



**Daffodil**  
*International*  
**University**

Department of Computing and Information Systems

Project Title

**ShobSheba Service marketplace**

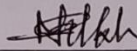
<p><b>Submitted by:</b></p> <p><b>Emran Al Mahmud</b> <b>ID: 191-16-414</b> <b>BSc in Computing</b> <b>Information Systems (CIS)</b> <b>Batch: 05</b></p>	<p><b>Supervised by:</b></p> <p><b>Md. Mehedi Hassan</b> <b>Lecturer</b> Department of Computing and Information Systems</p>
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**Submission Date: January 14, 2023**

## APPROVAL

This Project titled **ShobSheba Service Marketplace**, submitted by Emran Al Mahmud ID No: 191-16-414 to the Department of Computing & Information Systems, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computing & Information Systems and approved as to its style and contents. The presentation has been held on- 14-01-2023.

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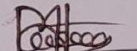
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Daffodil International University

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**Mr. Md. Mehedi Hassan**

**Lecturer**

Department of Computing & Information Systems

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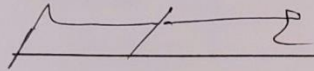
**Internal Examiner**

**Lecturer**

Department of Computing & Information Systems

Faculty of Science & Information Technology

Daffodil International University



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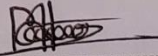
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## Declaration

I hereby declare that; this project has been done by me under supervision of Md. Mehedi Hassan, Lecturer, department of Computing and Information System (CIS) of Daffodil International University. I am also declaring that this project or any part of there has never been submitted anywhere else for the award of any educational degree like, B.Sc., M.Sc., Diploma or other qualifications.

Supervised By



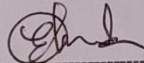
Md. Mehedi Hassan

Lecturer

Department of CIS

Daffodil International University

Submitted By



Emran Al Mahmud

ID: 191-16-414

Department of CIS

Daffodil International University

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## **Acknowledgement**

At first I would like to Thank the Almighty Allah (SWT) for he has brought me up to this very important phase of my life. And my parents for their continuous support and motivation. The I would like to thank my supervisor Md. Mehedi Hassan along with other teachers of this department for their help and support whenever I needed it.

## **Dedication**

Because this is my first final academic assignment, I'd want to dedicate it to my parents. They are my motivation, and without them, I am completely insufficient. So I think they are deserving of this accolade.

## **Executive Summary**

**ShobSheba Service Marketplace** is an academic project. This project is about bringing various types of on-demand services at one platform. In this system there would be three types of users. on-demand service sellers can create their service profile and upload their service details and pricing. Customers can search available services to their needs based on their particular location and book the service and schedule. Customers can make payment for purchased service manually or through online payment. There would also be a system Admin who would verify each service provider and businesses and give them access to the system. Will be able to manage all users, sellers, services, categories and orders and payout requests.

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## Chapter 1- Introduction

### 1. 1 – Introduction

Nowadays, there's a marketplace and an audience for virtually any kind of product or service people are interested in selling. E-commerce has increasingly become a critical component of business strategy and a powerful economic development catalyst in the emerging global economy. Through increased competition, cost savings, and changes in seller pricing behavior, the continued expansion of e-commerce could put downward pressure on inflation.

In Bangladesh around 52.58 million people are using internet on a daily basis (homepage, 2022). There has been a rapid growth of E-commerce platforms all over the country. Needless to say, they are now not only limited for selling or buying tangible products. Since the period of Covid-19 people got more and more used to buy products and services online. Factors like avoiding pain, saving time, not having to visit physical service points motivates people ordering services or solutions online. In this era of modern technology, customers tend to search for assistance regarding their household works, appliance servicing and repairing, Cleaning etc. It gives a customer advantage of saving time and indirect costs as well as having an idea about the predefined features and outcome of the service. It also allows startups & businesses to manage and reach customers more efficiently while providing value through intangible skills, expertise and time. However, the demand for selling and buying services online is high enough that supply would still fall short. So a system like **ShobSheba** can really help both customers and sellers to grab and properly utilize this opportunity.

## 1.2 – Document Contents

### **Chapter-1: Introduction**

Contains a Short overview of the project

### **Chapter-2: Initial Study**

This chapter focuses on the project's goals, objectives, background research, issue areas, and potential remedies.

### **Chapter-3: Literature review**

This chapter discusses the domain problem, solutions to the problem, comparisons of current systems, and the proposed strategy.

### **Chapter-4: Foundation**

This chapter provides the system's problem area, a rich image requirement list, and other viable system solutions.

### **Chapter-5: Exploration**

This chapter contains different diagrams for the system, as well as a requirement list and a prototype.

### **Chapter-6: Engineering**

This chapter contains different diagrams like use case, class diagram, component diagram and samples of interface designs.

### **Chapter-7: Deployment**

This chapter contains coding examples of some of the main functionalities as well as a prioritization of the need list.

### **Chapter-8: Testing**

All kinds of software testing related to this system has been included. Some functional and some Non-functional testing.

### **Chapter-9: Implementation**

User training of the system is included here and implementation of it is discussed.

### **Chapter-10: Critical appraisal and evaluation**

This chapter contains the requirements that could be met and the ones which could not be met. And the reason behind it.

### **Chapter-11: Personal Achievements**

My personal learnings throughout doing this project

### **Chapter-12: Conclusion**

Project summary, project goals and my personal experience after doing this project is discussed

## Chapter 2 - Initial Study

### 2.1 - Project proposal:

#### Introduction

“ShobSheba” is a multivendor on-demand service marketplace. It’s a one-stop solution for various types of on-demand household and office service needs, providing dependable service while ensuring comfort and care. From Expert Repair, Cleaning, Packing-shifting & moving, Beauty & Salon, to Home decoration services. ShobSheba aims to make its user’s life easier in every aspect possible. For that they require an automated management system which will make the process more spontaneous for each and every role associated with the system.

#### Background study

These days, the modern urban settlers of the big cities around Bangladesh are often too tiresome and can’t manage time to do specific types of works or search for the necessary services physically (Fatbit, 2022). Mostly these types of works require individuals with expertise. This opens up a door to construct a bridge between service providing individuals and businesses with the consumers in need of those services. Although there are already a few companies serving this purpose. For example <https://www.sheba.xyz> is one of the popular service marketplaces in the country. There’s also <https://handymama.co> . which are mainly providing some niche services to the customers with their own verified experts. However, the demand for these kinds of services being available at hand is still high, and the supply of them still seems to be falling short. Therefore, “ShobSheba” required including similar types of features as well as some extra ones. They requested to take inspiration from these online marketplaces and gather deep knowledge about the phenomenon and come up with ideas how to improvise.

## **Project Description**

“ShobSheba” is a web-based application which will focus on creating an open marketplace for various types of services available around the cities. Where service providers can initially create their seller profiles for free and post their services on the categories available on the website. Which will be later on verified by system admin. Customers as well can create their user profile and check out the service they are in need of. They’ll also be able to check service reviews and comments and if the seller is verified. The system will earn a percentage as revenue from each service.

## **Feasibility Study**

### **➤ Operational Feasibility**

Operational feasibility mainly focuses on the overall usability of the system. The proposed “**ShobSheba**” Online service marketplace has very smooth navigation throughout the system and the functionalities are very user friendly. User can search for the services they need based on their location and service category. They can also specify which type of services they require and add additional services as well. All user inputs are properly verified and validated inside the system. System admin, Service seller, service buyer can easily register and log into their profiles and dashboards and perform their tasks and fulfill their needs.

### **➤ Technical Feasibility**

The proposed system ensures that the users can perform their activities very easily and efficiently. Specially for the system admin will have various types of accessibility to manage different types of users of the system. Can easily manage application content, services and its categories. The automated system is developed using latest web application technologies. We’ll use apache web server, MySQL database server, PHP 7 and Laravel 8 framework and MS Office for development and documentation purposes. It also ensures

compatibility for the system to run on different web browsers smoothly. And secure access for all users is maintained very effectively.

➤ **Economic feasibility**

The system is very easy to deploy and maintain at an affordable cost. To keep the web-application continuously live on the internet and ensure effortless access for users anytime the company will need to take care some yearly maintenance cost. Which are given below:

SL	Item	Cost
1	Domain Name	₹1200/yearly
2	10GB SSD web Hosting	₹1500/monthly
3	SMTP service	₹8000/monthly
4	G Suite	₹1500/monthly
Total yearly Cost		₹133,200

*Table 1: Cost Estimation of the Web-based solution*

Above are regular costs they'd have to maintain for their system. As for adding new features, custom modification the charge will depend on specific requirement.

**Market research analysis**

The daily life of urban dwellers is getting busier and tiresome day by day. And it's not always easy to get the desired assistance regarding some huge household tasks, appliance fixing and repairing, deep cleaning, moving and shifting. Also it can be hard to manage time and can be painful and take much effort. Also searching for these types of services physically can include a great number of indirect cost as well (ODTAP, n.d.). In some cases, there is no predefined cost idea for a particular service, so there's a chance of deception. As the use of modern technology, smart devices and internet users is increasing at fast rate, a need for on-demand service searching online is increasing rapidly. The market for on-demand services is developing, and there is a strong trend toward this economy.

Although it can be challenging to manage, keep satisfied both seller and customer ends. This business model can help service providers find new customers every day and make on-demand services available at service seeker's doorstep.

## **Foundation**

### **Main goals:**

- Service adding system – Verified sellers can post and showcase their service in detail.
- Service booking system – Customers can book particular service according to its availability
- Categorizing and prioritizing services and their sellers.
- Admin panel – creating an admin panel to manage both seller and customer end.
- Manage and monitor activity – Admin will manage and monitor each trading of services and user verification and validation.
- Feedback system – User feedbacks and comments on purchased services.
- Report generation – weekly, monthly and yearly revenue report generating, history of all completed services and their categories.

### **High-level features/requirements for achieving the goals**

- Different user registration and login system. (Admin, Seller and customer)
- Each type of user having different instrument panel
- Seller verification and background checking option for admin
- Service category and sub category specification for admin
- Approval and prioritization of each service before being posted on the website for the admin
- Manage trading and transaction of purchased services for the admin
- Service adding, specification and management for seller

- Order notification, completion status and payment status management for seller
- Creating and specifying customer support ticket option on particular order for seller
- Creating to-do list based on pending orders and prioritizing them for seller
- Payout request for each service provided for seller
- Service searching based on category and location for customer
- Service booking, customization, payment and feedback providing option for customer
- Generating sales and revenue report and record keeping of services, users and transactions

**Key activities for achieving the goals:**

<b>Task</b>	<b>Description</b>
Requirement analysis	In this section, it is determined what kind of equipment, features and functionalities are required for the project's construction.
Database analysis	This section examines what kind of data must be stored in the database.
System Design & Development	Processing of the system's modules and components based on the specified requirements. And development of the project in a systematic approach
Implementation	In this part the system deliverables will be produced and will be ready to be implemented
Testing	Each part and component of the system will be tested based on different test plans and methods.
Documentation	This section will contain the project's documentation.

*Table 2: Kea activities for achieving the goals*



## Prioritized Features according to MoSCoW

MoSCoW is a prioritization technique that is utilized during the requirement analysis stage. It helps comprehending the significance of each requirement.

Prioritized requirements according to MoSCoW:

SL	Requirement	Priority
01	Registration and Login for different users	Must Have
02	Admin control panel	Must Have
03	Location based searching	Should Have
04	Manage Services	Must Have
05	Manage service category	Should Have
06	Manage Sellers	Must Have
07	Service Booking	Must Have
08	Manage orders	Must Have
09	Manage transactions and payout requests	Must Have
10	Category based searching	Should Have
11	Customer feedback	Could Have
12	Online Support	Could Have
13	Seller Location tracking	Would Have
14	Email & SMS notification of order placement	Would Have

*Table 3: Prioritized Features*

## Evolutionary Development

### The final requirements based on Prioritized Requirements List (PRL):

- Different user portals for admin, seller & customer
- Service uploading and showcasing system
- Handle placed order
- User and order manipulation
- Location & category based searching facility

- Seller and customer report generation
- Customer feedback facility
- Online customer support system

### Time box for development

Task	Start Date	End Date	Duration
Requirement analysis	16/09/2022	30/09/2022	15 days
Database analysis and planning	01/10/2022	06/10/2022	6 days
Interface Design	09/10/2022	20/10/2022	11 days
System development	25/10/2022	04/12/2022	40 days
Testing	06/12/2022	10/12/2022	5 days
Implementation	20/12/2022	27/12/2022	7 days
Documentation	31/12/2022	15/01/2022	16 days

Table 4: Time box of the proposed system

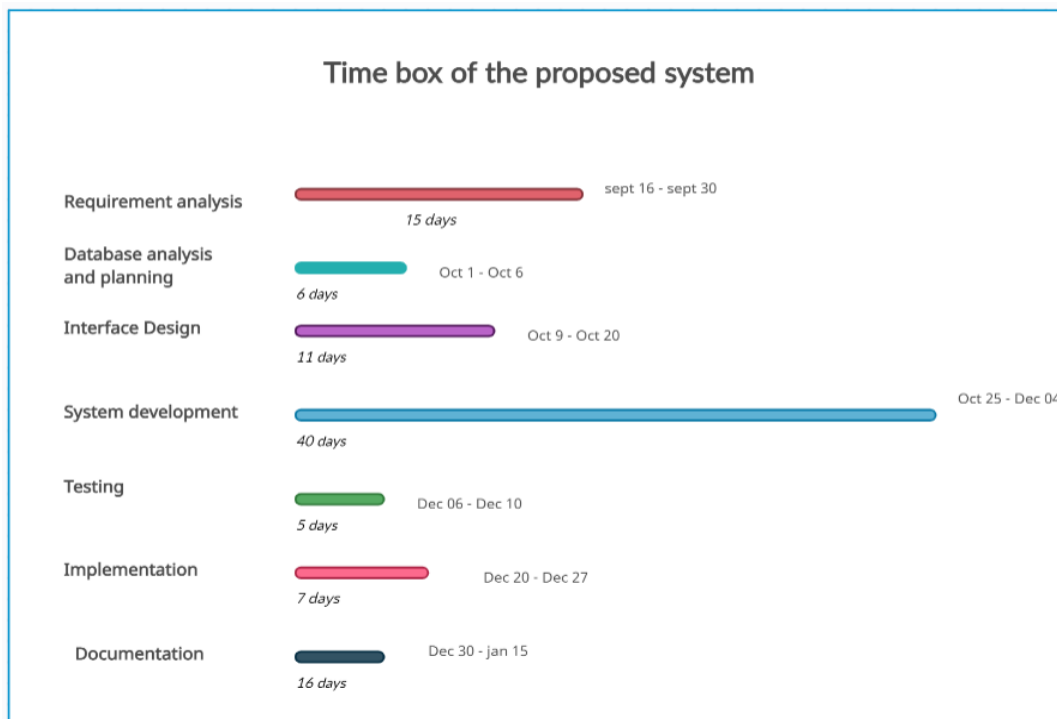


Figure 1: Gantt Chart of the Proposed Timebox Estimation

## Deployment

The recommended solution will be implemented at this phase. For the proposed system, I will design and implement the database & the web application. I plan to build the web application with the PHP/Laravel framework, as well as Bootstrap and jQuery for the front end. For database implementation, I will use MySQL. As Laravel's architecture is MVC-based it will have so many built in functionalities which will help complete the development process faster.

