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TITLE OF THE INTERNSHIP PROJECT

Software Quality Assurance & Testing on BlucheeZ

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Approval

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I hereby declare that; this project has been done by me under supervision **Abdullah Bin Kasem Bhuiyan**, Lecturer; Department of Computing and Information System. I am also declaring that this project or any part of there has never been submitted anywhere else for the award of any educational degree like, B.Sc., M.Sc., Diploma or other qualifications.

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It is worth mentioning to utter the name of all respectable teachers in my department from whom I have received suggestions and advice for preparing this report and learned over the academic years.

Finally, thanks to all the scholars whose writings, valuable research, and models helped me in completing this document.

Dedication

I would like to dedicate this project to my parents, especially my father, who insisted on studying computer science. He collected all of the needed information to be eligible for admission to computer science at Daffodil International University and admitted me. So, yes because of him I came so far.

Executive Summary

In my last semester of BSc in Computing and Information System at Daffodil International University, I had to do an internship program of 6 months at a reputed software company. My internship company was Softopark It Limited.

Softopark is the leading web development, eCommerce, and digital marketing agency in Bangladesh, Established in 2015. It provides quality service with its amazing professional and skilled team to establish client business. Softopark also has professional training services to train tech and non-tech people to work better in the It industry. It always looks forward to improving the quality of its services to fulfill the commitment of uncompromised work.

During my internship period, I worked on a project as a Software Quality Assurance. The name of the project was "**blucheez**" for the Softopark. During the course of my internship, I had to learn how to manage projects in accordance with the software development life cycle, deliver higher-quality goods, and guarantee higher-quality services. In addition, I have developed numerous soft skills including accountability, timeliness, respect for others, accepting new challenges, etc. I have also learnt how to conduct myself appropriately in the workplace. My time at Softopark It Limited has been wonderful, and the internship program has been really beneficial for both my academic work and potential future employment.

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Chapter:1- Introduction

Nowadays, Software becomes a part of life. Every organization operates its activities and manages its employee through software. But it can be a nightmare if the software had any bugs. Your organization's confidential data can be leaked and you can face serious situations. So, to solve the problem test is very important and it is done throughout the SDLC phases. For testing purposes and to fulfill the responsibilities there is a role and its name is QA Engineer. Through the course of my internship, I have learned how to perform Software Quality Assurance and Testing. I also learned how to coordinate with team members and how to manage any project according to the software development lifecycle for ensure the quality the product and deliver a better-quality service to the user or clients. I have learned how to behave in a corporate office and also gain many loves from the company during my internship. I have worked on a test project which is bluchezz a clothing brand company, where I have done manual testing and automation testing to ensure the quality of the product.

1.1 What is Software Quality Assurance and Testing

Software quality assurance and Testing is a method or a process to assure the quality of any software and ensure that the software meets user requirements and follows the development standard procedure.

1.2 Activates of Software Quality Assurance and Testing

- As an SQA Engineer, We design the test strategy, procedures, test plan, and test scenarios.
- Make documents for the test plans and test strategy.
- Most important that we must make a document or include in the document any unusual software activities or defects.
- Need to Report for defects using a bug tracking system to the developer.
- Communicate with stakeholders and involve in the meeting.
- Verifying the test plan and procedures for any project.
- Perform functional and non-functional testing.
- Need to prepare the script for automation and Perform automation testing.
- Monitoring the software defects state and report.
- Need involvement with the user and understanding of the software problem.

1.3 Characteristics of a Good Software Quality Assurance and Test Engineer

- Real-time problem-solving skills.
- Thinking ability positively and negatively.
- Good with communication.
- Information gathering knowledge.
- Good at written skills.
- Stay up to date with tech news.

1.4 Why Software Quality Assurance and Testing is important

Well, as I discussed earlier that nowadays it's very important to test the software otherwise you can face a huge financial loss or face a critical situation that will be not good for your organization. The cybercrime rate are increasing day by day and all types of organizations are equally in danger if you don't have a secure system. I have a statistic report of data leaked which is below-

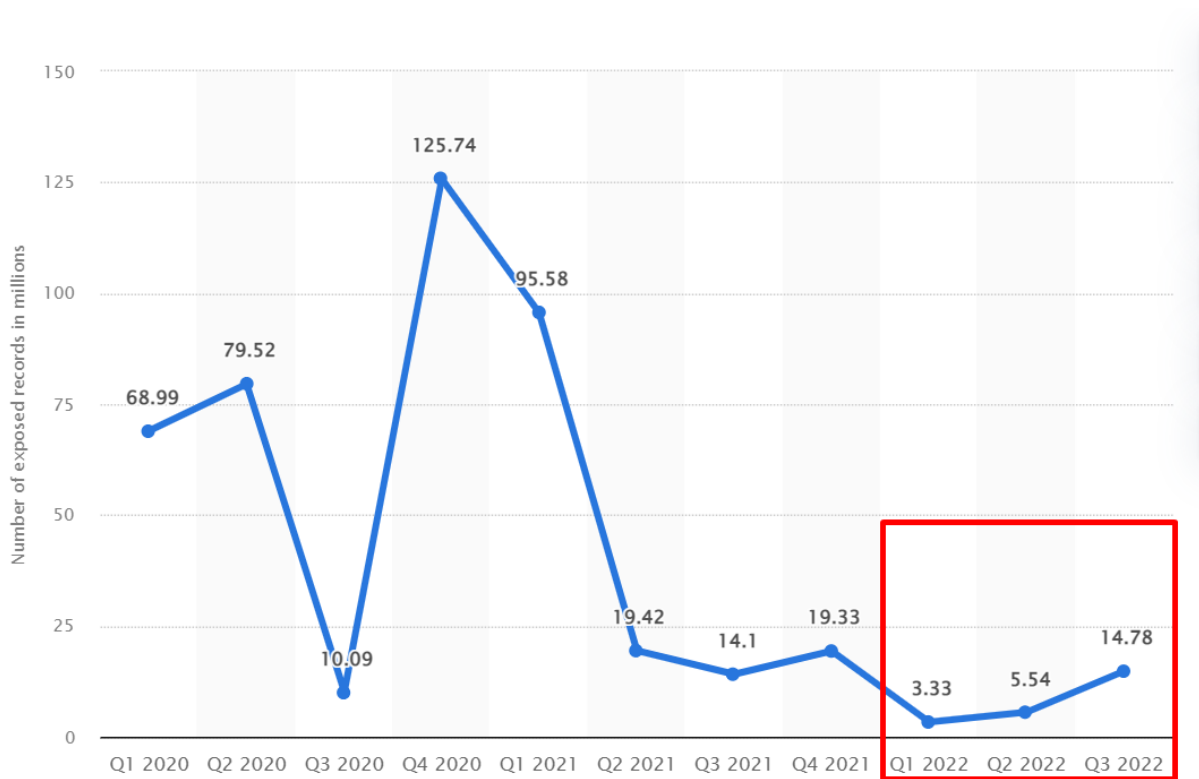


Fig 1: Data Leaked Report

Source: <https://www.statista.com>

1.5 Document Contents

These following chapters are followed during the documentation for the project documentation:

Chapter:1- Introduction

In the introduction chapter the introductory description of the project and the system.

Chapter 2: Initial Study

In this chapter, it contains the initial study of the proposed system as well the main goals of the system and project.

Chapter 3: Literature Review

In this chapter the problem domain, solution, evaluation and finally recommendation has been done.

Chapter 4: Methodology

The methodology chapter contains of different types of methodology, which types of methodology is perfect for this project and why.

Chapter 5: Test Planning

Test Planning chapter contains the description of that will be tests needed for the project and how we can conduct those tests.

Chapter 6: Test case design

In this chapter the case has been designed as per system module and the project requirements.

Chapter 7: Test Case Develop and Execution

This chapter contains the Test cases, and Test cases expected result and actual result and the Test Pass or Fail.

Chapter 8: Automation Testing

The Automation Testing chapter contains the details about the Web Automation and Mobile Automation.

Chapter 9: Reporting

In this chapter, it contains the report of the tests that was performed.

Chapter 10: Critical Appraisal and Evaluation

In this chapter, it contains the assessment of the initial goals that were met and not met including lesson learned.

Chapter 11: Conclusion

This Chapter contains a summary report including the objectives and success.

Chapter 2: Initial Study

2.1 Understanding the project proposal

Before starting testing, of course, we need to understand the project proposal for better understand its goals.

Introduction

Bluchezz is an e-commerce site that aimed to develop a way with help of internet-based solutions to serve the diverse consumer with the test of exotic fashion. There are many fashion brand available that are focused to develop their product to their own taste but unlike other fashion, brand bluchezz focused on customer taste, and their need and give priority to their choice. It also ensures the quality of the product and also which is comfortable for you.

Background Story

Bangladesh's apparel industry is very big and very strong. Bangladesh holds a great position in the international market, we are in the second position in terms of global export volume. We are producing most of the products of famous brands but although we are Bangladeshi the highest exporter we don't have any brand or any brand that has a presence in the international market. So, Bluchezz focus on how it will spread in the country and also grab the international market through the love of people.

Description of the proposed system

Focusing on people's need and their choice Bluchezz is making comfortable cloth for men and women. People can easily navigate to their website for purchasing any item from their collection easily with payment. They will get of popup with the discount sale and also can see most of their favorite item at the top of the websites. They can also add an item for later purchase.

2.2 Feasibility Study

- **Operational Feasibility**

The main focus of Operational Feasibility is to fully implement the human resources that are available in the project. Its concerned about the usability of the system and all the resources are working fine. Navigating Bluchezz is easy to use and its also has proper verification and validation. The user and admin panel get easy response in minimum response time.

- **Technical Feasibility**

Technical Feasibility considers the technical requirements of the project. Technical implementation is dependent on the organization's capability. Like if any project proposal has been done by the high technical resources allocated but when it is needed to implement then the organization can't effort such cost due to high technology resources. So, after the technical requirements were proposed than it compared the technical capability to the organization.

- **Economic Feasibility**

Economic Feasibility is very important for any organization because every organization need to be profitable after performing all types of services. So, be profitable its need to do planning where the investment will go and the investment will get prioritized in process of the feasibility study. Projection of costs, Expenses, investment, Cash flow projection etc. get analyzed in this stage.

- **Market Research analysis based on feasibility factors**

Bangladesh is the second largest country exporting clothing in the international market. Bangladesh is just one stop behind China which is the first largest exporter country in the clothing industry. There are more than 45000 garment factories in BD and most of them are established in Dhaka. 3.6 million workers directly work in this industry. The garment industry accounts for about 80% of all export earnings that are achieved by Bangladesh each year. Europe receives 61% of the exports that are created by the Bangladesh garment industry every year. In total, the garment and textile sector earns around \$19 billion each year in annual exports. That reflects 20% of the GDP. So, Bluchezz will create a great impact in this industry.

2.3 Foundation

Aims, Objective, and Scope

Aims of the proposed project

- Create high-quality design products.
- Giving priority to customer choice and their needs.
- Grab the local and international markets.

Objectives of the proposed document

- Understanding all requirements clearly.
- Develop a user-friendly website and mobile application.
- Enlisting all features in the website and mobile application.

Main Goals

- Deliver the unique and best design flexibly.
- Offer a diverse range of products that will meet different styles and preferences.
- We will ensure that the customer can create a wardrobe that will reflect their individuality and personal style.

High-Level Features/Requirements for this project

- Register: User can easily register with a valid email.
- Login: User will be able to login with a registered email and password.
- Logout: User will be able to get logout when they are logged in.
- View account details: User will view the account details that he created.
- Edit accounts: User will be able to edit the account information.
- Search item: User will be able to search any item.
- View item: User will be able view items.
- Add items to cart: The user will be able to add selected items.
- View shopping cart: User will be able the added product in shopping cart.
- Change items in cart: user will be able add or delete item in cart.
- Confirm to buy: User will confirm to buy.
- Delivery and payment: User will get a view for delivery details and payments.
- Place Order: user will get a view for place order.
- Cancel Order: User will be able to cancel any order item.
- Return items: User will be able to return any ordered item.
- View orders and cancel: User will be able to see a view all orders and canceled.
- Rate and reviews: User will be able to Review ordered items.

2.4 Activities for this project to achieve goals

Project Initiation

This project will create a great impact in the fashion industry. Its main goal is to create a brand that will produce high-quality, unique, and comfortable products.

Feasibility Study

A feasibility Study is very important for any project to start because its gives the initial idea that the project is stable or not. Operational, technical , and economic feasibility of the project is measured to determine whether the project is feasible enough to continue.

System Analysis

In this section, the systems requirements are explained that what is needed and whats the most important things in this system that must be included. Prioritized functional and requirements were selected from the requirement catalog.

Test case Design

After analysis the system the test case needed to be designed because its give a idea what to test and when to test

Manual Testing

The test case implementation and execution in manually are performed in this section. In manual testing all testing performed by human manually.

Automation Testing

The test script need to prepared in for the automation testing. So the test program are developed and executed in this section.

Other Project Matters

Risk management, configuration management etc.

Documentation

The documentation of the project will be recorded in this section.

Prioritizing features according to MOSCOW rules

Must have

- Registration and Login for all users.
- Search facilities.
- Shopping cart facilities.
- Payment facilities .
- Orders and returns.

Should have

- Wishlist for user.
- Gift vouchers.
- Rating and add comments.

Could have

- Blog about upcoming update.
- Quick links.

Based on PRL the final requirements are:

- Users can select the signup or login button and type in their credentials for registration or for login respectively.
- Users can edit or view their profile when they are logged in.
- Users can Logout successfully when they are logged in.
- Customer views and selects an item that he/she wishes to purchase, must add in cart using cart button.
- Once the customer proceeds to buy from the cart page, the delivery and payment page need to be visible.
- The customer can view and manage orders that are yet to be delivered to the customer
- Each customer has the option to review purchased products and assign ratings or satisfaction levels.
- credentials for registration or for login respectively.

Iterative Development

Iterative development is a model where all the processes follow a cycle. If any step fulfills its requirements then it's going for the next steps otherwise not. The first stage or initial stage for the iterative model is planning where all the details of hardware and software requirements are included. The second stage is the analysis where all types of business logic and models are get analyzed and designed and performed. The next phase is coding where all the logic are combined and developed logic with coding. Then the testing phase comes where all types of testing are performed and then in the evaluation phase, all steps are evaluated. That's how the cycle goes on until it fulfills the requirement.

Deployment

In this phase, the recommended solution will be implemented. Bluchezz going developed by using the shopify e-commerce platform along with javascript and MySQL for database.

Conclusion

From the above discussion, we can say that the Bluchezz will be a great initiative to represent the unique choice of people. They can also serve people by producing comfortable and unique products.

Chapter 3: Literature Review

A literature review means, it's a summary of any project that are previously done. Its give you an idea about the project or any particular topic. Generally, a literature review surveys scholarly in articles and books. It gives a theoretical base for the research that determines of your research nature. A literature review creates a base for the researchers or the readers that give the full understanding of the particular field. The purpose of the literature review is that what knowledge and idea you have been established and what's the strong and weakest points of the topic.

3.1 Background of the project

There are a lot of fashion brands available in Bangladesh. Each brand focus on an individual part of the fashion industry. Some brands focus on fashion and some brands are focused on comfort and some brands are focused on fewer prices. But there are no fashion brands that focus on unique comfortable fashion products with less price. So, Bluchezz focused on that part that's main aim is to deliver a unique and comfortable product at less price.

3.2 Problem areas

The main priority is giving the user a good user experience and security, if the user has a bad experience that will create problems. Optimized Search engine if the search engine will be not optimized then the search result will not show in time. That's a problem. Missing product image and description. And there are also some business criteria problems like the inflation rate and the power shortage are the main problems for this industry. Bangladesh is the second largest exporter in the clothing industry after china. But due to these problems, the export rate is so high that the buyers lose their interest in buying from us. On the other hand, the garment owner companies claim that they are in huge losses if this situation continues they need to think if they will continue or not. In this situation. So these is the main problems.

3.3 Possible solutions

If there's a problem there's a solution. Like if a user needs a good experience then the site need to be more

- Privacy
- Security
- Trust
- User verification
- Server Availability
- Backup

Privacy

We need to ensure the privacy of user information because its plays a vital role for gain users' involvement with us. For that we will encrypt the data.

Security

Nowadays, Security plays a vital role for every organization because if any important information leaks than it will be a problem for any organization to ensure security the data access needs to be restricted by role-based.

Trust

People don't want to believe anyone nowadays because of some fraud. They don't want to believe easily any online sites. Our priority is to make it Trustworthiness as soon as possible.

User-verification

User verification must be needed for this site. Because nowadays people don't want to give their information to anyone and for this reason, they try to open a fake account which may create problems.

Server Availability

For user good experience this is play a good role because for user there will be no fixed time they can access the site any time and for that we have to be prepared.

Backup

Any problem may occur which can erase our data or pop up any critical issue that take time to be fixed , and for that we need a backup for the system.

3.3 Comparison

There are many fashion brand available like: Arong(Bangladesh) , Catseye(Bangladesh)

Arong(<https://www.aarong.com>)

Arong is a fashion brand of Bangladesh which are established in 1978 by focusing rural fashion design. They also focused on handmade handicraft that are build by village or poor people from rural area.

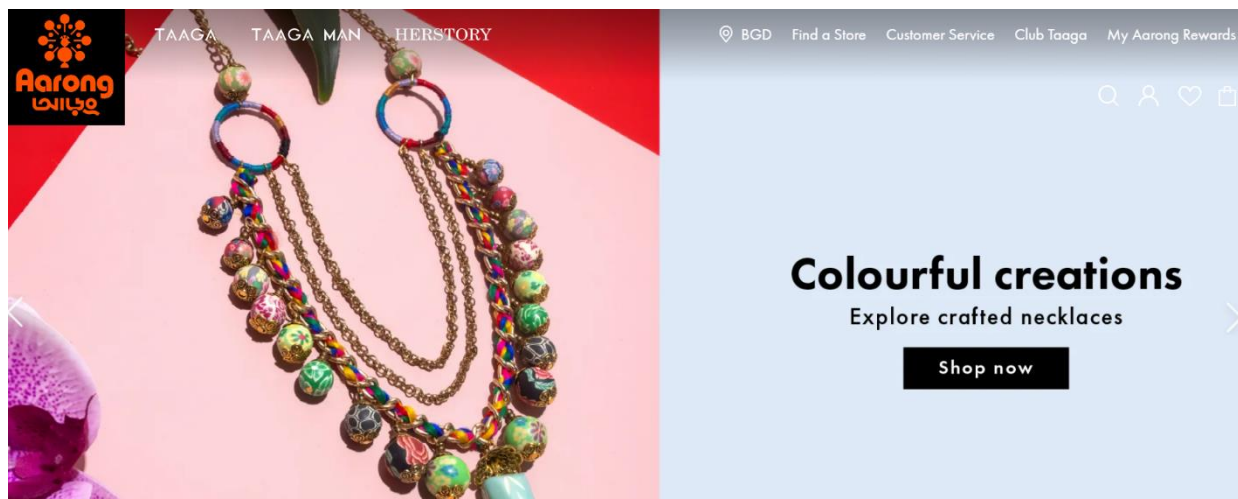


Fig no:2 aarong website

Best feature

- Clear and clean interface
- Quality picture
- Easily readable Text

Limitation

- Navigation problem
- Constantly popup promotion
- Load problem

CatsEye(<https://catseye.com.bd/>)

Catseye began their journey in 1980 from a small shop. Currently, they are one of the known brands in the fashion industry. They develop their own design by focusing on youth.

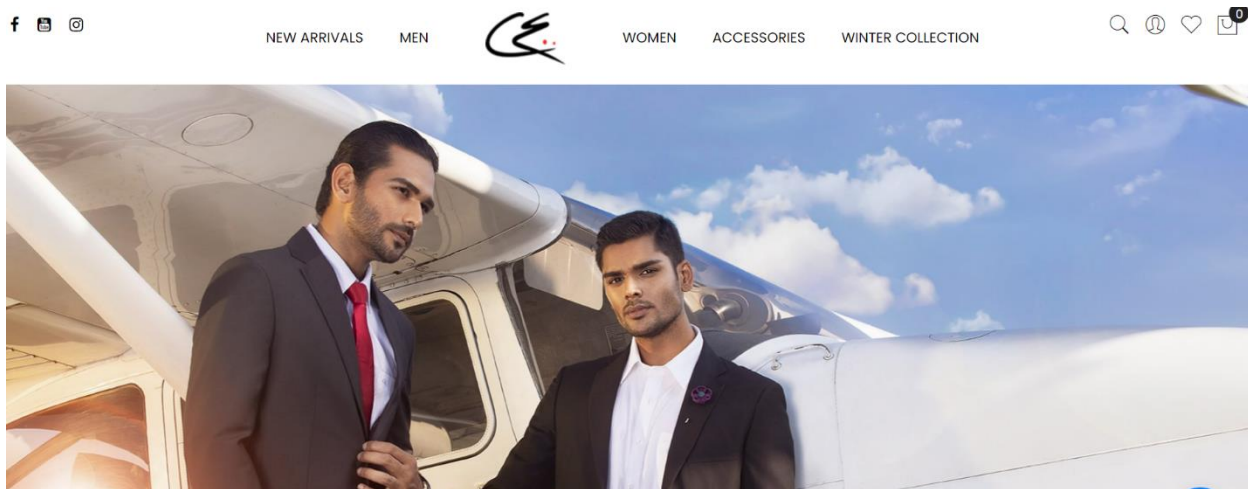


Fig no: 3 Catseye website

Best Features

- Easy to understand
- Clear and clean interface
- Quality picture
- Short description of the product

Limitation

- Homepage logo is not clear
- Given priority men's fashion in the homepage
- Didn't promote women's fashion in the homepage

3.4 Recommended Approach

As we discussed above we are clear about that what we have to what not. It also clears about the functionalities. By following best features and limitations we can build a error free system for the user. We can include the best features by reviewing them which are more suitable for our system and ignore the limitation or problem areas.

So, the system should provide the below aspects:

- The system should be user friendly
- The system should have security
- The system should be tested
- Quality picture needed
- Understandable text
- Attractive and clean Design
- Simple navigation needed
- Having clear images and videos
- Solving load issue

Chapter 4: Methodology

Methodology means a systematic process and practice for successfully completing and managing the project. In software engineering, the SDLC methodology are followed by the developer. There are some methodologies and each has it own benefits and drawbacks. Here I will discuss three methodologies and among them, we will choose one for our project.

4.1 what to use

There are many software development methodologies like:

- Agile methodology
- Waterfall methodology
- DevOps
- Spiral
- Iterative
- V-model

Here I will describe three methodologies with their benefits and drawbacks for better understanding.

Agile methodology

An agile methodology is an approach which is a combination of incremental and decremental approaches. In agile methodology, the product is tested in each cycle and then improved in each iteration. The main goal of agile methodology is find out the problems in initial phase or as soon as possible. In agile methodology, it believes that if you fail early you can solve the problem before it became a major problem.

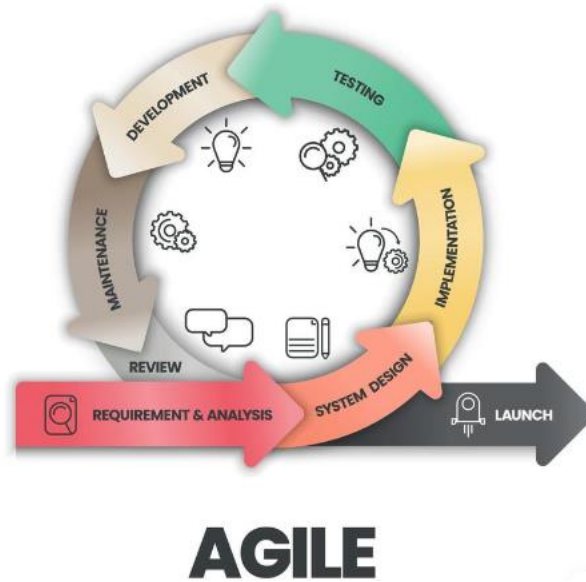


Fig no: 4 Agile model

Benefits of Agile

- In agile methodology, each of the sprint working features of the software deliver to the customer.
- The customer is satisfied because of they receive the sprint working features and for that they can have a look and fulfill their expectations.
- If the customer makes any changes then it's implemented in next phase.
- In agile methodology, the daily interaction happens between developer member and business people.
- Any changes are accepted even the later stage of development.

Drawbacks of Agile

- Because of changes can happen in last stage its difficult to predict the cost and risk.
- Sometimes the requirements are not clear enough and for that its become difficult to predict the expected result.
- In agile methodology, there are not much documentation happened.

Waterfall model:

The waterfall model was a very popular model for software developers. The Waterfall model is very important because based on this model the other models are developed. In the waterfall model, the lifecycles divided into a different set of phases. This model considered that you can move on the next phase after completing the current phase. So if you didn't complete the current stage you cant go in the next phase. In this model the output of the previous phase is considered as input for the next phases.

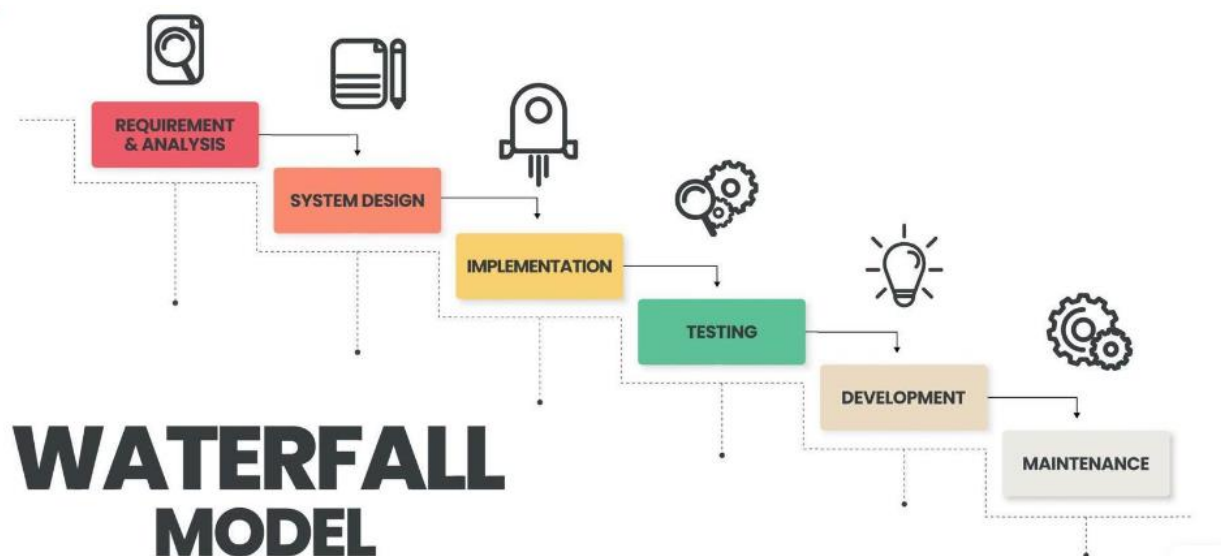


Fig no: 5 Waterfall model

Benefits of the waterfall model

- The waterfall model is very to understand
- Each stage of the model is clearly understand
- The process of the action and result are well documented
- The waterfall model works well where the requirement are clearly defined
- This model is very good for small projects

Drawbacks of the waterfall model

- The model is not suitable for big projects
- There are no opportunity to get feedback while its in a phase
- Its very difficult to make any changes after completing any phase
- There are no opportunity to overlap any phase because in the waterfall you can move on the next phase after completing the previous phase

DevOps methodology

DevOps is a software development methodology. This methodology improved the collaboration of software developer operation teams by using various types of automation tools. These automation tools are implemented in various stages that are parts of the lifecycle.

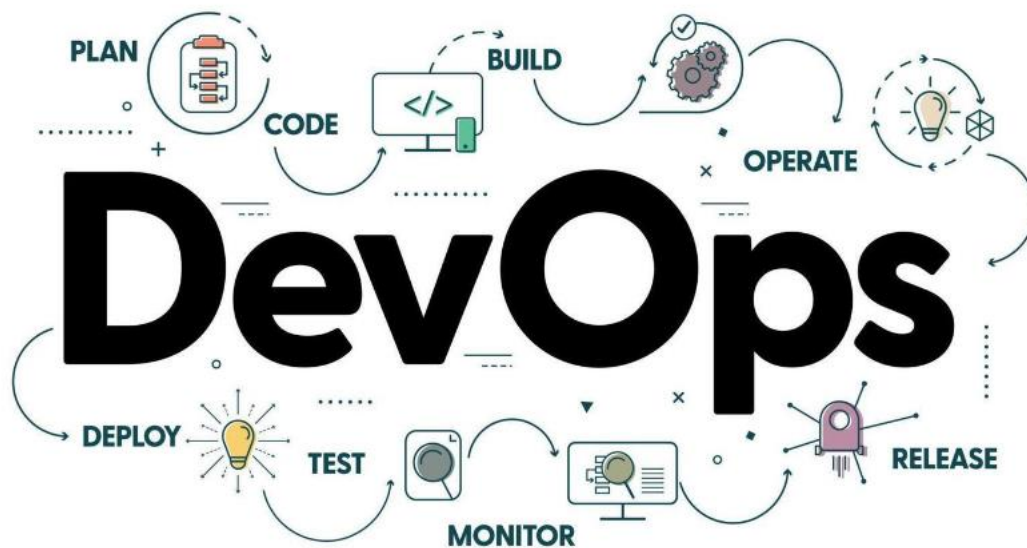


Fig no: 6 DevOps Model

Benefits of DevOps

- The DevOps methodology leads to better team engagement and productivity
- Simplifies the collaboration because all of the tools are placed in the cloud and for that, the customer can access them easily
- Its improves customer satisfaction
- Faster response to market changes to improve the growth of the business

Drawbacks of DevOps

- Its required enough DevOps knowledge because a lack of knowledge can lead to the problem in the integration of the automation projects
- The cost is high to set up an infrastructure by a DevOps environment
- Professional is not that much available for DevOps

Agile methodology vs waterfall methodology

An agile methodology is an approach which is a combination of incremental and decremental approaches. In agile methodology, the product is tested in each cycle and than improved in each iteration. The main goal of agile methodology is find out the problems in initial phase or as soon as possible. In agile methodology, it believes that if you fail early you can solve the problem before its became a major problem.

The waterfall model was a very popular model for software developers. The Waterfall model is very important because based on this model the other models are developed. In the waterfall model, the lifecycles divided into a different set of phases. This model considered that you can move on the next phase after completing the current phase. So if you didn't complete the current stage you cant go in the next phase. In this model the output of the previous phase is considered as input for the next phases.

