

Internship on Software Quality Assurance (SQA)

BY

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This Report Presented in Partial Fulfillment of the Requirements for the
Degree of Bachelor of Science in Computer Science and Engineering

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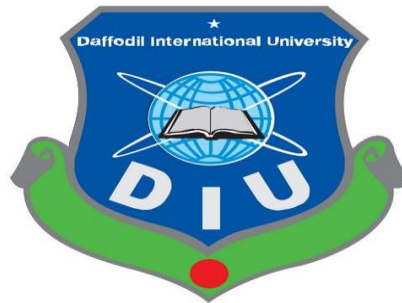
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**DAFFODIL INTERNATIONAL UNIVERSITY
DHAKA, BANGLADESH
JULY 2024**

APPROVAL

This Project titled Internship on Software Quality Assurance (SQA), submitted by Md. Hasibul Hasan Abir to the Department of Computer Science and Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on July 16, 2024.

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DECLARATION

I hereby declare that this internship has been done by us under the supervision of **Mr. Md. Sazzadur Ahamed, Assistant Professor, Department of CSE** Daffodil International University and co-supervision of **Mr. Amit Chakraborty, Assistant Professor, Department of CSE** Daffodil International University. I also declare that neither this internship nor any part of this internship has been submitted elsewhere for the award of any degree or diploma.

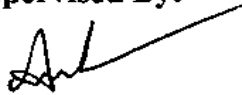
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I appreciate God for His blessings, which enabled us to successfully finish our final year internship.

I am deeply grateful to our supervisor **Mr. Md. Sazzadur Ahamed, Assistant Professor**, Department of CSE Daffodil International University. Our supervisor has extensive knowledge and interest in the field of SQA and is committed to completing this internship successfully. This internship was completed thanks to his patience, scholarly direction, encouragement, supervision, constructive criticism, helpful counsel, and correction of numerous drafts.

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Finally, i must acknowledge with due respect the constant support and patients of our Parents.

ABSTRACT

This paper describes the internship I completed in Software Quality Assurance (SQA) at Goinnovior Limited. The internship sought to connect theoretical understanding with practical application by concentrating on various testing approaches, such as automated manual testing. I received hands-on expertise with industry-standard tools such as Manual testing, JIRA and Selenium and worked on real-world projects that emphasized Agile approaches. The report describes the SQA processes used, the issues encountered, the solutions executed, and the major learnings. It emphasizes the need of efficient communication and collaboration in guaranteeing software quality. This thorough investigation provides significant insights into SQA procedures, which will help me improve professionally and prepare for a job in software quality assurance.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Software quality testing, known as SQA plays a role, in the software development life cycle by ensuring that the final products meet requirements and function as intended. In today's world where software is ubiquitous the importance of SQA cannot be overstated. Scrum quality assurance (SQA) involves tasks aimed at evaluating software creation processes identifying errors and areas for enhancement. This article shares my internship journey at Goinnovior Limited, a leading company in software quality assurance. During my internship from November 20, 2023 to March 20, 2024 I delved into SQA aspects. Applied my academic knowledge. One key objective was to gain hands on experience with the organizations SQA tools and procedures to ensure software efficiency. Throughout my internship I worked closely with colleagues in the SQA team, on projects.

Being involved in phases of the software quality assurance process. Having a good understanding of the company's software development practices were key aspects of my role. This included designing and executing test cases conducting tests using both automated tools and manual methods and managing issues using JIRA. The job was both. Demanding. From unraveling software systems, to communicating issues to developers and other team members I encountered obstacles.

1.2 Objective

During my time, as a trainee at Goinnovior Limited my main objective is to acquire hands on experience in software quality assurance to complement my background with industry knowledge. Some of the goals include;

1. **Understanding SQA Procedures:** Getting familiar with the company's SQA procedures and methodologies like Agile, Scrum and other relevant frameworks.

2. Testing Approaches: Exploring testing methods such as automated testing, performance testing and manual testing to detect and document software issues in real world projects.

3. Utilizing SQA Tools: Learning how to use industry SQA tools like Git for integration and JIRA for bug tracking.

4. Collaboration: Working closely with developers, project managers and stakeholders to ensure that high standards are met throughout the software development process through communication and teamwork.

5. Problem Solving: Enhancing problem solving skills by tackling challenges encountered during testing phases.

6. Documentation: Improving documentation skills by creating detailed test cases reports and offering recommendations, for enhancing software quality.

1.3 Motivation

I was excited to gain experience, in Software Quality Assurance (SQA) at Goinnovior Limited as a way to connect my knowledge of software engineering with its real world application. During my studies I delved into aspects of software design and testing realizing the importance of hands on experience in understanding the intricacies of ensuring software quality. The reputable service and innovative approach to software quality assurance at Goinnovior Limited caught my attention. Joining a team alongside seasoned professionals seemed like an opportunity. My aim was to engage in tasks to contribute to and grasp the companys SQA processes, strategies and tools.

