

Bhairab Book Shop

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A thesis submitted in partial fulfillment of the requirement for the degree of Bachelor of Science in Software Engineering.

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APPROVAL

This **project** entitled on "Bhairab Book Shop", submitted by Md. Hasnatul Haque Khan Auntu (ID: 152-35-101) to the Department of Software Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of Bachelor of Science in Software Engineering and approval as to its style and contents.

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DECLARATION

It hereby declares that this thesis has been done by us under the supervision of **S A M Matiur Rahman**, Associate Professor and **Ms. Syeda Sumbul Hossain**, Lecturer, department of Software Engineering, Daffodil International University. It is also declared that neither this thesis nor any part of this has been submitted elsewhere for award of any degree.

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Table of Contents

APPROVAL	i
DECLARATION	ii
ACKNOWLEDGEMENT	iii
LIST OF TABLES	viii
LIST OF FIGURES	ix
CHAPTER 1	
INTRODUCTION	
1.1 Project Overview	1
1.2 Project Purpose	1
1.2.1 Background	1
1.2.3 Goals	1
1.3 Stakeholders	1
1.4 Project Schedule	1
1.4.1 Gantt Chart	2
1.4.2 Release Plan/Milestone	2
CHAPTER 2	
SOFTWARE REQUIREMENT SPECIFICATION	
2.1 Functional Requirements	3
2.2 Data Requirements	3
2.3 Performance Requirements	3
2.3.1 Speed and Latency Requirements	3
2.3.2 Precision or Accuracy Requirements	3
2.3.3 Capacity Requirements	3
2.4 Dependability Requirements	4
2.4.1 Reliability Requirements	4
2.4.2 Availability Requirements	4
2.4.3 Robustness or Fault-Tolerance Requirements	4
2.4.4 Safety-Critical Requirements	
2.5 Maintainability and Supportability Requirements	

	2.5.1 Maintenance Requirements	4
	2.5.2 Supportability Requirements	5
	2.5.3 Adaptability Requirements	5
	2.5.4 Scalability or Extensibility Requirements	6
	2.6 Security Requirements	6
	2.6.1 Access Requirements	6
	2.6.2 Integrity Requirements	6
	2.6.3 Privacy Requirements	6
	2.7 Usability and Human-Interaction Requirements	7
	2.7.1 Ease of Use Requirements	7
	2.7.2 Personalization and Internationalization Requirements	7
	2.7.3 Understandability and Politeness Requirements	7
	2.7.4 Accessibility Requirements	7
	2.7.5 User Documentation Requirements	7
	2.7.6 Training Requirements	8
	2.8 Look and Feel Requirements	8
	2.8.1 Appearance Requirements	8
	2.8.2 Style Requirements	10
	2.9 Operational and Environmental Requirements	10
	2.9.1 Expected Physical Requirements	11
	2.9.2 Requirements for Interfacing with Adjacent Systems	11
	2.9.3 Projectization Requirements	11
	2.9.4 Release Requirements	12
	2.10 Legal Requirements	
	2.10.1 Compliance Requirements	12
	2.10.2 Standards Requirements	12
CHA	APTER 3	13
SYS	TEM ANALYSIS	13
	3.1 Use Case Diagram	
5.2 (Use Case Description (for each use case)	14
3.3 A	Activity Diagram (for each use case)	27
3.4	System Sequence Diagram (for each use case)	28
CHA	APTER 4	29

SYSTEM DESIGN SPECIFICATION	29
4.1 Class Responsibilities Collaboration (CRC) Cards	29
4.2 Sequence Diagram (for each use case)	29
4.2.1 Admin	29
4.2.2 Admin	32
4.3 Class Diagram	34
4.4 Database Design Diagram	35
4.5 Development Tools & Technology	35
4.5.1 User Interface Technology	36
4.5.1.1 ASP.NET MVC4 Framework or PHP Framework	36
4.5.1.2 CSS Framework or Bootstrap	36
4.5.1.3 Font Awesome or Others	37
4.5.2 Database Design Diagram	37
4.5.2.1 Microsoft Visual Studio 2010 or PHP Storm	37
4.5.2.2 MSSQL Server 2008 or MySQL Community Server 5.5	37
CHAPTER 5	38
SYSTEM TESTING	38
5.1 Testing Features	38
5.1.1 Features to be tested	38
5.1.2 Testing Features	38
5.2 Testing Strategies	38
5.2.1 Test Approach	39
5.2.2 Pass/Fail Criteria	39
5.2.3 Suspension and Resumption	39
5.2.4 Testing Schedule	39
5.2.5 Traceability Matrix	40
5.3 Testing Environment (hardware/software requirements)	41

5.4 Test Cases	42
CHAPTER 6	44
USER MANUAL	44
6.1 User Manual Home Page	44
6.2 User Manual (user)	44
6.3 Admin panel	46
CHAPTER 7	47
PROJECT SUMMARY	47
7.1 GitHub Link	47
7.2 Hosting Link	47
7.3 Critical Evolution	47
7.4 Limitations	47
7.5 Future Scope	47

LIST OF TABLES

Table 2.5.1: Maintenance Requirements	4
Table 2.5.2: Supportability Requirements	5
Table 2.5.3: Adaptability Requirements	5
Table 2.5.4: Scalability or Extensibility Requirements	6
Table 3.2: Use Case Description (for each use case)	4-26

LIST OF FIGURES

Figure 1.4.1: Gantt Chart.	2
Figure 3.1: Use Case Diagram.	13
Figure 3.3: Activity Diagram (for each use case)	27
Figure 3.4: 3.4 System Sequence Diagram (for each use case)	28
Figure 4.2.1: Sequence Diagram (Admin)	29-31
Figure 4.2.2: Sequence Diagram (User)	32-33
Figure 4.3: Class Diagram	34
Figure 4.4: Database Diagram.	35

CHAPTER 1

INTRODUCTION

1.1 Project Overview

Bhairab Book Shop is an online base website for Pre-Order and Selling book platform in Bangladesh. This technology will help to find who want to buy book. Various offer and exciting book selling is the goal of this project.

1.2 Project Purpose

We are living in the generation of technology.

- This web application is simple and user friendly that's why customer can easily buy various kind of books with a cheaper rate.
- This technology for spreading the light of knowledge.

1.2.1 Background

This web application is an online-based book selling platform. People'll get a lot of services there. For customer, this website has a lot of books like [general, memoir, anthology, novel], customer can buy the book and admin can panel order confirmation this order.

Users can pre-order in this website as like [Comic, Romance Novel] then fill-up the form product title, product documentation and brief description.

1.2.2 Benefits & Beneficiaries

This website is an application attracts more users. The system of this website will make sure that there is no waste of money. It can improve user satisfaction. Providing relevant information. By using this system people can easily get various kind of books.

1.2.3 Goals

The objective of the project targets:

- Providing lots of books.
- The customer can communicate with the admin.
- Admin can see the client's feedback and message.
- Admin can be seen product those are sell before.

1.3 Stakeholders

Those who are using our web application are our stakeholders. The user is stakeholders.

