Development of Web Based Shokher Bagan Service System

Submitted by

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A project report submitted in partial fulfillment of the requirements for the degree of Bachelor of Science in Software Engineering from Daffodil International University

DEPARTMENT OF SOFTWARE ENGINEERING

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APPROVAL

This thesis titled on "**Web Based Shokher Bagan Service System**", submitted by **Anisur Rahman Faysal (ID: 183-35-2601)** 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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This is to certify that the project titled" **Development of Web Based Shokher Bagan Service System**" is the result of our study in partial fulfillment of the B.Sc. Engineering degree under the supervisor of Md. Monirul Islam, Assistant Professor, Department of Software Engineering, Daffodil International University,Daffodil Smart City, Birulia 1216,Savar,Dhaka, Bangladesh. It is also hereby declared that this project or any part of it has not been submitted elsewhere for the award of any degree.

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ABSTRACT

Gardening is a beloved hobby for many, yet maintaining a thriving garden can be challenging due to the lack of accessible resources and expert advice. I experienced this firsthand when I struggled with my own garden, which boasted a variety of flowers and fruit trees. Despite my efforts, I faced issues with withering flowers, yellowing leaves, and stagnating plants due to the unavailability of essential materials like fertilizer and topsoil, and the absence of expert guidance. In response to this problem, I have developed a web application aimed at providing comprehensive support to gardening enthusiasts. This innovative platform connects hobbyists with necessary services, including consultation with experts, procurement of gardening supplies, and maintenance advice. Furthermore, nursery owners can create accounts to sell their products and receive consultancy for better nursery management. This system not only supports hobbyists in maintaining their gardens but also helps nursery owners expand their businesses and optimize their operations. This web application serves as a centralized hub for all gardening needs, fostering a community where knowledge and resources are easily accessible, thereby enhancing the overall gardening experience and promoting sustainable practices.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Gardening is an enriching and rewarding activity that brings joy to millions of people around the world. It provides a sense of connection with nature, contributes to environmental sustainability, and enhances mental well-being. However, maintaining a healthy and flourishing garden requires consistent effort, knowledge, and resources. Gardeners often encounter various challenges, such as plant diseases, pest infestations, and nutrient deficiencies, which can hinder their ability to sustain vibrant and productive gardens.

Fig:1.1 Successfully start gardening

My personal journey as a gardening enthusiast highlighted several of these challenges. Despite having a garden adorned with diverse flowers and fruit trees, I struggled with the deterioration of my plants. The flowers began to wither, leaves turned yellow, and the overall health of the plants declined. The root cause of these issues was the difficulty in accessing necessary gardening supplies like fertilizers and topsoil, coupled with the lack of expert advice on garden maintenance.

During my search for solutions, I discovered a significant gap in the market. Existing websites and platforms either did not provide comprehensive gardening services or were fragmented and insufficient. This realization sparked the idea of creating a web application that would serve as a one-stop solution for gardening enthusiasts.

The primary objective of this web application is to bridge the gap between gardeners and the resources they need to maintain their gardens effectively. The platform offers a range of services, including:

- **Consultation Services:** Users can connect with gardening experts for personalized advice on plant care, pest control, and garden planning.
- **Procurement of Supplies:** The platform facilitates the purchase of essential gardening materials such as fertilizers, soil, and tools, ensuring that users have access to high-quality products.
- **Community Support:** A vibrant community of gardeners can share experiences, tips, and solutions, fostering a collaborative environment.
- **Nursery Management for Business Owners:** Nursery owners can create accounts to sell their products, receive consultancy services to enhance their business operations, and expand their market reach.

By integrating these services, the web application aims to empower gardening hobbyists with the knowledge and resources needed to nurture their gardens successfully. Additionally, it provides nursery owners with the tools to optimize their business practices, thereby contributing to a more robust and dynamic gardening ecosystem.

Fig:1.2 After Get Consultancy

This project report will detail the development process, features, and benefits of the web application, highlighting how it addresses the critical needs of gardeners and nursery owners alike. Through this platform, we aim to revolutionize the gardening experience, making it more accessible, enjoyable, and sustainable for everyone involved.