Moreover I looked forward to leveraging my skills to tackle real world challenges and gain insights into maintaining standards of software quality. My ultimate career aspiration is to become a SQA specialist who can make contributions towards developing reliable and top notch software products. This internship was seen as a step, towards achieving that goal.

1.4 Background

During my internship, at Goinnovior Limited I had an opportunity to delve into the realm of Software Quality Assurance (SQA). Goinnovior Limited is renowned for its software solutions. Places a strong emphasis on maintaining high standards through rigorous SQA processes. The SQA team plays a role in the software development cycle by ensuring that all products adhere to quality benchmarks before they are released. Their responsibilities include conducting performance testing adhering to industry standards and employing both automated and human testing methods.

Through project assignments mentoring orientation sessions training programs and regular evaluations the internship program at Goinnovior Limited provided an introduction, to SQA. Interns actively participated in projects where they could apply their knowledge in practical settings. Additionally they received guidance from professionals that enabled them to enhance their skills and deepen their understanding of software quality assurance practices.

1.5 Scope of the Study

This study delves into my hands on experience and insights gained during my software quality assurance (SQA) internship, at Goinnovior Limited. It details the processes and tools employed in SQA practices encompassing both automated testing methods. The utilization of industry tools like JIRA for bug tracking and Selenium for test automation is highlighted.

Examining each stage of the software innovation lifecycle involving SQA procedures the study underscores the incorporation of methodologies and continuous integration practices. It encompasses an evaluation of my contributions to projects, documenting test case creation and execution identifying defects and effectively communicating issues with development teams. Additionally it addresses challenges encountered during the internship such as software systems and articulating technical problems. The report also outlines solutions implemented to resolve these challenges.

In essence this study aims to provide an account of my experience in SQA by bridging theoretical knowledge with real world application and fostering essential skills vital for a successful career, in software quality assurance.

CHAPTER 2

ORGANIZATION OVERVIEW

2.1 Company Background

Goinnovior Limited is a tech services and consulting firm located in Dhaka, Bangladesh. Established in 2015 the company offers a range of IT services, such, as website development, networking solutions, graphic design software, cybersecurity expertise and marketing support. With a team of 10-50 employees Goinnovior caters to midmarket and business clients with design and development services.

2.2 Mission and Vision

The main objective of Goinnovior Limited is to streamline its clients operations by delivering top tier IT solutions. Through consulting, software development and technology outsourcing services the company aims to enhance client workflows, communication channels and data management systems. Goinnovior strives to ensure customer satisfaction by offering quality products and services at prices while expanding its presence, as a technology driven business solutions provider.

2.3 Services Offered

Goinnovior Limited provides a comprehensive range of IT services, including:

- **IT Consultancy**
 - IT strategy and planning
 - IT project management
 - IT security and risk management
 - Development and integration software
 - Data analysis and business intelligence

- **Managed IT**
 - Network Monitoring and Management
 - Data Backup and Disaster Recovery
 - Cloud Management and Services
 - Management of IT Asset
- **Digital Marketing**
 - Search Engine Optimization (SEO)
 - Social Media Marketing (SMM)
 - Video Marketing
 - Lead Generation
 - Content Writing
- **Brand and Promotion**
 - Increasing brand awareness
 - Building brand identity
 - Enhancing customer loyalty
 - Driving sales and revenue
- **Domain and Hosting**
 - Domain Registration
 - Web Hosting
 - Virtual Privet Server
 - Email Hosting
- **Technology Training**
 - Software Development
 - Cybersecurity
 - Networking and Infrastructure
 - Database Administration and Management
 - OS and Server Administration

- **Offshore Development**
 - Quality Assurance and Testing
 - Custom Software Development
 - Blockchain Development
 - User Experience (UI/UX) Design
 - Mobile App Development

2.4 Specialized Solutions

Goinnovior offers specialist IT solutions customized to various corporate needs:

- IT Infrastructure
- Integrated Cyber Security
- Modern Workplace
- Web Application
- Business Automation
- Internet of Things (IoT)
- Blockchain

2.5 Career Opportunities

Goinnovior Limited offers a range of job opportunities, in the field of IT and related areas enabling individuals to engage in work and advance their careers. The company focuses on creating a work environment that fosters advancement and growth.

CHAPTER 3

WORKING ACTIVITY

3.1 Introduction

During my internship, at GoInnovior Limited I had the opportunity to closely collaborate with the Software Quality Assurance (SQA) team. My responsibilities included a variety of tasks that provided me with insights into the workings and functions of SQA. Below is a rundown of my activities ranging from fundamental to more advanced tasks.