1.4 Project Schedule

Though my project is big so this project will take time. But I am trying to finish the web developing before my Final Defense. So, I used (3) months to make my system. Here's the Gantt Chart. So that I can easily find out when I have finished my work.

1.4.1 Gantt Chart

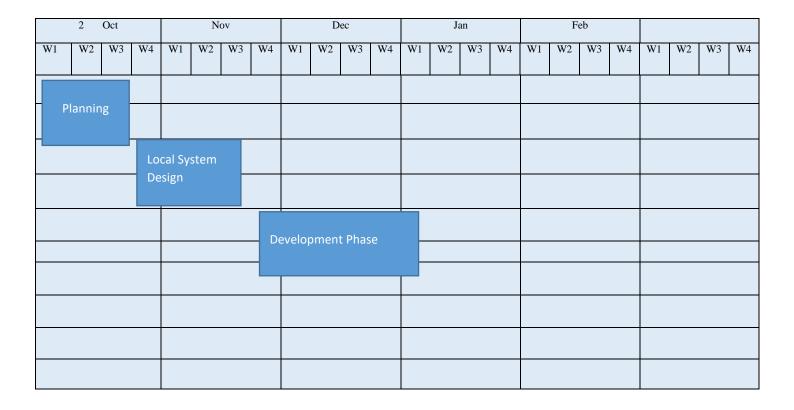


FIGURE 1. 4: RESEARCH SCHEDULE

1.4.2 Release Plan/Milestone

Because my system is not a small project, I can't finish it within a short time. So, I will update it & release the updated version next time and I will try to make the system more reliable.

Release plan-1: I will try to release my web application on January 5,2021

CHAPTER 2

SOFTWARE REQUIREMENT SPECIFICATION

2.1 Functional Requirements

My application is an online based book shop. Users can register by giving their necessary details. After successful registration, the user can log in by giving a username and password. Then the user has to fill up their profile. A user can see other user-profiles and also post.

2.2 Data Requirements

Data requirements refer to those data which are needed to build the system model. For my project, I need to focus on some points such as:

- 1) User Information:
- User Identification
- Signup/Login
- Authentication
- View another user information
- 2) Create Service:
- Create Product
- Order Information
- Modify Whole System,

2.3 Performance Requirements

Performance requirements are one of the most important things for an web application. If the performance is well, then the Application will be more useable.

2.3.1 Speed and Latency Requirements

Speed: The system will run at a high speed with good performance.

Latency: The latency will be also user-friendly and easy.

2.3.2 Precision or Accuracy Requirements

The precision and the accuracy is for the research purpose however I know

And implemented the project. This project is fully functional in localhost access.

2.3.3 Capacity Requirements

User capacity: About 1000+ people can access the website at a time. The capacity will be increased according to the users.

2.4 Dependability Requirements

However, this project has dependability because it depends on the frameworks and users.

2.4.1 Reliability Requirements

Reliability is an important non-functional requirement for most software products so a software requirements specification (SRS) should contain a reliability requirement, and most do A software product will fail under certain conditions, with certain inputs, and given the same inputs and conditions will fail every time until the cause of the failure is corrected. So, I tried to make my web application more reliable so that users can easily use my system & get better service from this system.

2.4.2 Availability Requirements

This project idea is not unique. The numbers of availability of the website will increase based on the increments of the users. I am planning to publicly launch the sites and I am capable to manage large datasets.

2.4.3 Robustness or Fault-Tolerance Requirements

This project has the tolerance of the least user right now as now it is in the localhost so based on the computer requirement and the configuration it can manage the datasets.

2.4.4 Safety-Critical Requirements

Safety and privacy are well maintained in the project. In my privacy policy, this is mentioned that no data will disclose or share publicly as well.

2.5 Maintainability and Supportability Requirements

At least one backup server with the same configuration as in the main server is also recommended for fault tolerance and better performance. Separate storage (with backup) for the database, electronic document, and manuscript is also recommended.

2.5.1 Maintenance Requirements

Requirement No.	Requirement
L-1	While login matches the username with user type
L-2	User will get the functionalities of his/her type
L-3	Login time should be stored in the log file

2.5.2 Supportability Requirements

Requirement No.	Requirement
A-1	Admin will log in using email & password
A-2	Admin will add book name
A-3	Admin can add Category name of the Book

2.5.3 Adaptability Requirements

Requirement No.	Requirement
AI-1	Seller & user both can add their personal information.
AI-2	Users may need to add their information.
AI-3	A seller needs to add their specialty information.

2.5.4 Scalability or Extensibility Requirements

Requirement	Requirement
CI-1	customer can check their order
CI-2	Admin can check their information & can add edit
CI-3	Then all update is saving in the database

2.6 Security Requirements

Each time there is a security violation. For this reason, without registration and log in, user can not enter into this website.

2.6.1 Access Requirements

To access the website a user must need the credentials to access the website, otherwise, the user only can view the website can't order or purchase the book or the other access.

2.6.2 Integrity Requirements

The operational demand definition method includes the subsequent activities:

- 1. Identify stakeholders who will or have an interest in my web application system. So mainly our stakeholders are customers. They should have Register & Login for their other activities.
- 2. By establishing measures of effectiveness and suitability, users can easily access & can use our system.

2.6.3 Privacy Requirements

Privacy is an important part of the business model or any website. We ensure the privacy and safety of the database that is going to be stored in the Service & Software database. There will be no pirates with the main data.

2.7 Usability and Human-Interaction Requirements

It is very easy to use this website. It is very user-friendly so to interact with the website a user doesn't need anything besides the internet connection to access the website. To order any book, user must need the credential user name and password.

2.7.1 Ease of Use Requirements

The user interface of this system must be familiar to users, and so may need to follow a single set of rules of consistent with those of the operating system, or other mainstream applications.

2.7.2 Personalization and Internationalization Requirements

The structure of my e-commerce system, including the software itself, the externally visible properties of the user interface, and the relationships between them.

2.7.3 Understandability and Politeness Requirements

Functional requirements are product features or functions that developers must implement to enable users to accomplish their tasks. So, it's important to make them clear both for the development team and the stakeholders. Functional requirements describe system behavior under specific conditions.

2.7.4 Accessibility Requirements

Accessibility focuses on how a weak or disabled person accesses or benefits from a site, system, or application. Accessibility is an important part of designing our site and should be considered throughout the development process.

2.7.5 User Documentation Requirements

The user requirement(s) document (URD) or user requirement(s) specification (URS) is a document usually used in software engineering that specifies what the user expects the software to be able to do.

Once the required information is completely gathered it is documented in a URD, which is meant to spell out exactly what the software must do and becomes part of the contractual agreement. A customer cannot demand features not in the URD, while the developer cannot claim the product is ready if it does not meet an item of the URD.

The URD I used as a guide for planning cost, timetables, milestones, testing, etc. The explicit nature of the URD allows customers to show it to stakeholders to make sure all necessary features are described.

2.7.6 Training Requirements

Identify and document the types of training required. More than one type of training may be required for a training group or organization. The following suggests training appropriate for:

- 1. application staff,
- 2. operations staff,
- 3. technical staff.
- 4. Tips and Hints

The project delivery team may not conduct every training course but may advise the customer as to the training required and recommend applicable vendor training courses as well.