## Conclusion

We can conclude from the preceding discussion that **"ShobSheba"** can be a successful enterprise in the on-demand service marketplace field. With good arrangements of commonly needed on-demand services making them available nearby at customer's area it can gain popularity and can create a good customer base. For it's safe and secured trading facility it can gain customer's trust as well.

## 2. 2 Background of the project

Since 2007-2008 people started to lean on to use smartphones more than ever before (Standard, 2022). And day by day people got used to finding app based or web based solutions for almost everything possible in their daily life. People now are very careful about investing their time in their daily tasks. People like to have everything under control at hand by using modern technologies and try to find solutions for daily life issues online. The on-demand online services with interesting features is a new evolution of consumer retail experience. It provides a new degree of ease and access for customers and Businesses. **"ShobSheba"** here tries to expand the market and connection between seller and customer by welcoming all different types of service providers in each areas of the city to join the initiative. Also it lets customers to have a variety of commonly needed services at their doorstep. Saving huge amount of time and indirect costs. It's a one-stop solution for a variety of on-demand household and workplace service needs, offering trustworthy service while also assuring comfort and care. Expert

repair, cleaning, packing-shifting & moving, beauty & salon, and home design services are also available. ShobSheba strives to make its users' lives as simple as possible. They will need an automated management system to make the process more spontaneous for each position involved with the system.

### 2.3 Problem Areas

Except a small number of urban dwellers many people inside and mostly outside Dhaka city still have not that much access to modern online solutions. It is mainly due to problems with scalability. People in large number still depends on workshops, service points regarding cleaning, shifting, salon and spa, repairing and fixing. And it gets hard to be sure about service quality, skill of service provider and commitment they'll be offered. Also security and safety might be at stake sometimes as the trading is mostly not under any centralized supervision. Moreover, there is no predefined idea about service availability in those situations. Also there is no standard charge fixed for particular services, so there is a chance for a customer to be charged excessively.

On the other hand, service providers are limited to a very small number of limited customers. and there is not specific routine for them in case of service providing. And for new comers in the field it might get very frustrating finding new customers on a daily basis and to prove their skills.

### 2.4 - Possible solutions

After analyzing the above mentioned issues, “**ShobSheba**” finds the opportunity to try solving them. Customers can find variety of services according to their demand available in their area. And they can get the service at a reasonable price having a predefined idea about the service pricing. It will save a lot of valuable time, help avoid indirect costs and bring the service at their doorstep in most of the cases. also customer safety and security will be prioritized. The sellers will be background checked based on their professional skill and experience and their profile will be verified after providing National ID and service documents. Transactions will be safe and verified by admin. The system admin will have the ability to manipulate all users.

## Chapter 3 - Literature review

A literature review is a type of evaluation piece. A literature review is an academic publication that incorporates new material and significant results, as well as theoretical and methodological contributions to a certain area.

matter. It is a secondary resource that does not contain any fresh or distinctive experimental work. The four goals of a literature review are to survey, synthesize, critically analyze, and present. (2019, rlf.org.uk) It focuses on a certain aspect of the literature review. It summarizes the information in that literature. It also analyzes the limitations of the literature and gaps in existing knowledge and presents them in an organized manner.

### 3.1 Discussion on the Problem Domain

In normal terms, Online service marketplace is also a branch of modern e-commerce by taking online transactions and trading at stake. People by necessary products online. In this case people will order on-demand services. Here the services available are itself the product. In Bangladesh e-commerce started to grow from the early 2000's (e-Cab, n.d.). but it started booming from 2013 when Bangladesh Bank took the initiative and permitted online transactions as well as products purchase using international credit cards. According to recent market research, the Bangladesh business-to-customer e-commerce market is expected to grow by 17.61% per year, reaching Tk65,966 crores in 2022. According to a report released last year by the e-Commerce Association of Bangladesh (e-Cab), there are over 2,500 e-commerce platforms in Bangladesh, with 1% being large businesses, 4% medium businesses, and 95% being small businesses. e-Cab members included approximately 1,600 e-commerce entrepreneurs (Standard, 2022). So the above scenario indicates how people are more and more leaning towards online trading. Although, service marketplace is quite a new phenomenon but people seem to be welcoming it nicely. But there still some problem remains, like:

- The product delivery channel is not that strong yet
- Online transaction system still needs a lot of improvement

- Internet bandwidth is pretty low and the connection is unreliable
- Huge difference between ordered product and the actual one received
- Not so stable govt. policies

Mainly we have four types of e-commerce available, which are:

- Business to Business (B2B)
- Business to Customer (B2C)
- Customer to Customer (C2C)
- Customer to Business (C2B)

**Business to Business:** B2B refers to a transaction between a business and another business. It could be a trade between organizations. Transactions between manufacturers and wholesalers, for example.

**Business to Customer (B2C):** refers to organizations that sell products to general consumers. It is the most common transaction in the ecommerce market as a whole. Customers, for example, may purchase a product from a company through ecommerce.

**Customer to Customer (C2C):** refers to the ability of one customer to sell their products to other customers. It is the most straightforward transaction in the ecommerce market. Through ecommerce, one person can sell their product or service to another person who requires it.

**Customer to Business:** it is the reverse process of B2C. Here Customers can sell their products to the business organization directly. In example, photographer can sell his photos to an organization. In this process we will use B2B, B2C and C2C business process. As the services being provided are of many kinds.

### 3.2 - Discussion about problem solution

The global online on-demand home services market is expected to be worth USD 3.71 billion in 2021, with a compound annual growth rate (CAGR) of 16.7% from 2022 to 2030 (paperpublications, 2022). In Bangladesh recently a lot of entrepreneurs are entering this market and providing a group of necessary services. But there are a few challenges to be faced as well, which are:

**Trust:** The most common issue in ecommerce is a lack of trustworthiness. The process of becoming a trustworthy ecommerce site should be transparent. to demonstrate

The ecommerce site must set up an encrypted delivery cart and ensure the privacy of customers' information as the delivery progresses in real time from warehouse to customer door.

**Product quality:** Customers may not always receive the original quality of the product for which they bid. This is entirely a self-awareness issue, and no proper solution has been found. Customers can take any specific law or any penalty against the organizations to avoid these types of problems.

**Unaffordable internet connectivity:** Unlike in other countries, the cost of internet in our country is exorbitant. Many customers are hesitant to purchase products online. The government should take some steps to make things more affordable for everyone and to lower prices.

**Absence of proper user identification:** Any user who bids on a vehicle must provide proper identification and authentication. Several identifiers, such as email verification, mobile number verification, and face recognition, can easily prevent fraud in an ecommerce site.

**Absence of testing facilities:** Users are unable to test the vehicles for which they have bid. As a result, the authority can set a time limit for physically testing the vehicles.

## Chapter 4 - Foundation

### 4.1 The Problem Area Identification

Identifying the issue is the greatest way to enhance any project. And that portion may be done by the user because they will be using the system the most. So, some of the problems that have been reported by users are as follows:

#### 4.1.1 – Interview

Interviews are one of the most effective methods for gathering information and concerns from users. It is simple to learn the user's requirements, the types of problems that are regularly encountered, and potential solutions by conducting an interview. The following questions are set to be asked of users during the interview for the proposed system:

1. For Customer:
  - How do they usually search for a required service and what is the response?
  - If the current process is convenient for them and if it is cost and time efficient
  - Is there a fixed cost for every service available?
  - Which type of services they require more often
  
2. For Seller:
  - What is the current method they follow to find new customers?
  - Do they manage to get desired payment after providing the service?
  - How do they prioritize customer orders?

#### 4.1.2 – Observations

Another prominent strategy for gathering user requirements and information about difficulties is observations. To follow the users, the observation approach is utilized to travel to the business location and sort out the problems. The following are the key reasons for observations:

- Service booking and consuming process of existing systems



- Finding out the down parts of key features of the existing systems
- Demo use of those systems
- Checking out customer feedbacks
- Thinking of worst case scenarios

#### 4.1.3 – Questionnaires

Questionnaires are one of the most effective methods for gathering information by asking stakeholders and users questions. This method is simple and effective for a system. A type of question is set for the users to answer, which could be MCQs or short questions. The following is a simple question format:

Questions for problem identification	
<b>Name :</b>	<b>Age:</b>
<b>General User:</b> Customer	<b>Gender:</b>
Question-1	What type of services you require frequently?
Ans:	
Question-2	How do you find out the reliability of the service?
Ans:	
Question-3	How do you know if a particular service is available nearby?

Questions for problem identification	
<b>Name :</b>	<b>Age:</b>
<b>General User:</b> Service seller	<b>Gender:</b>
Question-1	Do you get a good number of customers every day?
Ans:	
Question-2	How did you manage providing your service during the pandemic situation?
Ans:	
Question-3	Where you ever denied your payment after providing the demanded service?

*Table 5: Questions for Problem Identification*

## 4.2 Rich Picture

A rich image is a representation of a situation that depicts the essential aspects and relationships that must be examined before attempting to act to bring about any improvement. Rich picture of "ShobSheba" is as follows:

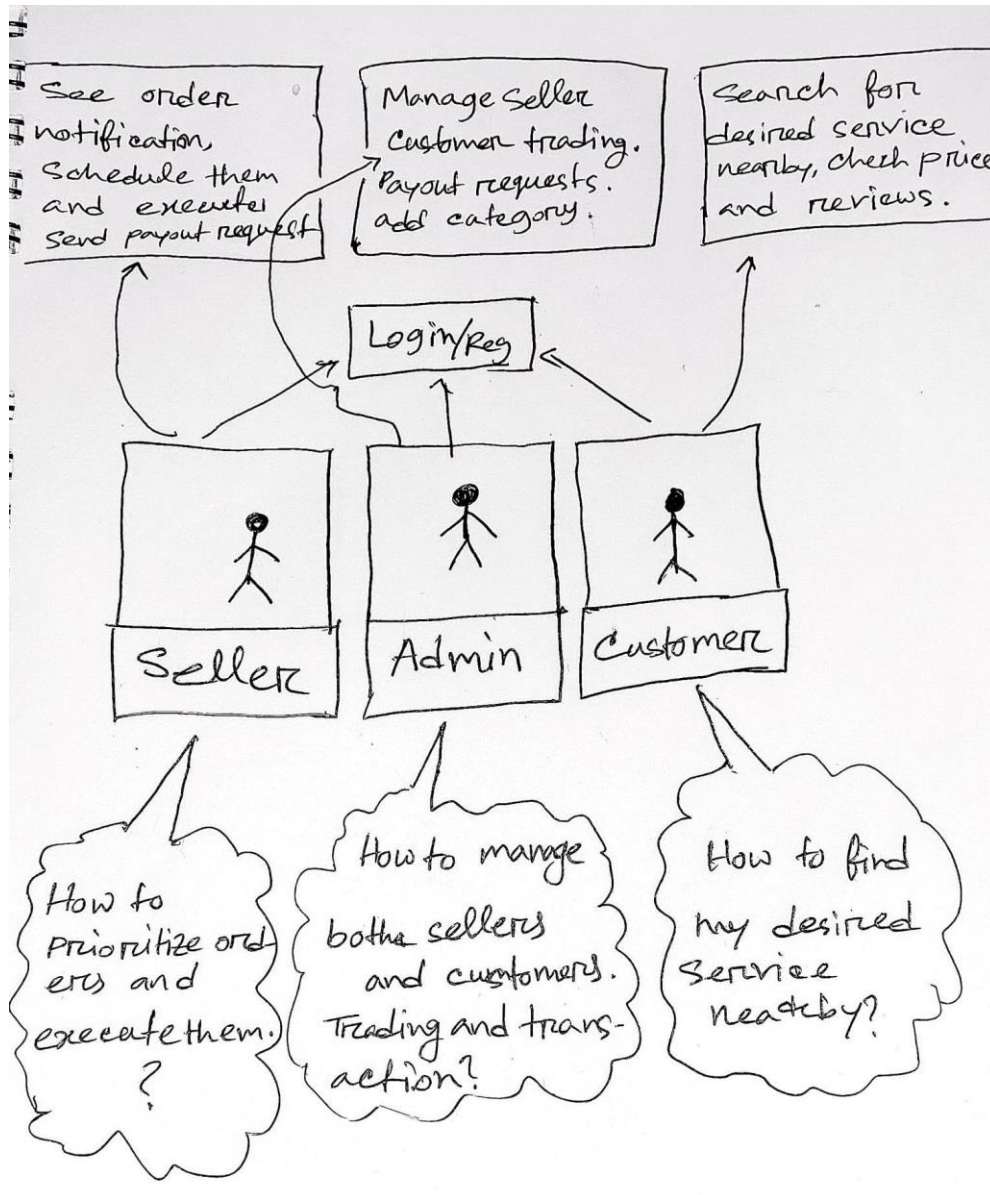


Figure 2: Rich Picture of ShobSheba

## The legends of rich picture



Actor



Event



Issue



Process



Conflicts

### Key actors

There are three types of actors:

- Admin
- Service seller
- Customer

### **Description of rich picture:**

The rich picture here represents the business flow of the system. How a user will perform after landing on the home page, search for services, select service category and see details. How admin manages both customer and seller conflicts. For example, if a customer paid for a service and the seller didn't get there to provide it.