The difference between waterfall and agile models are listed below:

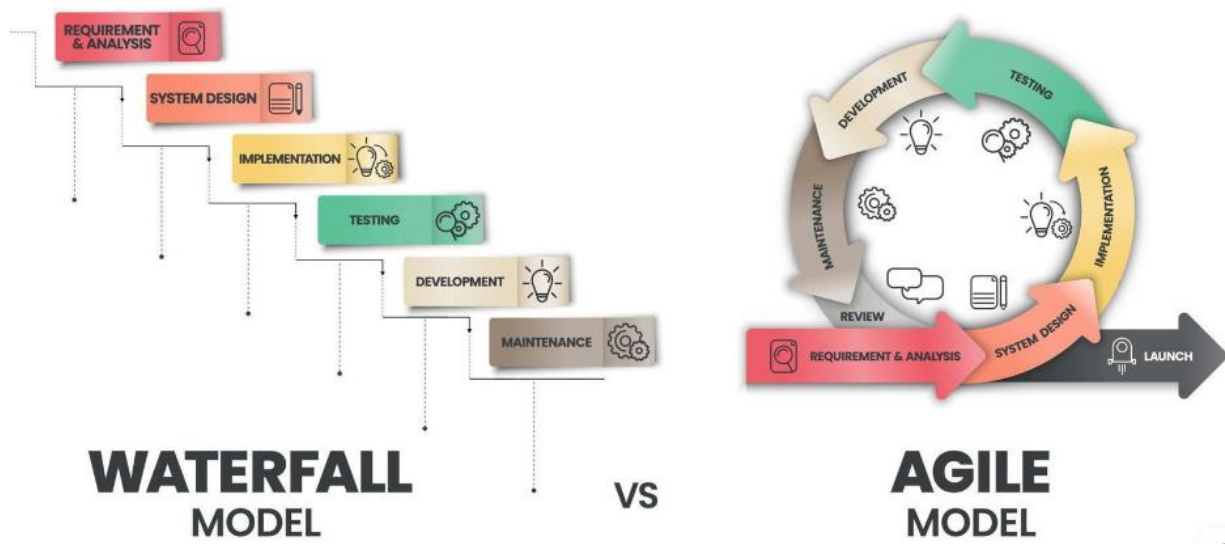


Fig no: 7 Waterfall vs Agile model

Agile vs Waterfall model

	Agile Model	Waterfall Model
Timeline	In the agile model, the timeline is flexible.	In the waterfall model, the timeline is fixed because in the waterfall model the start and finish of the project are mapped out from the start.
Client involvement	In agile methodology, the main focus is customer satisfaction. So in agile, the customer get involved in every stage.	In the waterfall model after the requirements are cleared or the goal established then the client does have not any involvement in the process.
Budget	In the model, the budget is flexible because of agile is open to any adaption from beginning to end. So the budget can be changed later on if changes are required.	In the waterfall model, the budget is almost fixed. The project gets estimated from beginning to end including the cost budget. So there are fewer changes to change the budget in this model.
Flexibility	Agile is more flexible the waterfall model. In the agile method any changes are welcome in sprint as well as the last stage of the project.	Waterfall model is not flexible as agile model because in waterfall model the each step should be completed for move on the next stage.

4.2 Choosing methodology

Because of more benefits, I have chosen the agile methodology. The main goals of the agile methodology is to satisfy the customer. An agile methodology is an approach which is a combination of incremental and decremental approaches. In agile methodology, the product is tested in each cycle and than improved in each iteration. The main goal of agile methodology is find out the problems in initial phase or as soon as possible. In agile methodology, it believes that if you fail early you can solve the problem before its became a major problem.

4.3 Why to use

For better management and successfully completing the project, every developer should follow a methodology. It helps to achieve the main goals and fulfill the customer requirement more efficiently.

Chapter 5: Test Planning

A test plan is a detailed document where all the test strategies, objectives, schedules, and resources are written to complete the particular project. As a QA tester it's very important to have a test plan because it's a key of success in completing the testing. The test plan is shared with all types of roles and people who are integrated with the project. The manager, Business analyst, developer team, the QA team can look for the document.

Why are test plans important?

- The test plan provides a clear guide for the QA team for testing
- It helps individuals outside of QA team for successfully complete any project
- Easy to understand the requirements and review

Components of the test plan

- Scope
In scope, the project objectives are declared. What we are going to test and what we are not going to test are defined in this phase.
- Schedule
In schedules for when the test will be start and when it will be finished, declared in this phase.
- Resource allocation
In this phase, the tester information and their role are defined.
- Environment
Which environment we are going to use for the test.
- Tools
How many tools and what are tools are we going to use in the test.
- Defect management
How bugs will be reported and whom.
- Risk analysis
What are risk can up when we are doing testing.
- Exit
When the test should stop.

5.1 Overview of the Buechezz web application

Bluchezz is an e-commerce site that aimed to develop a way with help of internet-based solutions to serve the diverse consumer with the test of exotic fashion. There are many fashion brand available that are focused to develop their product to their own taste but unlike other fashion, brand bluchezz focused on customer taste, and their need and give priority to their choice. It also ensures the quality of the product and also which is comfortable for you.

Homepage:



Fig 8 : bluchezz

Domain: e-Commerce

Sub Domain: B2C (Business to Customer)

Application: Online shopping

Application type: Web application

5.2 purpose of this document

The document has a test plan which are we going to follow during the test activity. This document declares that all of the stakeholders are agree to the method, approaches and scope that will be performed from beginning to end .

5.3 Test strategy and approaches

A test strategy is an outline or a set of methods that how we are going to test the system. Its give us a clear outline that what we are going to test and what will be procedures followed during performing the test. The main purpose of the documents is that to find out what will be the strongest and weak points to test the system. The approaches of software testing –

Functional testing

Functional testing is a testing approach where the business logic are being checked. The main goal of functional testing is to ensure that is the functionalities and the result is the same as per the requirement. Important types of functional testing

- **Unit Testing**
Unit testing is the first level of testing is done by the developers. The main goal of unit testing is to ensure that the particular code for the system is working or not as per the requirement
- **Integration Testing**
After completing the unit testing the integration testing was performed. After integration with other modules, the test ensures that how all functionalities behaves as per requirement.
- **System Testing**
This a whole system check after the completion of integration. The main golas of system testing is to ensure that how the system behaves as per requirement.
- **User Acceptance Testing**
This is the last of functional testing. The main goal of user testing is to ensure that after all assessments the last piece of software is deliverable or not.

Non-Functional testing

- **Performance testing**
Performance testing is a type of non-functional testing. In functional testing the performance of the system is get checked means how the system is behave in different situations. The main types of functional testing –
 - Load testing
 - Stress testing
 - Endurance testing
 - Spike testing

- **Security testing**
Security testing is non-functional testing for verify that is the data safe is protected in the system or not.
 - Integrity
 - Confidentiality
 - Authentication
 - Authorization
 - Availability
 - Non-repudiation

- **Usability testing**
Usability testing is a non-functional testing determine that how easy to use the system. In this testing the visibility of the requirement and the work follow of the process get tested.

- **Compatibility testing**
In compatibility testing, how system will react or what will be the behavior in different environments getting checked.

5.4 Scope of test approach

In scope

List below are the main features of bluchezz

- Homepage
- Search functionalities
- Product details
- Cart page
- Checkout and payments
- My orders
- Contact us

Out of scope

- Database

5.4 Test entrance and exit criteria

Entrance Criteria

- Code must be in unit tested
- Client should provide the SRS document
- Definition of all test case and scenario are completed

Exit Criteria

- 100% test script are executed
- Test closure
- Test sign off
- All error must be fixed before sign off

5.5 Deployment of test plan

The deployment have shared in the next chapter.

5.6 Deliverables

- Test case report
- Bug summery
- Test closure

5.7 Testing process

- Testing
QA will execute at least 99% of test cases
QA will perform the ll in test scope
- Reporting
QA will discuss with PM
- Fixing
The developer will fixed the assign bug and report to the PM
- Verification
QA will verify the bugs and report to the PM
- Closure
If bug fixed QA will close the bugs
- Not fixed
QA will reassign the bugs

5.8 Test Environments

Tools:

- Project management
- Bug reporting



Jira is based on agile methodology software that is used for multipurpose. We will use jira or our project management and report the bug.

- Load testing



Apache Jmeter is open source tools is used for load testing.

API testing



Postman is Api platform for Design and test the API.

- **Newman for API automating run**
- **Web testing**



Burp suite is a web pen testing tools used to validate http request.

- **Web Automation**



Selenium is a automation tools used for test across various web browser

Operating System

- Windows
- Kali Linux

Web Browsers

- Chrome
- Firefox

5.9 Risk and assumptions

Risk or issues

There will no further change during the sprint except any major change need but it will be acceptable if the team agree to change it otherwise not.

Assumption

- The project will deliver on time
- The project will fulfill user requirements
- Required resources available
- All documentation will be up to date and delivered QA team

5.9 Exit

If the all requirements meet then the test will be close.

Chapter 6: Test case design

A test case is a set of actions to identify efficiently that is the system or software meet the requirements or not. The main goals of the test case is to determine that the system features are performing as expected. If we get the as expected result from testing than we mark as pass otherwise we mark it as fail.

6.1 Components of test case

The test case is very very important because its defines what must be tested in to the system. It is very helpful for developers to identify the problem and they can be fixed quickly than before.

- **Test Case ID/Name**
We can assign a numeric number for test case id and give the logical name to the test case to understand what particular functionalities we are testing.
- **Test Case Description**
In the test case description, we wrote how many ways we are going to test to the particular feature.
- **Precondition Test Data**
In the precondition data if any credentials are needed to perform the test we wrote here.
- **Step Description**
Its very important for developers because what was the steps during the test perform written in the test description.
- **Expected Result**
In this section what should be the system output as user requirement are wrote here.
- **Actual Result**
Whats the actual result after performing the test are written here
- **Status**
After comparing the Expected result and Actual Result we declare that is it meet the user requirement or not as PASS and FAILL.
- **Remarks**
In remarks, we use the reference link or picture if the requirement don't match as user-defined.
- **Comments**
In Comments, we attach any a short description how the developer can fix the problem easily which problem should fixed as soon as possible.

6.2 Designing Test Case for Functional Testing

6.2.1 Unit testing

Test module name: Registration

Product Name	https://blucheed.com.bd/	TC Start Date	10/10/2022	TC Execution Start Date	
Module Name	UserRegistration	TC End Date	15/10/2022	TC Execution End Date	
		Test Case Developed By	Shagor Mahmud Shakil	Browser (Tested)	
Developer Name (TL)	Mainuddin	Test Case Reviewed By		App (Tested)	

Test Case ID/Name	Test Case Description	Precondition	Test Data	Step Description	Expected Result
TC 001: Register	Verify keeping all field empty	1. Browser should be installed 2. Enter Valid URL		1. Go to URL, https://blucheed.com.bd/	1. URL should be open successfully in browser
				2. Click Register link	2. Link should work properly
				3. Keep all field empty	3. Field can be selected
				4. Click on ""Create Account"" button"	4. Button should work with a popup error message
TC 002: Register	Valid name field check	1. Browser should be installed 2. Enter Valid URL		1. Go to URL, https://blucheed.com.bd/	1. URL should be open successfully in browser
				2. Click Register link	2. Link should work properly
				3. Enter valid name	3. Field can be selected
				4. Fill up others field with valid info	4. Field can be selected
				5. Click on ""Create Account"" button"	5. Button should work suceesfully
TC 003: Register	Check name field without entering any name"	1. Browser should be installed 2. Enter Valid URL		1. Go to URL, https://blucheed.com.bd/	1. URL should be open successfully in browser
				2. Click Register link	2. Link should work properly
				3. Keep name field empty	3. Field can be selected
				4. Fill up others field with valid info	4. Field can be selected
				5. Click on ""Create Account"" button"	5. Button should work with a popup
TC 004: Register	Invalid name field check with only number	1. Browser should be installed 2. Enter Valid URL		1. Go to URL, https://blucheed.com.bd/	1. URL should be open successfully in browser
				2. Click Register link	2. Link should work properly
				3. Enter invalid name using number	3. Field can be selected
				4. Fill up others field with valid info	4. Field can be selected
				5. Click on ""Create Account"" button"	5. Button should work with a popup
TC 005: Register	Invalid name field check wityguerrf h special character	1. Browser should be installed 2. Enter Valid URL		1. Go to URL, https://blucheed.com.bd/	1. URL should be open successfully in browser
				2. Click Register	2. Link should work properly
				3. Enter invalid name using special	3. Field can be selected
				4. Fill up others field with valid info	4. Field can be selected
				5. Click on ""Create Account"" button"	5. Button should work with a popup error message
TC: 006 Register	Invalid name field check with html and php tag.	1. Browser should be installed 2. Enter Valid URL		1. Go to URL, https://blucheed.com.bd/	1. URL should be open successfully in browser

				2. Click Register	2. Link should work properly
				3. Enter invalid name with html or php tag	3. Field can be selected
				4. Fill up others field with valid info	4. Field can be selected
				5. Click on ""Create Account"" button"	5. Button should work with a popup error message
TC 007: Register	Valid email field check	1. Browser should be installed 2. Enter Valid URL		1. Go to URL, https://blucheez.com.bd/	1. URL should be open successfully in browser
				2. Click Register	2. Link should work properly
				3. Enter valid email address.	3. Field can be selected
				4. Fill up others field with valid info.	4. Field can be selected
				5. Click on ""Create Account"" button."	5. Button should work Sucessfully
TC 008: Register	Invalid email address check without '@'	1. Browser should be installed 2. Enter Valid URL		1. Go to URL, https://blucheez.com.bd/	1. URL should be open successfully in browser
				2. Click Register	2. Link should work properly
				3. Enter email address without ""@"".	3. Field can be selected
				4. Fill up others field with valid info.	4. Field can be selected
				5. Click on ""Create Account"" button."	5. Button should work with a popup error message
TC 009: Register	Invalid email address check without '.com'	1. Browser should be installed 2. Enter Valid URL		1. Go to URL, https://blucheez.com.bd/	1. URL should be open successfully in browser
				2. Click Register	2. Link should work properly

				3. Enter email address without ".com".	3. Field can be selected
				4. Fill up others field with valid info.	4. Field can be selected
				5. Click on "Create Account" button.	5. Button should work with a popup error message
TC 010: Register	Invalid email address check	1. Browser should be installed 2. Enter Valid URL		1. Go to URL https://bluccheez.com.bd/	1. URL should be open successfully in browser
				2. Click Register	2. Link should work properly
				3. Enter an invalid email address.	3. Field can be selected
				4. Fill up others field with valid info.	4. Field can be selected
				5. Click on "Create Account" button.	5. Button should work with a popup error message
TC 011: Register	Verify Password field with valid Password	1. Browser should be installed 2. Enter Valid URL		1. Go to URL https://bluccheez.com.bd/	1. URL should be open successfully in browser
				2. Click Register	2. Link should work properly
				3. Enter valid Password.	3. Field can be selected
				4. Fill up others field with valid info.	4. Field can be selected
				5. Click on "Create Account" button.	5. Button should work Successfully
TC 012: Register	Verify Password field entering less than 5 charcter	1. Browser should be installed 2. Enter Valid URL		1. Go to URL https://bluccheez.com.bd/	1. URL should be open successfully in browser
				2. Click Register	2. Link should work properly
				3. Enter Password of less than 8 charcter.	3. Field can be selected
				4. Fill up others field with valid info.	4. Field can be selected
				5. Click on "Create Account" button.	5. Button should work with a popup error message
TC 012: Register	Invalid email address checkVerify Password field without entering any letter	1. Browser should be installed 2. Enter Valid URL		1. Go to URL https://bluccheez.com.bd/	1. URL should be open successfully in browser
				2. Click Register	2. Link should work properly
				3. Enter Password of less than 8 charcter.	3. Field can be selected
				4. Fill up others field with valid info.	4. Field can be selected
				5. Click on "Create Account" button.	5. Button should work with a popup error message
TC 013: Register	Verify Password field without entering any symbol	1. Browser should be installed 2. Enter Valid URL		1. Go to URL https://bluccheez.com.bd/	1. URL should be open successfully in browser
				2. Click Register	2. Link should work properly
				3. Enter Password without any number or symbol.	3. Field can be selected
				4. Fill up others field with valid info.	4. Field can be selected
				5. Click on "Create Account" button.	5. Button should work successfully
TC 014: Register	Verify OTP	1. Browser should be installed 2. Enter Valid URL		1. Go to URL https://bluccheez.com.bd/	1. URL should be open successfully in browser
				2. Click Register	2. Link should work properly
				3. Fill up all field with valid info.	3. Field can be selected
				4. Click on "Create Account" button.	4. Button should work
				5. Enter OTP code."	5. OTP should passed
TC 015: Register	Verify to get registered with the same email address previously used for the registration.	1. Browser should be installed 2. Enter Valid URL		1. Go to URL https://bluccheez.com.bd/	1. URL should be open successfully in browser
				2. Click Register	2. Link should work properly
				3. Enter same email address previously used for the registration.	3. Field can be selected
				4. Fill up others field with valid info.	4. Field can be selected
				5. Click on "Create Account" button.	5. Button should work with a popup error message

Test Module: Search Functionalities

Product Name	https://blucheez.com.bd/	TC Start Date	16/10/2022	TC Execution Start Date	
Module Name	Search	TC End Date	18/10/2022	TC Execution End Date	
		Test Case Developed By	Shagor Mahmud Shakil	Browser (Tested)	
Developer Name (TL)	Mainuddin	Test Case Reviewed By		App (Tested)	

Test Case ID	Test Case Description	Pre-Condition	Test Data	Step Description	Expected Result
TC001: Search	Verify that search field accepts alphabets, numbers or symbols.	Should set up a browser. Internet access should be available. The user must be signed in.	Search products	1. Open browser	Browser should be opened
				2. Go to URL, https://blucheez.com.bd/	Ecommerce website should be opened
				3. Type user name and password.	user should be able to input username and password
				4. Select the "Login" button.	Home page should be displayed after login
				5. Click on search field.	Search field should accept alphabets, numbers or symbols.
TC002: Search	Make sure the search should be carried out after you enter your search terms and click the search icon.	Should set up a browser. Internet access should be available. The user must be signed in.	Search products	1. Open browser	Browser should be opened
				2. Go to URL, https://blucheez.com.bd/	Ecommerce website should be opened
				3. Type user name and password.	user should be able to input username and password
				4. Select the "Login" button.	Home page should be displayed after login and user name should be displayed on home page
				5. Click on search field.	Search should be performed according to search text provided by user.
				6. Enter the Search text	Search should be performed according to search text provided by user.
TC003: Search	Verify that the search results should be as per the search query.	Should set up a browser. Internet access should be available. The user must be signed in.	Search products	1. Open browser	Browser should be opened
				2. Go to URL, https://blucheez.com.bd/	Ecommerce website should be opened
				3. Type user name and password.	user should be able to input username and password
				4. Select the "Login" button.	Home page should be displayed after login and user name should be displayed on home page
				5. Click on search field.	Search should be performed according to search text provided by user.
				6. Enter the Search text	Search should be performed according to search text provided by user.

					search text provided by user.
TC004: Search	Make sure the user can search using the product name, brand name, or specification.	Should set up a browser. Internet access should be available. The user must be signed in.	Search products	1. Open browser	Browser should be opened
				2. Go to URL, https://blucheez.com.bd/	Ecommerce website should be opened
				3. Type user name and password.	user must be allowed to enter their login and password
				4. Select the "Login" button.	User should be logged in and Search functionality is present on home page.
				5. Click on search field.	The user should have the ability to do searches based on product and brand names.or a product description.
				6. Enter the Search text or brand name	
TC005: Search	Make sure that filter should be present for filtering the search results bases on Brand, Price, Reviews or Ratings.	Should set up a browser. Internet access should be available. The user must be signed in.	Search products	1. Open browser	Browser should be opened
				2. Go to URL, https://blucheez.com.bd/	Ecommerce website should be opened
				3. Type user name and password.	user must be allowed to enter their login and password

				4. Select the "Login" button.	User should be logged in and home page should be same on different browsers.
				5.. Enter the Search text or brand name	Search should be performed according to search text provided by user and filters should be present.
TC006: Search	Verify that sorting options should be present on search results page.	Should set up a browser. Internet access should be available. The user must be signed in.	Search products	1. Open browser	Browser should be opened
				2. Go to URL, https://blucheed.com.bd/	Ecommerce website should be opened
				3. Type user name and password.	user must be allowed to enter their login and password
				4. Select The" Login" Button	User should be logged in and alignment of products on home page should be proper.
				5.. Enter the Search text or brand name	Search needed to be performed to search text provided by user and sorting options should be present on search results page.
TC007: Search	Make sure that the number of search results displayed on one page.	Should set up a browser. Internet access should be available. The user must be signed in. Should set up a browser.	Search products	1. Open browser	Browser should be opened
				2. Go to URL, https://blucheed.com.bd/	Ecommerce website should be opened
				3. Type user name and password.	user must be allowed to enter their login and password
				4. Select The" Login" Button	After logging in, the home page should be displayed, along with the user's name.
				5.. Enter the Search text or brand name	Search needed to be performed to search text provided by user and sorting options should be present on

					search results page.
TC008: Search	Verify that there should be navigation button(Next and Previous) for navigation to pages.	Should set up a browser. Internet access should be available. The user must be signed in. Should set up a browser.	Search products	1. Open browser	Browser should be opened
				2. Go to URL, https://blucheez.com.bd/	Ecommerce website should be opened
				3. Type user name and password.	user must be allowed to enter their login and password
				4. Select The" Login" Button	Home page should be displayed after login and user name should be displayed on home page
				5.. Enter the Search text or brand name	Search should be
				6. Select Product page and navigate back	performed according to text provided by user and navigation button should be present on search result page.
TC009: Search	Make sure that user should be perform search in different categories for example, Punjabi, Shirts etc.	Should set up a browser. Internet access should be available. The user must be signed in. Should set up a browser.	Search products	1. Open the browser	Browser needed to be opene
				2. Go to URL, https://blucheez.com.bd/	Ecommerce website should be opened
				3. Type user name and password.	user must be allowed to enter their login and password
				4. Select The" Login" Button	Home page should be
					displayed after login and user name should be
					visiable on home page
				5.. Enter the Search text or brand name and select catagories	Search should be
					performed in different
					categories such as movies,
					books, grocery etc.

6.2.2 Integration Testing

Test Module: Login

Product Name	https://bluccheez.com.bd/	TC Start Date	18/10/2022	TC Execution Start Date	
Module Name	Login	TC End Date	20/10/2022	TC Execution End Date	
		Test Case Developed By	Shagor Mahmud Shakil	Browser (Tested)	
Developer Name (TL)	Mainuddin	Test Case Reviewed By		App (Tested)	

Test Case ID/Name	Test Case Description	Precondition	Test Data	Step Description	Expected Result
TC001: Login	valid email/username field check	User should be registered in the system.		1. Go to URL, https://bluccheez.com.bd/	URL should navigate to the required website
				2. Click "Sign in" link	Sign Link should work
				3. Enter valid username/email	Field can be selected
				4. Click on "Continue" button	Button should work
TC002: Login	Empty email/username field check	User should be registered in the system.		1. Go to URL, https://bluccheez.com.bd/	URL should navigate to the required website
				2. Click "Sign in" link	Sign Link should work
				3. Keep empty the field	Field can be selected
				4. Click on "Continue" button	Button should work with popup error message
TC003: Login	Check login functionality with invalid email id	User should be registered in the system.		1. Go to URL, https://bluccheez.com.bd/	URL should navigate to the required website
				2. Click "Sign in" link	Sign Link should work
				3. enter invalid username/email	Field can be selected
				4. Click on "Continue" button	Button should work with popup error message
TC004: Login	valid password field check	User should be registered in the system.		1. Go to URL, https://bluccheez.com.bd/	URL should navigate to the required website
				2. Click "Sign in" link	Sign Link should work
				3. Enter valid username/email	Field can be selected
				4. Click on "Continue" button	Button should work with popup error message
				5. Enter valid password	Field can be selected
				6. Click on "Sign in" button	Button should work
TC005: Login	Empty password field check	User should be registered in the system.		1. Go to URL, https://bluccheez.com.bd/	URL should navigate to the required website
				2. Click "Sign in" link	Sign Link should work
				3. Enter valid username/email	Field can be selected
				4. Click on "Continue" button	Button should work with popup error message
				5. Keep password field empty	Field can be selected
				6. Click on "Sign in" button	Button should work with popup error message
TC006: Login	Check login functionality with invalid password	User should be registered in the system.		1. Go to URL, https://bluccheez.com.bd/	URL should navigate to the required website
				2. Click "Sign in" link	Sign Link should work
				3. Enter valid username/email	Field can be selected
				4. Click on "Continue" button	Button should work with popup error message
				5. Keep password field empty	Field can be selected
				6. Click on "Sign in" button	Button should work with popup error message

Test Module: Product Details

Product Name	https://blucheez.com.bd/	TC Start Date	21/10/2022	TC Execution Start Date	
Module Name	Product Details	TC End Date	23/10/2022	TC Execution End Date	
		Test Case Developed By	Shagor Mahmud Shakil	Browser (Tested)	
Developer Name (TL)	Mainuddin	Test Case Reviewed By		App (Tested)	

Test Case ID	Test Case	Pre-Condition	Test Data	Test Step	Expected Result
TC001: Product Details	Verify that images of product are displayed correctly.	Should set up a browser Internet access should be available		Open browser	Browser should be opened
				Go to URL, https://blucheez.com.bd/	webpage must be opened
				Type username and password in	user must be allowed to enter their login and password
				log in by clicking the login button	After logging in, the home page should be displayed
				Click on a product displayed on home page.	the images of product should be displayed correctly.
TC002: Product Details	Verify that price of product is displayed.	Should set up a browser Internet access should be available The user must be signed in		Open browser	Browser should be opened
				Go to URL, https://blucheez.com.bd/	webpage must be opened
				type username and password in	user must be allowed to enter their login and password
				log in by clicking the login button	After logging in, the home page should be displayed along with the user's name
				Click on a product displayed on home page.	the images of product should be displayed correctly.
TC003: Product Details	Verify that product reviews are mentioned.	Should set up a browser Internet access should be available The user must be signed in		Open browser	The price of product should be displayed.
				Go to URL, https://blucheez.com.bd/	webpage must be opened
				type username and password in	user must be allowed to enter their login and password

				log in by clicking the login button	After logging in, the home page should be displayed, along with the user's name
				Click on a product displayed on home page.	The reviews about the product should be displayed.
TC004:	Verify that product specifications are displayed.	Should set up a browser Internet access should be available The user must be signed in		Open browser	Browser should be opened
Product Details				Go to URL, https://blucheez.com.bd/	webpage must be opened
				type username and password in	user must be allowed to enter their login and password
				log in by clicking the login button	User should be logged in and Search functionality is present on home page.
				Click on a product displayed on home page.	Product specifications should be displayed.
TC005:	Verify that information about IN-Stock/Out-Stock	Should set up a browser Internet access should be available The user must be signed in		Open browser	Browser should be opened
Product Details				Go to URL, https://blucheez.com.bd/	webpage must be opened

	are displayed.			type username and password in	User must be allowed to enter their login and password
				log in by clicking the login button	After logging in, the same page should be displayed
				Click on a product displayed on home page.	Stock information should be displayed.
TC006:	Verify that	Should set up a browser		Open browser	Browser should be opened
Product Details	seller ratings should be displayed.	Internet access should be available The user must be signed in		Go to URL, https://blucheez.com.bd/	webpage must be opened
				type username and password in	user must be allowed to enter their login and password
				log in by clicking the login button	User should be logged in and alignment of products on home page should be proper.
				Click on a product displayed on home page.	The seller ratings should be displayed.
TC007:	Verify that all	Should set up a browser		Open browser	Browser should be opened
Product Details	the variations of product are displayed.	Internet access should be available The user must be signed in		Go to URL, https://blucheez.com.bd/	webpage must be opened
				type username and password in	user must be allowed to enter their login and password
				log in by clicking the login button	Home page should be displayed after login and user name should be displayed on home page
				Click on any product displayed on home page	User should be redirected to product specification page.

			Click on a product displayed on home page.	All the variations of product should be displayed.
TC008:	Verify that	Should set up a browser	Open browser	Browser should be opened
Product	shipping	Internet access should be available	Go to URL, https://blucheez.com.bd/	webpage must be opened
Details	information about product are displayed.	The user must be signed in	type username and password in	user must be allowed to enter their login and password
			log in by clicking the login button	After logging in, the home page should be displayed, along with the user's name

				Click on any product displayed on home page	User should be redirected to product specification page.
				Click on a product displayed on home page.	the images of product should be displayed correctly.
TC009: Product Details	Verify that payment options are mentioned on product page.	Should set up a browser Internet access should be available The user must be signed in		Open browser	The shipping information should be displayed.
				Go to URL, https://blucheez.com.bd/	webpage must be opened
				type username and password in	user must be allowed to enter their login and password
				log in by clicking the login button	After logging in, the home page should be displayed, along with the user's name
				Click on user name displayed on home page.	User profile should be displayed.
				Click on a product displayed on home page.	The payment options should be displayed.
TC0010: Product Details	Verify that product suggestions related to product should be displayed.	Should set up a browser Internet access should be available The user must be signed in		Open browser	Browser should be opened
				Go to URL, https://blucheez.com.bd/	webpage must be opened
				type username and password in	user must be allowed to enter their login and password
				log in by clicking the login button	After logging in, the home page should be displayed, along with the user's name and product should be catagorised
				Click on a product displayed on home page.	The product suggestions should be displayed.

6.2.3 System Testing

Test Modules:

- Cart Page
- Checkout and Payments
- My Order

Module Name: Cart Page

Product Name	https://blucheez.com.bd/	TC Start Date	24/10/2022	TC Execution Start Date	
Module Name	Cart	TC End Date	25/10/2022	TC Execution End Date	
		Test Case Developed By	Shagor Mahmud Shakil	Browser (Tested)	
Developer Name (TL)	Mainuddin	Test Case Reviewed By		App (Tested)	

Test Case ID	Test Case	Pre-Condition	Test Data	Test Step	Expected Result
TC001: Cart	Verify that when user clicks on add to cart, the product should be added to cart.	Should setup a browser Internet connection should be Available		1. Open browser	Browser should be opened
				2. Open url	Blucheez website should be opened
				3. Type username and password in	user must be allowed to enter their Login and password
				4. log in by clicking the login button	User should be logged in After logging the home page should be displayed
				5. Click on any product displayed on home page	The product page should be displayed.
				6. Click on add to cart for the product.	The product should be added to cart.
TC002: Cart	Verify that user should be able to continue shopping after adding items to cart.	Should setup a browser Internet connection should be available The User must be signed in		1. Open browser	Browser should be opened
				2. Open url	Blucheez website should be opened
				3. Type username and password in	user must be allowed to enter their Login and password
				4. log in by clicking the login button	User should be logged in After logging the home page should be displayed
				5. Click on any product displayed on home page	The product page should be displayed.
				6. Click on add to cart for the product.	The product should be added to cart and user can continue

					shopping.
TC003: Cart	Verify that item quantity should be increased if user adds same item in cart again.	Should set up a browser Internet access should be available The user must be signed in		1. Open browser 2. Open url 3. Type username and password in 4. log in by clicking the login button 5. Click on any product displayed on home page 6. Click on add to cart for the product. 7. Click on add to cart again for the same product.	Browser should be opened Blucezz website should be opened user must be allowed to enter their Login and password User should be logged in After logging the home page should be displayed The product page should be displayed. The product should be added to cart. The item quantity should be increases.
TC004: Cart	Verify that total amount of all items should be displayed to user.	Should set up a browser Internet access should be available The user must be signed in		1. Open browser 2. Open url 3. Type username and password in 4. log in by clicking the login button 5. Click on any product displayed on home page 6. Click on add to cart for the product. 7. Click on go to cart button.	Browser should be opened Blucezz website should be opened user should be able to input username and password User should be logged in After logging the home page should be displayed The product page should be displayed. The product should be added to cart. The total amount of all items in cart should be displayed.
TC005: Cart	Verify that the amount displayed to user should include the taxes and shipping charges as per location.	Should set up a browser Internet access should be available The user must be signed in		1. Open browser 2. Open url 3. Type username and password in 4. log in by clicking the login button 5. Click on any product displayed on home page 6. Click on add to cart for the product.	Browser should be opened Blucezz website should be opened user must be allowed to enter their Login and password User should be logged in After logging the home page should be displayed The product page should be displayed. The product should be added to cart.