2.8 Look and Feel Requirements

The look and feel requirements report the mood, or the style of the product's appearance. These requirements specify the intention of the appearance and are not a detailed design of an interface.

2.8.1 Appearance Requirements

Appearance:

A site must be visually appealing, polished, and professional. It's reflecting my company, my products, and my services. My website may be the first, and only, impression a potential customer receives of my company.

An attractive and well developed site is far more likely to generate a positive impression and keep visitors on my site once they arrive. As businesses, large and small continue to populate the web, my challenge is to attract and keep users' attention.

Functionality:

Every component of your site should work quickly and correctly. Broken or poorly constructed components will only leave your visitors frustrated and disillusioned with your company. Across the spectrum, everything should work as expected, including hyperlinks, contact forms, site search, event registration, and so on.

Error-free copy:

The exposure of my website will get good result. Double-check my facts and figures, as I don't know who may be quoting me tomorrow.

Usability:

A critical, but often overlooked component of a successful website is its degree of usability. My website must be easy to read, navigate, and understand. Some key usability elements include:

Simplicity:

The best way to keep visitors glued to my site is through valuable content, good organization, and attractive design, by keeping my site simple and well organized.

Fast-loading pages:

A page should load in 20 seconds or less via dial-up; at more than that, you'll lose more than half of your potential visitors.

Minimal scroll:

This is particularly important on the first page. Create links from the main page to read more about a particular topic. Even the Search Engines will reward me for this behavior.

Consistent layout:

Site layout is extremely important for usability. Using a consistent layout and repeat certain elements throughout the site is important.

Prominent, logical navigation:

Place my menu items at the top of my site or above the fold on either side. By limiting my menu items to 10 or fewer.

Descriptive link text:

Usability testing can determine that long link text makes it much easier for visitors or users to find their way around a website. Descriptive link text is favored by Search Engines, too. Backlinks are important to give users a sense of direction and to keep them from feeling sad or lost. By using a site map, and breadcrumbs.

Cross-platform/browser compatibility:

Different browsers frequently have different rules for displaying content. At a minimum, I should test my site in the latest versions of Internet Explorer (currently, versions 8 and 9), as well as Firefox ,Safari or chrome.

Screen Resolution:

Screen resolution for the typical computer monitor continues to increase. The average web surfer uses a resolution of 1024 x 768 pixels. However, I need to make sure that what looks good in this setting will also work nicely for other resolutions.

Search Engine Optimized (SEO)

There are hundreds of rules and guidelines for effective search engine optimization, and this isn't the place to cover them all. For starters, follow these simple rules:

Include plenty of written content in PHP format

Using my important keywords frequently and appropriately in my copy.

I've barely scratched the surface of what makes a website most effective.

2.8.2 Style Requirements

I'm always looking for ways to improve how they manage the look, feel, and complexity when building a web application. This can be difficult when I have multiple team members.

Style guide:

A style guide is a document of code standards that details the various elements and patterns of a site or application. It is a one-stop place to see all visual styles of the site such as headers, links, buttons, color pallets, and any visual language that is used on the site.

2.9 Operational and Environmental Requirements

The operational demand definition method includes the subsequent activities:

- 1) Identify stakeholders who will or have an interest in our system. So mainly our stakeholders are seller & customer. They should have Register & Login for their other activities.
- 2) Establish a measure of effectiveness and suitability, so that users can easily access & can use our system.

A system of dependableness relies upon a stable atmosphere. The look of the environmental system for your information center should make sure that every system will operate faithfully whereas, remaining at intervals the vary of its in operation specifications. therefore,

attempted to form our systems atmosphere additional reliable so that users will simply access the system with no delay.

2.9.1 Expected Physical Requirements

Design is fundamentally an innovative process. The methods discussed in this chapter are intended to support the identification and exploration of design alternatives to meet the requirements revealed by analyses of opportunity space and context of use. The methods are not a substitute for creativity or inventiveness. Rather they provide a structure and context in which innovation can take place. We begin with a discussion of the need for and the methods used to establish requirements based on the concept of user-centered design. The types of methods included here are work domain analysis, workload assessment, situation awareness assessment, participatory design; contextual design; physical ergonomics; methods for analyzing and mitigating fatigue, and the use of prototyping, scenarios, persona, and models, and simulations. As with the descriptions in Chapter 6, each type of method is described in terms of uses, shared representations, contributions to the system design phases, and strengths, limitations, and gaps. These methods are grouped under design because their major contributions are made in the design phase; however, it is important to note that they are also used in defining the context of use and in evaluating design outcomes as part of system operation.

2.9.2 Requirements for Interfacing with Adjacent Systems Motivation:

Requirements for the interfaces to other applications often remain undiscovered until implementation time. We avoid a high degree of rework by discovering these requirements early.

Fit Criterion

For each inter-application interface, specify the following elements:

- The data content
- The physical material contents
- The medium that carries the interface
- The frequency
- The volume

2.9.3 Projectization Requirements

In the projection requirements, we have followed the following guideline for our project work.

Content:

Any requirements that are necessary to make the product into a distributable or salable item.

Considerations:

Some products have special needs to turn them into salable or usable products.

might consider that the product has to be protected such that only paid-up customers can access it. Ask questions of our marketing department to discover unstated assumptions that

have been made about the specified environment and the customers' expectations of how long installation will take and how much it will cost.

2.9.4 Release Requirements

To publish a website there are so many checks list need to check the UI design, any kind of error all the functionality is working properly or not. The database connection and stored process all the valid and legal information.

2.10 Legal Requirements

The Act requires you to disclose certain information about the identity of your company on your website. This information doesn't need to be on every page, but it does need to be easily found so it will typically go on our Contact Us page. The footer section of your pages will be useful to both users, and for your search engine optimization.

2.10.1 Compliance Requirements

The terms and conditions agreement is not only for customers but also highly important for protecting your business by making sure customers know their rights and responsibilities.

It helps you avoid customer uncertainty and misunderstandings, so it should be written with absolute clarity about what should be done in any given situation. Consumers should be informed about all the issues that come with shipping and delivery, the return policy, and the privacy policy as well as information about pricing, payment, taxes, and so on.