3.2 Learning the basics of SQA

• Understanding SQA Concepts

- **Introduction to SQA:** I familiarized myself with the basics of software quality assurance by reading manuals and attending classes.
- **SDLC Overview (Software Development Life Cycle):** I gained knowledge about the stages of SDLC and the role of SQA in each phase.
- **Testing Methods:** I explored testing approaches, such as regression testing, black box testing, white box testing, manual testing and automated testing.

• Familiarizing with Tools

- **Test Management Tools:** I acquired skills in using tools like JIRA for test management and bug tracking purposes.
- **Automation Testing Tools:** I learned how to utilize tools like Selenium, for testing web applications.

3.3 Test Planning and Design

• Analysis of Requirements

- **Gathering Requirements:** I attended meetings. Reviewed documents to understand the projects needs.
- **Test Case Creation:** Contributed to developing test cases aligned with user stories and requirements.

- **Drafting the Test Strategy**

- **Formulating Test Strategies:** Collaborated on crafting test plans outlining testing objectives, methods, resources and timelines.
- **Risk Assessment:** Identified risks and outlined mitigation strategies in the test plan.

3.4 Test Execution

- **Manual Testing**

- **Executing Test Cases:** Manually testing by executing test cases and reporting any discovered bugs.
- **Bug Reporting:** Using JIRA bugs were documented with screenshots, steps, for reproduction and severity levels.

- **Automated Testing**

- **Creating Test Scripts:** Employed Selenium WebDriver to develop and execute automated test scripts.
- **Updating Test Scripts:** Ensuring the relevance of automated test scripts by updating them to incorporate application changes.

3.5 Defect Management

- **Defect Tracking**

Adding issues: Included problems, in the JIRA defect tracking system with all the details.

Issue Prioritization: Participated in discussions to prioritize problems based on their severity and impact, on business operations.

- **Verification and Validation**

Reexamination: Ensured that resolved issues were thoroughly tested to confirm their resolution.

Regression Testing: Conducted tests to verify that recent code modifications did not introduce any problems.

3.6 Collaboration and Communication

- **3.6.1 Skill Enhancement**

Training Sessions: Went to workshops and training sessions to learn more about advanced testing tools and methods.

Self-Study: I was learning on my own by reading SQA-related books, papers, and websites.

- **3.6.2 Feedback and Making Things Better**

Peer Reviews: Test cases and scripts were reviewed by peers so that I could get helpful comments.

Performance Improvement: Used comments from mentors and peers to make testing better and improve my own performance.

CHAPTER 4

JOURNEY TO SQA & TESTER

After completing my three month training program at the company I began working on projects, with the SQA team. Specifically I was tasked with writing test cases for the website of goinnovior limited, which offers services to clients who directly engage with the companys employees. Upon inspection I reported to my supervisor about the bugs in modules of the website. To ensure testing I checked this website on over 10 Android and iOS devices. Additionally our senior SQA engineer, who leads the SQA team conducted automated testing, on this website well.

4.1 Test Case Development

As a intern SQA my first task was test case development. I was took part company Goinnovior Limited projects. I was wrote goinnovior limited website Navbar, Home Page, Buttons & Contract pages test case.

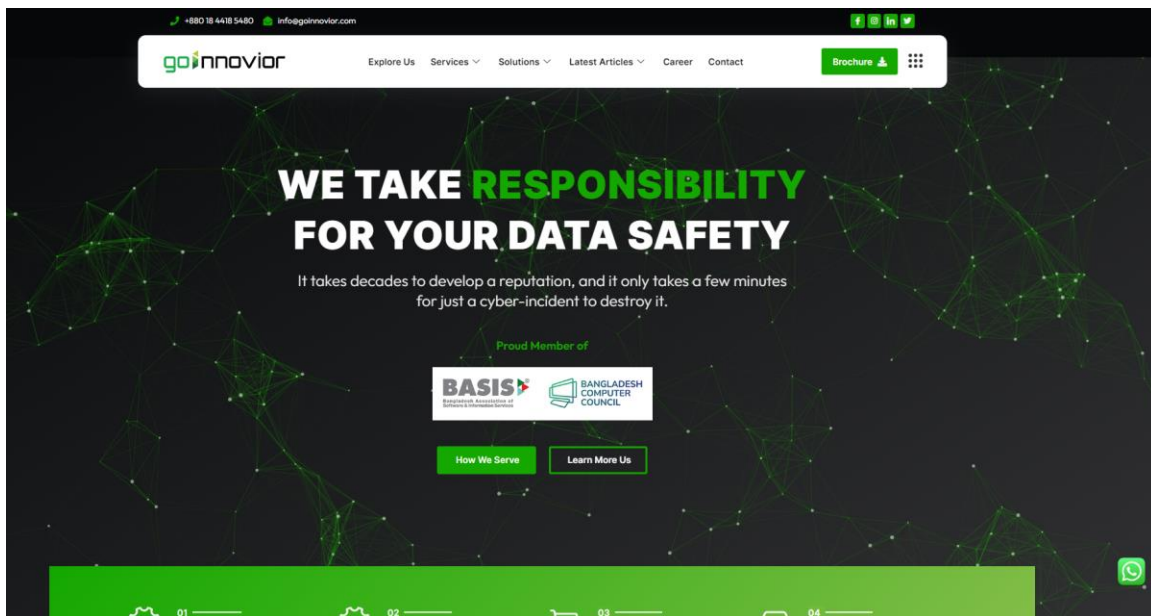


Figure 1.1 Goinnovior Projects

Home page functionality test cases:

Here is my writing the project test cases. This test cases based on the home page of this website.