				7. Click on go to cart button.	The total amount should include taxes and shipping charges.
TC006: Cart	Verify that user should not be able to add items in cart beyond a certain limit.	Should set up a browser Internet access should be available The user must be signed in		1. Open browser	Browser should be opened
				2. Open url	Blucezz website should be opened
				3. Type username and password in	user must be allowed to enter their Login and password
				4. log in by clicking the login button	User should be logged in After logging the home page should be displayed
				5. Click on any product displayed on home page	The product page should be displayed.
				6. Click on add to cart for the product for many times.	The user should not be allowed to add items to cart beyond a certain limit.
TC007: Cart	Verify that when user clicks on remove from cart button the item should be removed from cart.	Should set up a browser Internet access should be available The user must be signed in		1. Open browser	Browser should be opened
				2. Open url	Blucezz website should be opened
				3. Type username and password in	user must be allowed to enter their Login and password
				4. log in by clicking the login button	User should be logged in After logging the home page should be displayed
				5. Click on any product displayed on home page	User should be redirected to product specification page.
				6. Click on any product displayed on home page	The product page should be displayed.
				7. Click on add to cart for the product.	The product should be added to cart.
				8. Click on remove from cart button.	The item should be removed form cart.
TC008: Cart	Verify that user should be able to apply coupons or vouchers at checkout from cart.	Should set up a browser Internet access should be available The user must be signed in		1. Open browser	Browser should be opened
				2. Open url	Blucezz website should be opened
				3. Type username and password in	user must be allowed to enter their Login and password
				4. log in by clicking the login button	User should be logged in After logging the home page should be displayed
				5. Click on any product displayed on home page	User should be redirected to product specification page.
				6. Click on any product displayed on home	The product page should be

				page	displayed.
				7. Click on add to cart for the product.	The product should be added to cart.
				8. Click on go to cart button.	User should be able to apply coupons or vouchers.
TC009: Cart	Verify that items in cart should be present if user logs out and logs in again.	Should set up a browser Internet access should be available The user must be signed in		1. Open browser	Browser should be opened
				2. Open url	Bluceez website should be opened
				3. Type username and password in	user must be allowed to enter their Login and password
				4. log in by clicking the login button	User should be logged in After logging the home page should be displayed
				5. Click on user name displayed on home page.	User profile will be displayed.
				6. Click on any product displayed on home page	The product page should be displayed.
				7. Click on add to cart for the product.	The product should be added to cart.
				8. Click on Logout button	User is logged out.
				9. Login again with same user id	Item should be present as before password

Module Name: Checkout and Payments

Product Name	https://bluceez.com.bd/	TC Start Date	25/10/2022	TC Execution Start Date	
Module Name	Checkout and Payments	TC End Date	26/10/2022	TC Execution End Date	
		Test Case Developed By	Shagor Mahmud Shakil	Browser (Tested)	
Developer Name (TL)	Mainuddin	Test Case Reviewed By		App (Tested)	

Test Case ID	Test Case	Pre-condition	Test Data	Test Step	Expected Result
TC001: Check out and payments	Verify that payments options applicable for the order should be displayed at checkout.	Browser must be launched webpage must be opened The user need to log in		1. Browser must be launched	Browser should be opened
				2. webpage must be opened	website should be opened
				3. Type username and password in	user must be allowed to enter their login and password
				4. log in by clicking the login button	User should be logged in ,page should be displayed
				5. Click on any product displayed on home page	The product page should be displayed.
				6. Click on add to cart for the product.	The product should be added to cart.

				7. Click on Checkout button.	The checkout page should be displayed with payments options.
TC002: Check out and payments	Verify that delivery details of items should be displayed at checkout.	Browser must be launched webpage must be opened The user need to log in		1. Browser must be launched	Browser should be opened
				2. webpage must be opened	website should be opened
				3. Type username and password in	user must be allowed to enter their login and password
				4. log in by clicking the login button	User should be logged in ,page should be displayed,
				5. Click on any product displayed on home page	The product page should be displayed.
				6. Click on add to cart for the product.	The product should be added to cart.
				7. Click on Checkout button.	The checkout page should be displayed with delivery details.
TC003: Check out and payments	Verify that user should get order details by message or email.	Browser must be launched webpage must be opened The user need to log in		1. Browser must be launched	Browser should be opened
				2. webpage must be opened	website should be opened
				3. Type username and password in	user must be allowed to enter their login and password
				4. log in by clicking the login button	User should be logged in ,page should be displayed,
				5. Click on any product displayed on home page	The product page should be displayed.
				6. Click on add to cart for the product.	The product should be added to cart.
				7. Click on Checkout button.	The checkout page should be displayed with payments options.
				8. Make payment for the order.	User should get order details by message or email.
TC004: Check out and payments	Verify that user should be directed to home page after	Browser must be launched webpage must be opened The user need to log in		1. Browser must be launched	Browser should be opened
				2. Webpage must be opened	website should be opened

	checkout.			3. Enter username and password	user must be allowed to enter their login and password
				4. Click on login button	User should be logged in ,page should be displayed,
				5. Click on any product displayed on home page	The product page should be displayed.
				6. Click on add to cart for the product.	The product should be added to cart.
				7. Click on Checkout button.	The checkout page should be displayed with payments options.
				8. Make payment for the order.	Ther order should be confirmed and user should be directed to home page.
TC005: Check out and payments	Verify that user should be displayed payment options such as Credit Card, Debit Card, Net Banking etc.	Browser must be launched webpage must be opened The user need to log in		1. Browser must be launched	Browser should be opened
				2. webpage must be opened	website should be opened
				3. Type username and password in	user must be allowed to enter their login and password
				4. log in by clicking the login button	User should be logged in ,page should be displayed,
				5. Click on any product displayed on home page	The product page should be displayed.
				6. Click on add to cart for the product.	The product should be added to cart.
				7. Click on Checkout button.	The checkout page should be displayed with payments options such as debit card, credit card, netbanking etc.
TC006: Check out and payments	Verify that if user is not registered then payment should be done as Guest user.	Browser must be launched webpage must be opened The user need to log in		1. Browser must be launched	Browser should be opened
				2. webpage must be opened	website should be opened
				3. Click on any product displayed on home page	user must be allowed to enter their login
				4. Click on add to cart for the product.	User should be logged in ,page should be displayed,
				5. Click on Checkout button.	The checkout page should be displayed with payments options.
				6. Make payment for the order.	The payment should be done as guest user.
TC007: Check out and payments	Verify that user should be provided with an option to save the payment method.	Browser must be launched webpage must be opened The user need to log in		1. Browser must be opened	Browser should be opened
				2. Webpage must be opened	Ecommerce website should be opened
				3. Type username and password in	user must be allowed to enter their login

			4. log in by clicking button	User should be logged in ,page should be displayed,
			5. Click on any product displayed on home page	User should be redirected to product specification page.
			6. Click on any product displayed on home page	The product page should be displayed.
			7. Click on add to cart for the product.	The product should be added to cart.
			8. Click on Checkout button.	The checkout page should be displayed with payments options.
			9. Make payment for the order.	the user should be able to save payment method for future orders.
TC008: Check out and payments	Verify that session should be timed out if payment is not done for a certain time.	Browser must be launched webpage must be opened The user need to log in	1. Browser must be launched	Browser should be opened
			2. webpage must be opened	website should be opened
			3. Type username and password in	user must be allowed to enter their login and password
			4. log in by clicking the login button	User should be logged in ,page should be displayed,
			5. Click on any product displayed on home page	User should be redirected to product specification page.
			6. Click on any product displayed on home page	The product page should be displayed.
			7. Click on add to cart for the product.	The product should be added to cart.
			8. Click on Checkout button.	The checkout page should be displayed with payments options.
			9. Select payment method and click on pay.	Payment page should be displayed.
			10. Stay on payment page for long time without any activity.	The payment session should be timedout.
TC009: Check out and payments	Verify that user details should be displayed on payment page for registered customers.	Browser must be launched webpage must be opened The user need to log in	1. Browser must be launched	Browser should be opened
			2. webpage must be opened	website should be opened
			3. Type username and password in	user must be allowed to enter their login and password
			4. log in by clicking the login button	User should be logged in ,page should be displayed,
			5. Click on user name displayed on home page.	User profile should be displayed.
			6. Click on any product displayed on home page	The product page should be displayed.
			7. Click on add to cart for the product.	The product should be added to cart.

				8. Click on Checkout button.	The checkout page should be displayed with user details.
TC0010: Check out and payments	Verify that on successful payment email or text message should be delivered to customer along with unique order number.	Browser must be launched webpage must be opened The user need to log in		1. Browser must be launched	Browser should be opened
				2. webpage must be opened	website should be opened
				3. Type username and password in	user must be allowed to enter their login and password
				4. log in by clicking the login button	User should be logged in ,page should be displayed,
				5. Click on any product displayed on home page	The product page should be displayed.
				6. Click on add to cart for the product.	The product should be added to cart.
				7. Click on Checkout button.	The checkout page should be displayed with payments options.
				8. Make payment.	Order should be confirmed and email or text message should be delivered to customer.

Test Module: My order

Product Name	https://blucheez.com.bd/	TC Start Date	01/11/2022	TC Execution Start Date	
Module Name	My Order	TC End Date	01/11/2022	TC Execution End Date	
		Test Case Developed By	Shagor Mahmud Shakil	Browser (Tested)	
Developer Name (TL)	Mainuddin	Test Case Reviewed By		App (Tested)	

Test Case ID	Test Case	Pre-Condition	Test Data	Test Step	Expected Result
TC001: My Orders	Check that user should be able to track the order on My orders page.	Browser must be launched webpage must be opened		1. Browser need to be 2. webpage need be opened 3. Type username and password in 4. log in by clicking the login button 5. Select the "My orders" link 6. To track an order, click on it	Browser should be opened website should be opened user must be allowed to enter their login User should be logged in After logging in, the home page The orders by user should be displayed. Tracking information should be displayed for that order.
TC002: My Orders	Check that user should be able to change the delivery date and time.	Browser must be launched webpage must be opened The user need to log in		1. Browser need to be 2. webpage need be opened 3. Type username and password in 4. log in by clicking the login button 5. Select My orders button 6. change delivery date and time by clicking the button.	Browser should be opened website should be opened user should be able to input username and password Home page should be displayed after login and user name should be displayed on home page The orders by user should be displayed. The user should be provided details for selecting delivery date and time.
TC003: My Orders	Check that user should be able to cancel the order	Browser must be launched webpage must be opened The user need to log in		1. Browser need to be 2. webpage need be opened 3. Type username and password in 4. log in by clicking the login button 5. Select My orders button 6. Cancel the order by deleting	Browser should be opened website should be opened user must be allowed to enter their login User should be logged in After logging in, the home page should be displayed, The orders by user should be displayed. User should be able to cancel the order.
TC004: My Orders	Check that user should be able to return the order after delivery of order.	Browser must be launched webpage must be opened The user need to log in		1. Browser need to be 2. webpage need be opened 3. Type username and password in 4. log in by clicking the login button 5. Select My orders button 6. return item for an order.	Browser should be opened website should be opened user must be allowed to enter their login User should be logged in After logging in, the home page should be displayed, The orders by user should be displayed. User should be provided with pickup date and time for return.
TC005: My orders	Check that user should be able to exchange the order from My orders page.	Browser must be launched webpage must be opened The user need to log in		1. Browser need to be 2. webpage need be opened 3. Type username and password in	Browser should be opened website should be opened user must be allowed to enter their login

			4. log in by clicking the login button	User should be logged in After logging in, the home page should be displayed,
			5. Select My orders button	The orders by user should be displayed.
			6. exchange item for an order by clicking button.	User should be given details of exchange item .
TC006: My Orders	Check that user should be able to provide feedback and reviews about the item delivered.	Browser must be launched webpage must be opened The user need to log in	1. Browser need to be opened	Browser should be opened
			2. webpage need be opened	website should be opened
			3. Type username and password in	user must be allowed to enter their login
			4. log in by clicking the login button	User should be logged in After logging in, the home page should be displayed,
			5. Select My orders button	The orders by user should be displayed.
			6. Click on Write review button for an item.	User can write review and provide feedback.

6.2.4 .Acceptance Testing

Test Module: Homepage

Product Name	https://blucheez.com.bd/	TC Start Date	03/11/2022	TC Execution Start Date	
Module Name	Homepage	TC End Date	04/11/2022	TC Execution End Date	
		Test Case Developed By	Shagor Mahmud Shakil	Browser (Tested)	
Developer Name (TL)	Mainuddin	Test Case Reviewed By		App (Tested)	

Test Case ID	Test Case	Pre-Condition	Test Data	Test Step	Expected Result
TC001: Homepage	Check to see if the home page is displayed after login or not.	Browser must be launched webpage must be opened The user must be signed in		1. Browser need to be launched	Browser should be opened
				2. webpage need be opened	website should be opened
				3. Type username and password in	user must be allowed to enter their login and password
				4. The user need to log in by click the login	User should be logged in After logging in, the home page should be displayed
TC002: Homepage	Check to see if the user name is displayed on home page or not	Browser must be launched webpage must be opened The user must be signed in		1. Browser need to be launched	Browser should be opened
				2. webpage need be opened	website should be opened
				3. Type username and password in	user must be allowed to enter their login and password
				4. The user need to log in by click the login	User should be logged in After logging in, the home page should be displayed,
TC003: Homepage	Check to see if the featured products are displayed on home page	Browser must be launched webpage must be opened The user must be signed in		1. Browser need to be launched	Browser should be opened
				2. webpage need be opened	website should be opened
				3. Type username and password in	user must be allowed to enter their login and password
				4. The user need to log in by click the login	User should be logged in After logging in, the home page should be displayed,
TC004: Homepage	Check to see if the Search Functionality is present on home page.	Browser must be launched webpage must be opened The user must be signed in		1. Open browser	Browser should be opened
				2. Open url	website should be opened
				3. Enter username and password	user must be allowed to enter their login and password
				4. Click on login button	User should be logged in and Search functionality is present on home page.
TC005: Homepage	Check to see if the the home page of application on different browsers.	Browser must be launched webpage must be opened The user must be signed in		1. Browser need to be launched	Browser should be opened
				2. webpage need be opened	website should be opened
				3. Type username and password in	user should be able to input username and password
				4. The user need to log in by click the login	User should be logged in and home page should be same on different browsers.
TC006: Homepage	Check to see if the the alignment on the home page	Browser must be launched webpage must be opened The user must be signed in		1. Browser need to be launched	Browser should be opened
				2. webpage need be opened	website should be opened
				3. Type username and password in	user must be allowed to enter their login and password

				4. The user need to log in by click the login	User should be logged in and alignment of products on home page should be proper.
TC007: Homepage	Check to see if the that products displayed on home page are clickable.	Browser must be launched webpage must be opened The user must be signed in		1. Browser need to be launched	Browser should be opened
				2. webpage need be opened	website should be opened
				3. Type username and password in	user must be allowed to enter their login and password
				4. The user need to log in by click the login	User should be logged in After logging in, the home page should be displayed,
				5. Select any product displayed on home page	User should be redirected to product specification page.
TC008: Homepage	Check to see if the when user clicks on a product, user should be redirected to product specification page.	Browser must be launched webpage must be opened The user must be signed in		1. Browser need to be launched	Browser should be opened
				2. webpage need be opened	website should be opened
				3. Type username and password in	user must be allowed to enter their login and password
				4. The user need to log in by click the login	User should be logged in After logging in, the home page should be displayed,
				5. Select product displayed on home page	User should be redirected to product specification page.
TC009: Homepage	Check to see if the user profile section is present on home page.	Browser must be launched webpage must be opened The user must be signed in		1. Browser need to be launched	Browser should be opened
				2. webpage need be opened	website should be opened
				3. Type username and password in	user must be allowed to enter their login and password
				4. The user need to log in by click the login	User should be logged in After logging in, the home page should be displayed,
				5. Click on user name displayed on home page.	User profile should be displayed.
TC0010: Homepage	Check to see if the products displayed on home page are categorised.	Browser must be launched webpage must be opened The user must be signed in		1. Browser need to be launched	Browser should be opened
				2. webpage need be opened	website should be opened
				3. Type username and password in	user must be allowed to enter their login and password
				4. The user need to log in by click the login	User should be logged in and home page should be displayed, products should be categorised

Test Module: Login (Admin Panel)

Product Name	https://blucheez.com.bd/	TC Start Date	05/11/2022	TC Execution Start Date	
Module Name	Login (Admin)	TC End Date	06/11/2022	TC Execution End Date	
		Test Case Developed By	Shagor Mahmud Shakil	Browser (Tested)	
Developer Name (TL)	Mainuddin	Test Case Reviewed By		App (Tested)	

Test Case ID/Name	Test Case Description	Precondition	Test Data	Step Description	Expected Result
TC001: Login	valid email/username field check	Admin should be registered in the system.		1. Navigate to Admin Login Page	Admin login page should open
				2. Enter the valid username/email	The valid username will be taken
				3. User must be allowed to enter	the password will be taken
				4. log in by clicking the login	Login should have successfully
TC002: Login	Empty email/username field check	Admin should be registered in the system.		1. Navigate to Admin Login Page	Admin login page should open
				2. Keep empty the username/email field	The username field will return error
				3. User must be allowed to enter	the password will be taken
				4. log in by clicking the login	Login should have unsuccessful
TC003: Login	Check login functionality with invalid email id	Admin should be registered in the system.		1. Navigate to Admin Login Page	Admin login page should open
				2. Keep empty the username/email field	The username field will return error
				3. User must be allowed to enter	the password will be taken
				4. log in by clicking the login	Login should have unsuccessful
TC004: Login	valid password field check	Admin should be registered in the system.		1. Navigate to Admin Login Page	Admin login page should open
				2. Enter the username/email field	The username will be taken
				3. User must be allowed to enter	the password will be taken
				4. log in by clicking the login	Login should have successful
TC005: Login	Empty password field check	Admin should be registered in the system.		1. Navigate to Admin Login Page	Admin login page should open
				2. Enter the username/email field	The username field will be taken
				3. User must be allowed to enter	the password field will return error their login
				4. log in by clicking the login	Login should have unsuccessful
TC006: Login	Check login functionality with invalid password	Admin should be registered in the system.		1. Navigate to Admin Login Page	Admin login page should open
				2. Enter the username/email field	The username field will be taken
				3. User must be allowed to enter	the password field will return error their login
				4. log in by clicking the login	Login should have unsuccessful button

Chapter 7: Test Case Develop and Execution

The test case is a set of instructions that a tester need to follow to successfully execute the project. At first, tester develop the test case to understand better that what will be the best output for the test project or what will be the way to achieve the goal as soon as possible. To execute the test case the tester follows a certain testing method. There are mainly two ways to perform testing which are manually and automatically and those testing are performed following the test techniques which are Black Box testing and White Box testing.

Manual Testing

The human performs manual testing step by step by following the test cases without any test scripts.

Automation Testing

Along with many scripts and tools, the testing executes automatically by following test automation framework.

7.1 Black-Box testing

Black-Box testing is a testing method where the software functionalities are being tested without having any internal coding structure. Black box testing mainly focused on the input and whats the output. In this testing method tester give valid and invalid input to check the system behavior and that's why its also known as behavioral testing.

Types of Black-Box testing

- Functional testing
- Non-Functional Testing
- Regression Testing

Functional Testing

In the functional testing the system functionalities are being checked and whats the behavior of the functions, they are function properly or not also being checked in this testing.

Non-Functional Testing

In the non-Functional Testing the non-Functional requirements are being checked like the system performance under heavy load and stress.

Regression Testing

Regression testing is a testing type where the testing start after completing all kind of testing to find out that if there are any new malfunctioning module or any working function are effected or not.

7.2 White Box Testing

White Box is a testing Method where the system code, design and business logic are being checked. In white Box code is visible to the tester everything is transparent that's why its also called transparent box testing or code box testing. For white Box testing must have coding knowledge and create test cases and execute the cases.

Types of White Box Testing

- Unit Testing
- Testing for Memory Leaks

Unit Testing

Unit testing the is first step of testing. Mostly unit testing done by the developer. Unit test performs on a particular module where the module code need to be visible for clarity. sometimes major bug can hide ina few lines of code mistake.

Testing for memory leaks

For system running slow, the main reason behind this is memory leaks . As a QA we need to do test for memory leaks.

7.3 Verification

Verification is a process to identify that is the software are build as per user requirement or not .

7.4 Validation

Validation is a process to ensure that the software meets the user true needs and the expectations.

7.5 Test Case Execution

7.5.1 Unit testing

Test module name: Registration

Product Name	https://blucheez.com.bd/	TC Start Date	10/10/2022	TC Execution Start Date	10/11/2022
Module Name	UserRegistration	TC End Date	15/10/2022	TC Execution End Date	11/11/2022
		Test Case Developed By	Shagor Mahmud Shakil	Browser (Tested)	Yes
Developer Name (TL)	Mainuddin	Test Case Reviewed By	Rakib Hasan	App (Tested)	No

Test Case	Test Case	Precondition	Test Data	Step Description	Expected Result	Actual Result	Status	Remark
TC Register 001	Verify keeping all field empty	1. Browser should be installed 2. Enter Valid URL		1. Go to URL https://blucheez.com.bd/ 2. Click Register link 3. Keep all field empty 4. Click on ""Create Account"" button	1. URL should be open successfully in browser 2. Link should work properly 3. Field can be selected 4. Button should work with a popup error message	1. Url working properly 2. Link are working Properly 3. Field can Select 4. Got an error message with proper Explanation	PASS	
TC Register 002	Valid name field check	1. Browser should be installed 2. Enter Valid URL	Shagor Mahmud Shakil	1. Go to URL https://blucheez.com.bd/ 2. Click Register link 3. Enter valid name 4. Fill up others field with 5. Click on ""Create Account"" button	1. URL should be open successfully in browser 2. Link should work properly 3. Field can be selected 4. Field can be selected 5. Button should work	1. Url working properly 2. Link are working Properly 3. Field can Select 4. Successfully 5. Button are working	PASS	
TC Register 003	Check name field without entering any name"	1. Browser should be installed 2. Enter Valid URL		1. Go to URL https://blucheez.com.bd/ 2. Click Register link 3. Keep name field empty 4. Fill up others field with 5. Click on ""Create Account"" button	1. URL should be open successfully in browser 2. Link should work 3. Field can be selected 4. Field can be selected 5. Button should work	1. Url working properly 2. Link are working Properly 3. Field can Select 4. Successfully 4. Button are working	PASS	
TC Register 004	Invalid name field check with only number	1. Browser should be installed 2. Enter Valid URL	99923456897	1. Go to URL https://blucheez.com.bd/ 2. Click Register link 3. Enter invalid name using 4. Fill up others field with valid info 5. Click on ""Create Account"" button	1. URL should be open successfully in browser 2. Link should work 3. Field can be selected 4. Field can be selected 5. Button should work with a popup error message	1. Url working properly 2. Link are working Properly 3. Field can Select 4. Successfully entering data 5. Button are working and the name field got accepted	FAIL	
TC Register 005	Invalid name field check with special character	1. Browser should be installed	\$\$%^*E33	1. Go to URL https://blucheez.com.bd/	1. URL should be open successfully in browser	1. Url working properly	FAIL	

		2. Enter Valid URL		2. Click Register	2. Link should work properly	2. Link are working Properly		
				3. Enter invalid name using	3. Field can be selected	3. Field can Select		
				4. Fill up others field with	4. Field can be selected	4. Successfully		
				5. Click on ""Create Account"" button	5. Button should work with a popup error message	5. Button are working and the name field got		
TC: Register	006	Invalid name field check with html and php tag.	1. Browser should be installed 2. Enter Valid URL	<php echo "shagor mahmud"; ?>	1. Go to URL https://blucheez.com.bd/	1. URL should be open successfully in browser	1. Url working properly	PASS
					2. Click Register	2. Link should work properly	2. Link are working Properly	
					3. Enter invalid name with html or php tag	3. Field can be selected	3. Field can Select	
					4. Fill up others field with valid info	4. Field can be selected	4. Successfully entering data	
					5. Click on ""Create Account"" button	5. Button should work with a popup error message	5. Button are working and the name field got accepted	
TC Register	007	Valid email field check	1. Browser should be installed 2. Enter Valid URL	xicoka3870@bitvoo.com	1. Go to URL https://blucheez.com.bd/	1. URL should be open successfully in browser	1. Url working properly	PASS
					2. Click Register	2. Link should work properly	2. Link are working Properly	
					3. Enter valid email address.	3. Field can be selected	3. Field can Select	
					4. Fill up others field with valid info.	4. Field can be selected	4. Successfully entering data	
					5. Click on ""Create Account"" button."	5. Button should work Successfully	5. Button are working and the successfully Registered	
TC Register	008	Invalid email address check without '@'	1. Browser should be installed 2. Enter Valid URL	xicoka3870bitvoo.com	1. Go to URL https://blucheez.com.bd/	1. URL should be open successfully in browser	1. Url working properly	PASS
					2. Click Register	2. Link should work properly	2. Link are working Properly	
					3. Enter email address	3. Field can be selected	3. Field can Select	
					4. Fill up others field with valid info.	4. Field can be selected	4. Successfully entering data	
					5. Click on ""Create Account"" button."	5. Button should work with a popup error message	5. Button are working with a error message	
TC Register	009	Invalid email address check without '.com'	1. Browser should be installed 2. Enter Valid URL	xicoka3870bitvoo	1. Go to URL https://blucheez.com.bd/	1. URL should be open successfully in browser	1. Url working properly	PASS
					2. Click Register	2. Link should work properly	2. Link are working Properly	
					3. Enter email address without ".com".	3. Field can be selected	3. Field can Select	
					4. Fill up others field with	4. Field can be selected	4. Successfully	
					5. Click on ""Create Account"" button."	5. Button should work with a popup error message	5. Button are working with a error message	

TC Register	010	Invalid email address check	1. Browser should be installed 2. Enter Valid URL	xicoka38 70bit voo	1. Go to URL https://blucheez.com.bd/	1. URL should be open successfully in browser	1. Url working properly	PASS	
					2. Click Register	2. Link should work properly	2. Link are working Properly		
					3. Enter an invalid email	3. Field can be selected	3. Field can Select		
					4. Fill up others field with valid info.	4. Field can be selected	4. Successfully entering data		
					5. Click on ""Create Account"" button."	5. Button should work with a popup error message	5. Button are working with a error message		
TC Register	011	Verify Password field with valid Password	1. Browser should be installed 2. Enter Valid URL	Shagor12 34	1. Go to URL https://blucheez.com.bd/	1. URL should be open successfully in browser	1. Url working properly	PASS	
					2. Click Register	2. Link should work properly	2. Link are working Properly		
					3. Enter valid Password.	3. Field can be selected	3. Field can Select		
					4. Fill up others field with	4. Field can be selected	4. Successfully		
					5. Click on ""Create Account"" button."	5. Button should work Sucessfully	5. Button are working and successfully Registered		

TC Register	012	Verify Password field entering less than 5 charcter	1. Browser should be installed 2. Enter Valid URL	shag	1. Go to URL https://blucheez.com.bd/ 2. Click Register 3. Enter Password of less than 8 character. 4. Fill up others field with valid info. 5. Click on ""Create Account"" button."	1. URL should be open successfully in browser 2. Link should work properly 3. Field can be selected 4. Field can be selected 5. Button should work with a popup error message	1. Url working properly 2. Link are working Properly 3. Field can Select 4. Successfully 5. Button are working with proper error message.	PASS	
TC Register	012	Invalid email address checkVerify Password field without entering any letter	1. Browser should be installed 2. Enter Valid URL		1. Go to URL https://blucheez.com.bd/ 2. Click Register 3. Enter Password of less than 8 character. 4. Fill up others field with valid info. 5. Click on ""Create Account"" button."	1. URL should be open successfully in browser 2. Link should work properly 3. Field can be selected 4. Field can be selected 5. Button should work with a popup error message	1. Url working properly 2. Link are working Properly 3. Field can Select 4. Successfully 5. Button are working with proper error message.	PASS	
TC Register	013	Verify Password field without entering any symbol	1. Browser should be installed 2. Enter Valid URL	xicoka3870@bitvoo.com	1. Go to URL https://blucheez.com.bd/ 2. Click Register 3. Enter Password without any number or symbol. 4. Fill up others field with valid info. 5. Click on ""Create Account"" button."	1. URL should be open successfully in browser 2. Link should work properly 3. Field can be selected 4. Field can be selected 5. Button should work successfully	1. Url working properly 2. Link are working Properly 3. Field can Select 4. Successfully 5. Button are working with proper error message.	FAIL	
TC Register	014	Verify OTP	1. Browser should be installed 2. Enter Valid URL		1. Go to URL https://blucheez.com.bd/ 2. Click Register 3. Fill up all field with valid info. 4. Click on ""Create Account"" button. 5. Enter OTP code."	1. URL should be open successfully in browser 2. Link should work properly 3. Field can be selected 4. Button should work 5. OTP should passed	1. Url working properly 2. Link are working Properly 3. Field can Select 4. Successfully 5. there was no OTP need	FAIL	
TC Register	015	Verify to get registered with the same email address previously used for the registration.	1. Browser should be installed 2. Enter Valid URL	xicoka3870@bitvoo.com	1. Go to URL https://blucheez.com.bd/ 2. Click Register 3. Enter same email address previously used for the registration. 4. Fill up others field with valid info. 5. Click on ""Create Account"" button."	1. URL should be open successfully in browser 2. Link should work properly 3. Field can be selected 4. Field can be selected 5. Button should work with a popup error message	1. Url working properly 2. Link are working Properly 3. Field can Select 4. Successfully 5. Button are working with proper error message.	PASS	

Remarks:

Reference: Test Case 001



PLEASE ADJUST THE FOLLOWING:

- Email can't be blank
- Password can't be blank

First Name

Last Name

Email *

⚠ Email can't be blank.


Password *

⚠ Password can't be blank.

Register

Fig 9: Register TC001

Reference: Test Case 003



PLEASE ADJUST THE FOLLOWING:

- Email can't be blank
- Password can't be blank

First Name

Last Name

Email *

⚠ Email can't be blank.


Password *

⚠ Password can't be blank.

Register

Fig 10: Register TC 003

Reference: Test Case 005



MY ACCOUNT

Dashboard

Addresses (1)

Wishlist (0)

Logout

Hello \$%*&#E33 \$%*&#E33 (not \$%*&#E33 \$%*&#E33? Log out)

Order History

Special character inserted
Invalid type name

✓ MAKE YOUR FIRST ORDER You haven't placed any orders yet.

Fig 11 : Register TC 005

Reference: Test Case 006

First Name

Last Name

Fig 12: Register TC 006

Reference: Test Case 010

First Name

Last Name

Email *

Invalid Email

Fig 13: Register TC 010

Reference: Test Case 011



PLEASE ADJUST THE FOLLOWING:

- Email can't be blank
- Password can't be blank

First Name

Last Name

Email *

▲ Email can't be blank.