2.10.2 Standards Requirements

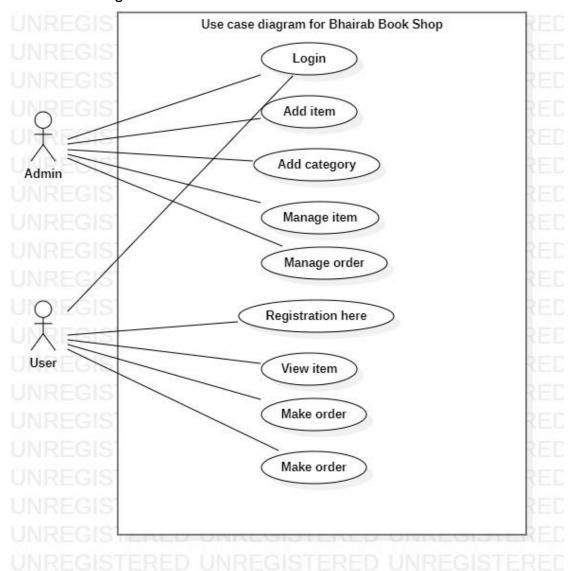
Tech Requirements & Getting Setup The "Right Way"

- 1. Domain Name
- 2. Hosting
- 3. The 2 most common types of hosting you will come across are
- 4. Website Platform
- 5. Website Speed
- 6. SSL Security
- 7. SEO Friendly
- 8. Tracking and Analytics

CHAPTER 3

SYSTEM ANALYSIS

3.1 Use Case Diagram



3.2 Use Case Description (for each use case)

Use Case Name:	Complete registration	
Scenario:	Complete a registration.	
Triggering Event:	Customer wants to login into the system	
Brief Description:	A new customer needs to first register into the system before performing any transaction.	
Actors:	Customer	
Related Use Case:	none	
Stakeholders:	Use Case Name:	Complete registration
	Scenario:	Complete a registration.
	Triggering Event:	Customer wants to login into the system
	Brief Description:	A new customer needs to first register into the system before performing any transaction.
	Actors:	Customer
	System manage	ment
Preconditions:	An unregistered customer	
Post conditions:	Registered customer	

	 The customer clicks the register button on the Home Page. The system displays the register page. The customer enters all of the required information. The customer clicks the send button. 	 4.1. The system checks that all of the required information were entered. a. If yes, the system will update the customer's record in the customer and account tables in the database. b. System displays OK message.
Exception Conditions:	1. if customer don't fill up any block of the form , then	the customer can not complete registration.

Use Case Name:	System login	
Scenario:	Customer have to login to perform a transaction	on
Triggering Event:	When customer want to do a transaction	
Brief Description:	A customer needs to log-in into the system be	fore performing any transaction.
Actors:	Customer	
Related Use Case:	none	
Stakeholders:	System management	
Preconditions:	A registered user	
Post conditions:	Successful login	
Flow Of Events:	Actor System	

- 1. The customer clicks the log-in button on the home page.
- 2. The customer enters his/her user ID and password.
- 3. The customer clicks the OK button.
- customer is an authorized user; the system displays the Personal Home Page to the customer
- 1.1. The system displays the Log-in Page $\,$
- 3.1. The system validates the log-in information against the account table in the database.
- 4.1 The system displays the personal home page to the customer.

1.if customer cannot login , then the customer cannot perform any transaction

Use Case Name:	Order Products	
Scenario:	A customer can order product to purchase.	
Triggering Event:	After selecting the Product	
Brief Description:	When user add to cart button click then cart s	tore, and cart details menu show
Actors:	Customer	
Related Use Case:	System login, checkout, product, cart, order	
Stakeholders:	System management	
Preconditions:	User have logged-in.	
Post conditions:	User make a choice for product	
Flow Of Events:	Actor	System
	The customer enters the keyword for a product and clicks the search button on the personal home Page.	1.1. The system displays the matching products on the web Page.
	2. The customer chooses the desired products and clicks add to cart button on the web page.	2.1. The system adds the products into the customer's order table in the database.
Exception Conditions:	If user do not order product then use	r cannot get book.

Use Case Name:	Complete Checkout	
Scenario:	A customer can purchase any book in his/her shopping cart	
Triggering Event:	When a customer want to buy a book	
Brief Description:	User can check the book when checkout succe ordering the required book, a customer can p	•
Actors:	Customer	
Related Use Case:	none	
Stakeholders:	System management	
Preconditions:	The user have logged in and has at least have	one book in the cart
Post conditions:	Customer checked out the book	
Flow Of Events:	Actor	System
	 The customer clicks the checkout button on the web page. The customer checks the order list for any inconsistency. If nothing found, customer clicks the proceed button. The customer enters into the relevant payment method information and clicks the ok button. The customer checks that all information is correct and then check out the book. 	 The system displays the products in the order table of the customer on the web Page. The system displays the Invoice page. The system checks that the payment method is valid. Then, the system displays the delivery details page. The system checks that the payment system is valid. Then, the system displays the delivery details page. The system will display the check-out information for confirmation.
Exception Conditions:	 If Customer don't login to the system, then the customer cannot check out the book. If customer don't give information about payment method then the customer cannot check out the book. If customer don't give information about delivery location then the customer cannot check out the book. 	

Use Case Name:	System View	
Scenario:	A customer can review about the specific book	
Triggering Event:	Customer can all menus button access in front	end
Brief Description: Actors:	A Customer Can see the service and get the se support Customer	rvice when he/she contact me if system
Related Use Case:	System login, System view	
Stakeholders:	System management	
Preconditions:	The user have logged-in	
Post conditions:	The Customer Can see the all system view project	
Flow Of Events:	Actor	System
	 The Customer can see the service when click the Services menus when Customer click the testimonial menus When Customer Can order book menus click 	1.1 The system displays the Service itf system support 2.1 The System displays the all testimonials if web application support 3.1. The system displays all books
Exception Conditions:	 If a user do not login to the system then user cannot sell the book. If a user do not input correct about the products he going to sell then he cannot sell the book. 	

Use Case Name:	Service Status
Scenario:	Admin want to control a service status
Triggering Event:	It occurs when admin want to manage a service

Brief Description:	Admin can edit their service like adding new book, remove a book and update book availability status.	
Actors:	Admin	
Related Use Case:	System login	
Stakeholders:	Admin management	
Preconditions:	Admin check a service	
Post conditions:	Admin updated the status of the service	
Flow Of Events:	Actor	System
	 Admin enter the system after login Admin add a new product Admin approve a service from a user after checking the product. Admin remove a product. Admin update the status of a product which is unavailable. 	2.1. System added a new product 4.1. System remove the product. 5.1. System update the product status
Exception Conditions:	 If admin do not log in then admin can If user give wrong information about 	not edit a product status then admin will not approve the service

Use Case Name:	testimonials Status
Scenario:	Admin want to control a online book shop status
Triggering Event:	It occurs when admin want to manage a product
Brief Description:	Admin can edit their products like adding new books, remove a book and update book status.

Actors:	Admin	
Related Use Case:	System login	
Stakeholders:	Admin management	
Preconditions:	Admin check a product	
Post conditions:	Admin updated the status of the products	
Flow Of Events:	Actor	System
	 Admin enter the system after login Admin add a new product. Admin remove a product. Admin update the status of a book which is unavailable. 	2.1 System added a new product .1 System show the products. a. System update the productss status
Exception Conditions:	5. If admin do not log in then admin can6. If user give wrong information about	not edit a products status then admin will not approve the products

Use Case Name:	Message Status
Scenario:	Admin want to control a book shop's message status
Triggering Event:	It occurs when admin want to manage a message
Brief Description:	Admin can edit their message option like adding new message box.

Actors:	Admin	
Related Use Case:	System login	
Stakeholders:	Admin management	
Preconditions:	Admin check a message box	
Post conditions:	Admin updated the status of the message box	
Flow Of Events:	Actor	System
	 Admin enter the system after login Admin add a new message option. Admin remove a message. Admin update the status of a message which is unavailable. 	2.1 System added a new message box 2.2 System show the messages a. System update the message status b. System remove the message
Exception Conditions:	5. If admin do not log in then admin can6. If user give wrong information about	not edit a products status then admin will not approve the products

Use Case Name:	Create Category
Scenario:	Admin want to control a online book shop
Triggering Event:	It occurs when admin want to manage a Category
Brief Description:	Admin can edit their Category like adding new Category, remove a Category and update Category status.