TEST CASE										
Project Name		www.goinnovior.com		Project Description		Corporate Website				
Project Manager		Tasnia Afrin Asha		Technology Used		HTML, CSS, Bootstrap, ReactJS, VueJS, ExpressJS, MongoDB				
Expected Starting Date		24 April 2024		Actual Starting Date		24 April 2024				
expected Completion Date		24 June 2024		Actual Completion Date						

SL	Module/Feature/Page Name	Test Case ID	Test Case Title	Test Data / Information	Test Step	Expected Result	Actual Result	Status	Data/Input Data	Comment
1	Verify Home Page load	TC001	Loading Page	N/A	1. Ensure Internet Connectivity 2. Write the following url in the Browser www.goinnovior.com 3. Press Enter	The Landing Page Should be loaded Successfully	As Excepted	Pass	N/A	
2		TC002	Inspect Top Header's Element (Mobile Number) for Desktop view	N/A	1. Click on mobile number/icon	It Should take to the calling interface available in your local Sysytem	As Excepted	pass	N/A	
3		TC003	Inspect Top Header's Element (Email Id) for Desktop view test case on the basis of windows operating system	N/A	1. Click on Email ID/icon	It Should take to the default email interface	As Excepted	pass	N/A	If you are not login the interface, then Login the account
4		TC004	Inspect Top Header's Element (Email Id) for Desktop view test case on the basis of MAC operating system	N/A	1. Click on Email ID/icon	It Shouldn't take to the default email interface	Not Excepted	Fail	N/A	1. For chrome its doesn't work 2. As a default works in safari browser
5		TC005	Inspect Top Header's Element (Facebook Link) for Desktop view	N/A	1. click on Facebook Icon	It should take to the default facebook interface	As Excepted	pass	N/A	If you are not login the interface, then Login the account
6		TC006	Inspect Top Header's Element (Instagram) for Desktop view	N/A	1. Click on Instagram Icon	It Shouldn't take to the default Instagram interface	As Excepted	pass	N/A	
7		TC007	Inspect Top Header's Element (Linkedin) for Desktop view	N/A	1. Click on Linkedin Icon	It should take to the default facebook interface	As Excepted	pass	N/A	If you are not login the interface, then Login the account
8		TC008	Inspect Top Header's Element (Twitter) for Desktop view	N/A	1. Click on Twitter Icon	It should take to the default X interface	As Excepted	pass	N/A	If you are not login the interface, then Login the account

Figure 1.2 Home page functionality test cases.

Check Navigation Menu functionality test cases:

TEST CASE										
Project Name		www.goinnovior.com		Project Description		Corporate Website				
Project Manager		Tasnia Afrin Asha		Technology Used		HTML, CSS, Bootstrap, ReactJS, VueJS, ExpressJS, MongoDB				
Expected Starting Date		24 April 2024		Actual Starting Date		24 April 2024				
expected Completion Date		24 June 2024		Actual Completion Date						

SL	Module/Feature/Page Name	Test Case ID	Test Case Title	Test Data / Information	Test Step	Expected Result	Actual Result	Status	Data/Input Data	Comment
9	Check Navigation Menu	TC009	Explore us for Desktop View	N/A	1. Click on Explore us in this website	It take to the default Explore us webpage	As Excepted	pass	N/A	
10		TC010	Services for Desktop View	N/A	1. Click on Services in this website 2. Select Category	It take to the default Services webpage	As Excepted	pass	N/A	
11		TC011	Solutions for Desktop View	N/A	1. Click on Solutions in this website 2. Select Category	It take to the default Solutions webpage	AS Excepted	pass	N/A	
12		TC012	Latest Articles for Desktop View	N/A	1. Click on Latest Articles in this website 2. Select Category	It take to the default Latest Articles webpage	AS Excepted	pass	N/A	
13		TC013	Career for Desktop View	N/A	1. Click on Career in this website	It take to the default Career webpage	AS Excepted	pass	N/A	
14		TC014	Contract for Desktop View	N/A	1. Click on Contract in this website	It take to the default Contract webpage	AS Excepted	pass	N/A	
15		TC015	Brochure Download	N/A	1. Click on the Brochure download button	It take to the default Brochure Download page	AS Excepted	Fail	N/A	1. This company brochures are not updated. 2. Please Upload the Update Brochures
16		TC016	Nine Dots	N/A	1. Click on the Nine Dots Button	It take to the default Contents page	Not Excepted	Fail	N/A	Nine Dots section are empty. There are no contents available in this page

Figure 1.3 Check Navigation Menu functionality test cases.