Fig 14: Register TC 011

Reference: Test Case 012

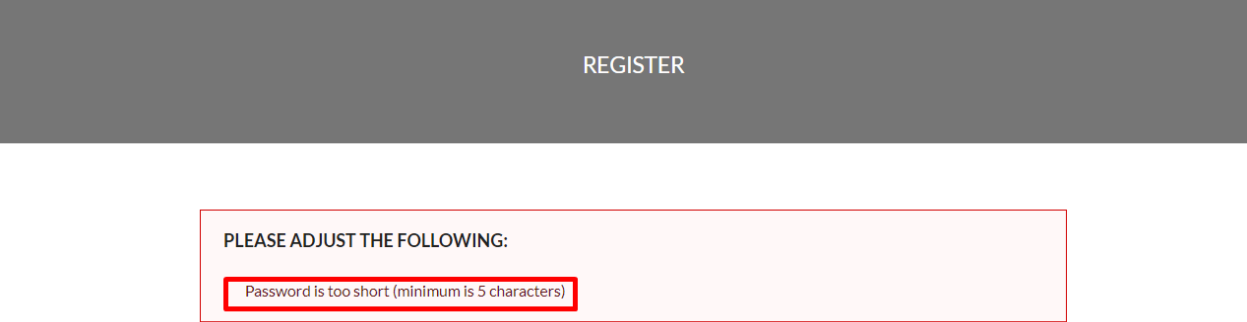


Fig 15: Register TC 012

Reference: Test Case 015

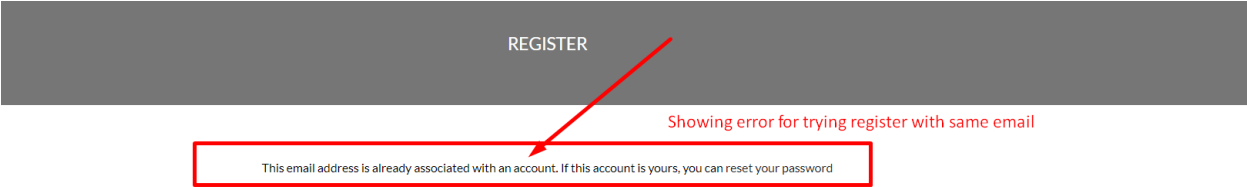


Fig 16: Register TC 015

Reference: Test Case 016



Fig 17: Register TC 017

Test module name: Search

Product Name	https://blucheez.com.bd/	TC Start Date	16/10/2022	TC Execution Start Date	14/11/2022
Module Name	Search	TC End Date	18/10/2022	TC Execution End Date	15/11/2022
		Test Case Developed By	Shagor Mahmud Shakil	Browser (Tested)	Yes
Developer Name (TL)	Mainuddin	Test Case Reviewed By	Rakib Hasan	App (Tested)	No

Test Case ID	Test Case Description	Pre-Condition	Test Data	Step Description	Expected Result	Actual Result	Status	Remarks
TC001: Search	Verify that search field accepts alphabets, numbers or symbols.	Should set up a browser. Internet access should be available.	%3	1. Open browser	Browser should be opened	Browser are opened successfully	PAS S	
				2. Go to URL, https://blucheez.com.bd/	website should be opened	Website are opened in browser perfectly		
				3. Click on search field.	Search field should accept alphabets, numbers or symbols.	Got the result for searching special character		
TC002: Search	Make sure the search should be carried out after you enter your search terms and click the search icon	Should set up a browser. Internet access should be available.	Search products	1. Open browser	Browser should be opened	Browser are opened successfully	PAS S	
				2. Go to URL, https://blucheez.com.bd/	website should be opened	Website are opened in browser perfectly		
				3. Type search term into the search window, then click the search symbol	The user-provided search text should guide the conduct of the search	search icon are functionable		
TC003: Search	Verify that the search results should be as per the search query.	Should set up a browser. Internet access should be available.	Clothing	1. Open browser	Browser should be opened	Browser are opened successfully	PAS S	
				2. Go to URL, https://blucheez.com.bd/	website should be opened	Website are opened in browser perfectly		
				3. Type username and password in	user must be allowed to enter their login and password	entered the user name and password successfully		
				4. Log in by clicking the login button	User should be logged in After logging in, the home page should be displayed,	successfully logged in		
				5. Type search term into the search window, then click the search symbol	The user-provided search text should guide the conduct of the search	Got the result for searching		
TC004: Search	Make sure the user can search using the product name, brand name, or specification	Should set up a browser. Internet access should be available	punjabi	1. Open browser	Browser should be opened	Browser are opened successfully	PAS S	
				2. Go to URL, https://blucheez.com.bd/	website should be opened	Website are opened in browser perfectly		
				3. Type username and password in	user must be allowed to enter their login and password	entered the user name and password successfully		

				4. Log in by clicking the login button	User should be logged in and Search functionality is present on home page.	successfully logged in		
				5. Type search term into the search window, then click the search symbol	The user should have the option to search for products based on their names, brands, or specifications	Got the result for searching		
TC005: Search	Verify that filter should be present for filtering the search results bases on Brand, Price, Reviews or Ratings.	Should set up a browser. Internet access should be available. The user must be signed in	1200	1. Open browser	Browser should be opened	Browser are opened successfully	FAIL L	
				2. Go to URL, https://blucreez.com.bd/	website should be opened	Websites are opened in browser perfectly		
				3. Type username and password in	user must be allowed to enter their login and password	entered the user name and password successfully		
				4. Log in by clicking the login button	User should be logged in. After logging in, the home page should be displayed,	successfully logged in		
				5. Type search term into the search window, then click the search symbol	The user-provided search text should guide the conduct of the search	Got the result for searching		
TC006: Search	Make sure that sorting options should be present on search results page.	Should set up a browser. Internet access should be available		1. Open browser	Browser should be opened	Browser are opened successfully	FAIL L	
				2. Go to URL, https://blucreez.com.bd/	website should be opened	Websites are opened in browser perfectly		
				3. Type username and password in	user must be allowed to enter their login and password	entered the user name and password successfully		
				4. Log in by clicking the login button	User should be logged in. After logging in, the home page should be displayed,	successfully logged in		
				5. Type search term into the search window, then click the search symbol	The user-provided search text should guide the conduct of the search	Got the result for searching		
TC007: Search	Verify that the number of search results displayed on one page.	Should set up a browser. Internet access should be available	Search products	1. Open browser	Browser should be opened	Browser are opened successfully		
				2. Go to URL, https://blucreez.com.bd/	website should be opened	Websites are opened in browser perfectly		
				3. Type username and password in	user must be allowed to enter their login and password	entered the user name and password successfully		

				4. Log in by clicking the login button	User should be logged in. After logging in, the home page should be displayed,	successfully logged in	PAS S
				5. Type search term into the search window, then click the search symbol	The user-provided search text should guide the conduct of the search	Got the result for searching	
TC008: Search	Make sure that there should be navigation button (Next and Previous) for navigation to pages.	Should set up a browser. Internet access should be available	Search products	1. Open browser	Browser should be opened	Browser are opened successfully	PAS S
				2. Go to URL, https://blucreez.com.bd/	website should be opened	Website are opened in browser perfectly	
				3. Type username and password in	user must be allowed to enter their login and password	entered the user name and password successfully	
				4. Log in by clicking the login button	User should be logged in. After logging in, the home page should be displayed,	successfully logged in	
				5. Type search term into the search window, then click the search symbol	Search should be performed according to text provided by user and navigation button should be present on search result page.	Got the result for searching	
TC009: Search	Verify that user should be perform search in different categories for example, clothing	Should set up a browser. Internet access should be available	Search products	1. Open browser	Browser should be opened	Browser are opened successfully	PAS S
				2. Go to URL, https://blucreez.com.bd/	website should be opened	Website are opened in browser perfectly	
				3. Type username and password in	user should be able to input username and password	entered the user name and password successfully	
				4. Log in by clicking the login button	Home page should be displayed after login and user name should be displayed on home page	successfully logged in	
				5. Type search term into the search window, then click the search symbol	Search should be performed in different categories such as Punjabi , T-shirts .	Got the result for searching	

Remarks

Reference: Search TC 001

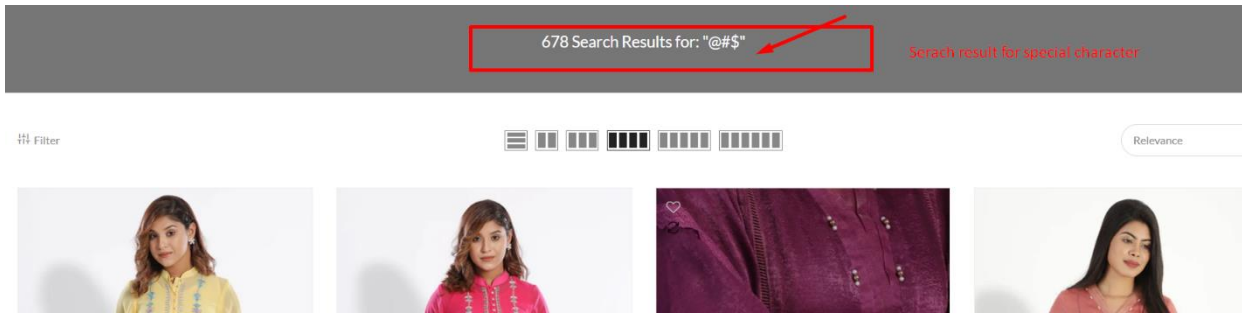


Fig 18: Search TC 001

Reference: Search TC 003

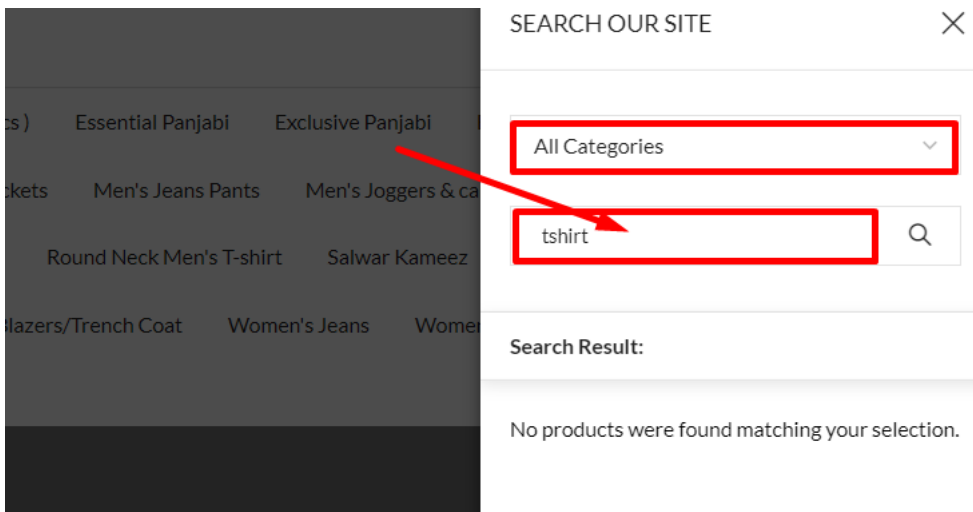


Fig 19: Search TC 003

Reference: Search TC 004

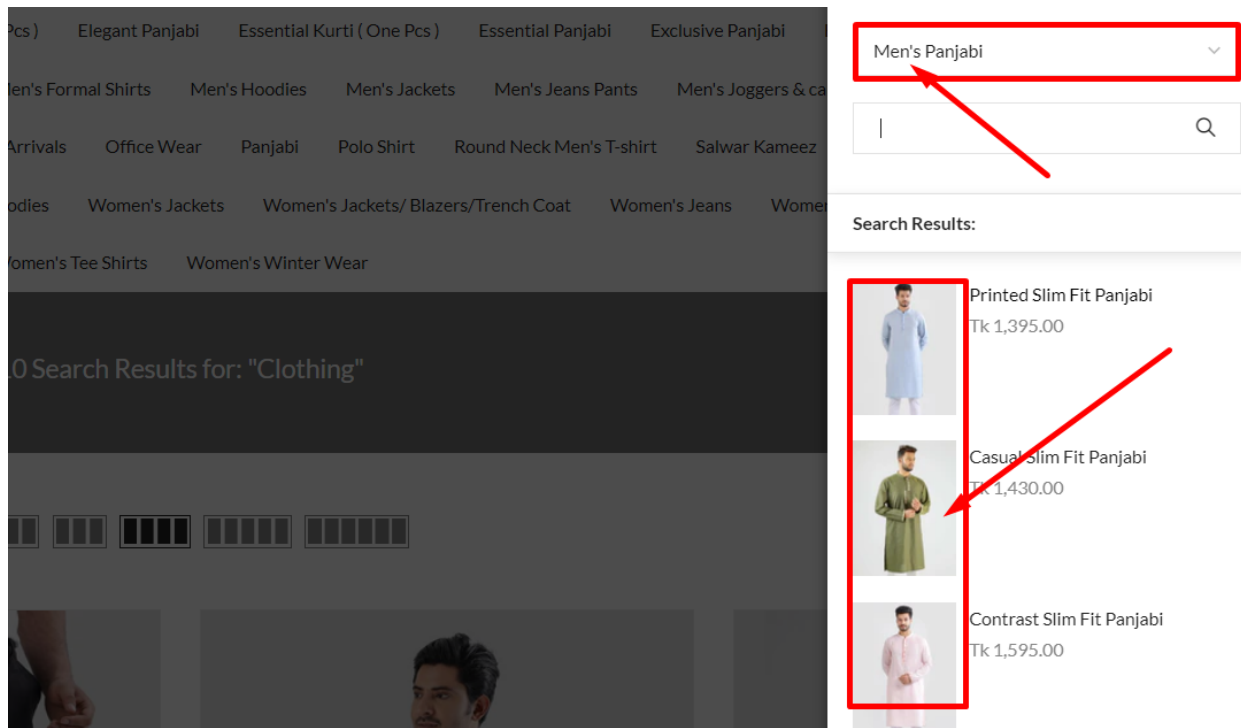


Fig 20: Search TC 004

7.5.2 Integration Testing

Test module name: Login

Product Name	https://blucheez.com.bd/	TC Start Date	19/10/2022	TC Execution Start Date	16/11/2022
Module Name	Login	TC End Date	20/10/2022	TC Execution End Date	17/11/2022
		Test Case Developed By	Shagor Mahmud Shakil	Browser (Tested)	Yes
Developer Name (TL)	Mainuddin	Test Case Reviewed By	Rakib Hasan	App (Tested)	No

Test Case	Test Case	Precondition	Test Data	Step Description	Expected Result	Actual Result	Status	Remarks
TC001: Login	valid email/username field check	User should be registered in the system.	tihilw83846@bitvoo.com	1. Go to URL, https://bluccheez.com.bd/	URL should navigate to the required website	Url working properly	PASS	
				2. Click "Sign in" link	Sign Link should work	Link are working		
				3. Enter valid username/email	Field can be selected	Field are selected		
				4. Click on "Continue" button	Button should work	Button functionality are working		
TC002: Login	Empty email/username field check	User should be registered in the system.		1. Go to URL, https://bluccheez.com.bd/	URL should navigate to the required website	Url working properly	PASS	
				2. Click "Sign in" link	Sign Link should work	Link are working		
				3. Keep empty the field	Field can be selected	Field are selected		
				4. Click on "Continue" button	Button should work with popup error	Button functionality are working		
TC003: Login	Check login functionality with invalid email id	User should be registered in the system.	tihilw83846@bitvoo	1. Go to URL, https://bluccheez.com.bd/	URL should navigate to the required website	Url working properly	PASS	
				2. Click "Sign in" link	Sign Link should work	Link are working		
				3. enter invalid username/email	Field can be selected	Field are selected		
				4. Click on "Continue" button	Button should work with popup error	Button functionality are working		
TC004: Login	valid password field check	User should be registered in the system.	itsempty	1. Go to URL, https://bluccheez.com.bd/	URL should navigate to the required website	Url working properly	PASS	
				2. Click "Sign in" link	Sign Link should work	Link are working		
				3. Enter valid username/email	Field can be selected	Field are selected		
				4. Click on "Continue" button	Button should work with popup error message	Button functionality are working		
				5. Enter valid password	Field can be selected	Field are selected		
				6. Click on "Sign in" button	Button should work	Button functionalities are working		
TC005: Login	Empty password field check	User should be registered in the system.		1. Go to URL, https://bluccheez.com.bd/	URL should navigate to the required website	Url working properly	PASS	
				2. Click "Sign in" link	Sign Link should work	Link are working		
				3. Enter valid username/email	Field can be selected	Field are selected		
				4. Click on "Continue" button	Button should work with popup error	Button functionality are working		
				5. Keep password field empty	Field can be selected	Field are selected		
				6. Click on "Sign in" button	Button should work with popup error	Button functionalities are working		
TC006: Login	Check login functionality with invalid password	User should be registered in the system.	newpassword	1. Go to URL, https://bluccheez.com.bd/	URL should navigate to the required website	Url working properly	PASS	
				2. Click "Sign in" link	Sign Link should work	Link are working		
				3. Enter valid username/email	Field can be selected	Field are selected		
				4. Click on "Continue" button	Button should work with popup error message	Button functionality are working		
				5. Keep password field empty	Field can be selected	Field are selected		
				6. Click on "Sign in" button	Button should work with popup error	Button functionalities are working		

Remarks:

Reference: Login TC 001

LOGIN

Email * Valid Email

tihw83846@bitvoo.com

Password * Valid Password

.....

Forgot your password?

New customer? Create your account

Fig 21: Login TC 001

Reference: Login TC 002

LOGIN

PLEASE ADJUST THE FOLLOWING:

- Incorrect email or password.

Email *

Password *

Forgot your password?

New customer? Create your account

Fig 22: Login TC 002

Reference: Login TC 003



Fig 23: Login TC 003

Reference: Login TC 004

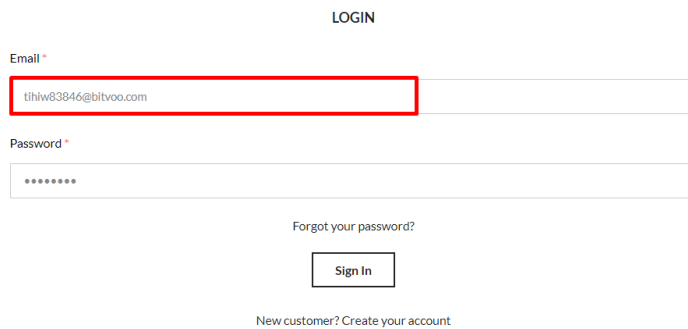


Fig 24: Login TC 004

Reference: Login TC 006

LOGIN

Email * Valid Email

Password * Invalid Password

Forgot your password?

New customer? Create your account

Fig 25: Login TC 006

Test module name: Product Details

Product Name	https://blucheed.com.bd/	TC Start Date	20/10/2022	TC Execution Start Date	18/11/2022
Module Name	Product Details	TC End Date	21/10/2022	TC Execution End Date	19/11/2022
		Test Case Developed By	Shagor Mahmud Shakil	Browser (Tested)	Yes
Developer Name (TL)	Mainuddin	Test Case Reviewed By	Rakib Hasan	App (Tested)	No

Test Case ID	Test Case	Pre-Condition	Test Data	Test Step	Expected Result	Actual Result	Status	Remarks
TC001:	Verify that product image showing correctly	Browser should be installed	Clothing	1. Open browser	Browser should be opened	Successfully Browser opened and showing the images correctly on product details page	PASS	
				2. Go to URL https://blucheed.com.bd/	website should be opened			
				3. Click on a product displayed on home page.	the images of product should be displayed correctly.			
TC002 : Product Details	Verify that price of product is displayed.	Browser should be installed Internet connection should be present User should be logged in		Open browser	Browser should be opened	Successfully Browser opened and showing the images correctly on product details page and the price of the product are showing	PASS	
				Go to URL https://blucheed.com.bd/	website should be opened			
TC003: Product Details	Verify that product reviews are mentioned.	Browser should be installed Internet connection should be present User should be logged in		Open browser	The price of product should be displayed.	Successfully Browser opened and showing the images correctly on product details page and the price of the product are showing	PASS	
				Go to URL https://blucheed.com.bd/	website should be opened			
				Type username and password in	user must be allowed to enter their login and password			
				log in by clicking the login button	After logging in, the home page should be displayed along with the user's name			
					The reviews about the product should be displayed.			

TC004: Prod uct Deta ils	Verify that product specificatio ns are displayed.	Browser should be installed Internet connection should be present User should be logged in		Open browser	Browser should be opened	Successfully Browser opened and showing the images correctly on product details page and the product specification are showing perfectly	PASS	
				Go to URL, https://blucheed.com.bd/	website should be opened			
				Type username and password in	user must be allowed to enter their login and password			
				log in by clicking the login button	After logging in, the home page should be displayed along with the user's name			
				Click on a product displayed on home page.	Product specifications should be displayed.			
TC005: Prod uct Deta ils	Verify that information about IN- Stock/Out- Stock are displayed.	Browser should be installed Internet connection should be present User should be logged in		Open browser	Browser should be opened	Successfully Browser opened and showing the images correctly on product details page and the product Stockout are showing perfectly	PASS	
				Go to URL https://blucheed.com.bd/	website should be opened			
				Type username and password in	user must be allowed to enter their login and password			
				log in by clicking the login button	After logging in, the home page should be displayed along with the user's name			
				Click on a product displayed on home page.	Stock information should be displayed.			
TC006: Prod uct Deta ils	Verify that seller ratings should be displayed.	Browser should be installed Internet connection should be present User should be logged in		Open browser	Browser should be opened	Successfully Browser opened and showing the images correctly on product details page and the product seller rating are sowing perfectly	PASS	
				Go to URL https://blucheed.com.bd/	website should be opened			
				Type username and password in	user must be allowed to enter their login and password			
				log in by clicking the login button	After logging in, the home page should be displayed along with the user's name. and alignments should be proper.			
				Click on a product displayed on home page.	The seller ratings should be displayed.			
TC007: Prod uct Deta ils	Verify that all the variations of product are displayed.	Browser should be installed Internet connection should be present User should be logged in		Open browser	Browser should be opened	Successfully Browser opened and showing the images correctly on product details page and the product Variation are sowing perfectly	PASS	
				Go to URL https://blucheed.com.bd/	website should be opened			
				Type username and password in	user must be allowed to enter their login and password			
				log in by clicking the login button	After logging in, the home page should be displayed along with the user's name. and alignments should be proper.			
				Click on any product displayed on home page	User should be redirected to product specification page.			
				Click on a product displayed on home page.	All the variations of product should be displayed.			
TC008: Prod uct Deta ils	Verify that shipping information about product are displayed.	Browser should be installed Internet connection should be present User should be logged in		Open browser	Browser should be opened	Successfully Browser opened and showing the images correctly on product details page and the shipping are sowing perfectly	PASS	
				Go to URL https://blucheed.com.bd/	website should be opened			
				Type username and password in	user must be allowed to enter their login and password			
				log in by clicking the login button	After logging in, the home page should be displayed along with the user's name. and alignments should be proper.			
				Click on any product displayed on home page	User should be redirected to product specification page.			

			Click on a product displayed on home page.	the images of product should be displayed correctly.			
TC009: Product Details	Verify that payment options are mentioned on product page.	Browser should be installed Internet connection should be present User should be logged in	Open browser	The shipping information should be displayed.	Successfully Browser opened and showing the images correctly on product details page and the Payments are sowing perfectly	PASS	
			Go to URL, https://blucheed.com.bd/	website should be opened			
			Type username and password in	user must be allowed to enter their login and password			
			log in by clicking the login button	After logging in, the home page should be displayed along with the user's name. and alignments should be proper.			
			Click on user name displayed on home page.	User profile should be displayed.			
			Click on a product displayed on home page.	The payment options should be displayed.			
TC0010: Product Details	Verify that product suggestions related to product should be displayed.	Browser should be installed Internet connection should be present User should be logged in	Open browser	Browser should be opened	Successfully Browser opened and showing the images correctly on product details page and the Product suggestion are sowing perfectly	PASS	
			Go to URL, https://blucheed.com.bd/	website should be opened			
			Type username and password in	user must be allowed to enter their login and password			
			log in by clicking the login button	After logging in, the home page should be displayed along with the user's name.			
			Click on a product displayed on home page.	The product suggestions should be displayed.			

Remarks:

Reference: PD TC001



Fig 25: PD TC001

Reference: PD TC002, TC003,TC004,TC005

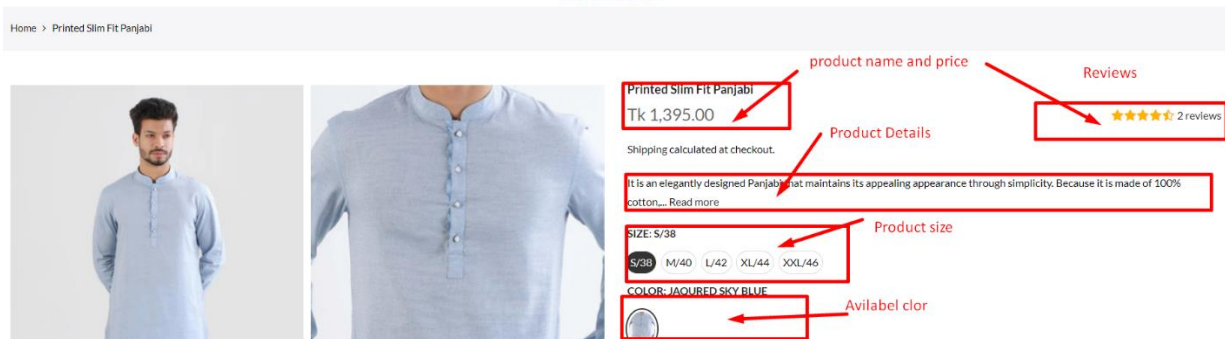


Fig 26: PD TC002, TC003,TC004,TC005

Reference: PD TC008

An estimated delivery time will be provided to you once your order is placed. Delivery times are estimates and commence from the date of shipping, rather than the date of order. Delivery times are to be used as a guide only and are subject to the acceptance and approval of your order.

Unless there are exceptional circumstances, we make every effort to fulfill your order within 3-7 business days of the date of your order. Business day mean Saturday to Thursday, except holidays.

Fig 27: PD TC008

Reference: PD TC009

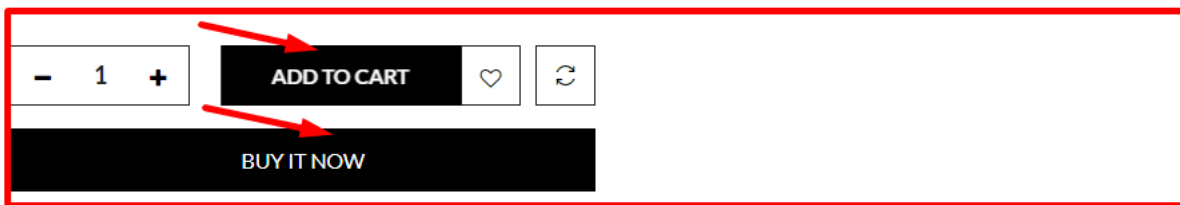


Fig 28: PD TC009

7.5.3 System Testing

Test module name: Cart Page

Product Name	https://blucheez.com.bd/	TC Start Date	21/10/2022	TC Execution Start Date	20/11/2022
Module Name	Cart Page	TC End Date	22/10/2022	TC Execution End Date	21/11/2022
		Test Case Developed By	Shagor Mahmud Shakil	Browser (Tested)	Yes
Developer Name (TL)	Mainuddin	Test Case Reviewed By	Rakib Hasan	App (Tested)	No

Test Case ID	Test Case	Pre-Condition	Test Data	Test Step	Expected Result	Actual Result	Status	Remarks
TC001: Cart	Verify that when user clicks on add to cart, the product should be added to cart.	Browser should be installed Internet connection should be present		1. Open browser 2. Open url 3. Type username and password in 4. log in by clicking the login button 5. Click on any product displayed on home page 6. Click on add to cart for the product.	Browser should be opened Blucheez website should be opened user must be allowed to enter their login and password User should be logged in After logging in, the home page should be displayed, The product page should be displayed. The product should be added to cart.	Website are opened in browser successfully. After clicking Add to Cart Successfully Producted added.	PASS	
TC002: Cart	Verify that user should be able to continue shopping after adding items to cart.	Browser should be installed Internet connection should be present User should be logged in		1. Open browser 2. Open url 3. Type username and password in 4. log in by clicking the login button 5. Click on any product displayed on home page 6. Click on add to cart for the product.	Browser should be opened Blucheez website should be opened user must be allowed to enter their login and password User should be logged in After logging in, the home page should be displayed, The product page should be displayed. The product should be added to cart and user can continue shopping.	Website are opened in browser successfully. After clicking Add to Cart Successfully Producted added. successful to continue shopping after adding.	PASS	
TC003: Cart	Verify that item quantity should be increased if user adds same item in cart again.	Browser should be installed Internet connection should be present User should be logged in		1. Open browser 2. Open url 3. Type username and password in 4. log in by clicking the login button 5. Click on any product displayed on home page 6. Click on add to cart for the product. 7. Click on add to cart again for the same product.	Browser should be opened Blucheez website should be opened user must be allowed to enter their login and password User should be logged in After logging in, the home page should be displayed, The product page should be displayed. The product should be added to cart. The item quantity should be increases.	Website are opened in browser successfully. After clicking Add to Cart Successfully Producted added. successful to adding the same product and updated.	PASS	

TC004: Cart	Verify that total amount of all items should be displayed to user.	Browser should be installed Internet connection should be present User should be logged in	1. Open browser	Browser should be opened	Website are opened in browser successfully. After clicking Add to Cart Successfully Product added. successful to adding the same product and updated. Total amount are showing	PASS	
			2. Open url	Blucezz website should be opened			
			3. Type username and password in	user must be allowed to enter their login and password			
			4. log in by clicking the login button	User should be logged in After logging in, the home page should be displayed,			
			5. Click on any product displayed on home page	The product page should be displayed.			
			6. Click on add to cart for the product.	The product should be added to cart.			
			7. Click on go to cart button.	The total amount of all items in cart should be displayed.			
TC005: Cart	Verify that the amount displayed to user should include the taxes and shipping charges as per location.	Browser should be installed Internet connection should be present User should be logged in	1. Open browser	Browser should be opened	Website are opened in browser successfully. After clicking Add to Cart Successfully Product added. successful to adding the same product . There are location charges are available	PASS	
			2. Open url	Blucezz website should be opened			
			3. Type username and password in	user must be allowed to enter their login and password			
			4. log in by clicking the login button	User should be logged in After logging in, the home page should be displayed,			
			5. Click on any product displayed on home page	The product page should be displayed.			
			6. Click on add to cart for the product.	The product should be added to cart.			
			7. Click on go to cart button.	The total amount should include taxes and shipping charges.			
TC006: Cart	Verify that user should not be able to add items in cart beyond a certain limit.	Browser should be installed Internet connection should be present User should be logged in	1. Open browser	Browser should be opened	Website are opened in browser successfully. After clicking Add to Cart Successfully Product added. successful to adding the same product . There is a limit for product	PASS	
			2. Open url	Blucezz website should be opened			
			3. Type username and password in	user must be allowed to enter their login and password			
			4. log in by clicking the login button	User should be logged in After logging in, the home page should be displayed,			
			5. Click on any product displayed on home page	The product page should be displayed.			