## **4.3 Overall Requirement List**

Here is the overall final requirement list of the system:

### **Functional requirements**

- User login/registration system
- Service search and booking system
- Manage order
- Admin manipulation
- Add service category and subcategory
- Manage seller and services
- Manage service trading and transactions
- Customer online support
- Customer review and rating system

### **Non-functional requirements**

- Interface should be attractive and user friendly
- Seller verification and validation
- Implementation of proper authentication and authorization
- User data security and privacy
- Record order data
- Backup for data and resources
- Ensure proper accessibility

## 4.4 – technology to be implemented

There are several types of technologies to implement. Client server and web server applications are examples of such applications.

### Client server application

A client-server relationship is one in which one program (the client) seeks a service or resource from another program (the server) (the server). The central management of programs and data is a significant benefit of the client-server network. A client-server network speeds up data transfer while also securing the data supplied. Key features of client server applications are below:

- Physical installation of application
- Communication between servers and users
- Interacting with local and temporary storage
- Not easily portable and can be costly

### Web Application

The web server program is kept on the server. The user may simply connect to the server through the internet by using a defined domain name. They can connect to the system from anywhere in the world. It is not need to install any equipment. They use a browser and the internet to access the service. The characteristics of a Web server application are listed below:

- No installation required
- All time available and accessible
- Low cost and easy to use
- Can be used from any kind of browser

#### **4.5 – Recommendation and Justification**

Because the proposed system's users are spread across the country, a web server application will be appropriate. They must connect to the system from various locations. Many customers with the same sort of device can access it at the same time. data. As a result, client-server applications are not appropriate since this system cannot accommodate a high number of users. As a result, a web server application is recommended for the system.

## Chapter 5 - Exploration

### 5.1 Old System Use Case

A use case diagram focuses on a system's business flow. The following is an old system use case diagram:

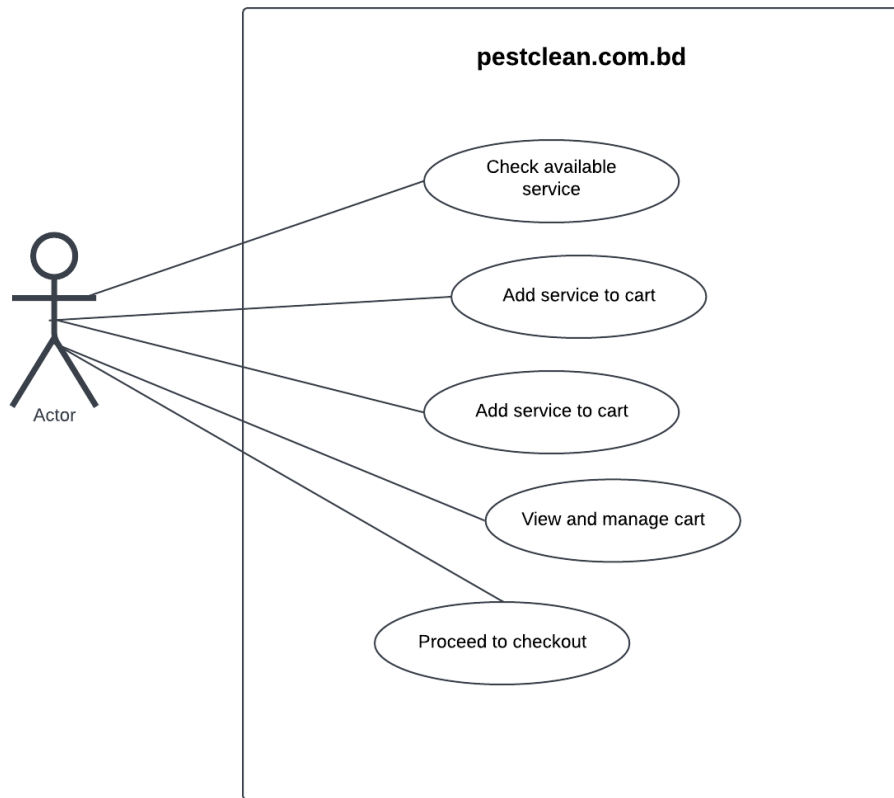


Figure 3: Old System use case

## 5.2 – Full system use case diagram

There are three types of users for the “ShobSheba” service marketplace. Use case diagrams for the users are given below:

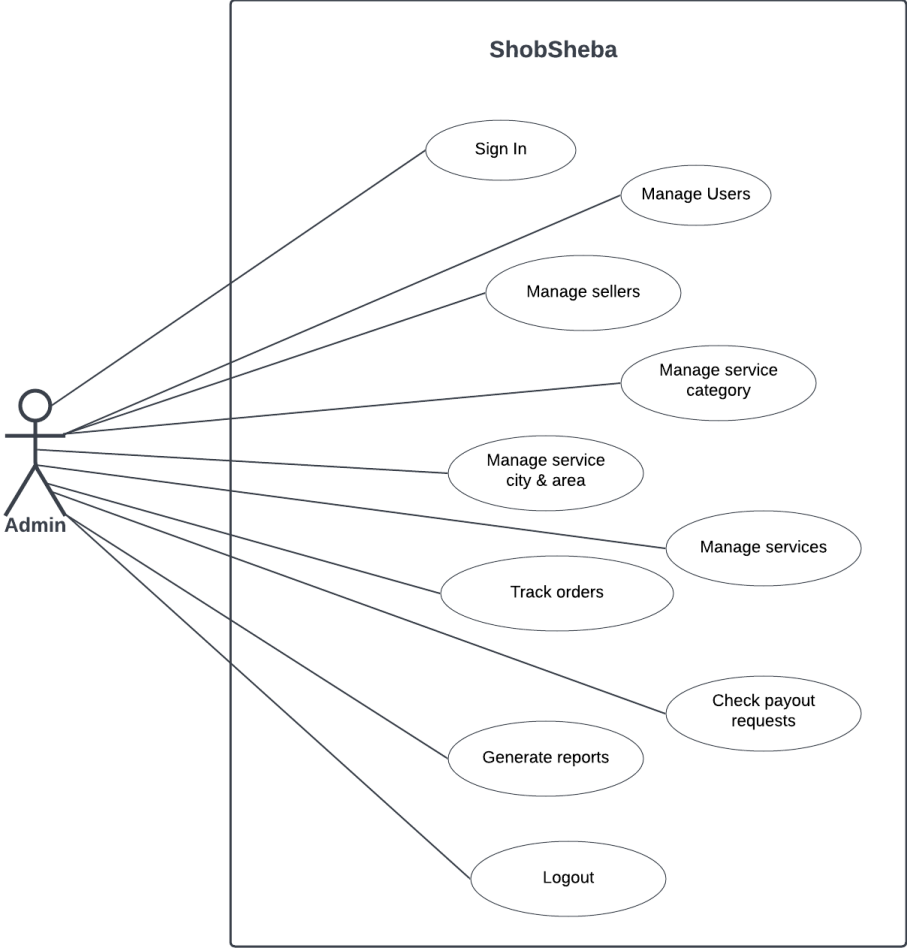
### Customer’s use case diagram



Figure 4: Full system customer use case diagram



**Admin's use case diagram**



*Figure 5: Full system Admin use case diagram*

**Seller's use case diagram**

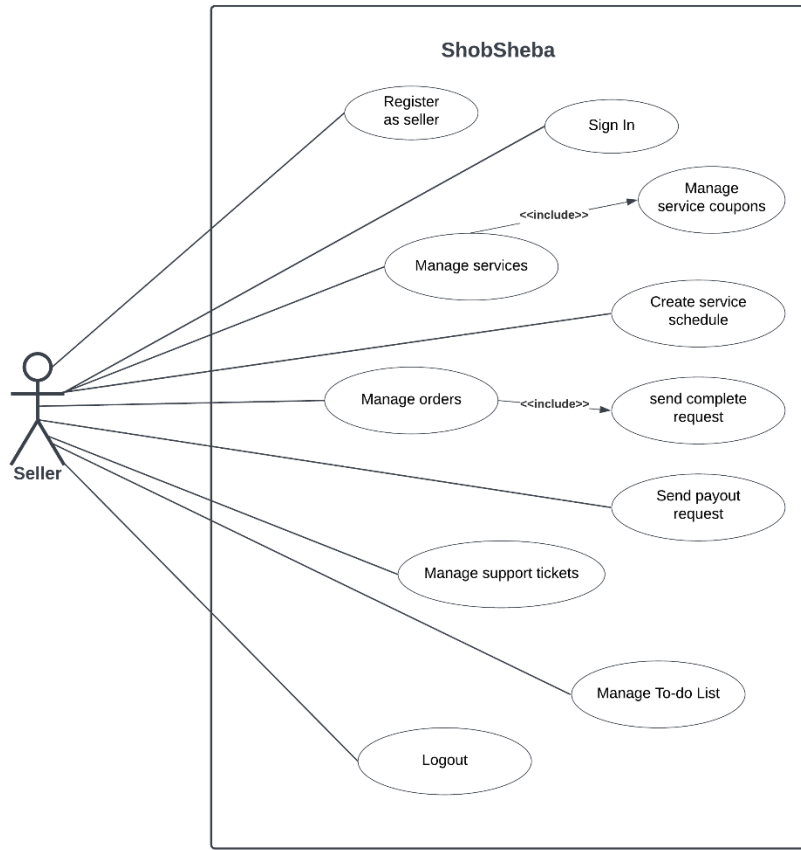


Figure 6: Full system Seller use case diagram

### 5.3 – Full system activity diagram

The main work flow of the system has been already posted above. Here are the activity diagrams for three types of actors of the system. As the system admin, seller and customer will have different types of functionalities to work on and different control panels, here are three activity diagrams for them given below:

#### Customer’s activity diagram

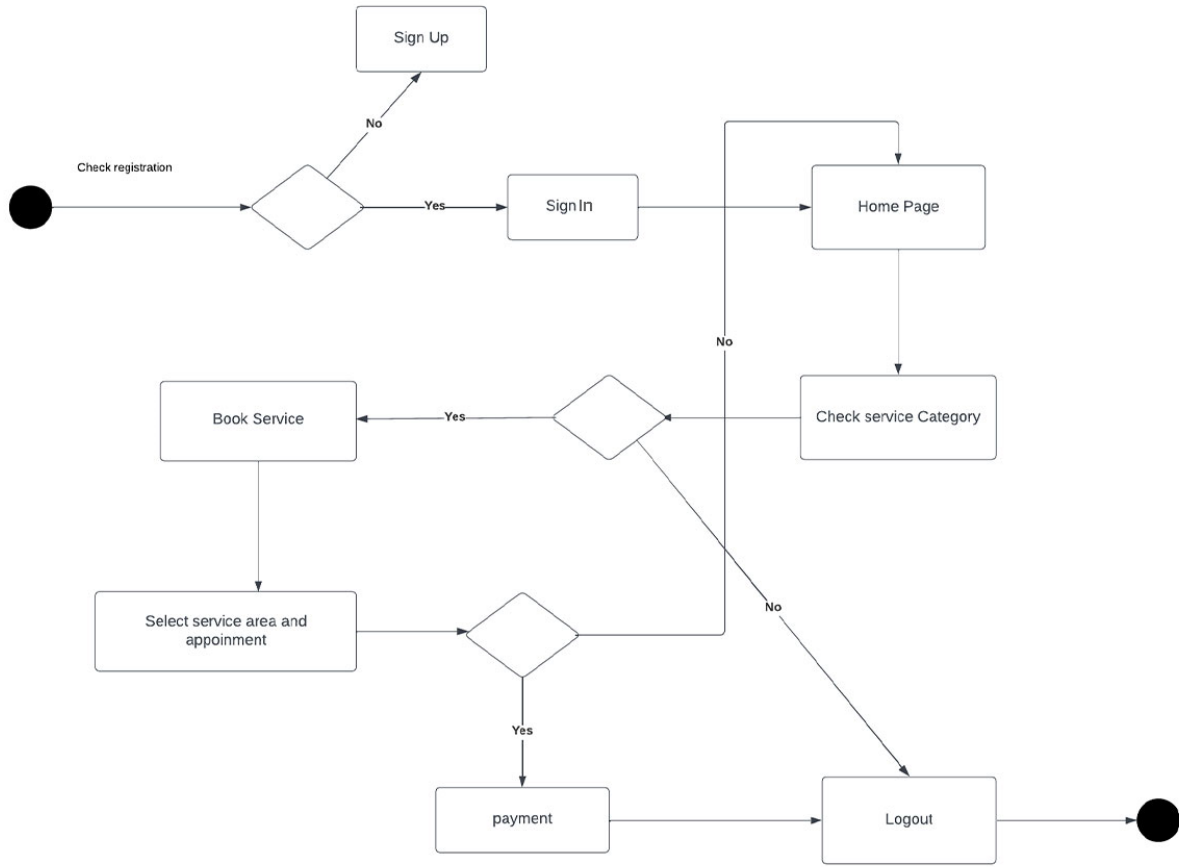


Figure 7: Full system Customer Activity case diagram

# Admin's activity diagram

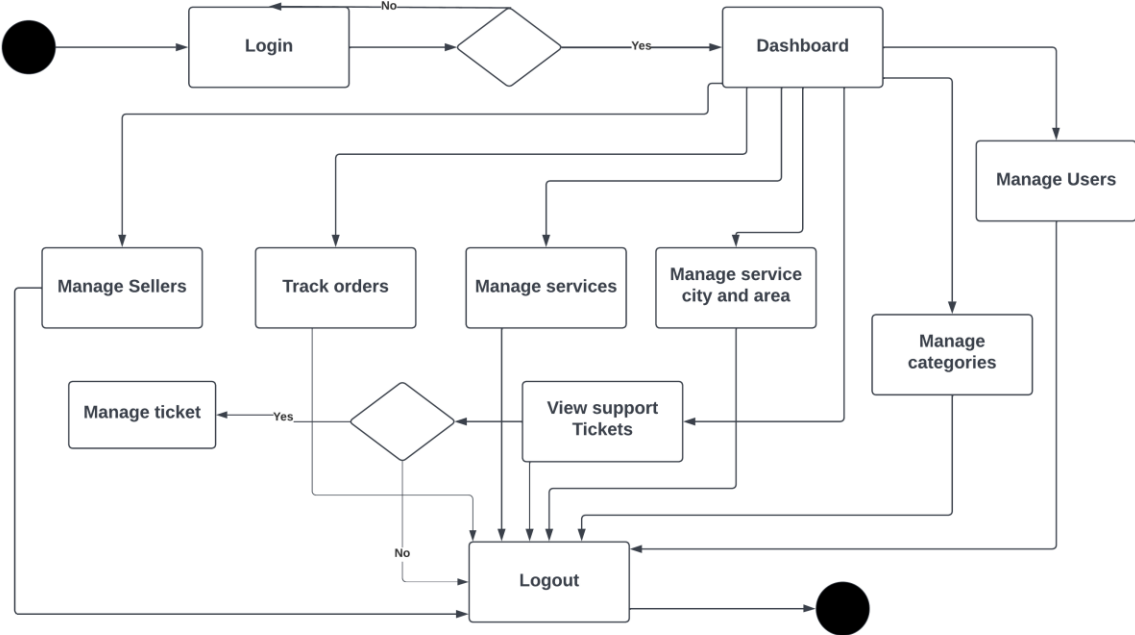


Figure 8: Full system Admin Activity case diagram

## Seller's activity diagram

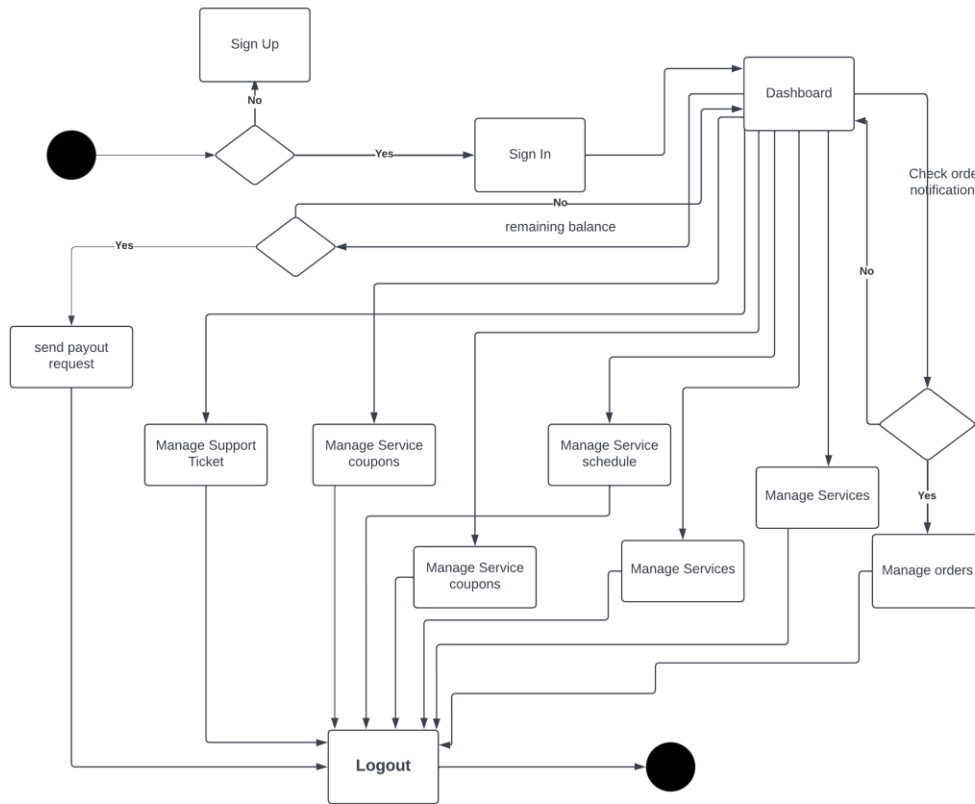


Figure 9: Full system Seller Activity case diagram

## 5.4 – Requirements catalogue

A requirements catalogue is a set of needs that must be met in order for a project objective to be met. It should ideally be a systematic and prioritized list of software or system needs.

### Requirement catalogue for user login and Registration

Source	Sign off	priority	Requirement ID
Admin	All users	Must	M-001
<b>Functional requirement</b>			
<b>Login/Registration for user</b>			
Every user needs to register and login to the system as user authentication is much prioritized for better and secure experience. A user cannot perform service booking or service managing without signing up			
Non-functional requirements			

Description	Target value	Acceptance value	Comments
<b>Login/Registration per day</b>	<b>1500 per day</b>	<b>1000</b>	

*Table 6: Requirement catalogue for user login and Registration*

### Requirement catalogue for service adding

Source	Sign off	priority	Requirement ID
Seller	Service seller	Must	M-002
<b>Functional requirement</b>			
<b>New service adding on seller profile</b>			
Service providers can post their service details, pricing and images and manage each service they provide.			
Non-functional requirements			
Description	Target value	Acceptance value	Comments
<b>Service posting per day</b>	<b>20 per day</b>	<b>10</b>	

*Table 7: Requirement catalogue for service adding*

### Requirement catalogue for service booking

Source	Sign off	priority	Requirement ID
Customer	Service buyer	Must	M-003
<b>Functional requirement</b>			
<b>Booking on-demand service</b>			
Customers can choose services based on their needs and service availability at the area. And make online payment			
Non-functional requirements			
Description	Target value	Acceptance value	Comments
<b>Service booking per day</b>	<b>2000 per day</b>	<b>1000</b>	

*Table 8: Requirement catalogue for service booking*

### Requirement catalogue for Generating sales reports

Source	Sign off	priority	Requirement ID
Admin	Admin	Must	M-004
<b>Functional requirement</b>			
<b>Generating various sales reports</b>			
Admin can have different types of sales and trading reports from each service provided on dashboard			
Non-functional requirements			
Description	Target value	Acceptance value	Comments
Showing reports per day	8 per day	10	

Table 9: Requirement catalogue for Generating sales reports

### Requirement catalogue for Category management

Source	Sign off	priority	Requirement ID
Admin	Admin	Should	M-005
<b>Functional requirement</b>			
<b>Manage service categories</b>			
Admin will be able to manage service categories and sub categories.			
Non-functional requirements			
Description	Target value	Acceptance value	Comments
Category adding	10	05	

Table 10: Requirement catalogue for Category management

### Requirement catalogue for Customer feedbacks

Source	Sign off	priority	Requirement ID
Customer	Service buyer	Could	M-006
<b>Functional requirement</b>			
<b>Customer feedbacks sharing</b>			
Customers can provide feedbacks by sharing rating and personal experience about the service.			
Non-functional requirements			
Description	Target value	Acceptance value	Comments
Sharing feedbacks per day	2000 per day	1000	

Table 11: Requirement catalogue for Category management

## 5.5 – Prioritized Requirements List (PRL)

I used the MoSCoW prioritizing approach to create a prioritized list of the identified requirement. The Bangladesh Blood Services Management System's prioritized requirement list is shown below:

### Must have requirements

Requirement ID	Requirements
M-001	Login/Registration for user
M-002	New service adding on seller profile
M-003	Booking on-demand service
M-004	Generating various sales reports

*Table 12: Must Have requirements*

### Should have requirements

Requirement ID	Requirements
M-005	Manage service categories

*Table 13: Should Have requirements*

### Could have requirements

Requirement ID	Requirements
M-006	Customer feedbacks sharing

*Table 14: Could Have requirements*



## 5.6 – Prototype of the new system

Here are some of the prototypes of “ShobSheba” on-demand service marketplace.

### Admin Dashboard prototype

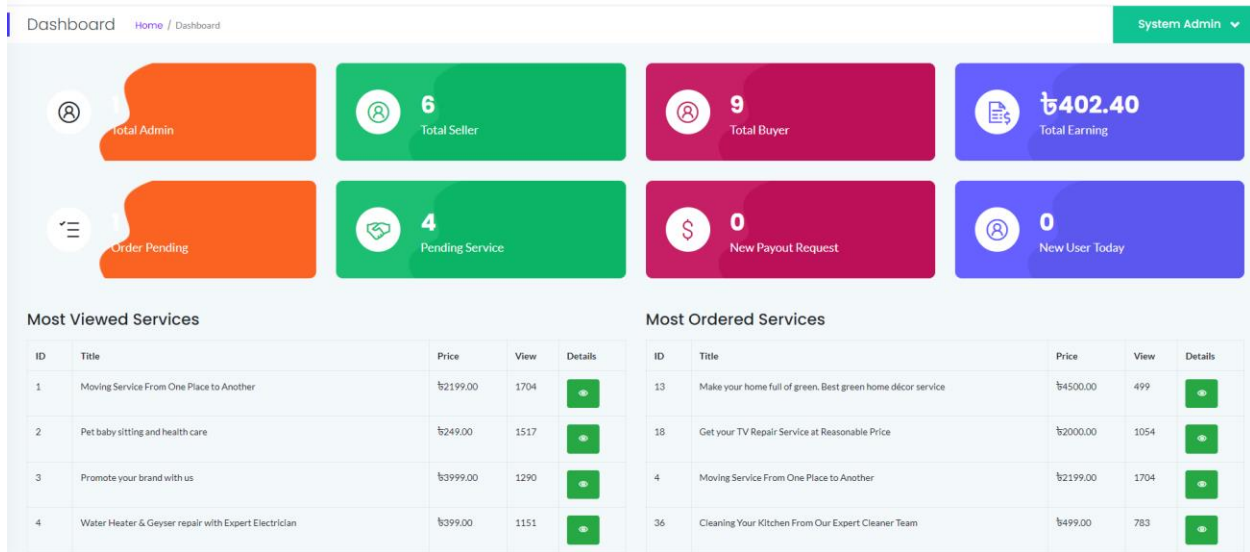


Figure 10: Admin dashboard prototype

### User sign up page prototype

The User registration prototype includes a role selection step with 'Seller' and 'Customer' options. The 'Customer' option is selected. Below this is a progress indicator with steps 1, 2, and 3, where step 1 is active. The registration form consists of the following fields:

- Full Name\* (input field)
- User Name\* (input field)
- Email Address\* (input field)
- Phone Number\* (input field)
- Password\* (input field)
- Confirm Password\* (input field)

A 'Next' button is located at the bottom right of the form.

Figure 11: User registration prototype

## Seller dashboard prototype

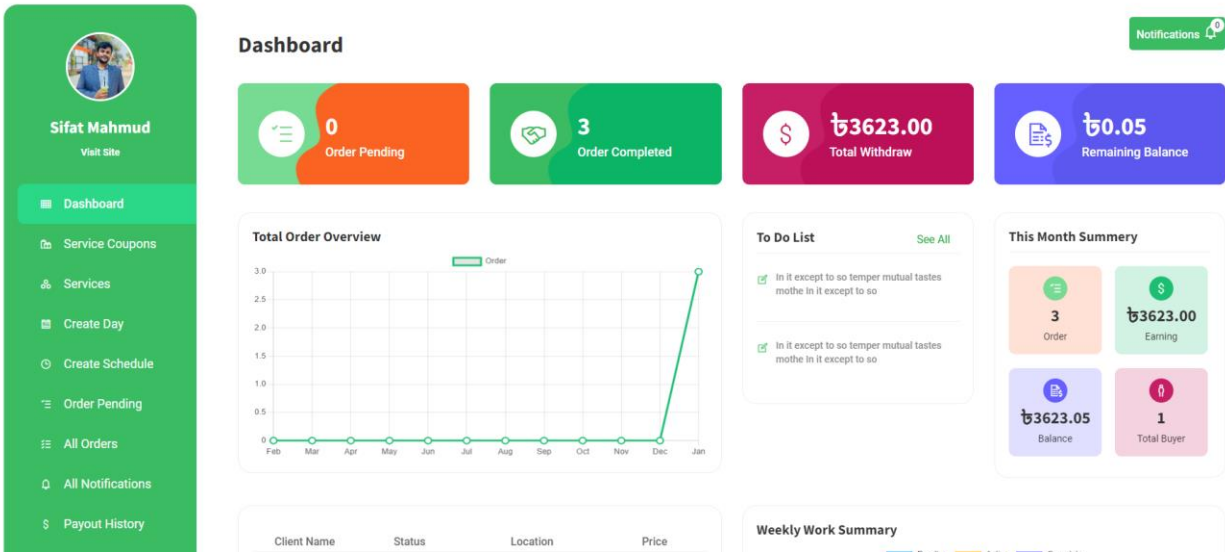


Figure 12: Seller Dashboard prototype

## Website landing page prototype

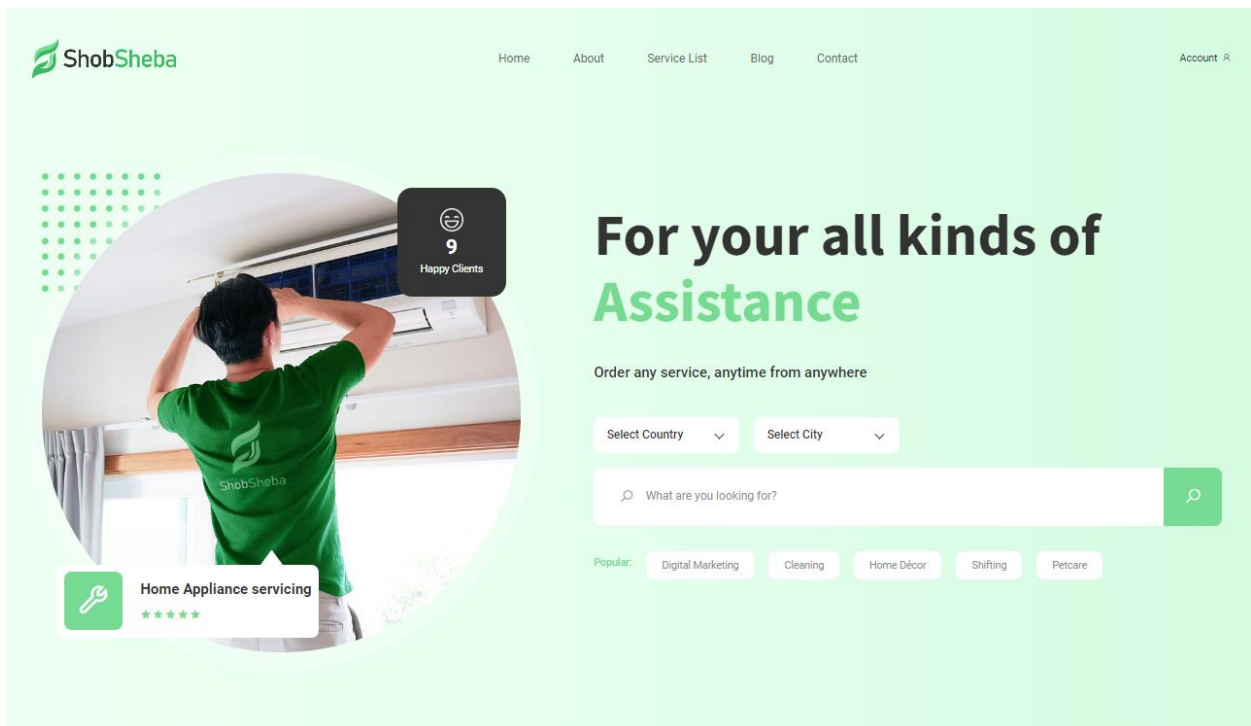


Figure 13: Homepage prototype

## Chapter 6 - Engineering

### 6.1 – New System Modules

The “ShobSheba” system has a lot of work modules based on its different user types. These are some of the core modules listed below:

#### Login Module

SL	User Action	SL	System Action
1	Admin clicks on the sign in button	1	A sign in form will appear
2	Admin fills up the login credentials	2	System does validation of the given data
3	Admin clicks login button	3	User is redirected to admin dashboard if the credentials provided are right. Otherwise sent back to sign in page again with an error message popping

*Table 15: Login Module*

#### Seller’s service adding Module

SL	User Action	SL	System Action
1	Seller clicks “add new service” button	1	Service detail form shows up
2	Seller selects service category and fills up the service details information	2	System process the data and send for admin approval. Shows error message of required fields to fill-up if any kept empty

*Table 16: Service adding Module*

#### Admin’s service management Module

SL	User Action	SL	System Action
----	-------------	----	---------------

1	Admin clicks on the check button for a requested new service	1	System asks for confirmation
2	Admin clicks confirmation button	2	System adds the service to service list page and shows “approved”
3	Admin clicks “Make featured” button	3	System adds the service to featured services and bring that up on home page
4	Admin clicks delete button	4	System asks for confirmation
5	Admin clicks confirmation button	5	System deletes the service from frontend and database

*Table 17: Service management Module*

### Customer’s service Booking Module

SL	User Action	SL	System Action
1	Customer clicks service list from menu	1	System shows All available services.
2	Customer clicks “book” button for a particular service	2	Area selection page pops up
3	Customer defines area	3	System redirects to schedule selecting page if user is signed in. otherwise shows sign in button.
4	User clicks sign in button	4	System takes to sign in page.