Contact functionality:

Figure 1.4 Contract functionality.

Contract functionality test cases:

Here is my writing the project test cases. This test cases based on the contract functionality of this website.

TEST CASE

Project Name	www.goinnovior.com	Project Description	Corporate Website
Project Manager	Tasnia Afrin Asha	Technology Used	HTML, CSS,Bootstrap,ReactJS,VueJS,ExpressJS,MongoDB
Expected Starting Date	24 April 2024	Actual Starting Date	24 April 2024
expected Completion Date	24 June 2024	Actual Completion Date	

SL	Module/Feature/Page Name	Test Case ID	Test Case Title	Test Data / Information	Test Step	Expected Result	Actual Result	Status	Data/Input Data	Comment
21	Home > Career				2. Click on Continue to Chat	whatsapp contract page				
22		TC022	Employee details button (More Details)	N/A	1. Click on the more details button	It take to the default employee details pages	AS Excepted	pass	N/A	
23		TC023	Employee Jobs apply form	N/A	1. Fill up the apply for the position form 2. Choose file (Select Picture to the device or drive)	Successfully fillup the form	AS Excepted	pass	N/A	
24		TC024	Employee form Submit Button	N/A	1. Click on the Submit button	ccessfully added the informat	AS Excepted	pass	N/A	
25	Home > Contract > Form	TC025	Email feild Input	N/A	Write the Email Address	Input valid mail	Not Excepted	Fail	N/A	ALL email are worked , please confirmation is mail Valid or invalid
26		TC026	Phone Number Input	N/A	Write the Phone number	Input valid number	AS Excepted	pass	N/A	
27		TC027	Official Website	N/A	Write the official mail address	Input Valid Email address	Not Excepted	Fail	N/A	ALL email are worked , please confirmation is mail Valid or invalid
28		TC028	Full Name	N/A	Write the Full Name	Input Correct Name	As Excepted	pass	N/A	
29		TC029	Service types	N/A	Select the Service types	Input the Service types	As Excepted	pass	N/A	
		TC030	Message	N/A	Input any kind of message	Show the message	As Excepted	pass	N/A	

Figure 1.5 Contract functionality test cases.

Functional links and Buttons test cases:

Here is my writing the project test cases. This test cases based on Functional links and Buttons the of this website.

TEST CASE										
Project Name		www.goinnovior.com		Project Description		Corporate Website				
Project Manager		Tasnia Afrin Asha		Technology Used		HTML, CSS,Bootstrap,ReactJS,VueJS,ExpressJS,MongoDB				
Expected Starting Date		24 April 2024		Actual Starting Date		24 April 2024				
expected Completion Date		24 June 2024		Actual Completion Date						

SL	Module/Feature/Page Name	Test Case ID	Test Case Title	Test Data / Information	Test Step	Expected Result	Actual Result	Status	Data/Input Data	Comment
16		TC016	Home Data	Test	1. Click on the Home Button	Contents page	Not Excepted	Fail	N/A	Home and the content available in this page
17	Functional Links and Button	TC017	How we Serve	N/A	1. Click on the How we serve Button	It take to the default Button page	Not Excepted	Fail	N/A	
18		TC018	Learn More Us	N/A	1. Click on the Learn More Us Button	It take to the default learn more us page	Not Excepted	Fail	N/A	
19		TC019	See More	N/A	1. Click on the See More Button	It take to the default see more page	AS Excepted	pass	N/A	
20		TC020	Request Consultation	N/A	1. Click on the Request Consultation Button 2. Fill up the requirement 3. Click the Submit Button	It take to the default Request Consultation page	AS Excepted	pass	N/A	
21		TC021	Whatsapp	N/A	1. Click on the whatsapp contract button 2. Click on Continue to Chat	It take to the default whatsapp contract page	AS Excepted	pass	N/A	
22	Home > Career	TC022	Employee details button (More Details)	N/A	1. Click on the more details button	It take to the default employee details pages	AS Excepted	pass	N/A	
23		TC023	Employee Jobs apply form	N/A	1. Fill up the apply for the position form 2. Choose file (Select Picture to the device or drive)	Successfully fillup the form	AS Excepted	pass	N/A	
24		TC024	Employee form Submit Button	N/A	1. Click on the Submit button	ccessfully added the informat	AS Excepted	pass	N/A	

Figure 1.6 Functional links and Buttons test cases.