			6. Click on add to cart for the product for many times.	The user should not be allowed to add items to cart beyond a certain limit.			
TC007: Cart	Verify that when user clicks on remove from cart button the item should be removed from cart.	Browser should be installed Internet connection should be present User should be logged in	1. Open browser 2. Open url 3. Type username and password in 4. log in by clicking the login button 5. Click on any product displayed on home page 6. Click on any product displayed on home page 7. Click on add to cart for the product. 8. Click on remove from cart button.	Browser should be opened Blucezz website should be opened user must be allowed to enter their login and password User should be logged in After logging in, the home page should be displayed, User should be redirected to product specification page. The product page should be displayed. The product should be added to cart. The item should be removed from cart.	Website are opened in browser successfully. After clicking Add to Cart Successfully Producted added. successful to adding the same product . The item is removed from the cart.		PASS
TC008: Cart	Verify that user should be able to apply coupons or vouchers at checkout from cart.	Browser should be installed Internet connection should be present User should be logged in	1. Open browser 2. Open url 3. Enter username and password 4. Click on login button 5. Click on any product displayed on home page 6. Click on any product displayed on home page 7. Click on add to cart for the product. 8. Click on go to cart button.	Browser should be opened Blucezz website should be opened user must be allowed to enter their login and password User should be logged in After logging in, the home page should be displayed, User should be redirected to product specification page. The product page should be displayed. The product should be added to cart. User should be able to apply coupons or vouchers.	Website are opened in browser successfully. After clicking Add to Cart Successfully Producted added. successful to adding the same product . The vouchers are available .		PASS
TC009: Cart	Verify that items in cart should be present if user logs out and logs in again.	Browser should be installed Internet connection should be present User should be logged in	1. Open browser 2. Open url 3. Type username and password in 4. log in by clicking the login button 5. Click on user name displayed on home page. 6. Click on any product displayed on home page 7. Click on add to cart for the product. 8. Click on Logut button 9. Login again with same user id password	Browser should be opened Blucezz website should be opened user must be allowed to enter their login and password User should be logged in After logging in, the home page should be displayed, User profile should be displayed. The product page should be displayed. The product should be added to cart. User is logged out. The user should be logged in and the items should be present in cart.	Website are opened in browser successfully. After clicking Add to Cart Successfully Producted added. successful to adding the same product . The items are available after logout and then login process.		PASS

Remarks

Reference: Cart TC001


SHOPPING CART			
PRODUCT	PRICE	QUANTITY	TOTAL
 <p>Zardosi Work Asymmetric Kurti Size: XS Color: Hot Pink</p>	Tk 2,995.00	1 +	Tk 2,995.00

Fig 29: Cart TC001

Reference: Cart TC002

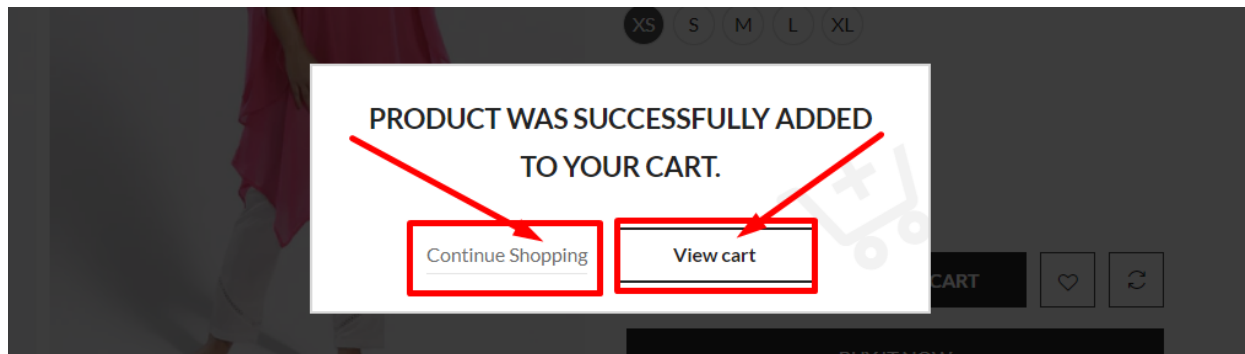


Fig 30: Cart TC002

Reference: Cart TC003



SHOPPING CART			
PRODUCT	PRICE	QUANTITY	TOTAL
 <p>Zardosi Work Asymmetric Kurti Size: XS Color: Hot Pink</p>	Tk 2,995.00	Quantity Updated - 3 +	Tk 8,985.00

Fig 31: Cart TC003

Reference: Cart TC004

PRODUCT	PRICE	QUANTITY	TOTAL
 <p>Zardosi Work Asymmetric Kurti Size: XS Color: Hot Pink</p>	Tk 2,995.00	- 3 +	Tk 8,985.00


Add Order Note
How can we help you?

SUBTOTAL: TK 8,985.00

CHECK OUT

Fig 32: Cart TC004

Reference: Cart TC005

PRODUCT	PRICE	QUANTITY	TOTAL
 <p>Zardosi Work Asymmetric Kurti Size: XS Color: Hot Pink</p>	Tk 2,995.00	- 4 +	Tk 11,980.00

Add Order Note
How can we help you?

SUBTOTAL: TK 11,980.00

CHECK OUT

⚠ Not enough items available. Only 4 left.

Fig 33: Cart TC005

Test Module: Checkout and Payments

Product Name	https://blucheed.com.bd/	TC Start Date	24/10/2022	TC Execution Start Date	22/11/2022
Module Name	Checkout and Payments	TC End Date	26/10/2022	TC Execution End Date	23/11/2022
		Test Case Developed By	Shagor Mahmud Shakil	Browser (Tested)	YES
Developer Name (TL)	Mainuddin	Test Case Reviewed By	Rakib Rahman	App (Tested)	

Test Case ID	Test Case	Pre-Condition	Test Data	Test Step	Expected Result	Actual Result	Status	Remarks
TC001: Check out and payments	Verify that payments options applicable for the order should be displayed at checkout.	Browser must be launched webpage must be opened The user need to log in		1. Browser must be launched 2. webpage must be opened 3.Type username and password in 4. log in by clicking the login button 5. Click on any product displayed on home page 6. Click on add to cart for the product. 7.Click on Checkout button.	Browser should be opened website should be opened user must be allowed to enter their login and password User should be logged in ,page should be displayed, After logging in, the home page should be displayed. The product page should be displayed. The product should be added to cart. The checkout page should be displayed with payments options.	Website are successfuuly opened in web browser. Payment information are available in the page.	PASS	
TC002: Check out and payments	Verify that delivery details of items should be displayed at checkout.	Browser must be launched webpage must be opened The user need to log in		1. Browser must be launched 2. webpage must be opened 3.Type username and password in 4. log in by clicking the login button 5. Click on any product displayed on home page 6. Click on add to cart for the product. 7.Click on Checkout button.	Browser should be opened website should be opened user must be allowed to enter their login and password User should be logged in ,page should be displayed, After logging in, the home page should be displayed. The product page should be displayed. The product should be added to cart. The checkout page should be displayed with delivery details.	Website are successfuuly opened in web browser. Payment information are available in the page and the delivery details are also aailable in the page	PASS	
TC003: Check out and payments	Verify that user should get order details by message or email.	Browser must be launched webpage must be opened The user need to log in		1. Browser must be launched 2. webpage must be opened 3.Type username and password in 4. log in by clicking the login button 5. Click on any product displayed on home	Browser should be opened website should be opened user must be allowed to enter their login and password User should be logged in ,page should be displayed, After logging in, the home page should be displayed. The product page should be displayed.	Website are successfuuly opened in web browser. Payment information are available in the page. Get an order details of my product via	PASS	

				page		mmessage.		
				6. Click on add to cart for the product.	The product should be added to cart.			
				7. Click on Checkout button.	The checkout page should be displayed with payments options.			
				8. Make payment for the order.	User should get order details by message or email.			
TC004: Check out and payments	Verify that user should be directed to home page after checkout.	Browser must be launched webpage must be opened The user need to log in		1. Browser must be launched	Browser should be opened			
				2. webpage must be opened	website should be opened			
				3.Type username and password in	user must be allowed to enter their login and password	Website are		
				4. log in by clicking the login button	User should be logged in ,page should be displayed, After logging in, the home page should be displayed.	successfuuly opened in web browser. Payment information are available in the page.		
				5. Click on any product displayed on home page	The product page should be displayed.	Get an order details of my product via mmessage. User are redirected to the home page succesfully.		
				6. Click on add to cart for the product.	The product should be added to cart.			
				7. Click on Checkout button.	The checkout page should be displayed with payments options.			
				8. Make payment for the order.	Ther order should be confirmed and user should be directed to home page.			
TC005: Check out and payments	Verify that user should be displayed payment options such as Credit Card, Debit Card, Net Banking etc.	Browser must be launched webpage must be opened The user need to log in		1. Browser must be launched	Browser should be opened			
				2. webpage must be opened	website should be opened			
				3.Type username and password in	user must be allowed to enter their login and password	Website are successfuuly opened in web browser.		
							PASS	

				4. Login by clicking login button	User should be logged in After logging in, the home page should be displayed.	Payment information are available in the page. There are no option are available for Checkout and payments option such as Debit card, Credit Card . There are payments options are available are for net banking like BKASH	PASS		
				5. Click on any product displayed on home page	The product page should be displayed.				
				6. Click on add to cart for the product.	The product should be added to cart.				
				7. Click on Checkout button.	The checkout page should be displayed with payments options such as debit card, credit card, netbanking etc.				
TC006: Check out and payments	Verify that if user is not registered then payment should be done as Guest user.	Browser must be launched webpage must be opened The user need to log in		1. Browser must be launched	Browser should be opened	Website are successfully opened in web browser. Payment information are available in the page. User can also choose any of the product and can done payments like a guest user.	PASS		
				2. webpage must be opened	website should be opened				
				3.Type username and password in	user must be allowed to enter their login and password				
				4. log in by clicking the login button	User should be logged in ,page should be displayed, After logging in, the home page should be displayed.				
				5. Click on Checkout button.	The checkout page should be displayed with payments options.				
				6. Make payment for the order.	The payment should be done as guest user.				
TC007: Check out and payments	Verify that user should be provided with an option to save the payment method.	Browser must be launched webpage must be opened The user need to log in		1. Browser must be launched	Browser should be opened	Website are successfully opened in web browser. Payment information are available in the page. There are no option available to save the the payments method or details.	FAIL		
				2. webpage must be opened	website should be opened				
				3.Type username and password in	user must be allowed to enter their login and password				
				4. log in by clicking the login button	User should be logged in ,page should be displayed, After logging in, the home page should be displayed.				
				5. Click on any product displayed on home page	User should be redirected to product specification page.				
				6. Click on any product displayed on home page	The product page should be displayed.				
				7. Click on add to cart for the product.	The product should be added to cart.				
				8. Click on Checkout button.	The checkout page should be displayed with payments options.				
				9. Make payment for the order.	the user should be able to save payment method for future orders.				
TC008: Check out and payments	Verify that session should be timed out if payment is not done for a certain time.	Browser must be launched webpage must be opened The user need to log in		1. Browser must be launched	Browser should be opened	Website are successfully opened in web browser. Payment information are available in the page. There are no option available to save the the payments method or	FAIL		
				2.	website should be opened				
				3. Enter uername and password	u				
					Home page should be displayed after logi				
				5. Click on any product displayed on home page	User should be redirected to product specification page.				
				6. Click on any product displayed on home	The product page should be displayed.				

			page		details. There are no session for payment option that will timeout.	
			7. Click on add to cart for the product.	The product should be added to cart.		
			8. Click on Checkout button.	The checkout page should be displayed with payments options.		
			9. Select payment method and click on pay.	Payment page should be displayed.		
			10. Stay on payment page for long time without any activity.	The payment session should be timedout.		
TC009: Check out and payments	Verify that user details should be displayed on payment page for registered customers.	Browser must be launched webpage must be opened The user need to log in	1. Browser must be launched	Browser should be opened		
			2. webpage must be opened	website should be opened		
			3.Type username and password in	user must be allowed to enter their login and password	Website are successfuuly	

E				4. login by clicking login button	User should be logged in. After logging in, the home page should be displayed.	opened in web browser. Payment information are available in the page.	PASS	
5. Click on user name displayed on home page.	User profile should be displayed.	The registered customers details are available on payment page by default.	6. Click on any product displayed on home page	The product page should be displayed.				
7. Click on add to cart for the product.	The product should be added to cart.							
8. Click on Checkout button.	The checkout page should be displayed with user details.							
TC0010: Check out and payments	Verify that on successful payment email or text message should be delivered to customer along with unique order number.		Browser must be launched webpage must be opened The user need to log in	1. Browser must be launched	Browser should be opened			Website are successfuuly opened in web browser. Payment information are available in the page. Customer get delivered text with product order number.
2. webpage must be opened	website should be opened							
3.Type username and password in	user must be allowed to enter their login and password							
4. log in by clicking the login button	User should be logged in ,page should be displayed, After logging in, the home page should be displayed.							
5. Click on any product displayed on home page	The product page should be displayed.							
6. Click on add to cart for the product.	The product should be added to cart.							
7. Click on Checkout button.	The checkout page should be displayed with payments options.							
8. Make payment.	Order should be confirmed and email or text message should be delivered to customer.							

Remarks

Reference: CP TC001

Contact information Already have an account? [Log in](#)

Email or mobile phone number
skkhan@gmail.com

Email me with news and offers

Shipping address

Country/Region
Bangladesh

First name
Sk king

Last name
khan

Address
Dhanmomdi, Dhaka

City
BD

Postal code
1000

Reference: CP TC005

Payment

All transactions are secure and encrypted.

Cash on Delivery (COD)

bKash

SSL PAYMENT LINK

▶ Enjoy 10% Discount by using your Debit or Credit cards from selected banks.
▶ HOTLINE: 09678-800796
Payment Link:
<https://invoice.sslcommerz.com/invoice-form?&refer=6114E58A22D8C>

Fig 35: CP TC005

Reference: CP TC009

Contact: skkhan@gmail.com Change

Ship to: Dhanmomdj, Dhaka, BD 1000, Bangladesh Change

Shipping method

Inside Dhaka Free

Outside Dhaka Free

[Return to information](#) Continue to payment

Gift card or discount code Apply

Subtotal ₳11,980.00

Shipping Free

Estimated taxes ₳599.00

Total BDT ₳12,579.00

Fig 36: CP TC009

7.5.4 .Acceptance Testing

Test Module: Homepage

Product Name	https://blucheez.com.bd/	TC Start Date	03/11/2022	TC Execution Start Date	24/11/22
Module Name	Homepage	TC End Date	04/11/2022	TC Execution End Date	25/11/22
		Test Case Developed By	Shagor Mahmud Shakil	Browser (Tested)	Yes
Developer Name (TL)	Mainuddin	Test Case Reviewed By	Rakib Rahman	App (Tested)	

Test Case ID	Test Case	Pre-Condition	Test Data	Test Step	Expected Result	Actual Results	Status	Remarks
TC001:	Verify that home page is displayed after login or not.	Browser launched must be webpage must be opened The user must be signed in	Email: bitayos943@probd.com Pass: bitayos943	1 Browser need to be launched 2 webpage need be opened 3 Type username and password in 4 The user need to log in by click the login	Browser should be opened website should be opened user must be allowed to enter their login and password User should be logged in After logging in, the home page should be displayed,	Browser are opened. Homepage are Displayed after login.	PASS	
TC002:	Verify that user name is displayed on home page or not	Browser launched must be webpage must be opened The user must be signed in	Email: bitayos943@probd.com Pass: bitayos944	1 Browser need to be launched 2 webpage need be opened 3 Type username and password in 4 The user need to log in by click the login	Browser should be opened website should be opened user must be allowed to enter their login and password User should be logged in After logging in, the home page should be displayed with useprofile	Browswe are opened. website should be opened After entering the credential login successfully Username is not displayed on home page .	FAIL	
TC003:	Verify featured products are displayed on home page	Browser launched must be webpage must be opened The user must be signed in	Email: bitayos943@probd.com Pass: bitayos945	1 Browser need to be launched 2 webpage need be opened 3 Type username and password in 4 The user need to log in by click the login	Browser should be opened website should be opened user must be allowed to enter their login and password User should be logged in After logging in, the home page should be displayed and the products	Website are opened successfully After entering the credential login successfully. Feature products are displayed on homepage	PASS	
TC004:	Verify Search Functionality is present on home page.	Browser launched must be webpage must be opened The user must be signed in	Email: bitayos943@probd.com Pass: bitayos946	1 Browser need to be launched 2 webpage need be opened 3 Type username and password in 4 The user need to log in by click the login	Browser should be opened website should be opened user must be allowed to enter their login and password User should be logged in After logging in, the home page should be displayed, Browser should be opened and the Search functionality should present on home page	Browser are opened. Search Fuctionalaties are Displayed after login.	PASS	

TC005:	Verify the home page of application on different browsers.	Browser launched must be webpage opened	The user must be signed in	Email: bitayos943@probd.com Pass: bitayos947	1 Browser need to be launched 2 webpage need be opened 3 Type username and password in 4 The user need to log in by click the login	Browser should be opened website should be opened user must be allowed to enter their login and password User should be logged in After logging in, the home page should be displayed, Browser should be opened and the Search functionality should present on home page and the result will same on different browser	Homepage are opened successfully as same for diffeent Browser.	PASS
TC006:	Verify alignment on the home page	Browser launched must be webpage opened	The user must be signed in	Email: bitayos943@probd.com Pass: bitayos948	1 Browser need to be launched 2. webpage need be opened 3 Type username and password in 4 The user need to log in by click the login	Browser should be opened webpage need be opened user must be allowed to enter their login and password User should be logged in After logging in, the home page should be displayed, Browser should be opened and the Search functionality should present on home page and all alignment as per design	website should be opened After login the products are in proper place in the Homepage.	PASS
TC007:	Verify products that displayed on home page are clickable.	Browser launched must be webpage opened	The user must be signed in	Email: bitayos943@probd.com Pass: bitayos948	1 Browser need to be launched 2. Open url 3 Type username and password in The user need to log in by click the login 4 Browser need to be launched 5 Click on any product displayed on home page	Browser should be opened 2 webpage need be opened user must be allowed to enter their login and password User should be logged in After logging in, the home page should be displayed and the products are clickable User should be redirected to product specification page.	The products are displayed on homepage are clickable. User can click the products successfully.	PASS
TC008:	Verify that when user clicks on a product, user should be	Browser launched must be webpage opened		Email: bitayos943@probd.com Pass: bitayos948	1 Browser need to be launched 2 webpage need be opened	Browser should be opened website should be opened	The products are displayed on	

	redirected to product specification page.	The user must be signed in		3 Type username and password in	user must be allowed to enter their login and password	homepage are clickable. User can click the products successfully and the products redirected to the product specification page successfully.	PASS
TC009: Homepage	Verify that user profile section is present on home page.	Browser launched must be webpage must be opened The user must be signed in	Email: bitayos943@probd.com Pass: bitayos948	1 Browser need to be launched 2. Browser need to be opened 3 Type username and password in 4 The user need to log in by click the login 5 Click on user name displayed on home page.	Browser should be opened webpage need be opened user must be allowed to enter their login and password User should be logged in After logging in, the profile section should present on homepage User profile should be displayed.	Browser are opened. Login successfully after giving valid credential. The profile button is available but not working.	FAIL
TC0010: Hpmepage	Verify that products displayed on home page are categorised.	Browser launched must be webpage must be opened The user must be signed in Browser launched must be	Email: bitayos943@probd.com Pass: bitayos948	1 Browser need to be launched 2 webpage need be opened 3 Type username and password in 4 The user need to log in by click the login	Browser should be opened website should be opened user must be allowed to enter their login and password User should be logged in After logging in, the profile section should present on homepage page should be displayed, products should be categorised.	The products that displayed in homepage are categorised and user can find tem in different categories.	PASS

Remarks:

Reference: HP TC 001



Fig 37: HP TC001

Reference: HP TC 002

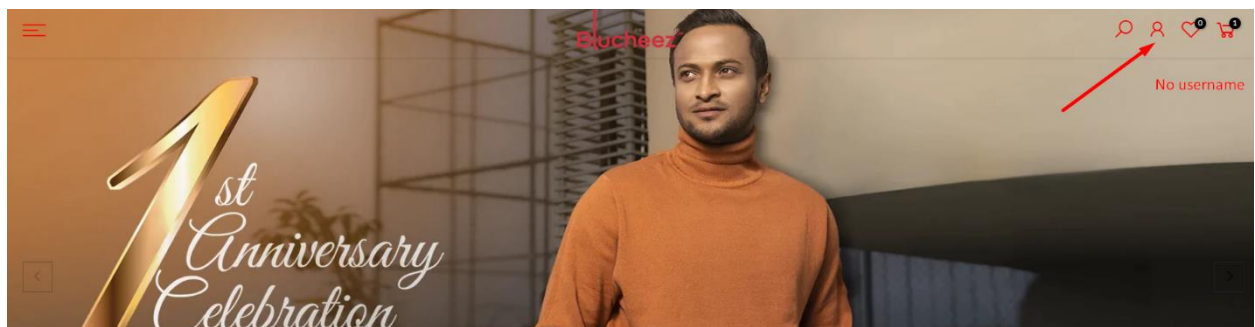


Fig 38: HP TC002

Reference: HP TC 005



Fig 39: HP TC005

Reference: HP TC 009



Its asking formlogin again .

LOGIN

Email *

Password *

[Forgot your password?](#)

[New customer? Create your account](#)

Fig 40: HP TC009

Test Module: Login (Admin)

Product Name	https://blucreez.com.bd/	TC Start Date	05/11/2022	TC Execution Start Date	26/11/22
Module Name	Login (Admin)	TC End Date	06/11/2022	TC Execution End Date	28/11/22
		Test Case Developed By	Shagor Mahmud Shakil	Browser (Tested)	Yes
Developer Name (TL)	Mainuddin	Test Case Reviewed By	Rakib Rahman	App (Tested)	

Test Case ID/Name	Test Case Description	Precondition	Test Data	Step Description	Expected Result	Actual Result	Status	Remarks
TC001: Login	valid email/username field check	Admin should be registered in the system.		1. Navigate to Admin Login Panel 2. Enter the valid username/email 3. Enter the Password 4. Click on Login	Admin login page should open The valid username will be taken the password will be taken Login should have successfully	Admin Login Paged open. The valid username and password are taken. Login successfully.	PASS	
TC002: Login	Empty email/username field check	Admin should be registered in the system.		1. Navigate to Admin Login Panel 2. Keep empty the username/email field 3. Enter the Password 4. Click on Login	Admin login page should open The username field will return error the password will be taken Login should have unsuccessful	Admin Login Paged are open. Trying to login without credential and unsuccessful with showig error.	PASS	
TC003: Login	Check login functionality with invalid email id	Admin should be registered in the system.		1. Navigate to Admin Login Panel 2. Keep empty the username/email field 3. Enter the Password 4. Click on Login	Admin login page should open The username field will return error the password will be taken Login should have unsuccessful	Admin Login Paged Opened. Trying login with invalid email and get an error with invalid email message.	PASS	
TC004: Login	valid password field check	Admin should be registered in the system.		1. Navigate to Admin Login Panel 2. Enter the username/email field 3. Enter the Password	Admin login page should open The username will be taken the password will be taken	Entered the valid username and the valid password . Successfully logged in.		

				4 . Click on Login	Login should have successful		PAS S	
TC005: Login	Empty password field check	Admin should be registered in the system.		1. Navigate to Admin Login Panel	Admin login page should open			
				2 Enter the . username/email field	The username field will be taken	Trying to login with empty		
				3 Keep the Password . field empty	the password field will return error	password field and get an error.		
				4 . Click on Login	Login should have unsuccessful		PAS S	
TC006: Login	Check login functionality with invalid password	Admin should be registered in the system.		1. Navigate to Admin Login Panel	Admin login page should open			
				2 Enter the . username/email field	The username field will be taken	Trying to login with invalid		
				3 Enter the invalid . Password	the password field will return error	password field and get an error.		
				4 . Click on Login	Login should have unsuccessful		PAS S	

Remarks:

Reference: Login TC 002

Please enter your login details.

Username

shagor

Password

.....

Login

Fig 41: Login TC002

Reference: Login TC 004

Please enter your login details.

Username

shagor

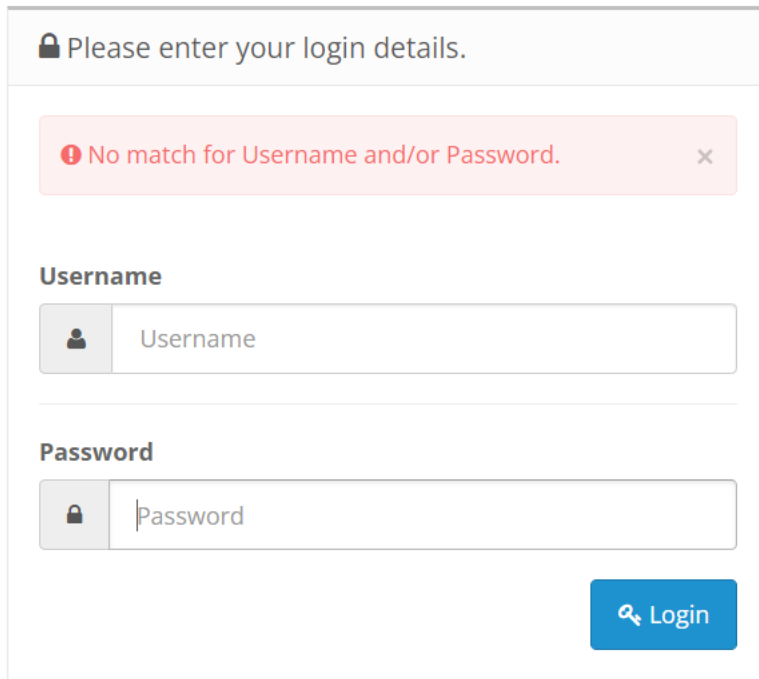
Password

.....

Login

Fig 41: Login TC004

Reference: Login TC 006



A screenshot of a login form. At the top, there is a header with a lock icon and the text "Please enter your login details." Below this is a red error message box with a white exclamation mark icon and the text "No match for Username and/or Password." followed by a close button (X). Underneath the error message are two input fields. The first is labeled "Username" and contains the placeholder text "Username". The second is labeled "Password" and contains the placeholder text "Password". At the bottom right of the form is a blue button with a magnifying glass icon and the text "Login".

Fig 42: Login TC006

Chapter 8: Automation Testing

8.1 What is Automation in testing?

Humans are trying to develop technology for better opportunities and minimize the risk of dangerous tasks. Nowadays people are so busy so they want the maximum output by giving minimum input and here's the automation comes. Automation is a process of minimum human interaction but the output of that interaction will be the maximum.

So, Automation testing is a process to execute the test automatically by helping of the scripts and tools and following the test automation frameworks.

8.2 Why Automation Testing?

Automation is a very important things in every parts of digital world. Automation makes human work easier. Sometimes its very hard to test manually software requirements and its also can be time-consuming. So, for reduce the time and easy to test the automating test conducted.

Automation testing can be conducted any time of day because in automation the script run and then test done automatically. It can be beneficial for same types of category problem, that can be easily resolve.

Benefits of Automation Testing

- Detailed reporting capabilities
- Improved bug detection
- Simplifies testing
- Speeds up the testing process
- Reduces human intervention
- Saves time and money

Which test need to be Automated

- Test that are repetitive
- Test that are failing for human error
- Test that cant be done in manually
- Test that can take long time to complete in manually

8.3 Web Automation

- Web automation is the process of using software to perform tasks on the web. This can include tasks such as filling out forms, clicking links, and extracting data from websites. Web automation is often used to automate repetitive tasks, or to perform tasks that are too complex or time-consuming to be done manually.
- Web automation can be accomplished using a variety of tools and programming languages, such as Selenium, Python, and Java. These tools allow users to write scripts or programs that can interact with websites in a way that is similar to how a human user would interact with them. This can be done by simulating mouse clicks, keyboard input, and other actions that a user might take.
- Web automation can be used for a wide range of purposes, such as data mining, data entry, testing, and web scraping. It is often used by businesses to automate processes and improve efficiency, or by individuals to save time and effort when performing tasks on the web.

Environment Setup

- Installing the Java Development Kit (JDK). This is required to write and run Java programs.
- Installing a Java Integrated Development Environment (IDE). An IDE is a software application that provides tools for writing and debugging code. Some popular Java IDEs include Eclipse and IntelliJ IDEA.
- Installing the Selenium library. Selenium is a popular open-source library for automating tasks on the web.
- Installing a web browser and the corresponding browser driver. Selenium can be used to automate tasks in a variety of web browsers, such as Chrome, Firefox, and Safari. To use Selenium with a particular browser, we will need to install the browser and also install the corresponding browser driver.
- Creating a new Java project in IDE and add the Selenium library as a dependency. WE will also need to add the browser driver executable to our project's class path.

Adding Dependency for Maven

```
1 <?xml version="1.0" encoding="UTF-8"?>
2
3 <project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001
4   xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/xsd/m
5   <modelVersion>4.0.0</modelVersion>
6
7   <groupId>blucezz</groupId>
8   <artifactId>Blucezz</artifactId>
9   <version>0.0.1-SNAPSHOT</version>
10
11   <name>Blucezz</name>
12   <!-- FIXME change it to the project's website -->
13   <url>http://www.example.com</url>
14
15   <properties>
16     <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
17     <maven.compiler.source>1.7</maven.compiler.source>
18     <maven.compiler.target>1.7</maven.compiler.target>
19   </properties>
20
21   <dependencies>
22
23
24   <!-- https://mvnrepository.com/artifact/org.seleniumhq.selenium/selenium-java -->
25 <dependency>
26   <groupId>org.seleniumhq.selenium</groupId>
27   <artifactId>selenium-java</artifactId>
28   <version>4.6.0</version>
29 </dependency>
30
```



Fig 43: Dependency1

```
67   </plugin>
68 <plugin>
69   <artifactId>maven-compiler-plugin</artifactId>
70   <version>3.8.0</version>
71 </plugin>
72 <plugin>
73   <artifactId>maven-surefire-plugin</artifactId>
74   <version>2.22.1</version>
75 </plugin>
76 <plugin>
77   <artifactId>maven-jar-plugin</artifactId>
78   <version>3.0.2</version>
79 </plugin>
80 <plugin>
81   <artifactId>maven-install-plugin</artifactId>
82   <version>2.5.2</version>
83 </plugin>
84 <plugin>
85   <artifactId>maven-deploy-plugin</artifactId>
86   <version>2.8.2</version>
87 </plugin>
88 <!-- site lifecycle, see https://maven.apache.org/ref/current/maven-core/lifecycle
89 <plugin>
90   <artifactId>maven-site-plugin</artifactId>
91   <version>3.7.1</version>
92 </plugin>
93 <plugin>
94   <artifactId>maven-project-info-reports-plugin</artifactId>
95   <version>3.0.0</version>
96 </plugin>
97 </plugins>
98 </pluginManagement>
99 </build>
100 </project>
101
```



Fig 44: Dependency2

```

1 package blucezz.Blucezz;
2
3 import org.openqa.selenium.WebDriver;
4
5 public class BaseDriver {
6     public static WebDriver webdriver;
7     @BeforeSuite
8     public void start() {
9         WebDriverManager.chromedriver().setup();
10        webdriver=new ChromeDriver();
11    }
12    @AfterSuite
13    public void close() {
14        webdriver.close();
15    }
16 }

```

```

blucezz.Blucezz
└─ BaseDriver
   ├── webdriver : WebDriver
   ├── start() : void
   └─ close() : void

```

Fig 45: SetBaseDriver

```

1 package blucezz.Blucezz;
2
3 import org.openqa.selenium.By;
4 import org.openqa.selenium.WebElement;
5 import org.openqa.selenium.support.ui.Select;
6 import org.testng.annotations.Test;
7
8 Run All
9 public class SiteBluceez extends BaseDriver {
10
11     public static String baseUrl="https://bluceez.com.bd/";
12
13     @Test (priority=0)
14     Run | Debug
15     public void openUrl() throws InterruptedException {
16         webdriver.get(baseUrl);
17         webdriver.manage().window().maximize();
18         Thread.sleep(5000);
19     }
20
21     // @Test (priority=1)
22     // public void Test() throws InterruptedException {
23     //     WebElement bluceez= webdriver.findElement(By.xpath("//a[@href='/account/login']"));
24     //     bluceez.click();
25     //     Thread.sleep(5000);
26     // }
27
28     @Test (priority=1)
29     Run | Debug
30     public void Test1() throws InterruptedException {
31         WebElement bluceez= webdriver.findElement(By.xpath("//i[@class='las la-search']"));
32         bluceez.click();
33         Thread.sleep(5000);
34     }
35 }

```

```

blucezz.Blucezz
└─ SiteBluceez
   ├── baseUrl : String
   ├── openUrl() : void
   ├── Test1() : void
   ├── Test2() : void
   ├── Test3() : void
   ├── Test4() : void
   └─ Test5() : void

```

Fig 46: TestExecution1

```

@Test (priority=2)
Run | Debug
public void Test2() throws InterruptedException {
    WebElement bluccheez= webdriver.findElement(By.xpath("//select[@name='product_t
    Select prodselect= new Select(bluccheez);

    prodselect.selectByValue("Men's Clothing");
    Thread.sleep(5000);
}

@Test (priority=3)
Run | Debug
public void Test3() throws InterruptedException {
    WebElement bluccheez= webdriver.findElement(By.xpath("//body/div[@id='nt_search_ca

    bluccheez.click();
    Thread.sleep(5000);
}

@Test (priority=4)
Run | Debug
public void Test4() throws InterruptedException {
    WebElement bluccheez= webdriver.findElement(By.xpath("//span[contains(text(),'Add

    bluccheez.click();
    Thread.sleep(5000);
}

@Test (priority=5)
Run | Debug
public void Test5() throws InterruptedException {
    WebElement bluccheez= webdriver.findElement(By.xpath("//a[contains(text(),'View ca

    bluccheez.click();
    Thread.sleep(5000);
}

```



- # bluccheez.Bluccheez
- SiteBluccheez
 - ° baseUrl : String
 - openUrl() : void
 - Test1() : void
 - Test2() : void
 - Test3() : void
 - Test4() : void
 - Test5() : void

Fig 47: TestExecution2

8.4 Mobile Automation

Mobile automation refers to the use of software to automatically perform tasks on a mobile device, such as a smartphone or tablet. This can include tasks such as installing and testing mobile apps, performing system updates, and simulating user interactions with the device.