*Table 18: Service booking module*

## 6.2 – Use case diagrams of “ShobSheba” system

### Customer’s use case diagram

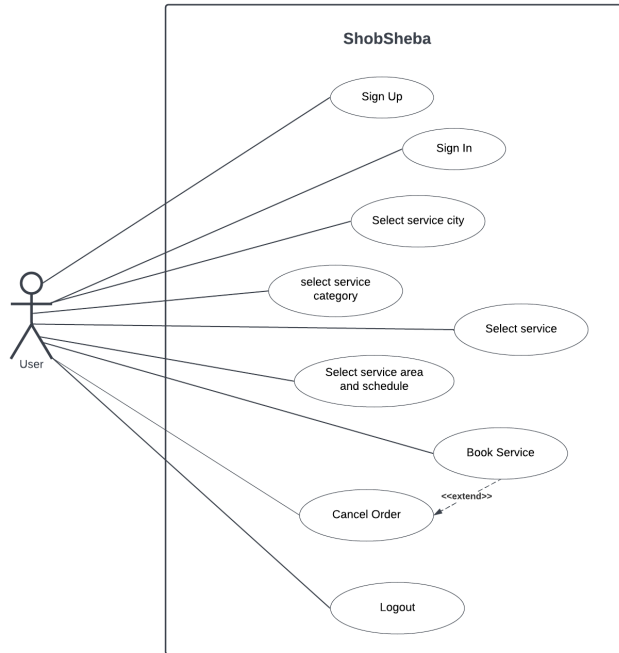


Figure 14: Customer use case diagram

### Admin's use case diagram

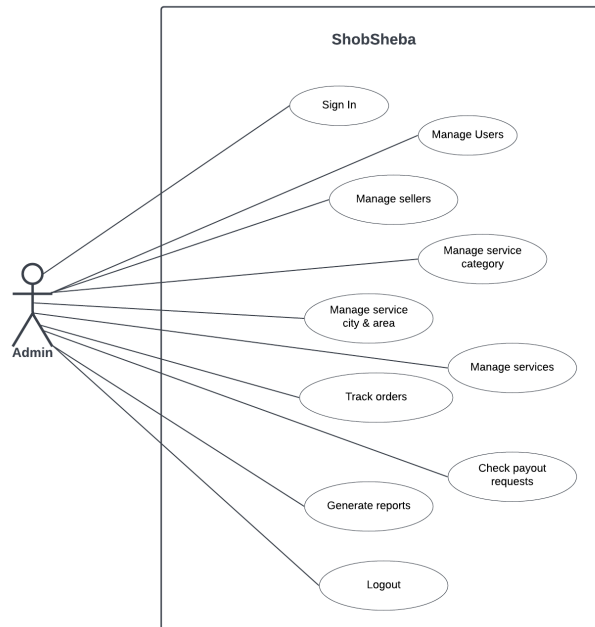


Figure 15: Admin use case diagram

## Seller's use case diagram

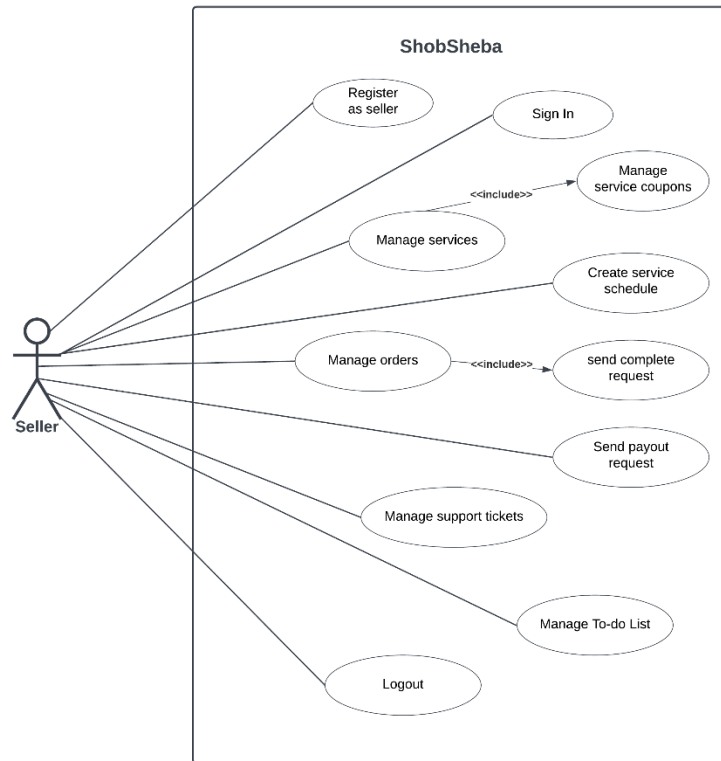


Figure 16: Seller use case diagram

## Class diagram of ordering service

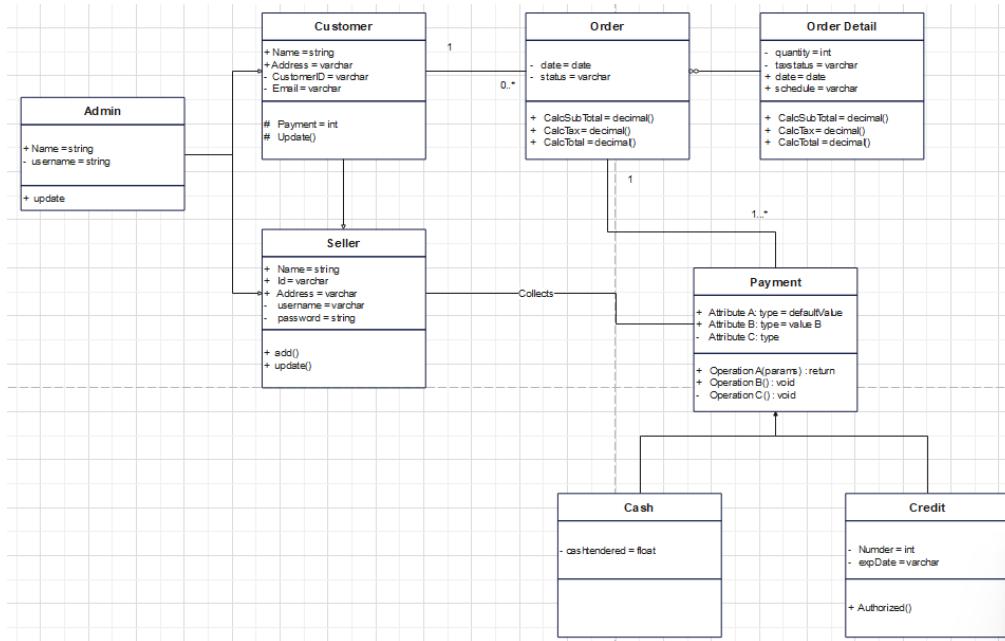


Figure 17: Class diagram of order

## Component Diagram of the system

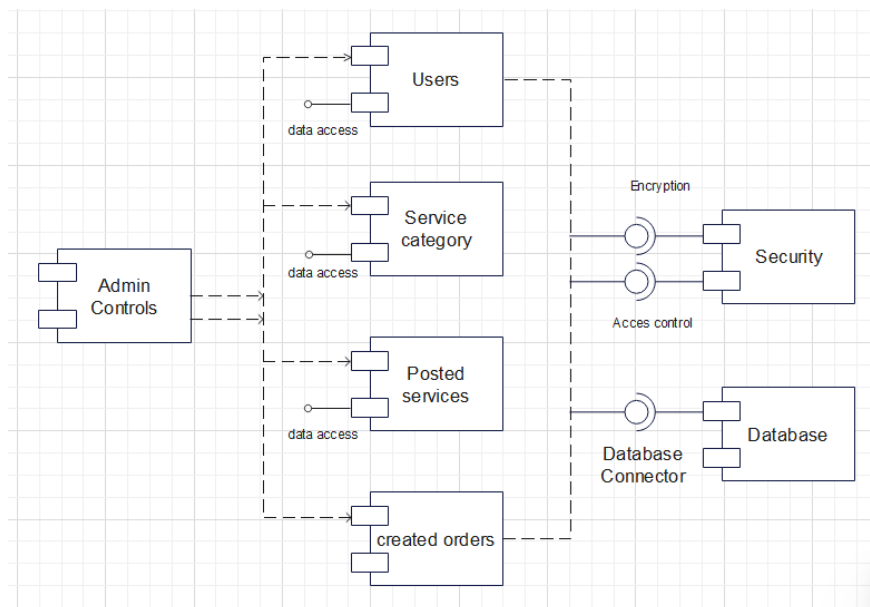


Figure 18: Component diagram of the system

## 6.3 – System Interface Design

### Landing page interface

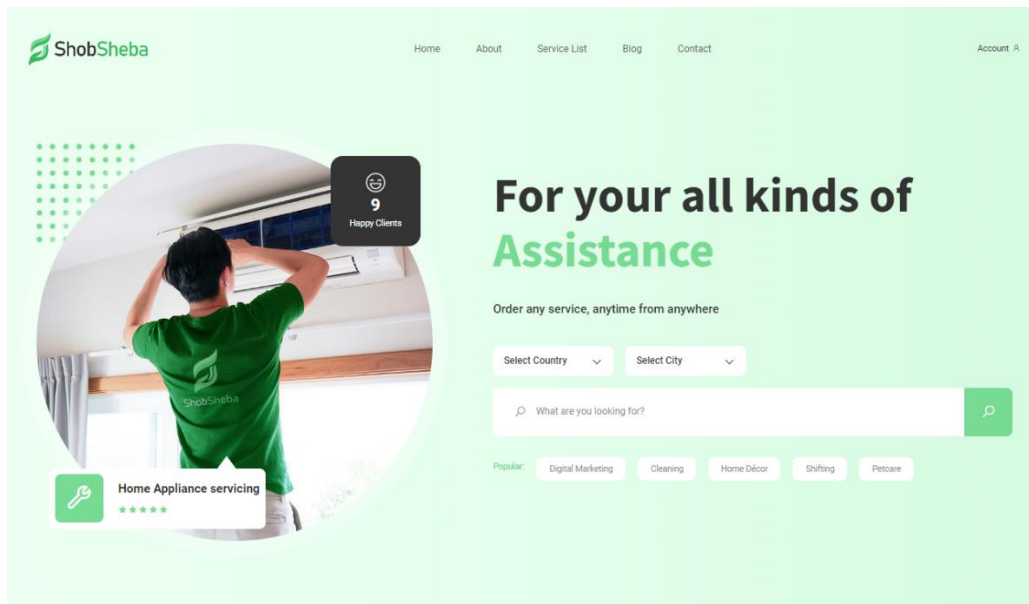


Figure 19: Home page interface

### Admin Dashboard interface

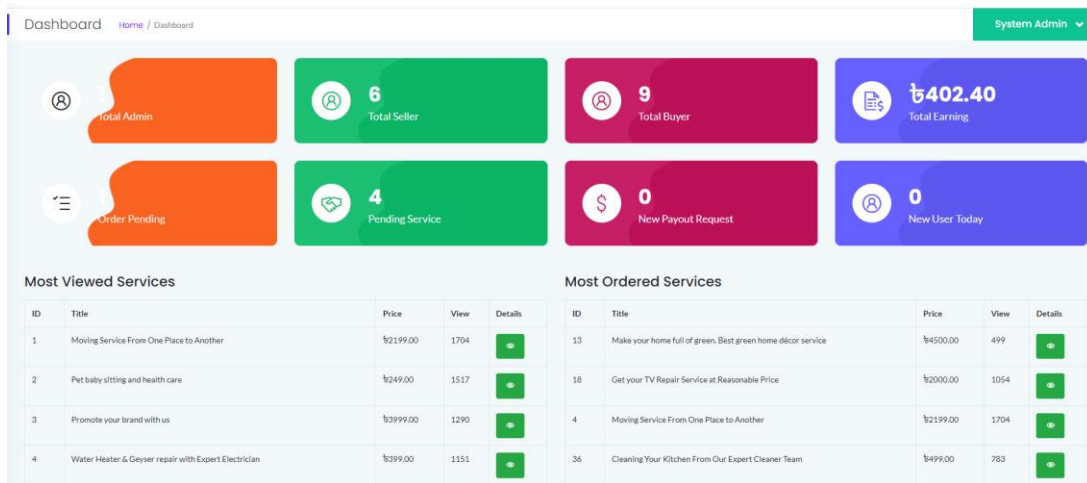


Figure 20: Admin dashboard interface



## Customer's profile interface

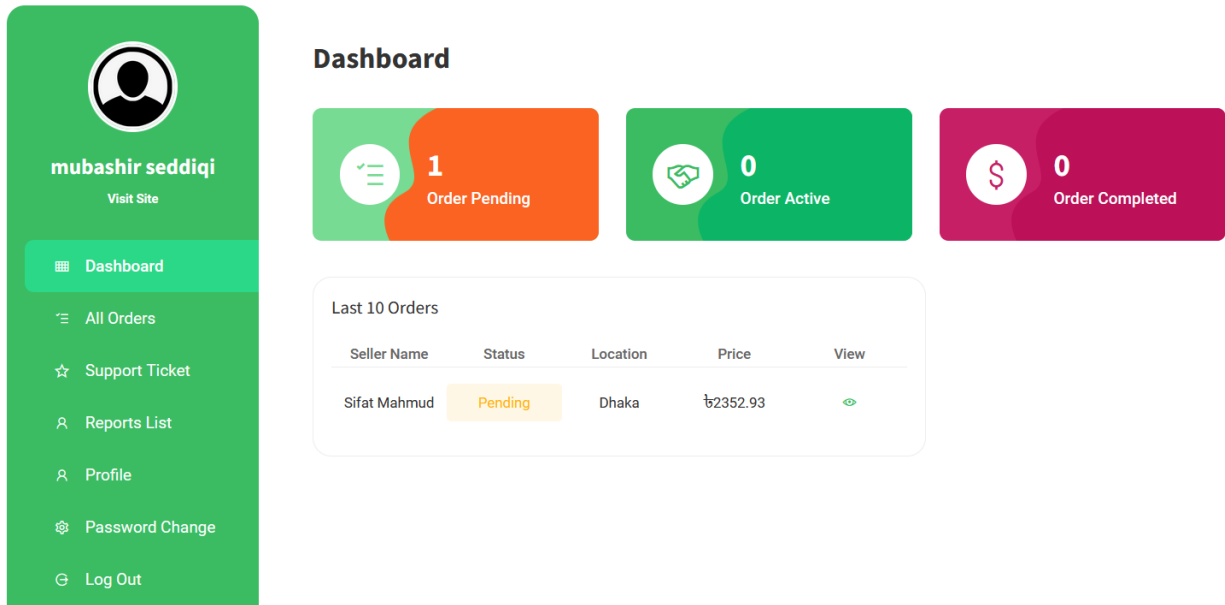


Figure 21: Customer dashboard interface

## Seller profile interface

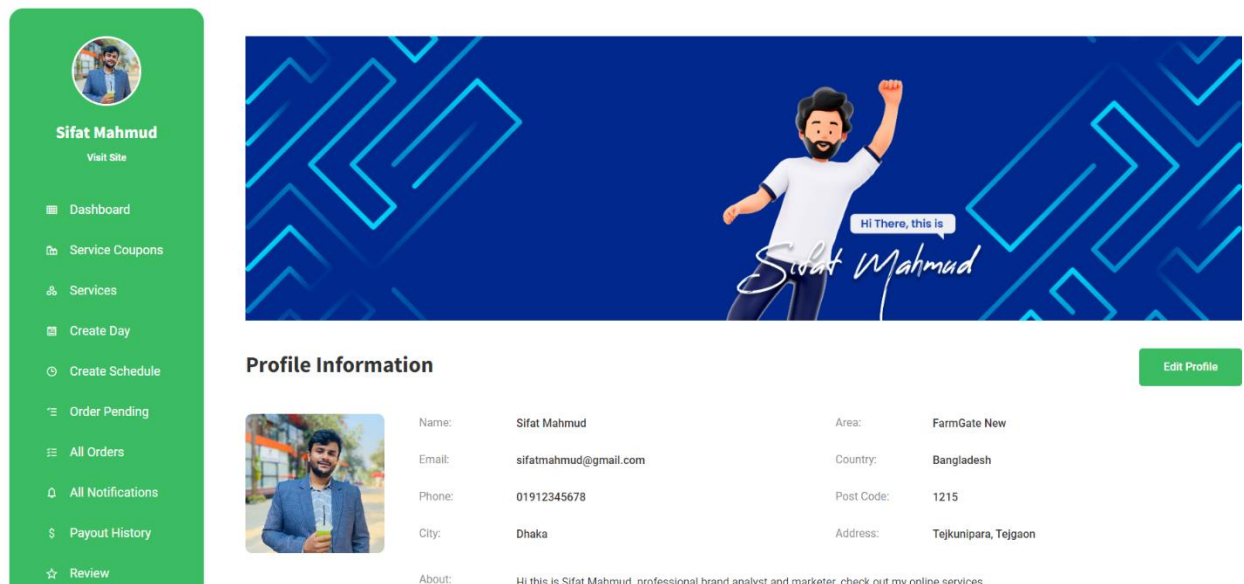


Figure 22: Seller profile interface

## Admin seller management interface

All Seller

Bulk Action

Show  entries Search:

ID	Name	User Type	User Status	User Verified	Email	Username	Action
<input type="checkbox"/>	1186	Emran Al Mahmud	Seller	Active <input type="button" value="Edit"/>	Verified <input type="button" value="Eye"/>	sifatcaps96@gmail.com ✓	Emran16-414 <input type="button" value="Send Email"/>
<input type="checkbox"/>	984	Md Siam	Seller	Active <input type="button" value="Edit"/>	Not Verified <input type="button" value="Eye"/>	siam.eveny@gmail.com ✓	mdsiam426 <input type="button" value="Send Email"/>
<input type="checkbox"/>	722	Admin	Seller	Active <input type="button" value="Edit"/>	Not Verified <input type="button" value="Eye"/>	mswebdesign6@gmail.com ✗ <input type="button" value="Send Code"/>	earnzbfw_ujgsoutlet <input type="button" value="Send Email"/>

Figure 23: Seller management interface

## Admin service management interface

All Services

Bulk Action

Show  entries Search:

ID	Title	Price	Status	Create Date	Featured	Action	
<input type="checkbox"/>	63	Expert AC Repair service at affordable price	₹1099.00	Approved	24-Dec-2022	Yes	<input type="button" value="Check"/> <input type="button" value="Eye"/> <input type="button" value="Delete"/> <input type="button" value="Featured"/> <input type="button" value="Make Featured"/>
<input type="checkbox"/>	56	Promote your brand with us	₹3999.00	Approved	28-Apr-2022	Yes	<input type="button" value="Check"/> <input type="button" value="Eye"/> <input type="button" value="Delete"/> <input type="button" value="Featured"/> <input type="button" value="Make Featured"/>
<input type="checkbox"/>	53	Your online business consultant. Grow your business with us	₹7999.00	Approved	28-Apr-2022	No	<input type="button" value="Check"/> <input type="button" value="Eye"/> <input type="button" value="Delete"/> <input type="button" value="Make Featured"/> <input type="button" value="Make Featured"/>

Figure 24: Service management interface

## Seller dashboard interface Design

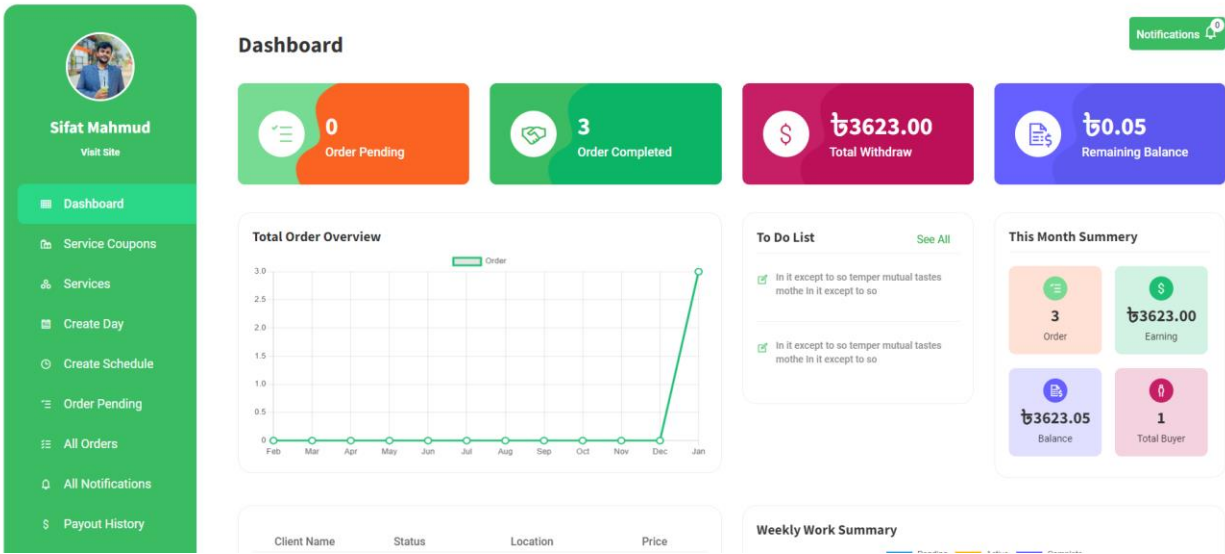


Figure 25: Seller dashboard interface

## Placed order on seller profile interface Design

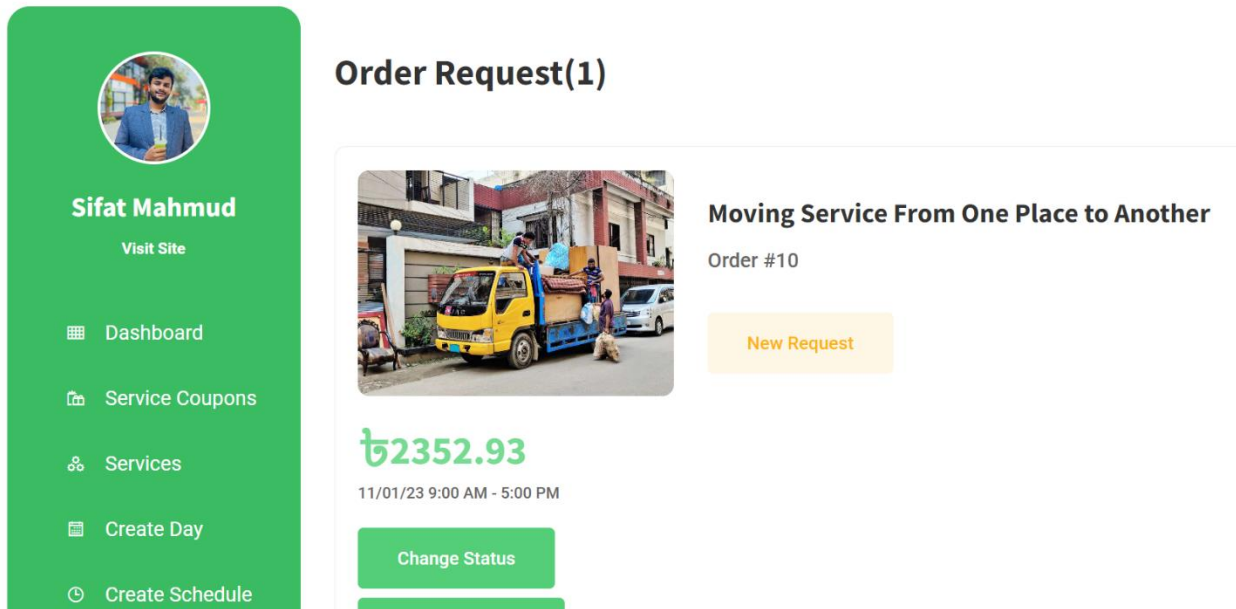


Figure 26: Service order interface

## Booking summary Interface

### Your Location

### Date & Time

2023-01-11 9:00 AM - 5:00 PM

### Booking Information

Name: mubashir seddiqi  
Email: mubashirseddiqi@gmail.com  
Phone: 01857918233

### Order Location

Bangladesh  
Dhaka

### Booking Summary

Appointment Package Service		
Shifting	× 1	₳1,599.00
setup	× 1	₳600.00
<hr/>		
Package Fee		₳2,199.00
<hr/>		
<b>Extra Service</b>		
<hr/>		
Extra Service		₳0.00
<hr/>		
Subtotal		₳2199
<hr/>		
Tax(+) 7 %		₳153.93
<hr/>		
<b>Total</b>		₳2352.93

Figure 27: Booking summary interface

## Chapter 7 - Deployment

### 7.1 – Core Module Coding Samples

I have used HTML5, CSS, Bootstrap, JavaScript to build the frontend interface of the “ShobSheba” online service marketplace. For database management I have used MySQL. And for development I have used PHP 7 and Laravel 8 Framework. Here are some coding samples provided for the major workflows of the system:

#### User registration coding sample

```
public function userRegister(Request $request)
{
    if($request->isMethod('post')){
        $request->validate([
            'name' => 'required|max:191',
            'email' => 'required|email|unique:users|max:191',
            'username' => 'required|unique:users|max:191',
            'phone' => 'required|unique:users|max:191',
            'password' => 'required|max:191',
            'service_city' => 'required',
            'service_area' => 'required',
            'country' => 'required',
        ]);

        $email_verify_token = Str::random(8);
        $user_type = get_static_option('buyer_register_on_off') === 'off' ? 0 : $request->get_user_type;se
        $user = User::create([
            'name' => $request->name,
            'email' => $request->email,
            'username' => $request->username,
            'phone' => $request->phone,
            'password' => Hash::make($request->password),
            'service_city' => $request->service_city,
            'service_area' => $request->service_area,
            'country_id' => $request->country,
            'user_type' => $user_type,
            'terms_conditions' => 1,
            'email_verify_token' => $email_verify_token,
        ]);
    }
}
```