4.2 Functional Modules Check

I also reviewed the website project features and module bugs, for Goinnovior Limited. My supervisor allocated tasks to each team member. My assignment involved examining three modules on the homepage; the navigation menu, different buttons and contact details. I tested all four modules. Identified issues. Upon finding a bug I informed both my supervisor and the leader of the SQA team.

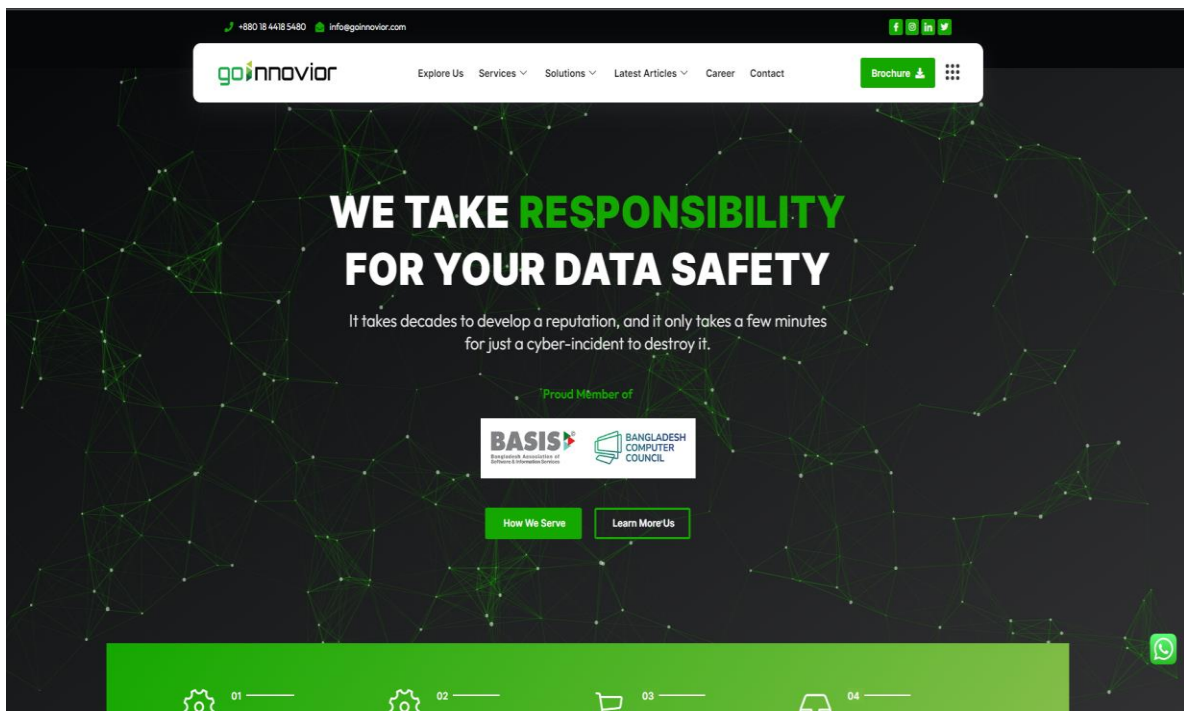


Figure 2.1 Goinnovior Limited Modules Check.

4.3 Finding Bug issue

Goinnovior Limited project modules checking bug report:

Project Name		Goinnovior limited			
Module Name		www.goinnovior.com			
Test By		Md. Hasibul Hasan Abir			
Designation		Management Trainee-Software Quality Assurance			
Date		June-6, 2024			
Report ID		TC_goinnovior_01	Report Description	Verify to all functional testing on web and mobile responsiveness	

Tr	Task S.NO	Section/Place	Description	Priority	Status	Tr	Dev Name	Dev-St atus	Tr	Screenshot/Videos	Tr	Notes
	1	Verify Home Page load	The top header's email are not redirecting the default pages for MAC	Low	New Bug		Anik			https://drive.google.com/drive/folders/1U8mofp4bqQF8BAUBF9GLW5f5rChew-Df	Notes	
	2	Check Navigation Menu	this navigation menu nine dots are empty.	Medium	New Bug		Anik			https://drive.google.com/file/d/1N02009sDet93p7deXWtTSYzNSzpJKd/view?usp=sharing	Notes	
	3	Functional Links and Button	1. The home pages show that "How we serve" button, this button are not redirecting the another pages. 2. Button is not functional	High	New Bug		Anik			https://drive.google.com/file/d/1o7F0QV0bq3x8KVz0F107Zea2Mu1rle/view?usp=sharing	Notes	
	4	Check Navigation Menu	The brochure is not updated.	High	New Bug		Anik			https://drive.google.com/file/d/1r9cW5pLgeQ2Kv1Ta1201AgBp9H5K/view?usp=sharing	Notes	
	5	Functional Links and Button	1. The home pages show that "Learn More Us" button, this button are not redirecting the another pages. 2. Button is not functional.	High	New Bug		Anik			https://drive.google.com/file/d/1o7F0QV0bq3x8KVz0F107Zea2Mu1rle/view?usp=sharing	Notes	
	6	Home > Contract > Form	Email feild input all email are accepted . there are no valid or invalid mail are checking.	High	New Bug		Anik			https://drive.google.com/file/d/19s0k15g4pCBVWwpnf_K1a1TgBaT1P5Z/view?usp=sharing	Notes	
	7	Home > Contract > Form	Official Website Email feild input all email are accepted . there are no valid or invalid mail are checking.	High	New Bug		Anik			https://drive.google.com/file/d/1yaa7HnSeQhJzU5ChuANLXFxELrdE4vuQ/view?usp=sharing	Notes	