Mobile automation is often used by developers and testers to streamline the process of testing and deploying mobile apps, as it allows them to quickly and easily perform repetitive tasks on multiple devices.

Mobile automation tools can also be used to simulate different network conditions and device configurations, which can be useful for testing the performance and stability of mobile apps under a variety of conditions.

Appium

For automating native, mobile web, and hybrid applications on iOS and Android platforms, we can use the open-source program Appium.. It is a widely used tool for mobile app testing and has support for many programming languages, including Java, Python, Ruby, C#, and more.

Appium works by communicating with the appium server, which in turn communicates with the mobile device using a specific set of commands. These commands can be used to perform actions on the device, such as installing and launching apps, simulating user interactions, and more.

One of the key benefits of Appium is that it allows developers and testers to write tests using the same techniques and frameworks that they would use for web application testing, which can make it easier to create and maintain test scripts. It also supports a wide range of mobile devices and operating systems, which makes it a versatile tool for mobile testing.

Environment setup

Appium Server Gui

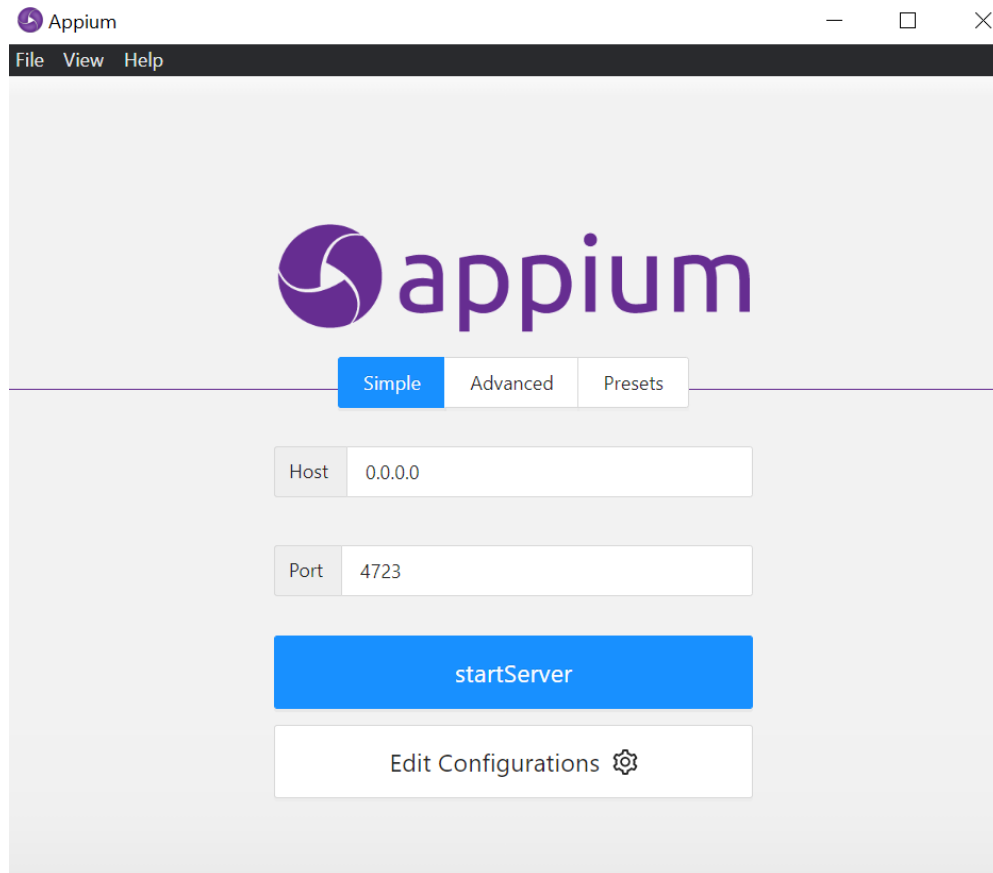


Fig 48: appium

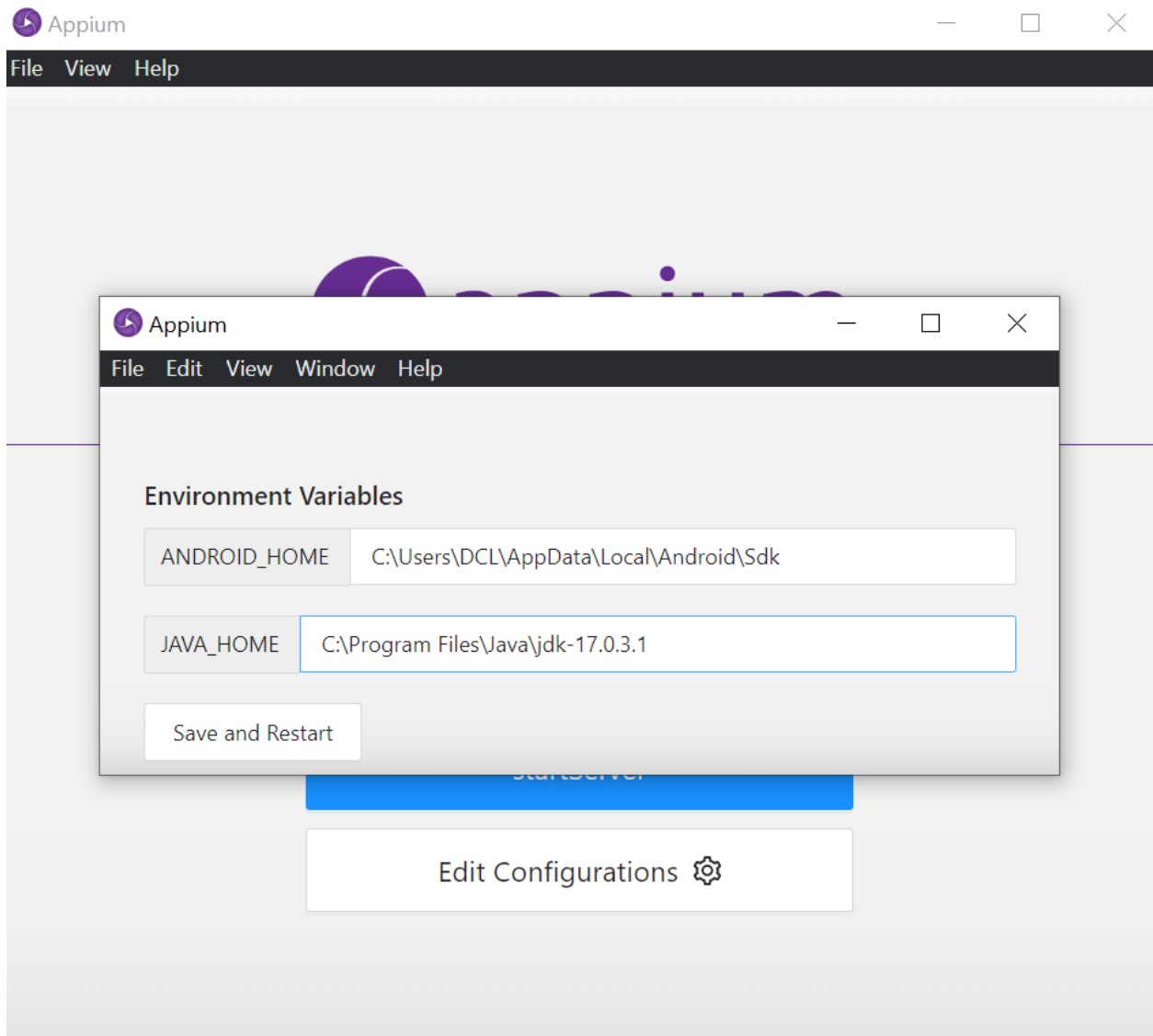


Fig 49: Setting Environment

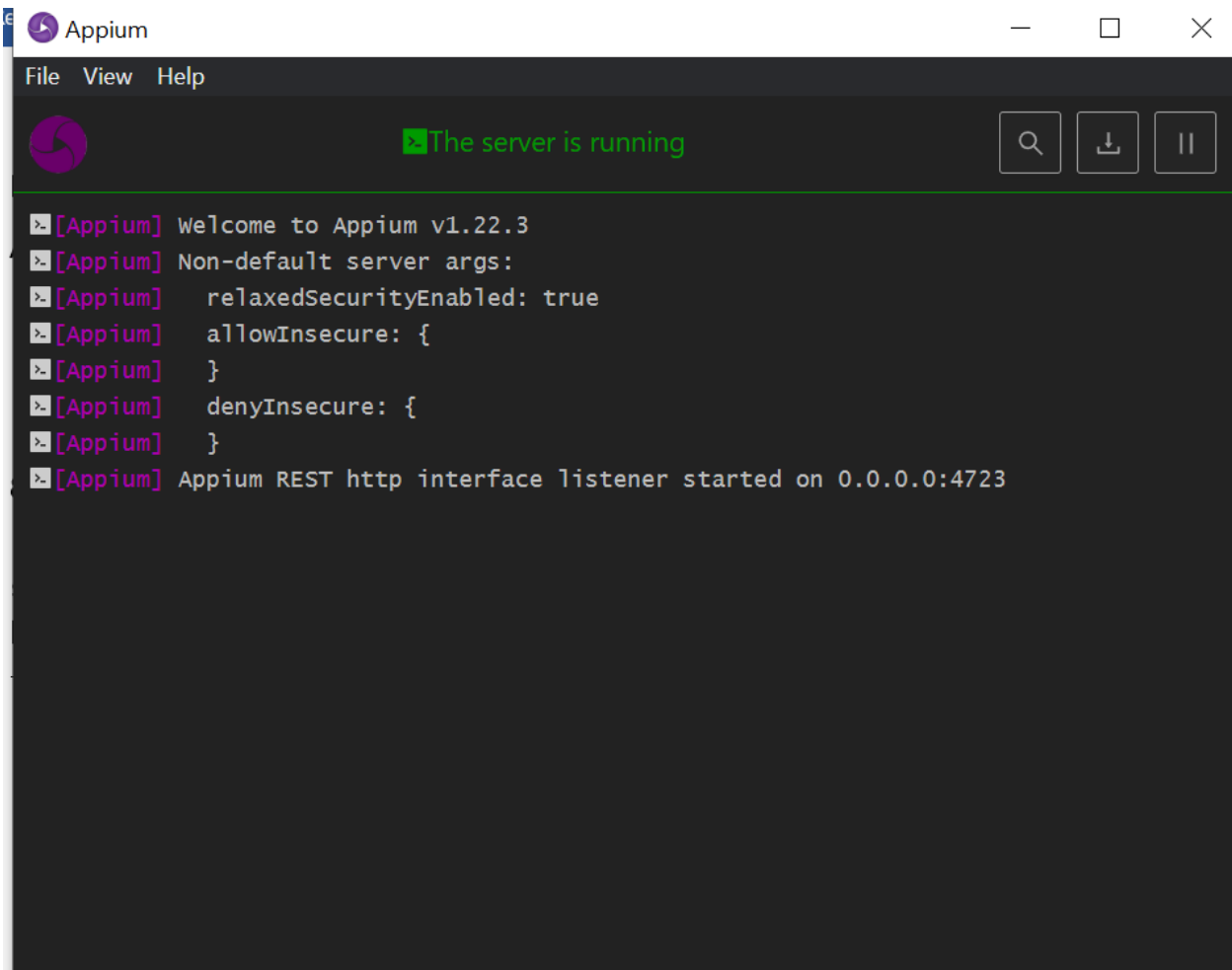


Fig 50: Appium running

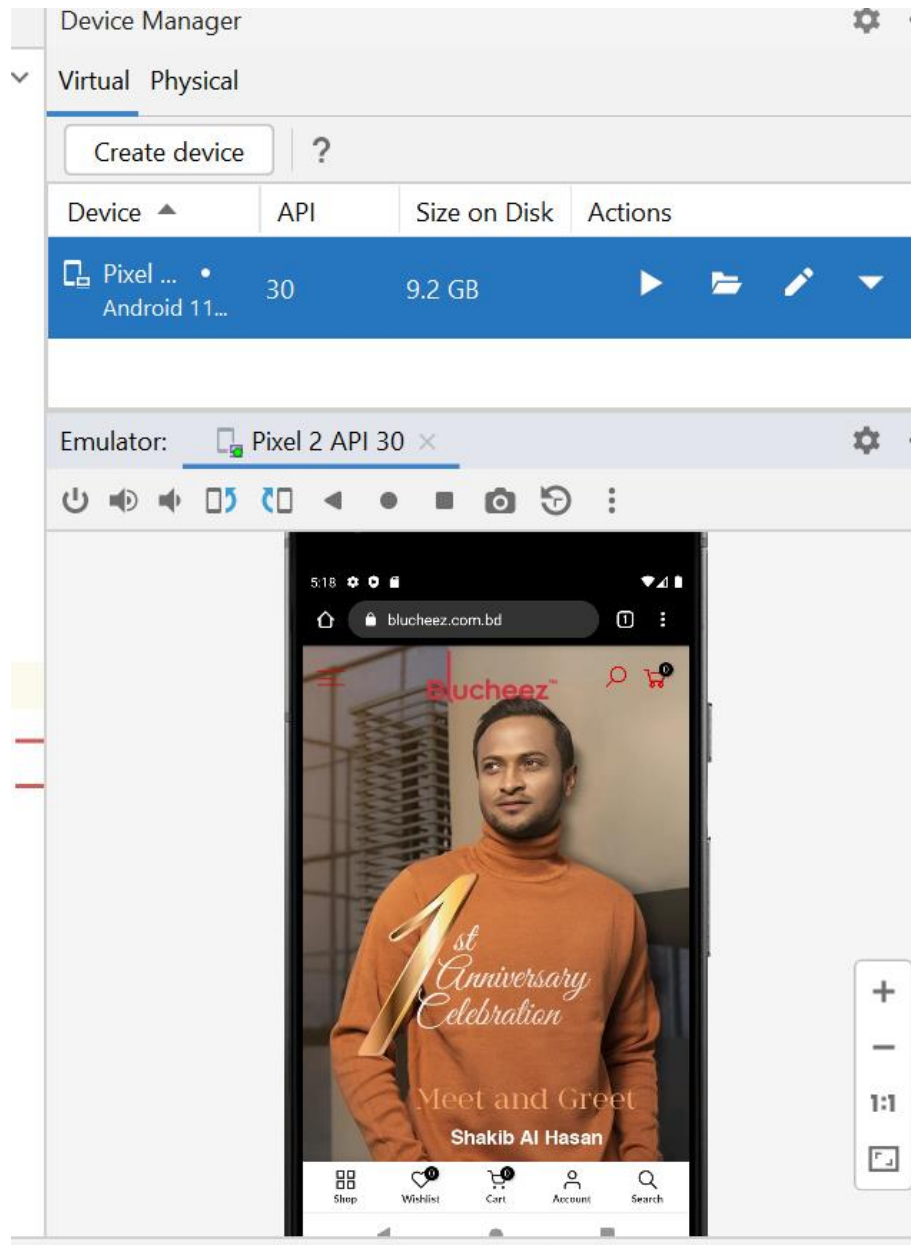


Fig 51: Mobiletest

8.5 Performance Testing

Performance testing is a testing process to test the speed, scalability, reliability, stability, response time and the resource usages of a software application under a particular workload.

There are many types of performance testing:

- Load testing
- Stress testing
- Endurance testing
- Spike testing
- Volume testing
- Scalability testing

Load Testing:

The Load testing is a testing where the test conduct under a particular user load to check the load ability of the software application.

Stress Testing:

The Stress testing is a testing where the test conduct under extreme user load to check the user handling ability of the software application.

Endurance Testing:

The Endurance testing is a testing where the test conduct to ensure that the application can handle the expected load for a long period.

Spike Testing

Spike testing is a testing type where the test done by suddenly increasing extreme load or decreasing the load to determine how software behave.

8.5.1 Performance testing using JMeter

What is JMeter

The Apache JMeter is an open source and java based software application used for performance testing, and load testing of any web application.

Why JMeter

- Free of Cost
- Performance Testing of Applications
- Load Testing and Stress Testing
- Framework
- Graphical Analysis
- Platform Independent

Environment Setup

- Setting up Apache JMeter
- Adding a Thread Group
- Adding HTTP Request
- Adding Listeners
- Running the Test

Setting up Apache JMeter

1. Navigate to bin folder inside JMeter folder
2. Open the JMeter.bat file
3. Double click the .bat file

```
C:\Windows\system32\cmd.exe
=====
Don't use GUI mode for load testing !, only for Test creation and Test debugging.
For load testing, use CLI Mode (was NON GUI):
  jmeter -n -t [jmx file] -l [results file] -e -o [Path to web report folder]
& increase Java Heap to meet your test requirements:
  Modify current env variable HEAP="-Xms1g -Xmx1g -XX:MaxMetaspaceSize=256m" in the jmeter batch file
Check : https://jmeter.apache.org/usermanual/best-practices.html
=====
```

Fig 52: bat file running

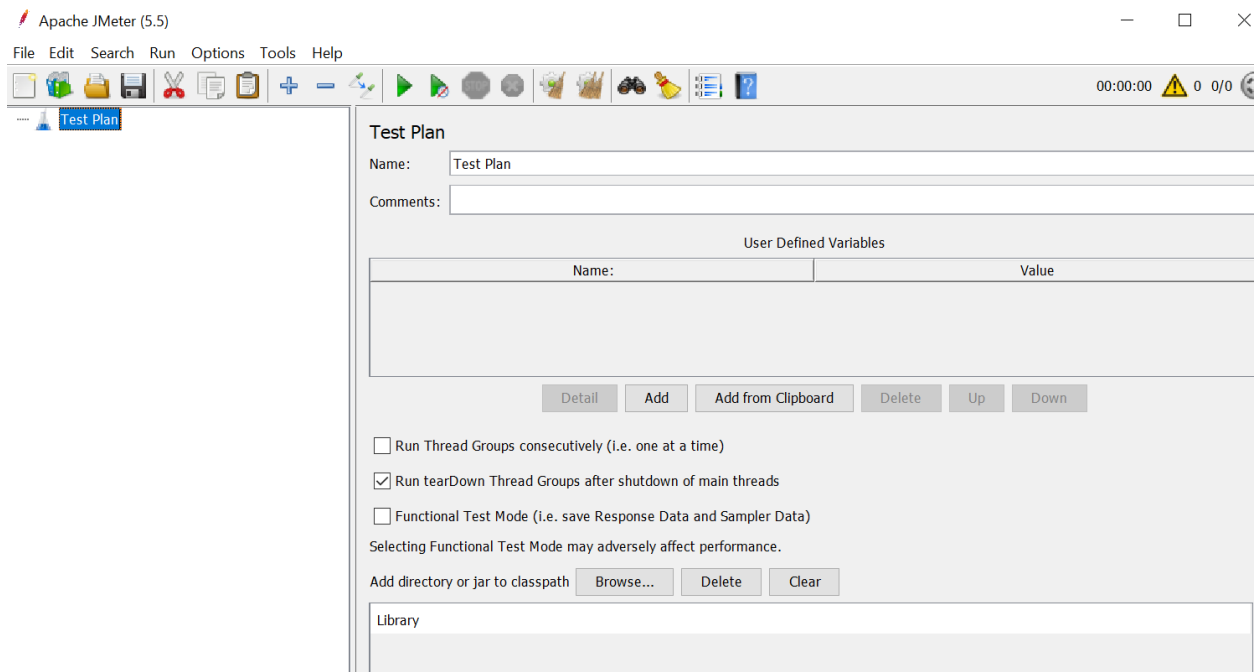


Fig 53: Apache

Adding thread group

- Click on Performance test
- Click add then threads and select thread groups

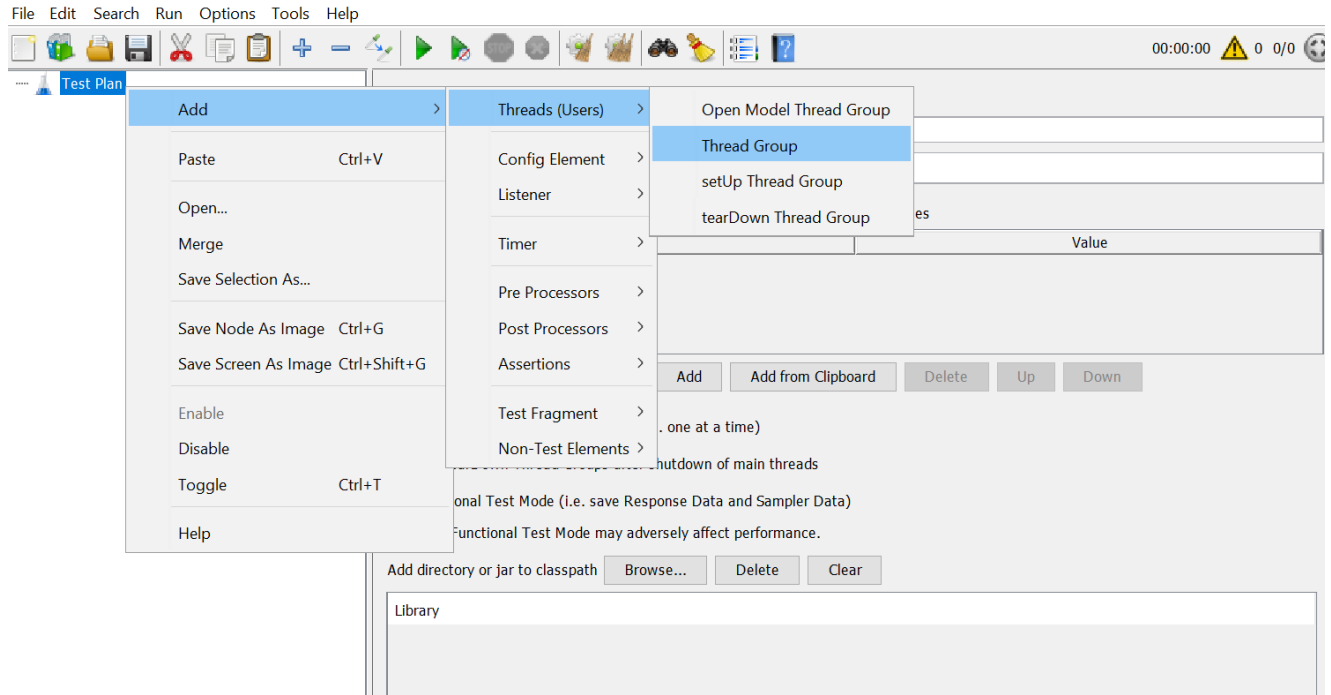


Fig 54: thread group

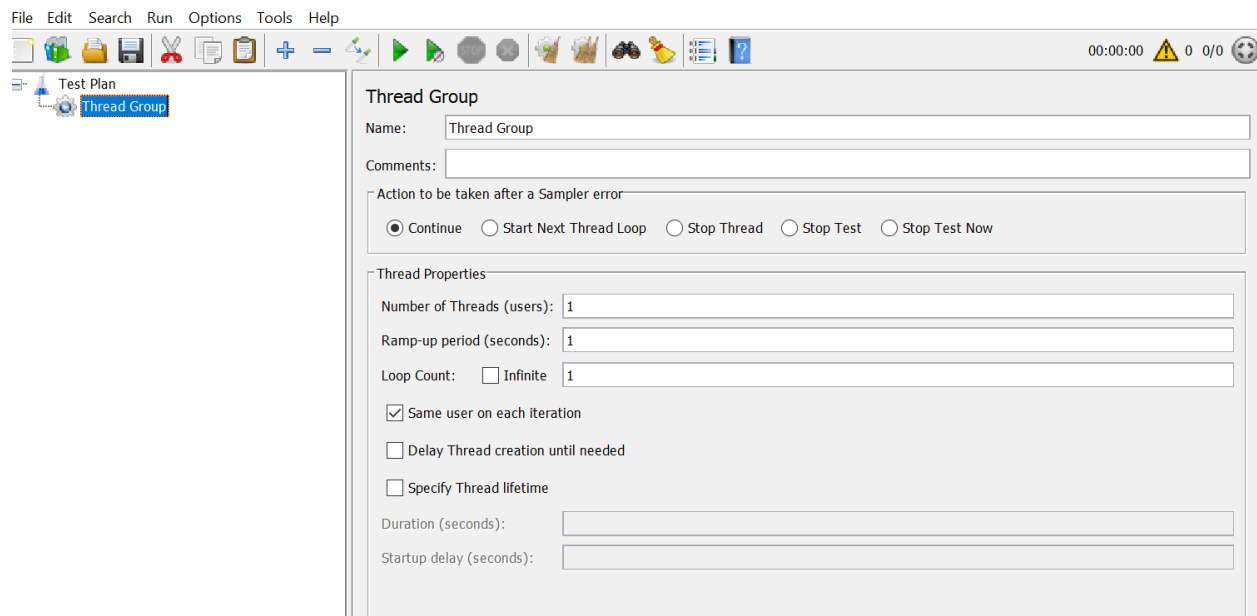


Fig 55: Thread Group

Adding HTTP Request

- Click on Thread group
- Navigate to add option
- Navigate to sampler option
- Now, Select the HTTP request option

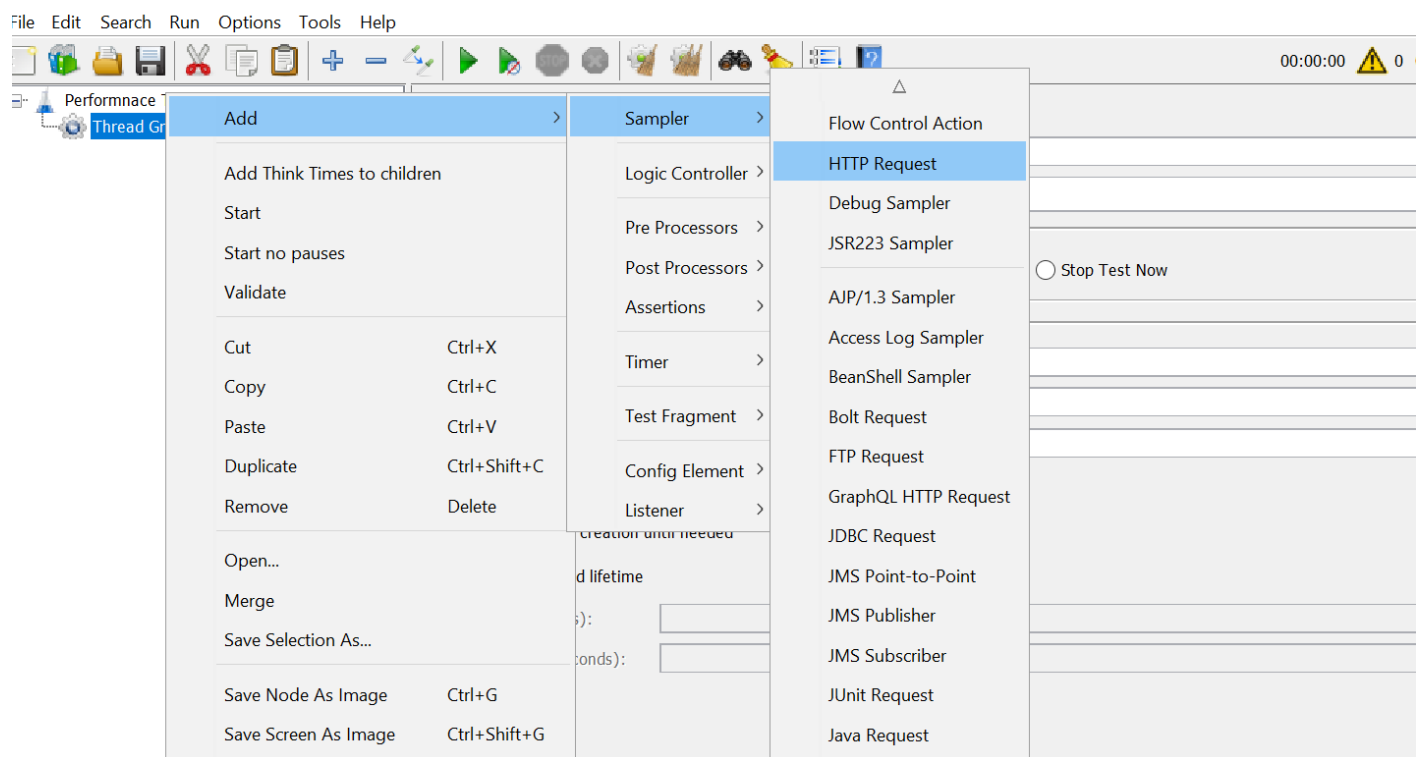


Fig 56: Adding HTTP request

Adding Listeners

- Click on Thread group
- Navigate to add option
- Navigate to view result select Tree option