Actors:	Admin	
Related Use Case:	System login	
Stakeholders:	Admin management	
Preconditions:	Admin check a Category	
Post conditions:	Admin updated the status of the Category	
Flow Of Events:	Actor	System
	 Admin enter the system after login Admin add a new Category. Admin remove a Category. Admin update the status of a Category which is unavailable. 	2.1 System added a new Category 3 System show the Category. a. System update the Category status b. System remove the Category
Exception Conditions:	 If admin do not login then admin cannot edit a Category status If user give wrong information about then admin will not approve the Category 	

Use Case Name:	See Cart
Scenario:	A customer can Add to cart his/her cart.
Triggering Event:	Customer puts his/her cart
Brief Description:	A Customer can add product cart and show all carts item list
Actors:	Customer

Related Use Case:	Log-in	
Stakeholders:	System management	
Preconditions:	The user have logged-in	
Post conditions:	The order table has been updated.	
Flow Of Events:	Actor	System
	 The customer add to cart button then cart add The customer clicks the send button on the webpage. The customer checks the cart list 	1.2 The system displays the Sell used Software web page. 3.2. The system displays a all cart list
Exception Conditions:	If a user do not login to the system then user cannot cart add.	

Scenario:	Order Status
Triggering Event:	Occurs when customer order a book
Brief Description:	When a user order to buy a book admin will check whether the book is available or not if the book is available then admin gives approval to sell the book.
Actors:	Admin , user
Related Use Case:	System login
Stakeholders:	Admin management, System management
Preconditions:	Admin checking a the ordered book

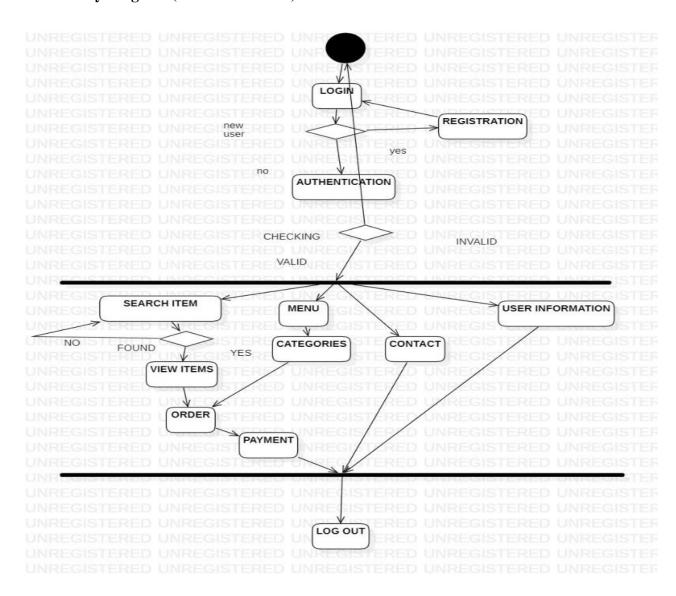
Post conditions:	Admin approved the ordered book	
Flow Of Events:	Actor 1. A customer login to the system and order a Book. 2. Admin check the availability of the Book. 3. If the Book is available then admin can approved the order to sell the Book. 4. User will get the book	System
Exception Conditions:	If the book is not available then admin cannot.	approved the order of the Book.

Use Case Name:	Quotes Status
Scenario:	User send Quotes to admin
Triggering Event:	Occurs when user send Quotes to admin
Brief Description:	User can directly send email to admin to share Quotes details information's.
Actors:	User , admin
Related Use Case:	none
Stakeholders:	Admin management
Preconditions:	User send email to admin
Post conditions:	Admin received email from user and replied to user

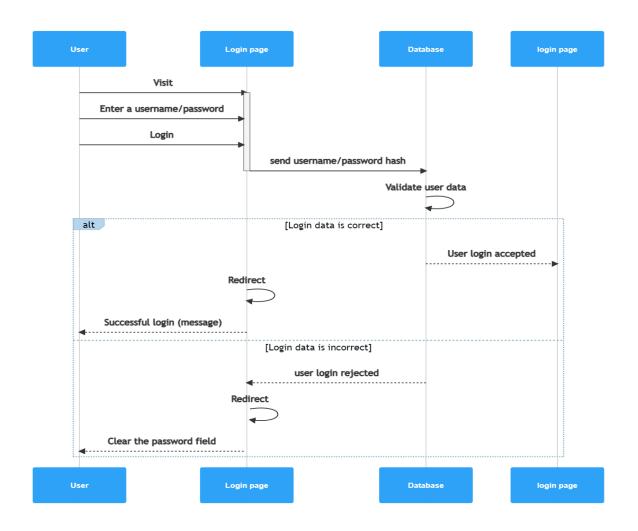
Flow Of Events:	Actor	System
	User send an email to admin to reply Quotes. Admin received the system Admin feedback the quotes	1.1 Quotes replay 3.1 problem solved
Exception Conditions:	If user don't send email to admin the	n admin cannot receive the System.

Use Case Name:	Check message	
Scenario:	User send message to admin	
Triggering Event:	Occurs when user send message to admin	
Brief Description:	User can directly send email to admin to share any problem about system.	
Actors:	User , admin	
Related Use Case:	none	
Stakeholders:	Admin management	
Preconditions:	User send email to admin	
Post conditions:	Admin received email from user and replied to user	
Flow Of Events:	f Events: Actor System	
	 4. User send an email to admin to solve a problem about system. 5. Admin received the email 6. Admin solved the problem 7. Admin replied to the user about solving the problem 	1.1 problem created 3.1 problem solved
Exception Conditions:	If user don't send email to admin then admin cannot receive the email.	

3.3 Activity Diagram (for each use case)



3.4 System Sequence Diagram (for each use case)



CHAPTER 4

SYSTEM DESIGN SPECIFICATION

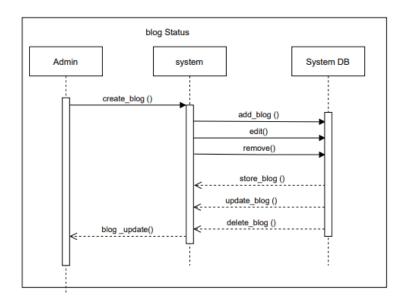
4.1 Class Responsibilities Collaboration (CRC) Cards

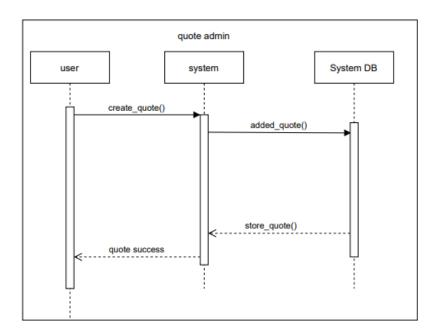
Although CRC cards were originally introduced as a technique for teaching object-oriented concepts, they have also been successfully used as a full-fledged modeling technique. My experience is that CRC models are an incredibly effective tool for conceptual modeling as well as for detailed design. CRC cards feature prominently in eXtreme Programming (XP) (Beck 2000) as a design technique. My focus here is on applying CRC cards for conceptual modeling with your stakeholders.