Figure 3.1 Goinnovior limited website modules checking bug report.

4.4 Test Approach

The testing procedure details the steps and protocols, for guaranteeing the effectiveness and excellence of the software. This manual serves as a guide for test design explaining techniques, norms, uses, test varieties, tools employed regression testing and criteria, for test composition.

4.4.1 Process of Testing

The testing process consists of a sequence of tasks aimed at ensuring that the software meets its specifications and performs properly. The main steps in the testing process are:

- **Understanding Requirements:** Before determining which components are testable it's crucial to comprehend and analyze the requirements.
- **Planning Tests:** Develop a test plan outlining the goals, scope, resources, timeline and deliverables.

- **Designing Test Cases:** Draft test cases and design documentation based on the requirements.
- **Setting Up Test Environment:** hardware, software and network settings to establish the test environment.
- **Conducting Testing:** Execute test cases using automated methods and document the outcomes.
- **Reporting Errors:** Log any identified defects, in the error reporting system during testing.
- **Completing Testing:** Execute all test cases resolve any issues and compile a test report summarizing the process.

4.4.2 Testing Levels

Testing is done in several stages to ensure complete and thorough coverage:

- **Unit testing:** involves verifying the correctness of individual components or modules.
- **Integration testing:** It is a way of ensuring that interconnected parts communicate properly.
- **System testing:** It is the process of ensuring that the entire system meets a given requirement.
- **Acceptance testing:** It involves putting the system through real-world scenarios to determine that it meets business requirements and is ready for deployment.

4.4.3 Roles and Responsibilities

- **Test Administrator:** Develops test methodologies, organizes and manages test activities, and manages the test team.
- **Test Leadership:** Manages testing efforts, allocates responsibilities to team members, & ensures testing procedures are followed.
- **Test Engineers/Analysts:** Create and execute test cases, report defects, and ensure testing is complete and comprehensive.
- **Developers:** Support testing & fix any bugs found during testing.
- **Project Manager:** Ensures testing meets project deadlines and objectives.

CHAPTER 5

CHALLENGES

5.1 Challenges

During my internship, at GoInnovior Limited I encountered challenges. The connection between ideas and their implementation in settings proved to be quite difficult especially when dealing with technologies and social issues. Balancing my internship duties with teaching responsibilities was a struggle as some projects required time management skills. Understanding the mission goals and technical documents from the start was also a bit tricky. Developing communication and conflict resolution skills, within a context took a lot of effort. It's no task to maintain energy levels at work while collaborating with diverse teams requiring strong interpersonal abilities. Handling feedback. Defect reporting posed challenges but served as learning opportunities.

5.2 Academic Preparation Challenges

- **Bridging the Theory-Practice Gap:**

Challenges: The engaging part of this task was applying the theories I studied to real world scenarios. Unlike the concepts covered in my courses I had to grasp ideas related to software testing, which varied greatly in actual projects.

Resolution: To overcome this I made sure to reach out to my mentors and colleagues whenever I faced challenges or encountered something. Additionally consulting project documentation proved helpful in filling any knowledge gaps. I also revisited some concepts, from my school days to address areas where I felt lacking.

- **Technical Proficiency:**

Challenges: Even though I already had a grasp of programming and testing methods I was able to gain knowledge, about various tools used in professional settings for tasks like Selenium testing.

Resolution: To tackle this I concentrated on expanding my expertise through courses, on the job training and practical application of these tools, in sample projects to enhance my skills.

- **Time Management:**

Facing challenges was quite tough especially when juggling tasks, like test cases, meetings and discovering tools at once. To tackle this I improved my productivity by organizing tasks based on their importance creating a schedule and monitoring performance to track deadlines accurately.

5.3 Personal Skill Challenges

- **Communication Skills**

Facing difficulties: Nonetheless it can lead to disagreements. He emphasized the importance of teamwork and effective communication. It took me a while to speak in meetings and deliver concise yet reports.

Finding a solution: As a result I enhanced my communication skills by taking notes in classes actively participating in discussions and seeking feedback on my reports before and, during work interactions.