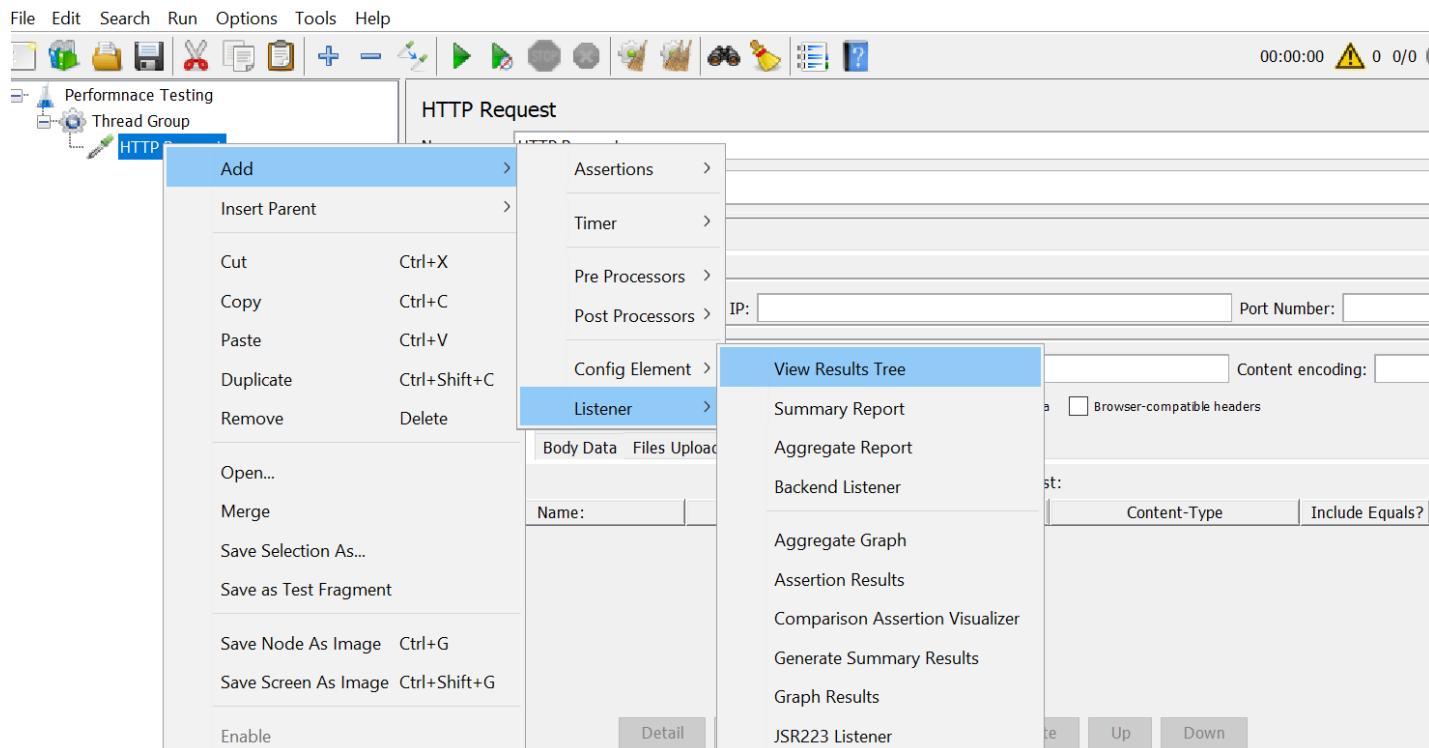


Fig 57: Adding Listeners

Running the Test

- Save the Test
- Now click on run test

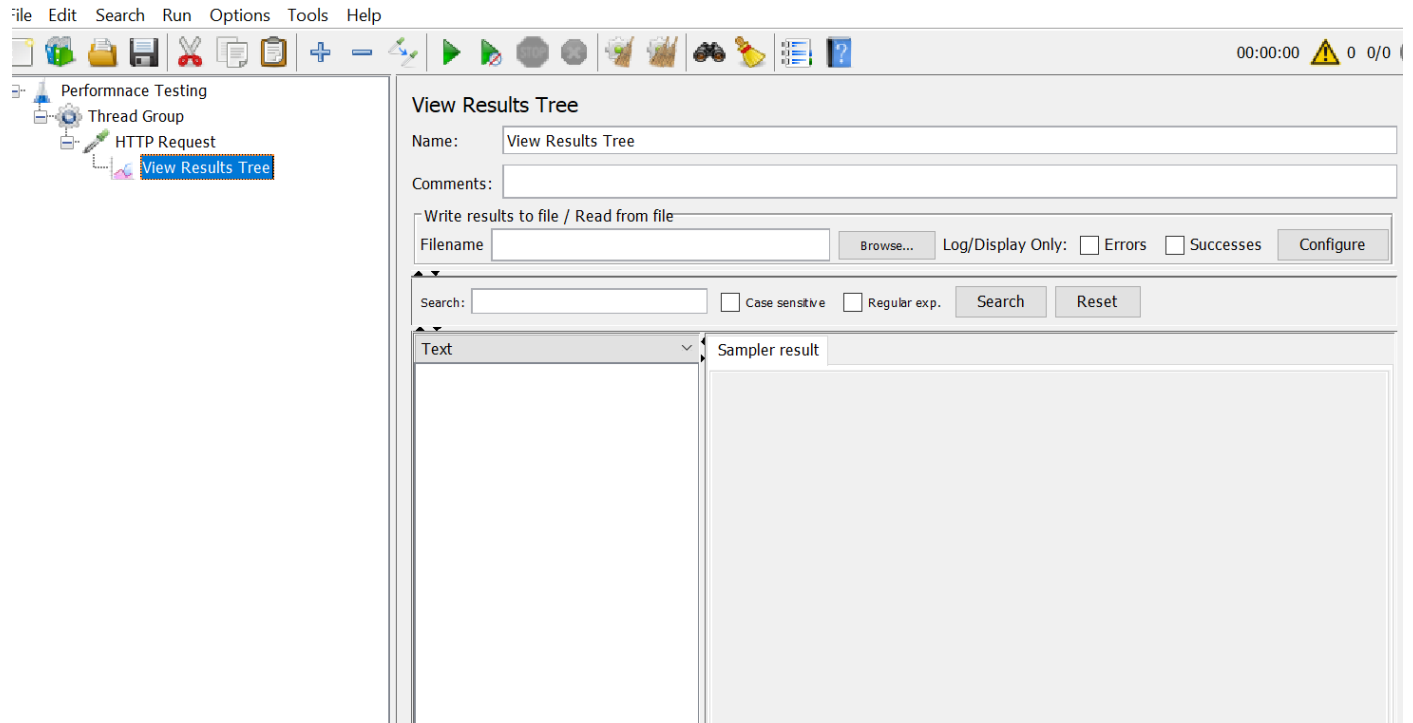


Fig 58: Run test

8.5.1.1 Performance Testing

Criteria:

Number of users: 5000

Time: 86400

Per-Second: 18

So,

Number of Threads: 18

Ramp-up Period: 1

Loop Count: 1

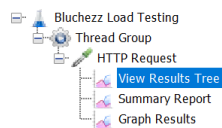


Fig 59: View result Tree

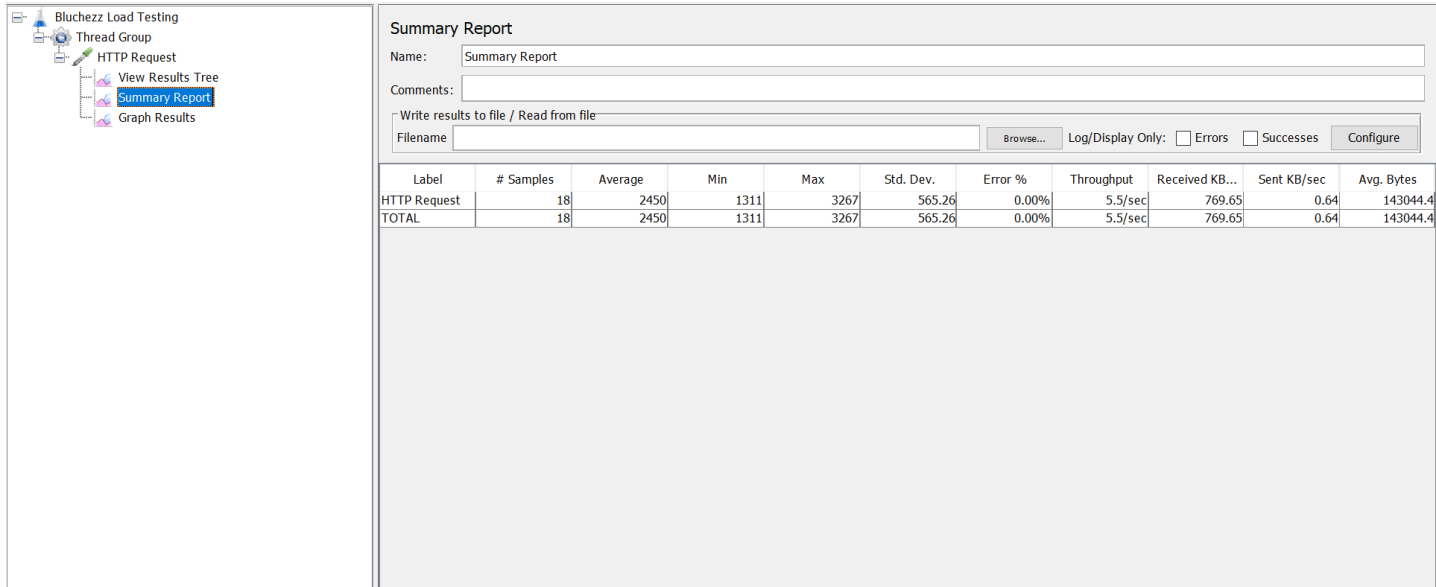


Fig 60: Summary result

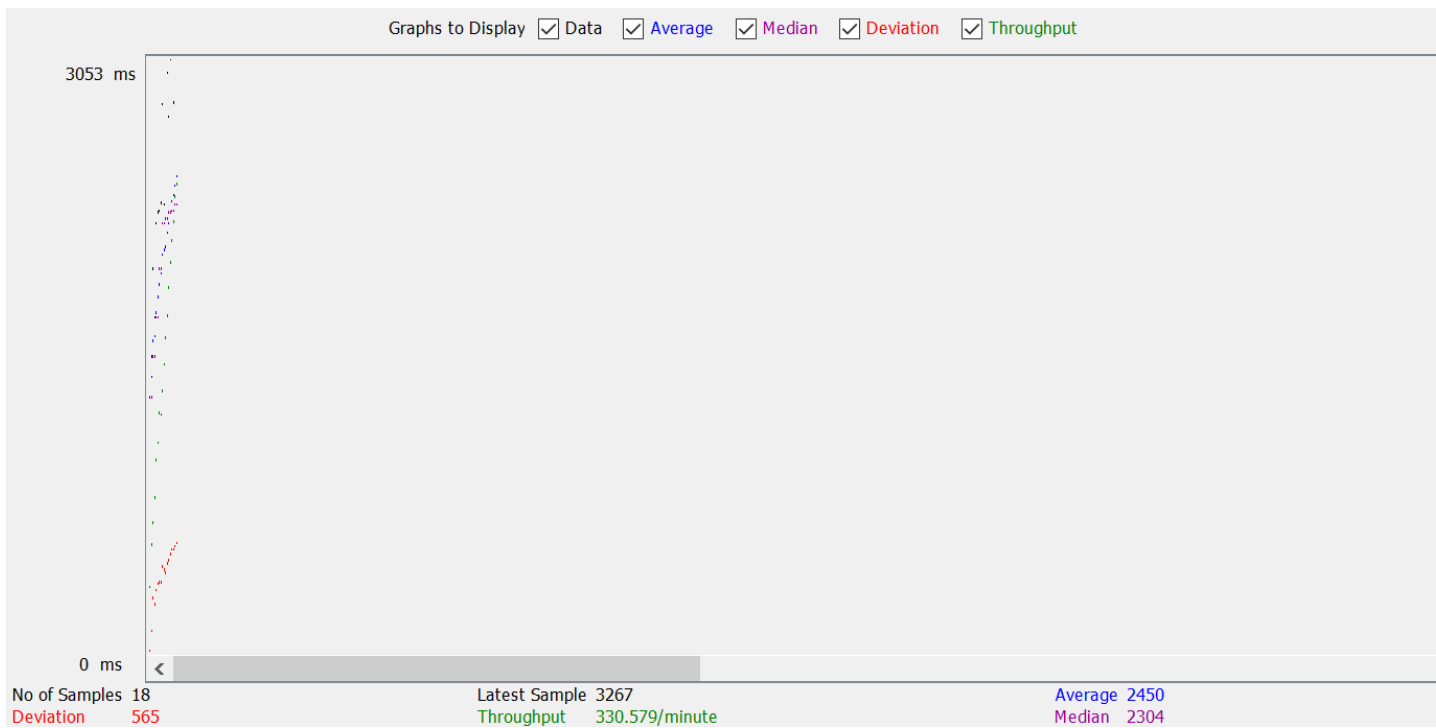


Fig 61: Graph Result

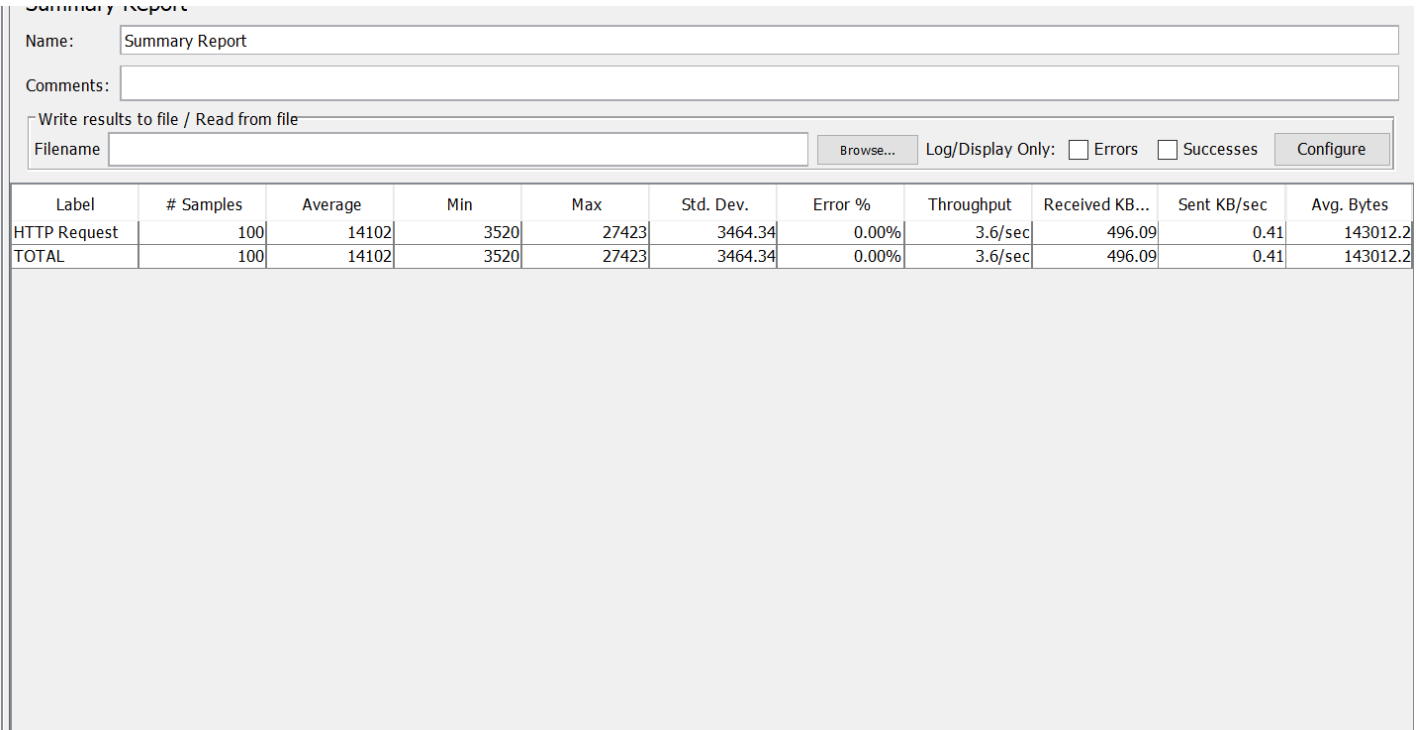


Fig 63: Summary

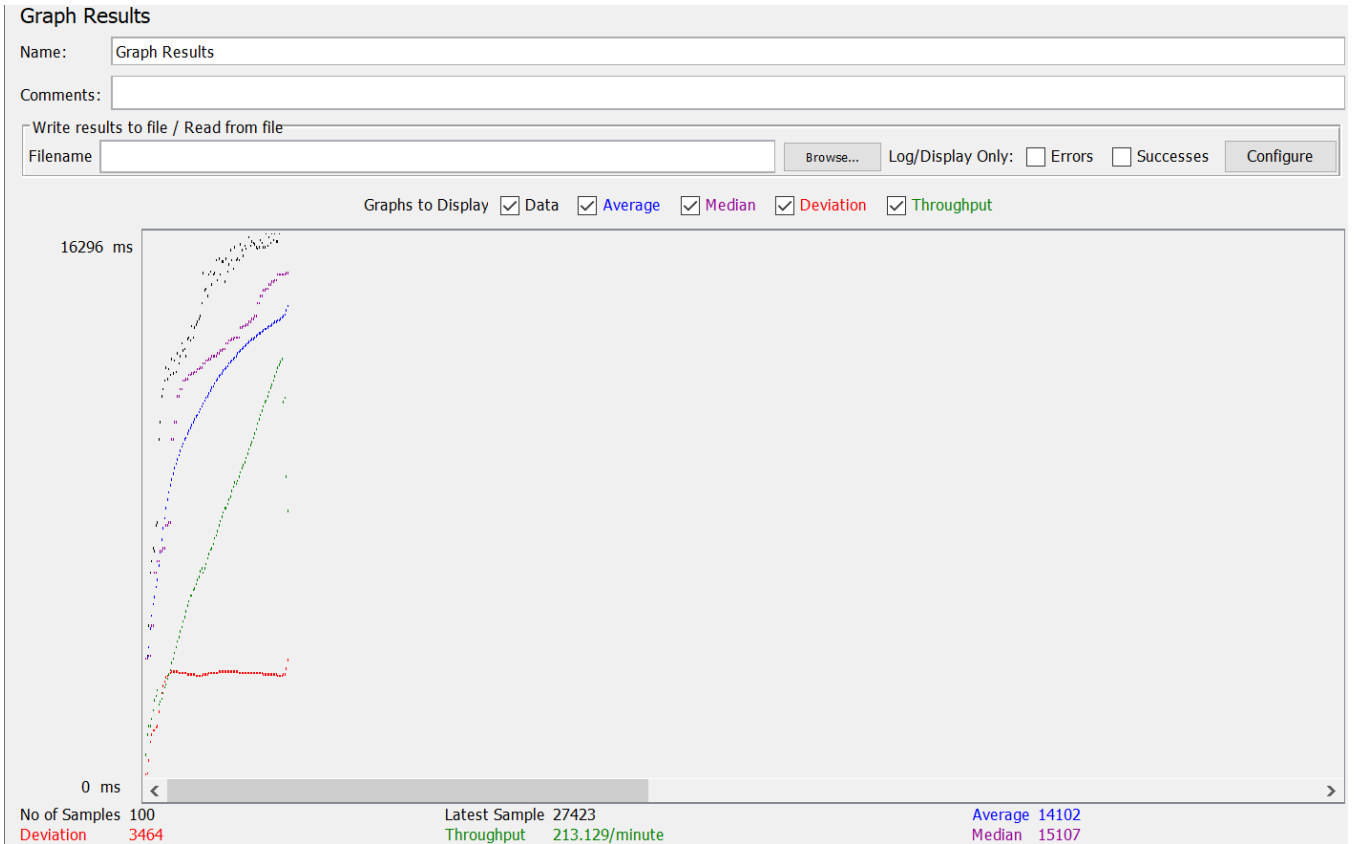


Fig 64: Graph Result

Aggregate Graph

Name: Aggregate Graph

Comments:

Write results to file / Read from file

Filename

Browse...

Log/Display Only: Errors Successes C...

Label	# Samples	Average	Median	90% Line	95% Line	99% Line	Min	Maximum	Error %	Throughput	Received K...
HTTP Request	100	14102	15107	16296	16362	24186	3520	27423	0.00%	3.6/sec	496.09
TOTAL	100	14102	15107	16296	16362	24186	3520	27423	0.00%	3.6/sec	496.09

Settings Graph

Display Graph

Save Graph

Save Table Data

Save Tab

Column settings

Columns to display: Average Median 90% Line 95% Line 99% Line Min Max Foreground

Value font: Sans Serif Size: 10 Style: Normal Draw outlines bar? Show number grouping? Value labels vertical?

Column label selection: Case sensitive R

Title

Graph title:

Font: Sans Serif Size: 16 Style: Bold

Graph size

Dynamic graph size Width: Height:

Fig 65: Aggregate Graph

8.6 API Testing

API testing is a testing where the test validates Application program interfaces. The main reason for API testing is to check the functionality, performance and the reliability of that interface. In API testing the tester use software to call the api and can view the response to that call.

Benefits of API Testing

There are several benefits to API testing:

1. API testing can ensure that the APIs are reliable and function correctly.
2. API testing can help to identify issues such as missing functionality, security vulnerabilities, and performance bottlenecks.
3. API testing can be faster and more efficient than GUI testing, as it allows you to directly test the API without going through the user interface.
4. API testing can be automated, which can save time and resources.
5. API testing can provide visibility into the API and how it is being used, which can help to identify potential problems and improve the API.
6. API testing can be used to test the integration of different systems and ensure that they work together as expected.
7. API testing can be used to validate the functionality and security of an API before it is released to users.

8.7 API Testing using Postman

Postman is a popular tool for API testing. It allows us to send HTTP requests and view the response.

URL: <https://blucheez.com.bd/>

End point: Cart

Description: Add product to Cart, Increase item, Decrease item, Delete item.

Test Case Id	EndPoint Base	Body	Status Code	Success Response	Failur Response	Validation	Comments
Cart_TC_001	https://blucheez.com.bd/	id: 44269840892183	200	<pre>{ "id": 44269840892183, "properties": {}, "quantity": 2, "variant_id": 44269840892183, "key": "44269840892183:e7bf428e1ba89965934d9712c7bf4ec6", "title": "Zardozi Regular Fit Panjabi - S/38 / COOL GREY", "price": 499500, "original_price": 499500, "discounted_price": 499500, "line_price": 999000, "original_line_price": 999000, "total_discount": 0, "discounts": [], "sku": "BMP-216", "grams": 0, "vendor": "Blucheez", "taxable": true, "product_id": 8075752472855, "product_has_only_default_variant": false, "gift_card": false, "final_price": 499500, "final_line_price": 999000, }</pre>	Null	<pre>pm.test("Status code is 200", function () { pm.response.to.have.status(200); }); pm.test("Added to Cart ", function () { pm.expect(pm.response.text()).to.include("Zardozi Regular Fit Panjabi"); }); pm.test("Body is correct", function () { pm.response.to.have.body("Zardozi Regular Fit Panjabi"); }); pm.test("Content-Type is present", function () { pm.response.to.have.header("Set-Cookie"); }); pm.test("Response time is less than 200ms", function () { pm.expect(pm.response.responseTime).to.be.below(200); }); pm.test("Successfully Added", function () { pm.response.to.have.status("OK"); });</pre>	<p>Validation Passed: 4</p> <p>Validation Failed: 2</p>
				<pre>{ "token": "06fce0c50e23e4a13e9a64d124fe09f3", "note": null, "attributes": {}, "original_total_price": 1997000, "total_price": 1997000, }</pre>		<pre>pm.test("Status code is 200", function () { pm.response.to.have.status(200); }); pm.test("Body matches string", function () { // ... })</pre>	

Cart_TC_002	https://blucheez.com.bd/	{"id":"44269840892183:e7bf428e1ba89965934d9712c7bf4ec6","quantity":3,"sections":"cart_js"}	200	Null	<pre> "total_discount": 0, "total_weight": 0.0, "item_count": 6, "items": [{ "id": 44269840892183, "properties": {}, "quantity": 3, "variant_id": 44269840892183, "key": "44269840892183:e7bf428e1ba89965934d9712c7bf4ec6", "title": "Zardozi Regular Fit Panjabi - S/38 / COOL GREY", "price": 499500, "original_price": 499500, "discounted_price": 499500, "line_price": 999000, "original_line_price": 999000, "total_discount": 0, "discounts": [], "sku": "BMP-216", "grams": 0, "vendor": "Blucheez", { "taxable": true, "token": "06fce0c50e23e4a13e9a64d124fe09f3", "note": null, "attributes": {}, "original_total_price": 998000, "total_price": 998000, "total_discount": 0, "total_weight": 0.0, "item_count": 4, "items": [{ "id": 44269412483351, "properties": {}, "quantity": 0, </pre>	<pre> pm.expect(pm.response.text()).to.include ("Zardozi Regular Fit Panjab"); }); pm.test("Content-Type is present", function () { pm.response.to.have.header("Content-Type"); }); pm.test("Response time is less than 200ms", function () { pm.expect(pm.response.responseTime).to.be.below(200); }); pm.test("Status code name has string", function () { pm.response.to.have.status("OK"); }); pm.test("Body matches string", function () { pm.expect(pm.response.text()).to.include ("id"); }); pm.test("Status code is 200", function () { pm.response.to.have.status(200); }); pm.test("Response time is less than </pre>	Validation Passed: 5 Validation Failed: 1 Validation Passed: 2
-------------	---	--	-----	------	--	--	---

Cart_TC_003	https://blucheez.cdm.bd/	<pre>{ "id": "44269840892183:e7bf428e1ba89965934d9712c7bf4ec6", "quantity": 0, "sections": "cart_js" }</pre>	200	<pre>"variant_id": 44269412483351, Null "key": "44269412483351:8f9b4b2fe4c67248936ac24418adf7ae", "title": "Zardozi Regular Fit Panjabi - S/38 / CREAM WHITE", "price": 379500, "original_price": 379500, "discounted_price": 379500, "line_price": 759000, "original_line_price": 759000, "total_discount": 0, "discounts": [],</pre>	Null	<pre>200ms", function () { pm.expect(pm.response.responseTime).toBe.below(200); });</pre>	<pre>Validation Failed: 1</pre>
-------------	---	--	-----	--	------	---	---------------------------------

Params Authorization Headers (26) Body ● Pre-request Script Tests ● Settings Cookies </>

```

1 pm.test("Status code is 200", function () {
2   pm.response.to.have.status(200);
3 });
4 pm.test("Added to Cart ", function () {
5   pm.expect(pm.response.text()).to.include("Zardozi Regular Fit
6     Panjabi");
7 });
8 pm.test("Body is correct", function () {
9   pm.response.to.have.body("Zardozi Regular Fit Panjabi");
10 });
11 pm.test("Content-Type is present", function () {

```

Test scripts are written in JavaScript, and are run after the response is received. Learn more about [tests scripts](#) ↗

Snippets

- Status code: Successful POST request
- Status code: Code name has string
- Response body: Convert XML body to a JSON Object

Body Cookies (17) Headers (42) Test Results (4/6) 200 OK 841 ms 14.86 KB Save Response ▾

Pretty Raw Preview Visualize Text ▾

```

1 {
  "id": "44269840892183",
  "properties": {},
  "quantity": 3,
  "variant_id": "44269840892183",
  "key": "44269840892183:e7bf428e1ba89965934d9712c7bf4ec6",
  "title": "Zardozi Regular Fit Panjabi - S\\38
  \\ COOL GREY",
  "price": 499500,
  "original_price": 499500,
  "discounted_price": 499500,
  "line_price": 1498500,
  "original_line_price": 1498500,
  "total_discount": 0,
  "discounts": [],
  "sku": "BMP-216",
  "grams": 0,
  "vendor": "Blucheez",
  "taxable": true,
  "product_id": "8075752472855",
  "product_has_only_default_variant": false,
  "gift_card": false,
  "final_price": 499500,
  "final_line_price": 1498500,
  "url": "\\products\\zardozi-regular-fit-panjabi-12?variant=44269840892183",

```

Fig 66: Cart add

Params Authorization Headers (26) Body ● Pre-request Script Tests ● Settings Cookies

```

1 pm.test("Status code is 200", function () {
2   pm.response.to.have.status(200);
3 });
4 pm.test("Body matches string", function () {
5   pm.expect(pm.response.text()).to.include("Zardozi Regular Fit
6     Panjab");
7 });
8 pm.test("Content-Type is present", function () {
9   pm.response.to.have.header("Content-Type");
10 });
11 pm.test("Response time is less than 200ms", function () {

```

Test scripts are written in JavaScript, and are run after the response is received. Learn more about [tests scripts](#) ↗

Snippets

- Status code: Code name has string
- Response body: Convert XML body to a JSON Object
- Use Tiny Validator for JSON data

Body Cookies (17) Headers (41) Test Results (5/6) 200 OK 1132 ms 21.88 KB Save Response ▾

Pretty Raw Preview Visualize Text ▾

```

1 {
  "token": "06fce0c50e23e4a13e9a64d124fe09f3",
  "note": null,
  "attributes": {},
  "original_total_price": 1997000,
  "total_price": 1997000,
  "total_discount": 0,
  "total_weight": 0.0,
  "item_count": 6,
  "items": [
    {
      "id": "44269840892183",
      "properties": {},
      "quantity": 2,
      "variant_id": "44269840892183",
      "key": "44269840892183:e7bf428e1ba89965934d9712c7bf4ec6",
      "title": "Zardozi Regular Fit Panjabi - S\\38
      \\ COOL GREY",
      "price": 499500,
      "original_price": 499500,
      "discounted_price": 499500,
      "line_price": 999000,
      "original_line_price": 999000,
      "total_discount": 0,
      "discounts": [],
      "sku": "BMP-216",
      "grams": 0,
      "vendor": "Blucheez",
      "taxable": true,
      "product_id": "8075752472855",

```

Fig 67: Cart increase

The screenshot shows a REST client interface with the following details:

- Request Body:** A JSON object with the following structure:


```
1 { "id": "44269840892183:e7bf428e1ba89965934d9712c7bf4ec6", "quantity": 0, "sections": "cart_js" }
```
- Response:** A 200 OK status with a response time of 1315 ms and a size of 15.76 KB. The response body is displayed in the 'Text' view:


```
1 { "token": "06fce0c50e23e4a13e9a64d124fe09f3", "note": null, "attributes": {}, "original_total_price": 998000, "total_price": 998000, "total_discount": 0, "total_weight": 0.0, "item_count": 4, "items": [ { "id": 44269412483351, "properties": {}, "quantity": 2, "variant_id": 44269412483351, "key": "44269412483351:8f9b4b2fe4c67248936ac24418adf7ae", "title": "Zardozi Regular Fit Panjabi - S\\38 \\ CREAM WHITE", "price": 379500, "original_price": 379500, "discounted_price": 379500, "line_price": 759000, "original_line_price": 759000, "total_discount": 0, "discounts": [], "sku": "BMP-226", "grams": 0, "vendor": "Blucheez", "taxable": true, "product_id": 8075688345879, } ] }
```

Fig 68: Cart Remove

URL: <https://blucheez.com.bd/>

End point: Checkout

Description: Edited Checkout Information

TestCaseId	EndPointBase	Body	Status Code	Success Response	Failur Response	Validation	Comments
Checkout_01	https://bluc-eez.com.bd/	{ "sessionToken": "SmpPc212R0NRMmhXcExGMGw1eGw3T1E4TE9SaTZVd3d0TXhPZE1aV2hBSUNnZ2ZJMXdyeGRTWIUxUkZ2N0IRZ3lzYnVNdUpIcXhzQWhVSmNoVVVIVkiCbE4zcllrUTkrSIFyd3BUQXhLeVIZNS9TMhPUP2dORWo0dzNxTGR3Ny9FRJjTait2QTNJVGTyDStNL2JyT2tMN09OcE5tSnpiWlcvKy9QTINTe4xYzBEaDIRTIF1OUo0Qzh3c0hPSWNGenBrcHpCSkFIZFF2RlpOdjRqOS9Ydkc5UUFvQU5YeUpwVUISbzRQVEZEZ mxINS9nL2Q0R0dycG81NkcvUVJQV2JaSVIUamVoLS00T29j cCtDRjdxTJmOVVFLS1OdVBYa21CSjZxeD11TmltY3p3SVVnPT0", "queueToken": "AtgwT591uD53mxbRU73zVST877tMTVCitNBOS01ifQnneuuTYxmvJWI EYfjWhcBNPsYBjBTed-gKbmaLekkRjmdW8TvtHs28AyW746gQu3- u0qNEzfPazPw7P4F2DC8DN1-RCQEWqis9mAXNPmawcDhY9GTdV0OvnxnQFmRXwa6dR wGzikf2AA=="	200	<pre> "data": { "session": { "negotiate": { "__typename": "NegotiationResultPayload", "result": { "queueToken": "Ar09XjOMYHwrL0_vciEth_ngLFCLeNmkcK9PQ6YNuGg1U-xbyhwjixWYSpOgZuniSvedUGxMGX-jjhAZKCblmEHxCmL4vWDFdmawisu42ghWfY13LK2FDGFJm9Kb KP0hsgonJtp2nbdorH9GinWQJJO-3AFVWVJd8B7Wlbfk2445X0JQlkyFfMA==", "buyerProposal": { "merchandiseDiscount": { "__typename": "FilledDiscountTerms", "lines": [] }, "deliveryDiscount": { "__typename": "FilledDiscountTerms", "lines": [] }, "delivery": { "__typename": "FilledDeliveryTerms", "intermediateRates": false, "progressiveRatesEstimatedTimeUntilCompletion": 0, "shippingRatesStatusToken": "", "deliveryLines": [</pre>	Null	<pre> pm.test("Status code is 200", function () { pm.response.to.have.status(200); }); pm.test("Name Validation", function () { pm.expect(pm.response.text()).to.include("Shagor"); }); pm.test("firstName", function () { pm.expect(pm.response.text()).to.include("Shagor"); }); pm.test("lastName", function () { pm.expect(pm.response.text()).to.include("Mahmud"); }); pm.test("city", function () { pm.expect(pm.response.text()).to.include("dhaka"); }); pm.test("countryCode", function () { pm.expect(pm.response.text()).to.include("BD"); }); pm.test("phone Number Validation", function () { pm.expect(pm.response.text()).to.include("01764523102"); }); pm.test("currencyCode", function () { pm.expect(pm.response.text()).to.include("BDT"); }); pm.test("", function () { pm.response.to.have.status("OK"); }); </pre>	Validation Passed: 9

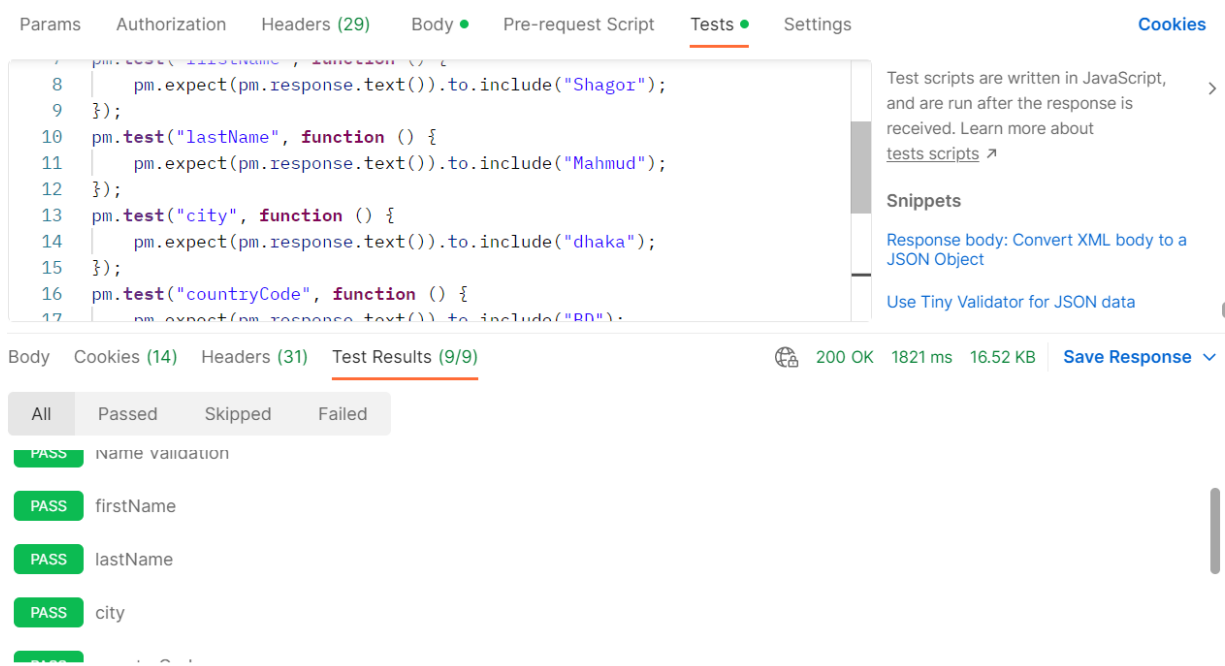


Fig 69: Checkout

8.8 Security Testing

Security testing is an important process that helps identify vulnerabilities and weaknesses in a system or application that could be exploited by attackers. By performing security testing, organizations can take steps to prevent or mitigate the risks associated with these vulnerabilities, such as data breaches, unauthorized access, and other security incidents.