Figure 28: User registration coding sample

## Different user register coding sample

```
if($user ){
    if($request->get_user_type==0){
        $user_type = 'seller';
    }else{
        $user_type = 'buyer';
    }

    try {
        $message = get_static_option('user_email_verify_message');
        $message = str_replace(["@name", "@email_verify_tokn"],[$user->name, $email_verify_tokn],$message);
        Mail::to($user->email)->send(new BasicMail([
            'subject' => sprintf(__('Verify your email address %s'),get_static_option('site_title')),
            'message' => $message
        ]));

        $message = get_static_option('user_register_message');
        $message = str_replace(["@name", "@type", "@username", "@email"],[$user->name, $user_type, $user->username, $user->email], $message);
        Mail::to(get_static_option('site_global_email'))->send(new BasicMail([
            'subject' => get_static_option('user_register_subject') ?? __('New User Registration'),
            'message' => $message
        ]));
    } catch (\Exception $e) {
    }
}

if($request->get_user_type==0){
    $last_order_id = DB::getPdo()->lastInsertId();
    SellerVerify::create([
        'seller_id' => $last_order_id,
        'status' => 0,
    ]);
}
```

Figure 29: different registration coding sample

## Add service coding sample

```
public function addServices(Request $request)
{
    if ($request->isMethod('post')) {
        $request->validate([
            'category' => 'required',
            'title' => 'required|max:191|unique:services',
            'description' => 'required|min:150',
            'slug' => 'required',
        ]);

        $seller_country = User::select('id', 'country_id')->where('country_id', Auth::guard('web')->user()->country_id)->first();
        $country_tax = Tax::select('tax')->where('country_id', $seller_country->country_id)->first();

        $service = new Service();
        $service->category_id = $request->category;
        $service->subcategory_id = $request->subcategory;
        $service->title = $request->title;
        $service->slug = $request->slug;
        $service->description = $request->description;
        $service->image = $request->image;
        $service->image_gallery = $request->image_gallery;
        $service->video = $request->video;
        $service->seller_id = Auth::guard('web')->user()->id;
        $service->service_city_id = Auth::guard('web')->user()->service_city;
        $service->status = 0;
        $service->tax = $country_tax->tax ?? 0;
        $service->is_service_all_cities = $request->is_service_all_cities ?? 0;
    }
}
```

Figure 30: Service adding coding sample

## Service price calculation coding sample

```
$sub_total = 0;
$total = 0;
$tax_amount = 0;

$tax = Service::select('tax')->where('id', $request->service_id)->first();
$service_details_for_book = Service::select('id','service_city_id')->where('id',$request->service_id)->first();
$service_country = optional(optional($service_details_for_book->serviceCity)->country)->id;
$country_tax = Tax::select('id','tax')->where('country_id',$service_country)->first();
$sub_total = $package_fee + $extra_service;
if(!is_null($country_tax)){
    $tax_amount = ($sub_total * $country_tax->tax) / 100;
}
$total = $sub_total + $tax_amount;

//calculate coupon amount
$coupon_code = '';
$coupon_type = '';
$coupon_amount = 0;
```

Figure 31: Price calculation coding sample

## Create order coding sample

```
$order_create='';
if($request->is_service_online_ != 1 && Auth::guard('web')->check() && Auth::guard('web')->user()->user_type == 1){
    Order::create([
        'service_id' => $request->service_id,
        'seller_id' => $request->seller_id,
        'buyer_id' => Auth::guard('web')->check() ? Auth::guard('web')->user()->id : NULL,
        'name' => $request->name,
        'email' => $request->email,
        'phone' => $request->phone,
        'post_code' => $request->post_code,
        'address' => $request->address,
        'city' => $request->choose_service_city,
        'area' => $request->choose_service_area,
        'country' => $request->choose_service_country,
        'date' => \Carbon\Carbon::parse($request->date)->format('D F d Y'),
        'schedule' => $request->schedule,
        'package_fee' => 0,
        'extra_service' => 0,
        'sub_total' => 0,
        'tax' => 0,
        'total' => 0,
        'commission_type' => $commission->commission_charge_type,
        'commission_charge' => $commission->commission_charge,
        'status' => 0,
        'order_note' => $request->order_note,
        'payment_gateway' => $request->selected_payment_gateway,
        'payment_status' => $payment_status,
    ]);
}else{
```

Figure 32: Create order coding sample

## 7.2 – Possible problem breakdowns

To make the development process of “ShobSheba” we need to breakdown the entire project into small chunks. For the process to be more efficient. Here are some solutions that can be applied:

- Requirement analysis and database design
- Admin panel and controls development
- Different user profiles development
- Services category and panel development
- Service schedule management system development
- Service booking system development
- Order processing system development
- Service and order management system development
- Seller management system development
- Payment processing system development

### Database Design and Analysis

- ✓ Determine and finalize the specifications
- ✓ Compile information to deal with
- ✓ Normalize the information gathered
- ✓ Create an ERD and a data dictionary
- ✓ Create the schema in accordance with the data dictionary

### Admin control panel development

- ✓ Develop the required devices for admin
- ✓ Develop different types of controls for admin
- ✓ Seller verification, validation and managing
- ✓ Service and orders management
- ✓ Payout requests approval
- ✓ Various types of report generating

### Customer panel development



- ✓ Front-end interface design for service booking
- ✓ Signup-login if not done already
- ✓ Service searching based on location and category
- ✓ Booking information validation
- ✓ Service schedule availability checking
- ✓ Payment verification and validation

### **Service seller panel development**

- ✓ Front-end development
- ✓ Service detail credentials management
- ✓ Service schedule management
- ✓ Service attributes manipulation
- ✓ To-do list management
- ✓ Payout request system

## **7.3 – Prioritization while Developing the Solution**

We have already prioritized the requirements list in order to identify the system's functionality. It is now time to prioritize tasks during the development phase, which is critical because random development may miss some core functionalities to develop. The following is a list of prioritized development tasks –

- Requirement analysis and database design
- Development of database and relations
- Registration and login system for customer and seller
- Seller panel development
- Customer panel development
- Services panel development
- And Admin control panel development

## Chapter 8 - Testing

### 8.1 – Acceptance of the Test plan

To create a successful software, testing is essential. During the analysis phase, a testing plan should be developed. These plans must be approved by both the user and the developer. The test plan for this project will ensure that all relevant testing requirements and user acceptance criteria are met.

### 8.2 – Introduction

Software testing is a method of determining whether a software product meets the expected requirements and ensuring that it is defect-free. It consists of putting software/system components through their paces with manual or automated tools in order to evaluate one or more properties of interest. The goal of software testing is to identify errors, gaps, or missing requirements when compared to the actual requirements.

In this process we will check if ShobSheba meets the proper specifications and requirements. Is it secured for users? etc. We will do **Functional, Non-Functional Testing** here. Test plan are created based on this criterion.

### 8.3 – Overview of Shobsheba web application

ShobSheba is an on-demand service marketplace. Where users can register as seller or customer. Sellers can create their own seller profile, post their service description and customers will book for service appointment. The Main functionalities of ShobSheba -

- Registration
- Login
- Service Searching & Filtering
- Service Posting
- Booking service appointment
- User & Service verification & update by admin
- Payment

## 8.7 – Test Case

Following the completion of the test acceptance plan, test cases must be prepared. The Shobsheba system's test cases are –

### Unit testing – test case

Test case Name	Module Test
Test Class	
Test Description	
User	
Expected Result	
Actual Result	

### Module testing – Test Case

Test case Name	Module Test
Test Class	
Test Description	
User	
Expected Result	
Actual Result	

### Integration Testing – test case

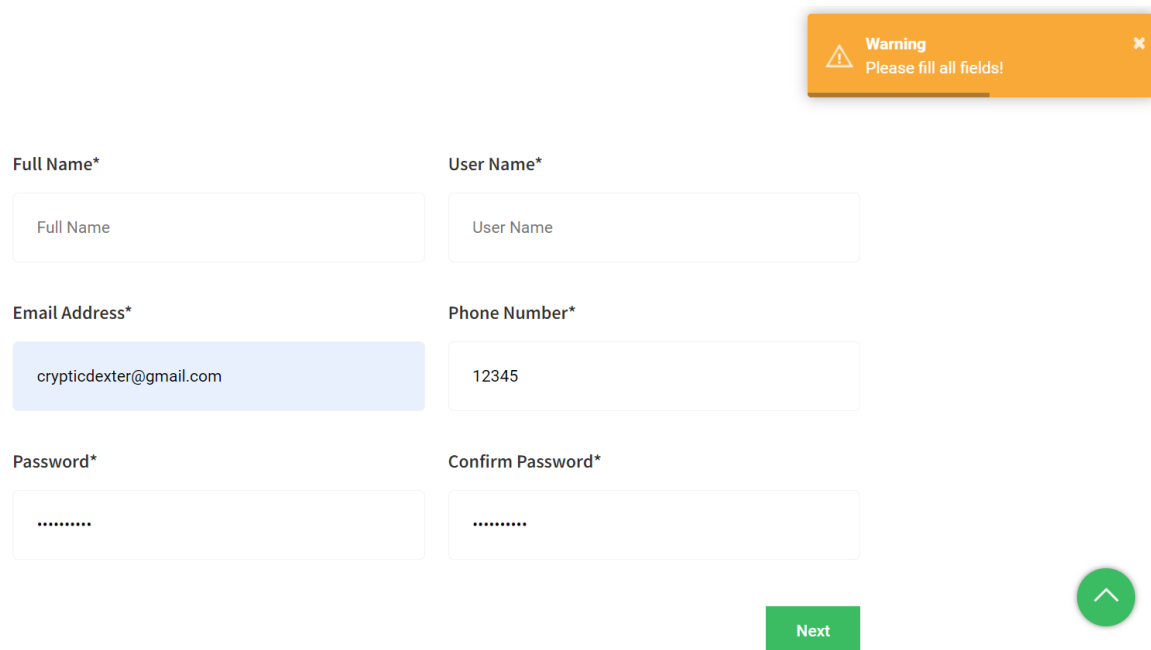
Test case Name	Module Test
Test Class	
Test Description	
User	
Expected Result	
Actual Result	

## 8.8 – Test-Case Develop and Execution

### Module testing 1

Test case Name	Module Test
Test Class	Form controller
Test Description	Form registration without information
User	Enter no data
Expected Result	Show the message that fields cannot be kept empty
Actual Result	It shows the expected output

Table 18: Module testing 1 Test Case



The screenshot shows a registration form with the following fields and values:

- Full Name\*: Full Name
- User Name\*: User Name
- Email Address\*: crypticdexter@gmail.com
- Phone Number\*: 12345
- Password\*: .....
- Confirm Password\*: .....

A warning message is displayed at the top right: "Warning Please fill all fields!". A green "Next" button is located at the bottom right, along with a circular arrow icon.

Figure 33: Module testing 1 Test Result

### Module testing 2

Test case Name	Module Test
Test Class	Form controller
Test Description	Form registration with wrong input data
User	Enter wrong input

<b>Expected Result</b>	Show the message that the email must be valid email address.
<b>Actual Result</b>	It shows the expected output

*Table 19: Module testing 2 Test Case*

The screenshot shows a registration form with the following fields and values:

- Full Name\*: Emran
- User Name\*: Emran123
- Email Address\*: wrongemail
- Phone Number\*: wrong phone number
- Password\*: .....
- Confirm Password\*: .....

There is a green "Next" button and a green circular arrow icon. Below the form, a red error message box displays: "The email must be a valid email address." with a close button (X).

*Figure 34: Module testing 2 Test Result*

## Unit Testing 1

Test case for unit testing

<b>Test case Name</b>	Unit test
<b>Test Class</b>	Service category controller
<b>Test Description</b>	Service category validation
<b>User</b>	Select specific service category
<b>Expected Result</b>	Show the services available under selected categories
<b>Actual Result</b>	It shows the expected output

*Table 20: Unit Testing 1 Test Case*

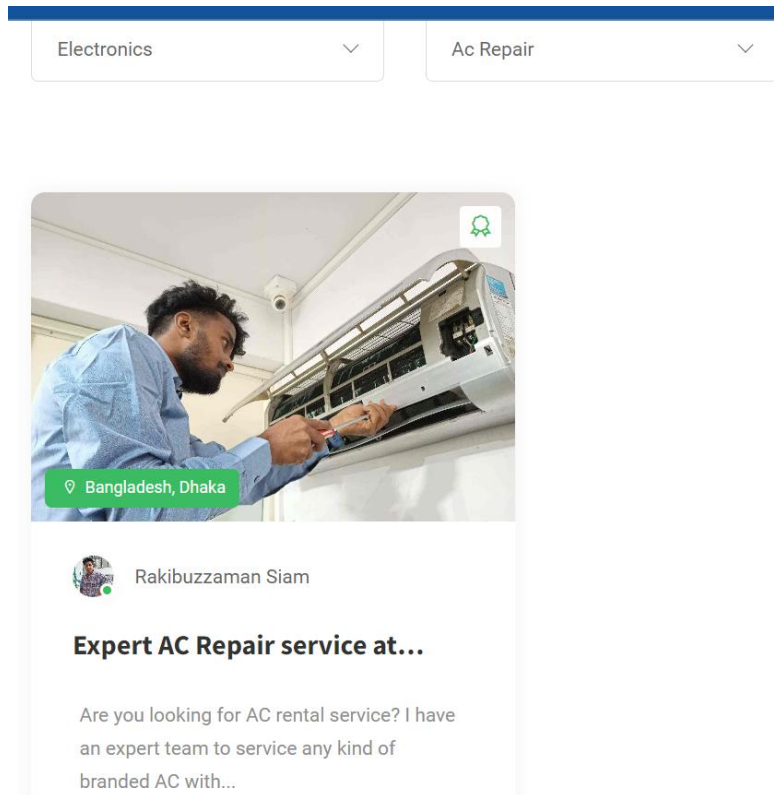


Figure 35: Unit Testing 1 Test Result

## Unit Testing 2

Test case for unit testing

<b>Test case Name</b>	Unit test
<b>Test Class</b>	Service booking
<b>Test Description</b>	Service area validation before booking
<b>User</b>	Doesn't select specific service area
<b>Expected Result</b>	Show the message to select a specific area
<b>Actual Result</b>	It shows the expected output

Table 21: Unit Testing 2 Test Case

1 Location > 2 Service > 3 Date & Time > 4 Information > 5 Confirmation

**Aviso**  
Please select your area!

**Info!** This service is available only selected country and city

**Your Location**  
 Bangladesh  
 Dhaka  
 FarmGate New

Service Country

Service City

Choose Area

[Next](#)

Figure 36: Unit Testing 2 Test result

## Integration testing 1

<b>Test case Name</b>	Integration test
<b>Test Class</b>	system controller
<b>Test Description</b>	Successful login of service seller to the system
<b>User</b>	Enter login information
<b>Expected Result</b>	Show login successful message and redirect to seller dashboard
<b>Actual Result</b>	It shows the expected output

Table 22: Integration Testing Test Case

## Sign In

Login Success Redirecting

Username or Email \*

Password\*

Remember me [Forgot Password](#)

Redirecting..