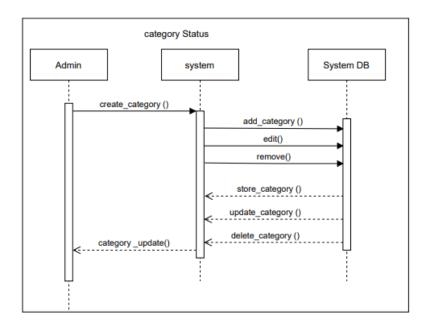
A class represents a collection of similar objects. An object is a person, place, thing, event, or concept that is relevant to the system at hand. For example, in a university system, classes would represent students, tenured professors, and seminars. The name of the class appears across the top of a CRC card and is typically a singular noun or singular noun phrases, such as Student, Professor, and Seminar. You use singular names because each class represents a generalized version of a singular object.

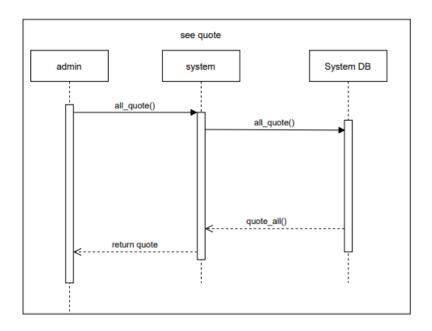
4.2 Sequence Diagram (for each use case)

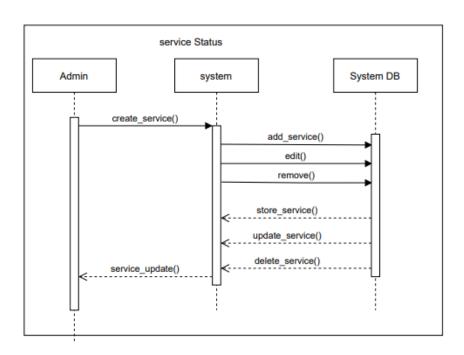
4.2.1 Admin



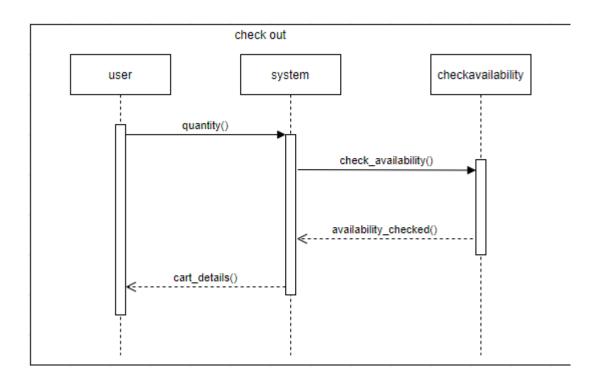


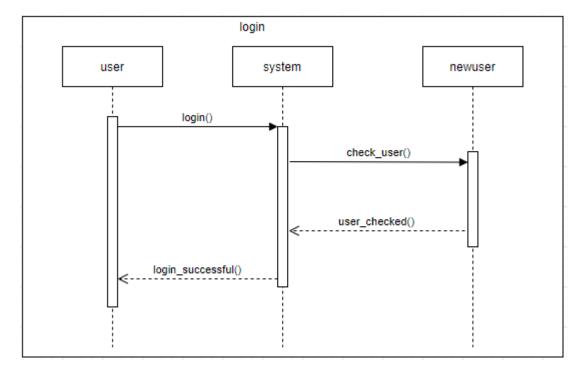


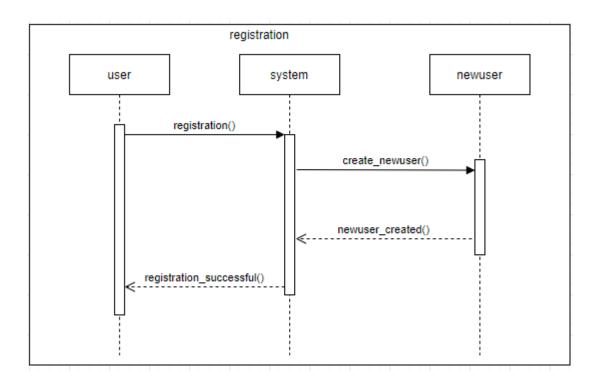


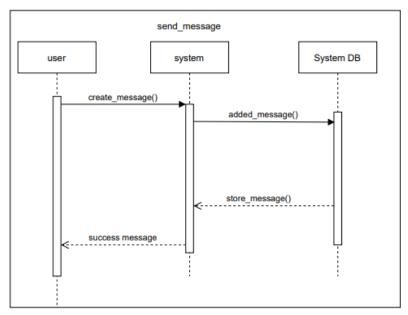


4.2.2 Admin

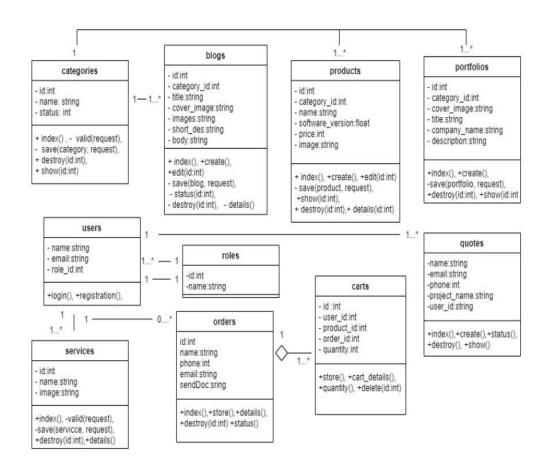




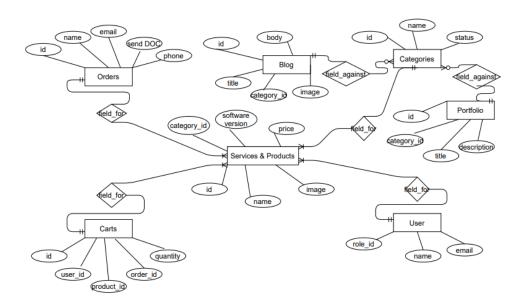




4.3 Class Diagram



4.4 Database Design Diagram



4.5 Development Tools & Technology

The web development tools that help the developer to ease the workflow of development are:

- 1. Javascript
- 2. Front-end Frameworks
- 3. Databases
- 4. Programming Languages
- 5. Icons
- 6. Css
- 7. PHP
- 8.

Javascript happens to be one of the most popular programming languages for the developer community. The library contains a set of already prepared libraries – that helps in easy access to web development. Some of the famous Javasript libraries are:

- 1. Front-end Frameworks
- 2. Php Frameworks

The front-end frameworks constitute folders and files. CSS, and HTML and Bootstrap are some of the examples to be cited.