CHAPTER 6

ACQUIRED KNOWLEDGE

6.1 Benefits for the University's Internship Program

There is a significance, to university internship programs as per my experience at GoInnovior Limited. These programs encourage the acquisition of knowledge that complements concepts taught in classrooms. It raises the question of incorporating real world assignments into courses to better prepare learners for commercial roles. Connecting with realities and sharing such insights can enhance the educational services offered within universities, for both teachers and fellow students.

6.2 Capacity to learn

I also have learned and adapt to the behaviour of quickly understanding the temper of a firm like GoInnovior Limited and others which we come across. I was able to:

- **Understanding New Concepts:** It is crucial, for information security students to grasp ideas. According to the results of a self completion Scale survey respondents indicated that they have opportunities to learn about SQA procedures within their organizations and are open to adopting tools such as automation testing with Selenium.
- **Problem Solving:** It is essential to address any issues that arise during the testing phase and determine the solutions.
- **Keeping Updated:** Innovation is an aspect that everyone in this field should possess, especially considering the changes, in quality assurance practices and industry norms. Staying informed through educational resources provided by companies is vital.

6.3 Stability

Following of dependable behaviour was felt particularly during my internship period. Key features include:

- **Punctuality:** Another essential skill is the ability to consistently meet deadlines execute test cases effectively and report any issues promptly to ensure tasks are completed on time.
- **Dependability:** It's crucial to be a team member whom others can rely on to complete tasks efficiently without delays.
- **Accountability:** Taking responsibility means being accountable, for completing assigned tasks and actively seeking solutions or help when needed to achieve results.

6.4 Work Quality

One recurring theme that was brought out strongly in the internship applied high quality standards in any activity that was conducted. I learned:

- **Develop Comprehensive Test Cases:** Create descriptions, for each test that cover all aspects of the application being tested.
- **Troubleshooting:** Thorough testing using both automated tools to identify issues and maintain the stability of the software.
- **Report Discoveries:** Produce concise and clear reports, on defects and test results that assist in identifying and resolving challenges encountered by developers.

6.5 Opinion

According to the writers perspective he believes that participating in an internship, at GoInnovior Limited offered a learning opportunity and significantly enriched his experience. This hands on experience provided insights into SQA procedures, technologies and the inherent challenges of software quality assurance. The positive work environment along with colleagues fostered growth and allowed for collaboration with experienced professionals while making valuable contributions to the team. This experience has reaffirmed the writers interest in pursuing a career in SQA. Underscored the importance of learning and adaptation in response, to the evolving technology landscape.

CHAPTER 7

CONCLUDING STATEMENTS

7.1 Summary of Experience

During my time, at GoInnovior Limited I gained hands on experience in Software Quality Assurance (SQA). Throughout my internship I engaged in a range of tasks that allowed me to connect knowledge, with real world practice. These tasks involved understanding SQA concepts carrying out testing procedures and contributing to defect resolution.

7.2 Key Learning Outcomes

- **Technical Abilities:** I gained experience using testing tools such, as Selenium and JIRA along, with understanding how to develop and implement both manual and automated test scenarios.
- **Analytical Skills:** My capacity to assess requirements devise test scenarios and recognize risks has been enhanced.
- **Problem Solving:** I honed my thinking abilities by troubleshooting issues encountered during testing and devising efficient resolutions.

7.3 Personal and Professional Growth

During my time, at GoInnovior Limited as an intern I gained professional growth. The energetic and team oriented atmosphere helped me enhance my teamwork skills, communication and relationships through interactions with colleagues and participation in team meetings. Meeting deadlines consistently and taking ownership of tasks helped me establish a reputation for reliability, professionalism and responsibility. Overcoming challenges, during project testing improved my problem solving abilities and perseverance. Adapting quickly to technologies, methodologies and industry standards showcased my enthusiasm for learning and adaptability.

7.4 Impact of Future Work

During my internship I acquired hands on experience that will be beneficial, for my endeavors in the SQA field. The skills and insights I acquired will directly translate to my projects and job opportunities enabling me to make contributions, to any SQA team.

7.5 Recommendation for the University's Internship Program

- **Curriculum Integration:** Incorporating hands on activities in university courses to equip students with skills for real world job scenarios.
- **Industry Collaboration:** Collaborating with industry experts like GoInnovior Limited to provide students with internship placements, valuable internship opportunities and exposure to industry trends.
- **Continuous Feedback:** Establishing a feedback system to enhance the internship program based on student feedback and industry requirements.

7.6 Conclusion

In conclusion my time, at GoInnovior Limited for my internship was truly rewarding and filled with excitement. It has provided me with a base for my endeavors in the field of Software Quality Assurance. The valuable skills, understanding and perspectives acquired during this period will undoubtedly serve as tools as I progress in my career. I am grateful, for this opportunity. Excited to apply the knowledge gained to projects.

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