Why security testing is needed:

- **Protecting sensitive data:** Security testing helps ensure that sensitive data, such as customer information and financial data, is properly protected and not exposed to unauthorized parties.
- **Maintaining customer trust:** Customers expect their personal and financial information to be secure when they transact with an organization. Security testing helps build trust by demonstrating that the organization takes the security of its systems and applications seriously.

- Complying with regulations: Many industries are subject to regulations that require organizations to maintain certain security standards. Security testing can help organizations ensure that they are in compliance with these regulations.
- Protecting the organization's reputation: A security breach can have serious consequences for an organization's reputation, potentially leading to lost customers, damage to the brand, and legal liabilities. Security testing can help prevent such breaches from occurring.
- Protecting the organization's assets: Security testing helps protect the organization's assets, including its data, systems, and infrastructure, from being compromised by attackers.

Gathering Info About Domain

Logged At ↑	Not Before	Not After	Common Name	Matching Identities	Issuer Name
2022-12-27	2022-12-27	2023-03-27	blucheez.com.bd	blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2022-12-27	2022-12-27	2023-03-27	blucheez.com.bd	blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2022-12-26	2022-12-26	2023-03-26	www.blucheez.com.bd	www.blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2022-12-26	2022-12-26	2023-03-26	www.blucheez.com.bd	www.blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2022-10-28	2022-10-28	2023-01-26	blucheez.com.bd	blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2022-10-28	2022-10-28	2023-01-26	blucheez.com.bd	blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2022-10-27	2022-10-27	2023-01-25	www.blucheez.com.bd	www.blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2022-10-27	2022-10-27	2023-01-25	www.blucheez.com.bd	www.blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2022-08-29	2022-08-29	2022-11-27	blucheez.com.bd	blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2022-08-29	2022-08-29	2022-11-27	blucheez.com.bd	blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2022-08-28	2022-08-28	2022-11-26	www.blucheez.com.bd	www.blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2022-08-28	2022-08-28	2022-11-26	www.blucheez.com.bd	www.blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2022-06-30	2022-06-30	2022-09-28	blucheez.com.bd	blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2022-06-30	2022-06-30	2022-09-28	blucheez.com.bd	blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2022-06-29	2022-06-29	2022-09-27	www.blucheez.com.bd	www.blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2022-06-29	2022-06-29	2022-09-27	www.blucheez.com.bd	www.blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2022-05-01	2022-05-01	2022-07-30	blucheez.com.bd	blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2022-05-01	2022-05-01	2022-07-30	blucheez.com.bd	blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2022-04-30	2022-04-30	2022-07-29	www.blucheez.com.bd	www.blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2022-04-30	2022-04-30	2022-07-29	www.blucheez.com.bd	www.blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2022-03-02	2022-03-02	2022-05-31	blucheez.com.bd	blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2022-03-02	2022-03-02	2022-05-31	blucheez.com.bd	blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2022-03-01	2022-03-01	2022-05-30	www.blucheez.com.bd	www.blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2022-03-01	2022-03-01	2022-05-30	www.blucheez.com.bd	www.blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2022-01-01	2022-01-01	2022-04-01	blucheez.com.bd	blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2022-01-01	2022-01-01	2022-04-01	blucheez.com.bd	blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2021-12-31	2021-12-31	2022-03-31	www.blucheez.com.bd	www.blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2021-12-31	2021-12-31	2022-03-31	www.blucheez.com.bd	www.blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2021-11-02	2021-11-02	2022-01-31	blucheez.com.bd	blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3
2021-11-02	2021-11-02	2022-01-31	blucheez.com.bd	blucheez.com.bd	C=US, O=Let's Encrypt, CN=R3

Fig 70: DInfo

Scanning for Potential risky information

```
target IP:      23.227.38.65
target Hostname: blucheed.com.bd
target Port:    80
start Time:    2023-01-09 19:27:08 (GMT-5)

server: cloudflare
ncommon header 'x-dc' found, with contents: gcp-asia-southeast1,us-central1,gcp-us-central1
ncommon header 'x-redirect-reason' found, with contents: https_required
ncommon header 'x-shardid' found, with contents: 278
ncommon header 'alt-svc' found, with contents: h3=":443"; ma=86400, h3-29=":443"; ma=86400
ncommon header 'report-to' found, with contents: {"endpoints":[{"url":"https://a.nel.cloudflare.com/v3?s=eyphBm1EniwjUq5tI7btJMpvkDrdU6xL2uqUswvyeLkPqYdq91fHLYLvdT8T1u6q0Tg7Kc9%2BvzFBgUUCfhnJALL4ULk9JpLlIgtTiaMweo7FnJao128gmVIAAdAmw%3D%3D"}],"group":"cf-nel","max_age":604800}
ncommon header 'nel' found, with contents: {"success_fraction":0.01,"report_to":"cf-nel","max_age":604800}
ncommon header 'server-timing' found, with multiple values: (processing;dur=13, db;dur=5, asn;desc="138192", edge;desc="SIN", country;desc="BD",cfRequestDuration;dur=245.000124,)
ncommon header 'x-storefront-renderer-rendered' found, with contents: 1
ncommon header 'x-shopid' found, with contents: 58500776131
ncommon header 'x-sorting-hat-podid' found, with contents: 278
ncommon header 'x-shopify-stage' found, with contents: production
ncommon header 'x-sorting-hat-shopid' found, with contents: 58500776131
ncommon header 'x-request-id' found, with contents: 160f40ed-f650-4d21-b39e-3ded3399ac61
root page / redirects to: https://blucheed.com.bd/
no CGI Directories found (use '-C all' to force check all possible dirs)
ncommon header 'x-alternate-cache-key' found, with contents: cacheable:5b881f1398bd0e59efab9088b075f33e
ncommon header 'x-cache' found, with contents: miss
cookie localization created without the httponly flag
cookie_tracking_consent created without the httponly flag
cookie_y created without the httponly flag
cookie_s created without the httponly flag
cookie_shopify_y created without the httponly flag
cookie_shopify_s created without the httponly flag
cookie_shopify_m created without the httponly flag
ncommon header 'x-shopify-generated-cart-token' found, with contents: 4690dc5b86a20801dd1b0be73d43bba5
```

Fig 67: potential risk

Scanning for open Port

```
(root@Windows7)-[~/home/khan]
# nmap blucheedz.com.bd
Starting Nmap 7.92 ( https://nmap.org ) at 2023-01-09 19:12 EST
map scan report for blucheedz.com.bd (23.227.38.65)
ost is up (0.022s latency).
DNS record for 23.227.38.65: myshopify.com
ot shown: 996 filtered tcp ports (no-response)
ORT    STATE SERVICE
0/tcp  open  http
43/tcp open  https
080/tcp open  http-proxy
443/tcp open  https-alt

map done: 1 IP address (1 host up) scanned in 5.83 seconds

(root@Windows7)-[~/home/khan]
# nmap -sS -p1-80 -max-rtt-timeout 4 blucheedz.com.bd
Starting Nmap 7.92 ( https://nmap.org ) at 2023-01-09 19:16 EST
map scan report for blucheedz.com.bd (23.227.38.65)
ost is up (0.0063s latency).
DNS record for 23.227.38.65: myshopify.com
ot shown: 79 filtered tcp ports (no-response)
ORT    STATE SERVICE
0/tcp  open  http

map done: 1 IP address (1 host up) scanned in 1.88 seconds
```

Fig 68: Open port

Chapter 9: Reporting

Reporting is very important for testing purpose. The Reporting refers to the process of documenting and communicating the results of a testing process. This typically includes creating a report that summarizes the testing that was done, the results that were achieved, and any issues or defects that were identified. The purpose of reporting in testing is to provide stakeholders with a clear and concise understanding of the quality of the product or system being tested, as well as any areas that need to be improved. It can also help to identify trends and patterns in the testing data, which can inform decision-making and help to prioritize future testing efforts.

9.1 Manual Testing Report

Manual testing is a testing process in which a tester manually executes test cases without the use of automation tools. In manual testing, the tester manually enters input, verifies output, and checks that the product or system being tested is functioning as expected. This type of testing is typically used to validate that the product or system meets the specified requirements and to identify defects or issues.

All Manual reports are submitted in previous chapter .

9.2 Automation Testing Report

Automation refers to the use of technology to perform tasks without the need for human intervention. In the context of testing, automation refers to the use of software tools or scripts to execute test cases and check the functionality of a product or system. Automated testing is typically used to test the functionality of an application or system, as it allows tests to be run quickly and accurately, without the need for manual intervention.

9.2.1 Performance Testing1

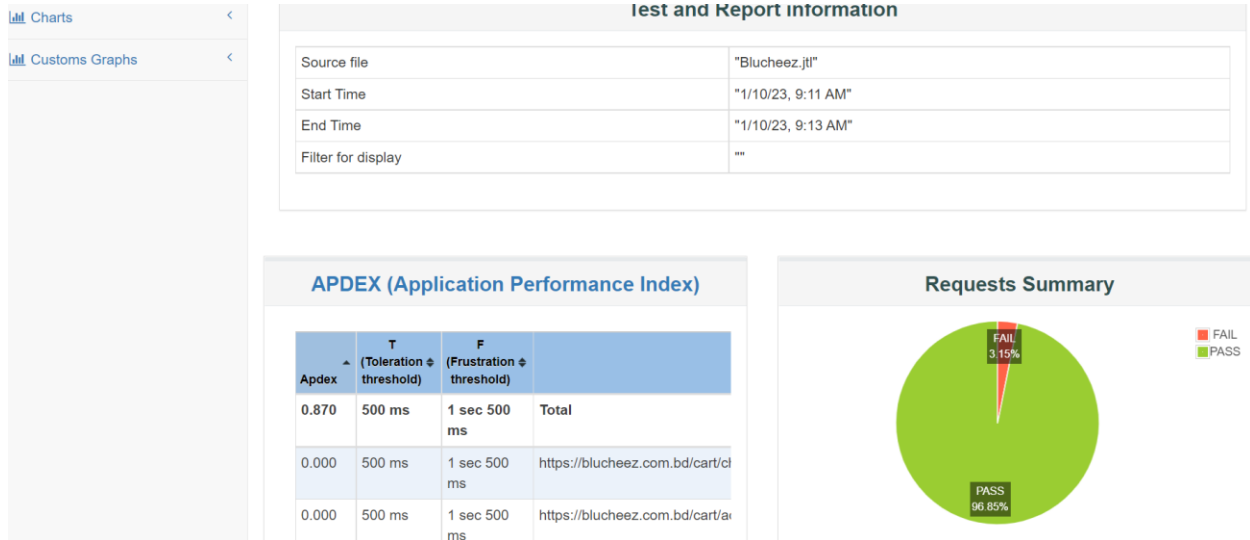


Fig 71: Summary

We can see that the Fail Rate for threads 20 is 3.15% so its not so good.

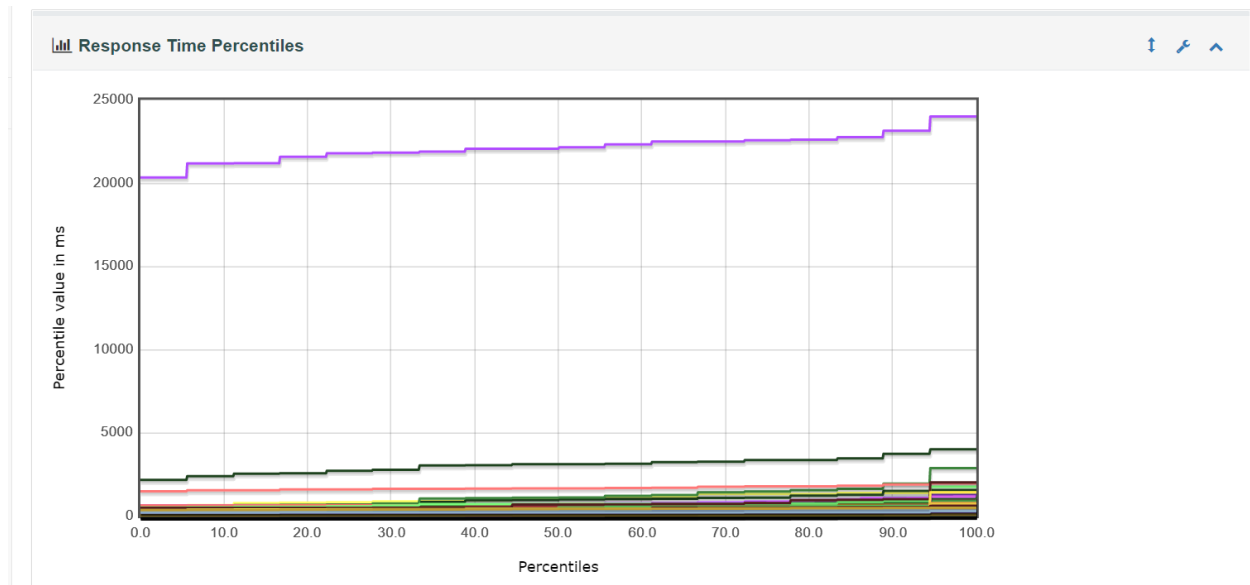


Fig 72: Response time

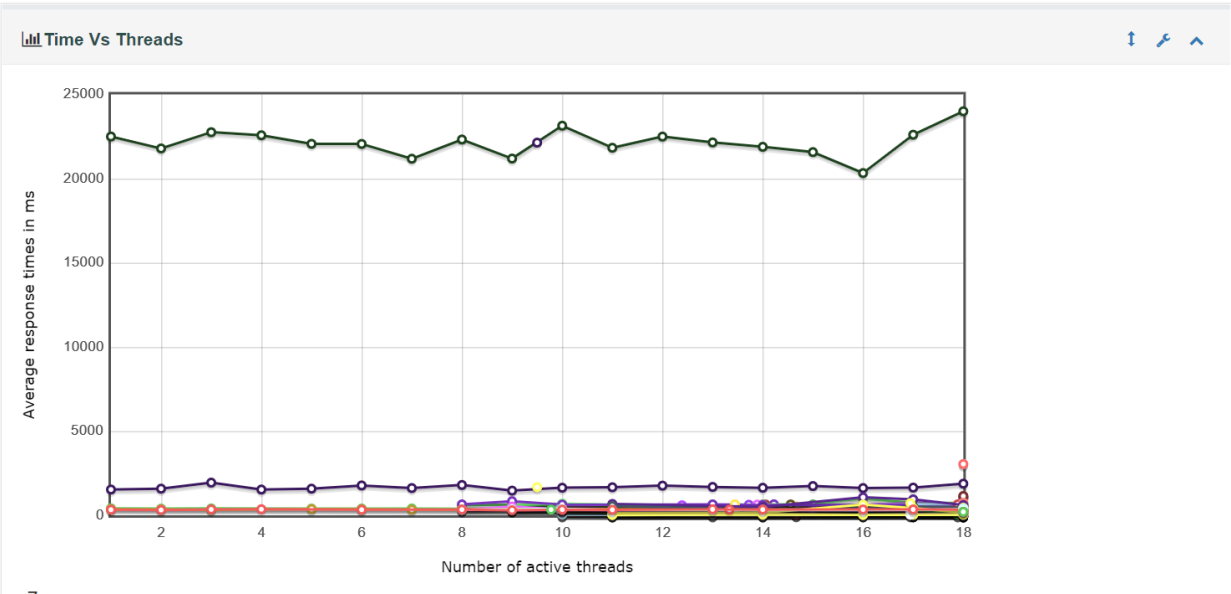


Fig 73: Time vs Threads

9.2.2 Performance Testing2

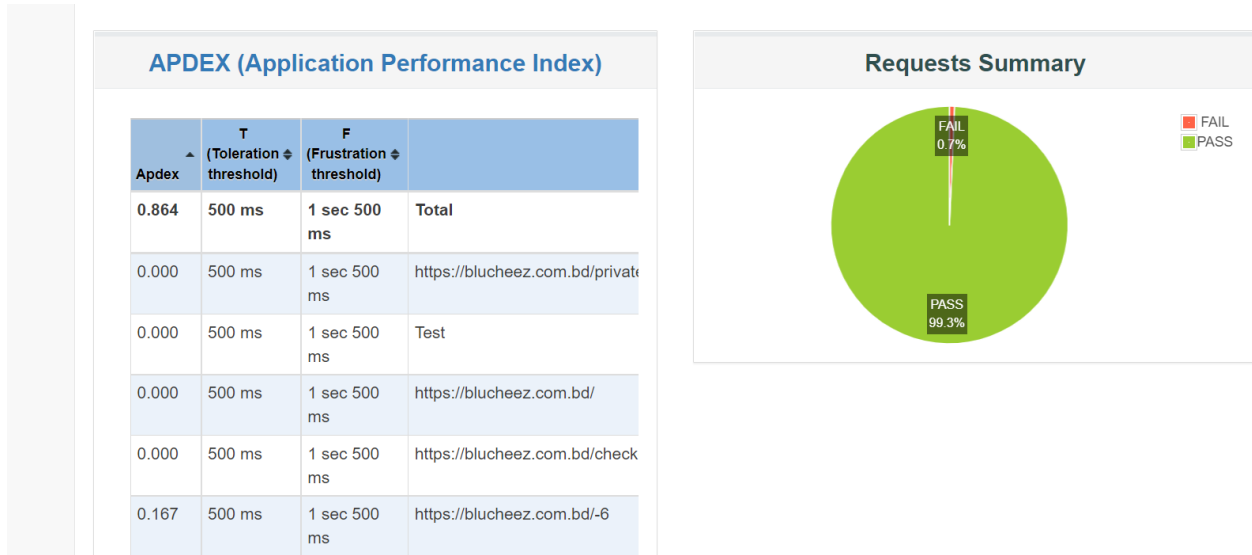


Fig 74: Summary

As we can see that the Fail rate for 20 threads is 0.7% that means that it can handle 7 user in per second .

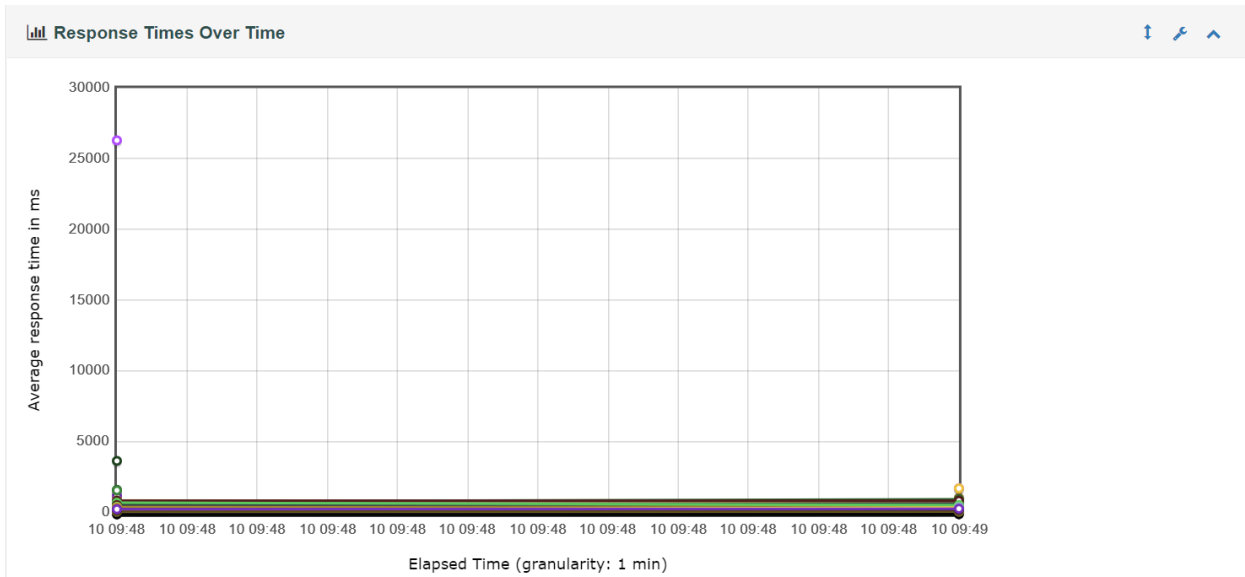


Fig 75: Response time

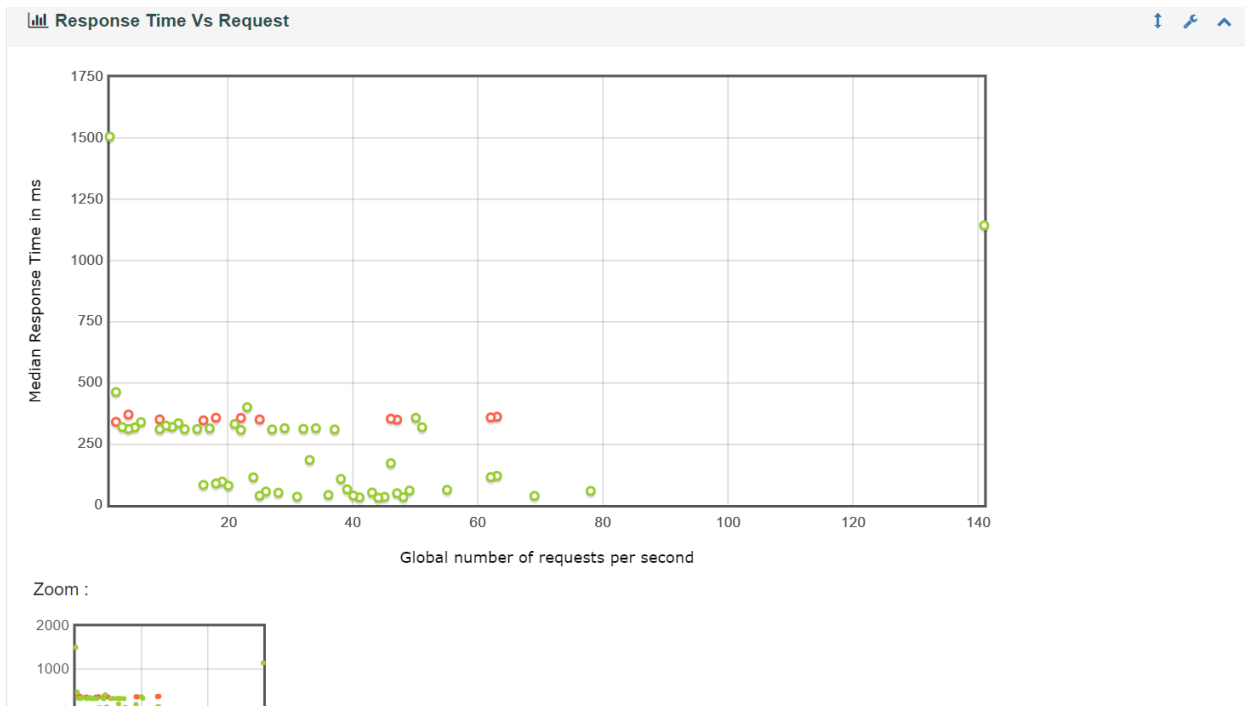


Fig 76: Response and Request

Chapter 10: Critical Appraisal and Evaluation

10.1 Objective that could be met with Manual Testing

- Verifying that the product or system functions as expected under different conditions and scenarios.
- Identifying defects or issues that may not be detectable through automated testing.
- Evaluating the usability and user experience of the product or system.
- Testing the product or system from the perspective of an end user.
- Providing feedback on the product or system to developers and other stakeholders.

Achievement rate and others:

Well, I have performed all types of required Manual testing for this project and the project has a 100% success rate.

10.2 Objective that could be met with Automation Testing

- Validating the functionality of the product or system.
- Ensuring that the product or system meets the specified requirements.
- Identifying defects or issues in a timely and efficient manner.
- Executing a large number of test cases in a short period of time.
- Reducing the reliance on manual testing, which can be time-consuming and prone to human error.

Achievement rate and others:

The project has two parts manual and automation testing. In Web the project has a 100% success rate.

10.3 Objective totally not met

Well the project has met all the objectives that was required.

Chapter 11: Critical Appraisal and Evaluation

11.1 Pre-project Review Closing

For Completing the project i have followed a predefined structure like

- project proposal submitting,
- project title defense,
- Testing and
- Documentation

11.2 What I have Learned

Throughout the project, I have learned many things like

- The importance of Email
- How to apply with the Email
- How to behave in a Corporate Office
- Manual Testing
- Automation Testing
- Documentation

11.3 The problems I have faced

I have faced some problems like, there are so many it companies in Dhaka but most of them are not that much serious with the Testing process. There are so many companies that don't follow the structure. they don't have any track or documents that they are working on it. When I have a task for API test and asked for the documentation but they didn't documented the API. There are so less Testers in the companies because they don't want pay money for their benefits. When I was working with this projects I didn't find any types sample reports that I can follow in the internet.

11.4 What solution Occurred

If there is a problem there is a solution. I have collected it Manually and for others problem I have followed all types of mini blog or resources that are related to my project. Talked with the people and My Course teacher or project coordinator who helped me by giving advised.

Chapter 12: Conclusion

12.1 Summary of the project

Blucheez is a Clothing brand that are focused on Comfortable Design. Its want to improve their website Quality and want engage more people through the user friendly interface. To improve the interface and modules I have conducted manual and automation testing to ensure that test will identify the defects or issue in the system and it will help to improve the Quality , Reliability and Security.

12.2 Goal of the Project

Software testing is an important part of the software development process, as it helps to ensure the quality and reliability of the final product.

- Identifying defects or issues in the product or system.
- Verifying that the product or system meets the specified requirements.
- Ensuring that the product or system is fit for its intended purpose.
- Providing stakeholders with information about the quality and reliability of the product or system.
- Improving the overall quality and reliability of the product or system.

12.3 Success of the Project

A project can be considered successful when it meets or exceeds the defined goals and objectives. In general, a successful project is one that is completed on time, within budget, and meets the specified requirements and quality standards. This project has met the user requirements and complete in time.

12.4 What I have done in the Documentation

I have done all task that was needed to complete the project like:

- Verifying that the site is easy to navigate and that users can find products and information easily.
- Ensuring that the site is optimized for mobile devices and responsive on different screen sizes and devices.
- Validating that the site's shopping cart and checkout process are smooth and efficient.
- Testing the site's payment gateway and other financial transactions to ensure that they are secure and accurate.
- Checking that the site's search functionality is effective and returns relevant results.
- Testing the site's performance and scalability to ensure that it can handle a large number of users and transactions.
- Ensuring that the site is protected against security threats, such as hacking and data breaches.

12.5 Value of the project

Software testing is needed in every system because without software testing no software is secure. Software testing can save any individuality from a great loss.

12.6 My experience

I have gain so many knowledge so my knowledge was zero in software testing but due to the internship program I have learned many things and make connection with so many industrious people. Overall it was a great experience.

Appendix A

Manual Testing

Input:

- Validation the data fields with data that don't match with the System specification.
- Validation the data fields and validate the correct input.
- The data type and range that shouldn't accepted.
- Checking invalid data responses in data fields.

Output

- The invalid types of data are get accepted without any data validation or confirmation.
- Incorrect input are getting rejected.
- Getting message that are shown that the input data in data fields are incorrect.

Some sample Test Cases:

- Empty field Response Test Case 001
- Informat data as input Test Case 006
- Range of input data Test Case 012

Appendix B

Automation Testing

Test:

- Need to Check the Web Compatibility with different Browser
- Validation the registration with the valid information
- Login into the account with the credential
- Complete the product full order process

Result:

- The system is compatible with different Browser
- Registration completed with valid information with no error
- Logged in successfully with no error
- Completed the product order

Sample:

Chrome Browser Fig 75: Result For Chrome

Firefox Browser Fig 76: Result For Firefox

Internet Explore Fig 77: Result For Internet Explore

Test result for Chrome



Fig 77: Result For Chrome Browser

Test result for Firefox



Fig 78: Result For Firefox Browser

Test result for Internet Explore



Fig 79: Result For Internet Explorer Browser

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THANK YOU

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