Programming Languages

The languages form the backbone of web development tools. The popular ones used are PHP framework (Laravel), JavaScript and many more.

4.5.1 User Interface Technology

User experience marks the top priority for almost every business in the market today. As a beginner in the developer world, you would have come across frequently that even the brief that you were given for your project, mentioned the simplicity of its user interface that it should feature. It doesn't matter how complex are the functions and background operations happening alongside. What the users see and get to experience has to be a seamless and smooth execution. Take any one of them, and you would notice that the platform is powerful yet simple with a brilliant user interface. And that is because of the many versatile frameworks working behind the curtains.

However, there is no denying that the ever-increasing demand of the customers and the market, in general, requires a constant need to put out high-quality functionality and usability. As this responsibility piles up on the developer, many developers find themselves stuck and confused about which framework to pick among so many.

4.5.1.1 ASP.NET MVC4 Framework or PHP Framework

Laravel is a web application framework with expressive, elegant syntax. We believe development must be an enjoyable, creative experience to be truly fulfilling. Laravel attempts to take the pain out of development by easing common tasks used in the majority of web projects, such as authentication, routing, sessions, and caching.

Laravel aims to make the development process a pleasing one for the developer without sacrificing application functionality. Happy developers make the best code. To this end, we've attempted to combine the very best of what we have seen in other web frameworks,

4.5.1.2 CSS Framework or Bootstrap

Cascade Style Sheet version 3.0 is used in this project. Because of this framework and the bootstrap style the site is responsive. Anyone can use any smart tools to access the website.

Bootstrap has consistently been one of the biggest CSS Frameworks there is. It is often a de facto framework, especially for Web Developers. After several years of work, in early 2018, the official 4.0 version was released! Bootstrap 4.0 was a significant update.

4.5.1.3 Font Awesome or Others

Font Awesome is used in this project. To make a beautiful website there us various front styles needed font awesome is a database of the font where we all collect the font and linked in our project work. Get vector icons and social logos on your website with Font Awesome, the web's most popular icon set, and toolkit.

Font Awesome is a font and icon toolkit based on CSS and LESS. It was made by Dave Gandy for use with Twitter Bootstrap and later was incorporated into the BootstrapCDN. Font Awesome has a 20% market share among those websites which use third-party Font Scripts on their platform, ranking it second place after Google Fonts.

4.5.2 Database Design Diagram

To implement this project various things needed to be done

- 1. Research Analysis
- 2. Notepad++/ Bracket
- 3. PHP framework (Laravel)
- 4. Microsoft Visual Studio 2010
- 5. Database

And so many things that are required to developed a professional eCommerce site.

4.5.2.1 Microsoft Visual Studio 2010 or PHP Storm

Both of the tools are user-friendly however I am confident and used to VMS 2010. It was very easy to figure out the problem and solve it. Also, it helps us to work on the project as a live collaboration.

4.5.2.2 MSSQL Server 2008 or MySQL Community Server 5.5

For the database, we have used MySQL Community Server 5.5 as we have taught in our university. MySQL is very user-friendly and very easy to use. All the database query is run on MySQL server.

4.5.2 .NET Runtime or Apache HTTP Server

Apache HTTP Server for the database connection otherwise no performance can be done from the admin to user interface. In the design phase, the login form for user admin is designed to log in and access the database connection is needed. Apache HTTP Server is used for the database connection.

CHAPTER 5

SYSTEM TESTING

5.1 Testing Features

5.1.1 Features to be tested

- At first, I need to test Registration & Login Features.
- Then I need to test the part of the order.
- Then I can test the feature of Approve of the order part.
- I can also test the View order.
- Seller features can be tested. (Like Seller information, Seller Education, Seller Specialty).

5.1.2 Testing Features

- 1) I need not test the feature of the Home Page.
- 2) I need not test about page, contact page features.

5.2 Testing Strategies

A testing strategy is an overview that describes the testing approach of the code development cycle. It's created to tell project managers, testers, developers regarding some key problems with the testing method. Check methods describe however the merchandise risks of the

stakeholder's square measure satisfied at the test level that varieties of testing square measure to be performed, and that entry and exit criteria apply. They're created supported development style documents. System style documents square measure primarily used, and infrequently abstract style documents could also be stated.

5.2.1 Test Approach

Test approach is the test strategy implementation of a project, which defines how testing would be carried out. Test approach has two techniques: Proactive - An approach in which the test design process is initiated as early as possible to find and fix the defects before the build is created. This approach is applied in our project.

5.2.2 Pass/Fail Criteria

The exact pass/fail criteria for load and stress testing are to be determined by ITS. However, in a general sense, if the application performs to an acceptable degree after it has been put under a certain capacity, then the test item will pass. On the contrary, the test item will fail if the application underperforms. Our system is tested with all the test cases and it passed the requirement.

5.2.3 Suspension and Resumption

It is important to understand that if a defect is detected at a point after which the testing shall resume proves to be of no use, then applying the resources on testing will be futile. One needs to specify the reason for stopping the test activities and define the acceptable level of defects that allows the testing process to surpass those defects. Few defects may arise in resuming the test activity. Those are the hidden defects that were somewhere ignored earlier

5.2.4 Testing Schedule

A Test Plan is a detailed document that describes the test strategy, objectives, schedule, estimation, deliverables, and resources required to perform testing for a software product. Test Plan helps us determine the effort needed to validate the quality of the application under test. The test plan serves us as a blueprint to conduct software testing activities as a defined process, which is minutely monitored and controlled by the test manager.

5.2.5 Traceability Matrix

The main agenda of every tester should be to understand the client's requirements and make sure that the output product should be defect-free. To achieve this goal, every QA should understand the requirement thoroughly and create positive and negative test cases.

This would mean that the software requirements provided by the client have to be further split into different scenarios and further to test cases. Each of these cases has to be executed individually. A simple way is to trace the requirement with its corresponding test scenarios and test cases. This merely is termed as 'Requirement Traceability Matrix.'

The traceability matrix is typically a worksheet that contains the requirements with its all-possible test scenarios and cases and their current state, i.e. if they have been passed or failed. This would help the testing team to understand the level of testing activities done for the specific product.

- 1. Requirement Traceability Matrix
- 2. Requirement ID
- 3. Requirement Type and Description

Test Cases with Status

5.3 Testing Environment (hardware/software requirements)

Network

• Documentation required like reference documents/configuration guides/installation guides/ user manuals

Tes t Cas e ID:	Test Name:	Test Case Objective:	Pre- Requisite:	Steps to Perform:	Expected Result:	Output:	Status: Pass/F ail.
001	Sign up with empty fields	To verify the none of the fields remain empty	Displayin g sign up form	 Submit a form with several empty fields. Click the signup button 	Error message showing indicating empty fields	Error	pass
002	Sign up with completin g fields	Completin g the fields with data	Displayin g sign up form	 Submit the form by completing all empty fields. Click the signup button 	Sign up successful	Input data in the wrong field	fail
003	Sign up with corrected data	To input the correct data incorrect field	Displayin g sign up form	 Submit the form by completing all correct data incorrect fields. Click the signup button 	Sign up successful	Sign up successf ul	pass
004	Login with empty fields	To verify the none of the fields remain empty	Displayin g login form	 Submit the form with several empty fields. Click the login button 	Error message showing indicating empty fields	Error	pass
005	login with completin g fields	Completin g the fields with data	Displayin g login form	 Submit the form by completing all empty fields. Click the login button 	Login successful	The user is not registere d	fail
006	login with corrected data	To input the correct data incorrect field	Displayin g login form	 Submit the form by completing all correct data incorrect fields. Click the sign-up button 	Login successful	Login successf ul	pass

007	Order Book by guest	Checking order criteria	1 0	1.guest select product 2.guest added it to the cart	You need to login	pass

Tests are limited to what can be tested and what not should be tested.