Figure 37: Integration Testing Test Result

## System Testing


Test case Name	System test
Test Class	Payment execution
Test Description	Selecting bank transfer option will allow user to put bank account details.
User	Select bank transfer payment method and click 'pay & Confirm order'.
Expected Result	Drive user to account details input form
Actual Result	Shows unexpected output  <b>FAIL</b>

Table 23: System Testing Test Case



Figure 38: System Testing Test Result



## Acceptance Testing

<b>Test case Name</b>	Acceptance test
<b>Test Class</b>	Service confirmation customer end
<b>Test Description</b>	User selecting Cash on Delivery option for a particular service and clicking 'pay and confirm order' button.
<b>User</b>	Select Cash on Delivery option and click 'pay and confirm order' button.
<b>Expected Result</b>	System will drive user to order confirmation page. And show order details and succession message.
<b>Actual Result</b>	It shows the expected output

Table 24: Acceptance Testing Test Case

**SUCCESSFULL !**



Your Order Successfully Completed

### Your Order Details

Date & Schedule	Amount Details	Order Status
<b>Date:</b> 26/12/22 <b>Schedule:</b> 10.00AM-11.00PM	<b>Package Fee:</b> ₵2000.00 <b>Sub Total:</b> ₵2000.00 <b>Tax:</b> ₵140.00 <b>Total:</b> ₵2140.00	<b>Order Status:</b> Pending

Figure 39: Acceptance testing test result

## Some Non-Functional Testing Benchmarks of ShobSheba at Development stage

### Security testing 1

Test case Name	Security test
Test Class	Login controller
Test Description	Login testing to book a service
User	Fill up login form with wrong data
Expected Result	Show a message of wrong input
Actual Result	It shows the expected output

Table 25: Security Testing Test Case

**Sign In**

Your email or Password Is Wrong !!

Username or Email \*

Password\*

Remember me [Forgot Password](#)

Login

Do not have Account? [Register](#)

Figure 40: Security Testing Test Result

## Some Testing Benchmarks

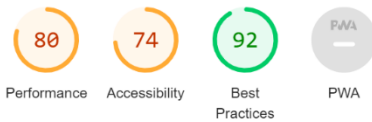
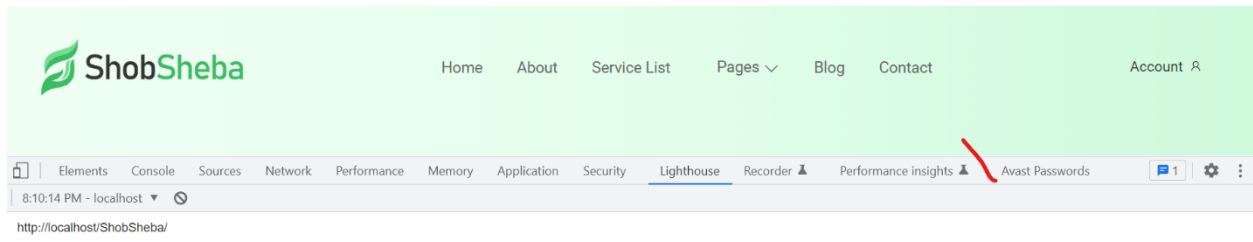


Figure 41: Testing Benchmark 1

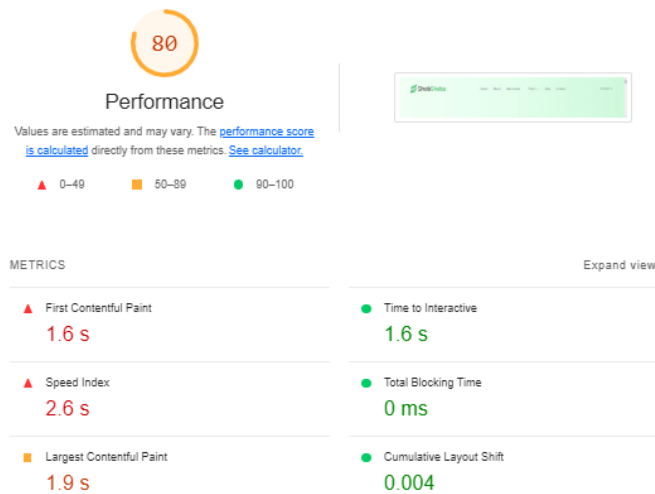


Figure 42: Testing Benchmark 2

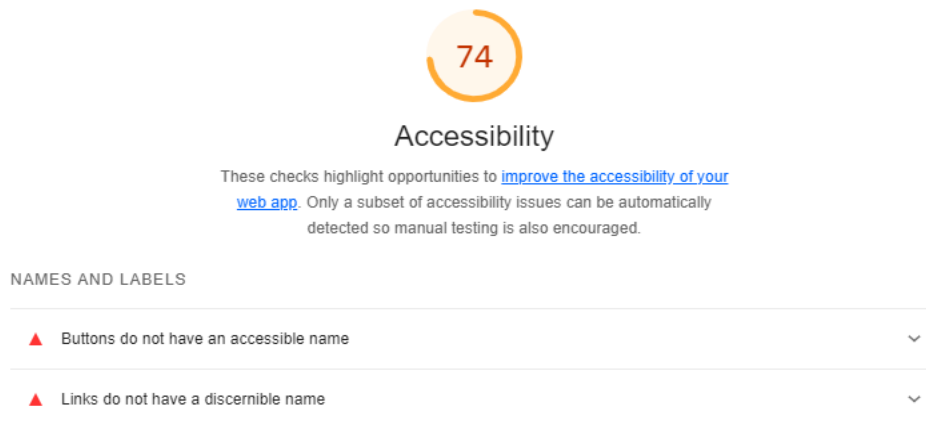


Figure 43: Testing Benchmark 3

## Chapter 9 - Implementation

### 9.1 – Training

Training is required to familiarize users with the developed system. Once the system is fully operational, the team must ensure that the users or operators are capable of handling operations through the system. Simply put, software training is here to stay as long as organizations are motivated by the desire to save time and money by digitizing tasks for themselves and all of their stakeholders, which include customers, vendors, and business partners. Here is a chart to describe the training procedure:

SL	User	Training Scope	Time Period	Comment
1	Service sellers	Registering as a seller, completing account information, send verification request by posting NID and service related documents, service posting, image selection, payment receive and withdrawal	2 Hours	Users seemed to be finding the learning process about the system very easy
2	System admin	Verifying sellers, managing all kind of users, managing posted services, managing service categories, check payout requests, monitor customer support tickets.	1:30 Hours	Admin acknowledges and appreciates the procedures

*Table 26: System Training*

## 9.2 – Implementation Scheme

### Direct cutover

The organization chooses a date on which the old system will no longer be used in the direct-cutover implementation methodology. Users begin using the new system on that date, and the old system becomes unavailable. The benefits of using this methodology include its speed and low cost. However, this method is also the most dangerous. If the new system has an operational problem or is not properly prepared, the consequences for the organization could be disastrous.

## 9.3 – Load Balancing

Load balancing means that the system is optimized against the effect of the users. Users hit show how many users are using the system at the same time and how much the system has sustained. This is referred to as load balancing and load equalization. It distributes the demand over several servers, allowing the system to operate at peak efficiency. Because there are six different sorts of users and a large number of hits each day, a great load balancing method should emerge.

## Chapter 10 - Critical Appraisal and Evaluation

### 10.1 – Objective Could be Met

The objectives that were first declared are mentioned below:

- Different login results
- All types of user management
- Service filtering based on category, rating
- Service and order management
- Seller and payment withdrawal management

#### Objective – 1

##### Achievement Evaluation

First of all, the sign up and login system works very successfully. Data and credentials provided are validated perfectly. And for each wrong credentials it shows messages. And for correct attempts the system takes users to their dashboard or control panel it was intended for. The Laravel authentication used in the system uses cookie-based authentication for the credentials provided.

#### Objective – 2

##### Achievement Evaluation

Service and order management works successfully which are the two main phases for the whole system's operation. With which seller, customer and also system admin will have to deal with. Sellers can post their services by only visiting one page and filling out the information the page contains. Also they can verify their profiles by only 2 steps. After posting the service they can also easily update its attributes, contents, price etc. users can easily find the available services from the menu and also can check the available categories right under the banner section of the website. Admin has very easy usability of managing every single aspect just by clicking simple readable buttons and has editing option for almost everything.

## **Objective – 3**

### **Achievement Evaluation**

Sellers can spontaneously set up their work days and specific work hours for each day of the week. Also they can fix a specific time period and set that time period for every week days as well. On the other hand, customers are shown service availability for each day according to the seller's work schedule. These features help the overall system perform smoothly and provides better usability and user experience for all users.

### **10.2 – Objectives that Couldn't be met at all**

Almost every related features and functionalities were tried to attach with the system to make the overall system perfect. But the Live chat option seemed to be important for the system but didn't get along

#### **The reason it missed out**

The biggest cause for not achieving the goal is a lack of time to finish the project. Due to the limited time frame, it would be pretty challenging, and another reason would be the necessity to run a real-time hosting server, which would also be quite difficult for the project. Because without web hosting, no one can communicate with others through the system. Although there is a support ticket option.

#### **How it could be done**

To get that component done successfully it would require another phase of planning and extended time period. There are some famous live chat software which can be integrated to this system. But they can be quite expensive and high maintenance. Also advance live chatting would require implementing Artificial Intelligence in the system which would require learning new technologies.

## Chapter 11 - Personal Achievements

### 11.1 – Pre-Project-Review-closing

To work on this project, I had to learn some new technologies and methods as an intern to work with a team. The project planning phase was itself very challenging to be taken care of as I had no previous professional work experience. Also following strict deadlines was a must. As this system is going to be adapted in real life soon, I had to be very determined throughout the process. Also I had to do a full documentation of the whole project.

### 11.2 – learnings from this task

First of all, this overall task helped me to better understand real life project development and be a team player. I also had the chance to take care of different aspects, from interface design suggesting brand identity and brand colors to front-end development. As well as taking care of the calculations and functionalities of back-end. And most importantly analyzing the client requirements and designing the database accordingly.

### 11.3 – challenges I have faced

From the very beginning it has been a difficult task to perform. Keeping in mind that this requires real life implementation. There are three different kinds of users. So the overall system required proper connectivity among all the components. Sometimes the functionalities were not working as it was intended to. I had to learn things alongside developing this project. Some components required developing multiple times to be more accurate and user friendly. I also tried popular payment gateways to be integrated with the system, but it could not be established because of each system having different policies.



## Chapter 12 - Conclusion

### 12.1 – Project Summary

**ShobSheba** is an on-demand service marketplace that offers customers services regarding household tasks such as Expert repairing, cleaning, shifting and moving as well as some commonly needed online services like brand building digital marketing etc. it's an open marketplace for users to sell their service at which they have expertise and experience. The system ensures smooth and ease of use for the overall functionalities. Also user safety. Customers can find their demanding service very easily and without spending a lot time. They can filter the available services based on their category, rating. They can also search for particular services they are looking for. It gives the system admin a bunch of useful features from managing all kinds of users, managing services to be posted on the websites, running orders etc. these tasks can be done by just clicking a few buttons.

The system is built on HTML5, CSS, Bootstrap, JavaScript, PHP and Laravel framework. It also has MySQL for database. The documentation shows the introduction of this system, work process, time it has taken to build, and all the necessary diagrams and coding samples.

### 12.2 – Goals of this project

The main goal of this project in fewer words is to create a system including mostly demanding and required services needed by the people around. For Which people has to look into so many different medias or has to be there physically to get these services. Here are the principal goals of the system –

- Save people's time and effort for finding the reliable on-demand service
- Making a reliable platform for both service providers and customers and to establish better engagement
- Make these services available at hand for customers

### **12.3 – what I have done in the documentation**

In the documentation I have tried to elaborate the overall system in different ways. Work process, time it has taken to build, and all the necessary diagrams and coding samples are included. I have also broken down the requirements in different levels and phases to better understand the project goals. I have also done many types of testing for the project to be sure about its functionalities working correctly and attach the reports and examples in this document. And at last I have described what experiences I have gathered throughout the task, my learnings and the challenges I have faced.

### **12.4 – My Personal Experience**

Throughout this endeavor, I've gained a lot of experience. I had various situations that I dealt with, which gave me a lot of experience. I learned how to run a business. whole project and how to meet all of the project's objectives in a short period of time, which provided me with invaluable expertise.

## Appendix

### Unit Testing 1

Test case for unit testing

<b>Test case Name</b>	Unit test
<b>Test Class</b>	Service category controller
<b>Test Description</b>	Service category validation
<b>User</b>	Select specific service category
<b>Expected Result</b>	Show the services available under selected categories
<b>Actual Result</b>	It shows the expected output

### Unit Testing 2

Test case for unit testing

<b>Test case Name</b>	Unit test
<b>Test Class</b>	Service booking
<b>Test Description</b>	Service area validation before booking
<b>User</b>	Doesn't select specific service area
<b>Expected Result</b>	Show the message to select a specific area
<b>Actual Result</b>	It shows the expected output

### Integration testing 1

<b>Test case Name</b>	Integration test
<b>Test Class</b>	system controller
<b>Test Description</b>	Successful login of service seller to the system
<b>User</b>	Enter login information
<b>Expected Result</b>	Show login successful message and redirect to seller dashboard

<b>Actual Result</b>	It shows the expected output
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### Acceptance Testing

<b>Test case Name</b>	Acceptance test
<b>Test Class</b>	Service confirmation customer end
<b>Test Description</b>	User selecting Cash on Delivery option for a particular service and clicking 'pay and confirm order' button.
<b>User</b>	Select Cash on Delivery option and click 'pay and confirm order' button.
<b>Expected Result</b>	System will drive user to order confirmation page. And show order details and succession message.
<b>Actual Result</b>	It shows the expected output

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