Following people are involved in test environment setup

- System Admins,
- Developers
- Testers
- Sometimes users or techies with an affinity for testing

5.4 Test Cases

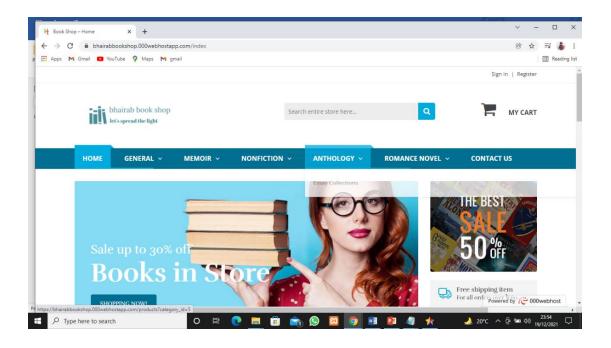
Test Cas e ID:	Test case name	Test Case Objective:	Pre- Requisite :	Steps to Perform:	Expected Result:	Output:	Status: Pass/Fai 1.
008	Order Products by user	Checking order criteria	Displayi ng Product	1.user select Product 2.user added it to the cart	Product added to the cart	Product added to the cart	pass
009	Check Out	Check out method	Displayi ng payment	1.user can use a payment method to check out the Software	Check out successful	Check out successf ul	pass

010	Resell Product by user	Resell Product criteria	Displayi ng Product	1.user can upload their Software 2.user can set their price	Product uploaded	Product uploaded	pass
011	Resell Product by guest	Resell Product criteria	Displayi ng Product	1.user can upload their Product 2.user can set their price	Product uploaded	You need to login	fail
012	Product status by admin	Add and remove a Product	Displayi ng Product	1. admin add a new Product in the system 2. admin remove a Product in the system	Product updated	Product updated	pass
013	Softwar e status by admin	Admin approve a Product from the user	Displayi ng Product	1. user upload a Product 2. admin approve the Product	Product updated	Product updated	pass
014	Order approve d by admin	Admin approve sell order	Display order	 user orders a Product. admin approve the order 	Order approved	Order approved	pass

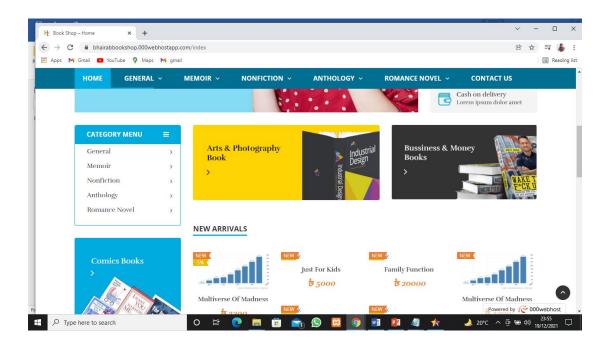
CHAPTER 6

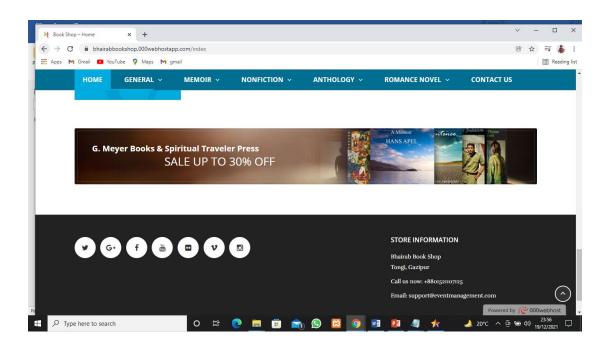
USER MANUAL

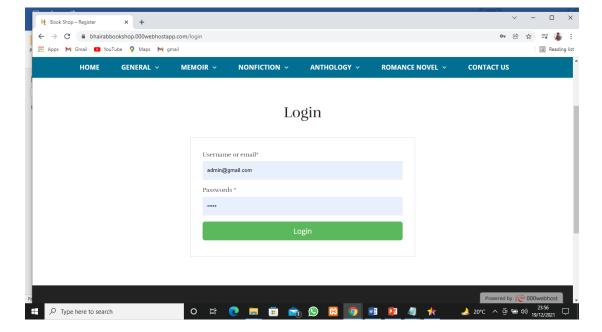
6.1 User Manual Home Page



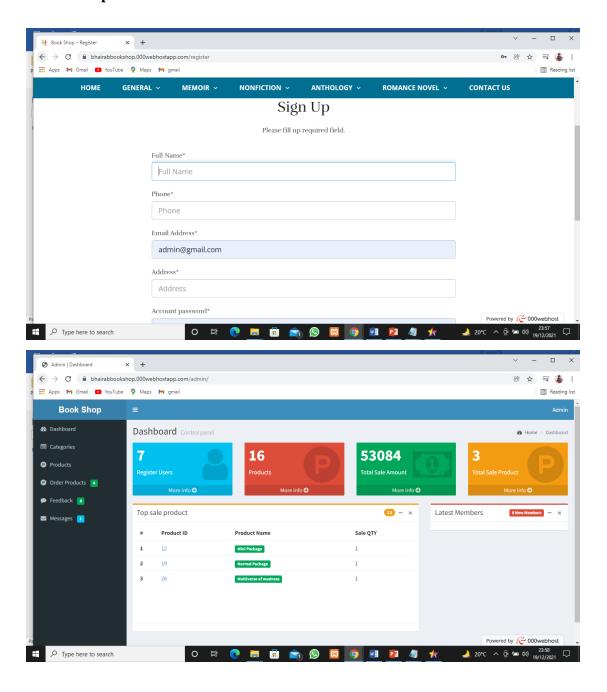
6.2 User Manual (user)







6.3 Admin panel



CHAPTER 7

PROJECT SUMMARY

7.1 GitHub Link

https://github.com/auntuswediu/bhairab-book-shop

7.2 Hosting Link

https://bhairabbookshop.000webhostapp.com/index

7.3 Critical Evolution

There was some critical situation for the evolution of this project main was the database connection and then the responsiveness of all the pages and lastly the checkout process.

7.4 Limitations

This project will hold a limited number of information and data regarding product, customer and dates when customer buy the Book. If the customer does not have a registered, then they never issue the product to that particular one. Create distinct product users based on their roles and permissions. Authenticate users at their login. Provide the list of software the users will buy.

7.5 Future Scope

In the future join the employee panel, I will add the role permission admin can set the menu employee which menu gets. I will add apps to this website that already create API so in the future I can do it.