1.2 Problem Statement

Gardening, despite its numerous benefits, presents a variety of challenges that can deter even the most passionate enthusiasts. Maintaining a healthy and flourishing garden requires not only a consistent supply of essential resources but also expert knowledge and timely advice. The primary problems faced by gardening hobbyists include:

1. **Access to Resources:** Gardeners often struggle to obtain high-quality gardening supplies such as fertilizers, topsoil, and pest control products. Local availability can be limited, and online options may be fragmented, making it difficult to find reliable sources.
2. **Lack of Expert Guidance:** Effective Garden maintenance often requires specialized knowledge. Many gardeners lack access to expert advice on issues such as disease management, optimal plant care practices, and efficient garden planning. This lack of guidance can lead to deteriorating plant health and decreased productivity.
3. **Time-Consuming Searches:** Hobbyists frequently spend significant time searching for solutions to their gardening problems. The fragmented nature of available information and resources means that gardeners must visit multiple websites and consult various sources, which is inefficient and frustrating.
4. **Inconsistent Quality of Services:** Existing gardening services and platforms often do not provide comprehensive support. The quality and reliability of available resources and advice can be inconsistent, leading to mixed results for gardeners.
5. **Limited Support for Nursery Owners:** Nursery owners also face challenges in managing their operations effectively. They need access to a wider market for their products and professional consultancy to enhance their business practices. Currently, there is a lack of integrated platforms that cater to the specific needs of nursery owners.

These challenges create a significant barrier for gardening enthusiasts, limiting their ability to enjoy and benefit from their hobby. Additionally, nursery owners struggle to optimize their businesses and reach potential customers.

To address these issues, a comprehensive solution is needed that provides easy access to resources, expert guidance, and a supportive community. This solution should also facilitate nursery owners in managing and growing their businesses effectively. The web application I

have developed aims to fill this gap, offering a unified platform that supports both gardeners and nursery owners, ultimately fostering a thriving gardening ecosystem.

1.3 Objective

This web application is to support gardening enthusiasts and nursery owners by providing a platform where users can purchase necessary gardening supplies, access expert advice, and efficiently buy flowers and fruits. Additionally, the platform opens new business opportunities for nursery owners and creates additional income avenues for plant consultants. This report will detail the development, features, and benefits of the application in achieving these goals.

- To Enables individuals who wish to start a garden to easily open an account and purchase the necessary equipment and supplies from nurseries through the platform.
- Offers users access to a wealth of advice from experienced gardening consultants, helping them maintain and improve the health and productivity of their plants.
- To Allows users to efficiently buy a wide variety of flowers and fruits, ensuring they have the best options available for their gardening needs.
- To Opens up new business horizons for nursery owners by providing them with a platform to sell their products to a broader audience and receive consultancy to enhance their operations.
- To Opens additional income avenues for plant consultants who can offer their expertise to a wider range of clients through the platform.

1.4 Features

1. Facilitates Garden Setup.
2. Provides Expert Guidance.
3. Streamlines Purchasing.
4. Expands Business Opportunities for Nursery Owners.
5. Creates Income Opportunities for Plant Consultants.

CHAPTER 2
SYSTEM ANALISIS

2.1 Theoretical Background Study

1. **Davey:** Davey offers consulting services and nursery-related services, including the purchase and delivery of products. However, it lacks raw material services and the ability to serve users based on their nearest area. In contrast, "Shoker Bagan" differentiates itself by providing raw material services, which is critical for gardeners needing soil, fertilizers, and other essentials. Additionally, our platform's focus on localizing services to the nearest area ensures more personalized and efficient service delivery. [1].
2. **Majestic Trees:** Majestic Trees specializes in consultancy but does not offer raw material services, nursery services, or product purchasing and delivery options. In contrast, "Shoker Bagan" offers a full range of services, including consultancy and a robust system for purchasing and delivering pure products. This makes our platform more versatile and valuable to users who need a one-stop solution for their gardening needs [2].
3. **Onetreeplanted:** One Tree Planted is focused primarily on environmental impact through tree planting initiatives. While they offer product purchasing and delivery services, they lack raw material services, consultancy, and nursery services. "Shoker Bagan" provides a holistic approach, integrating consultancy and nursery services with the ability to purchase and deliver high-quality products, enhancing the user experience [3].
4. **GreenDrop:** GreenDrop does not offer any of the key services that "Shoker Bagan" provides. Our platform's extensive range of services, from raw materials to consultancy and product delivery, clearly sets it apart. By offering a comprehensive solution, "Shoker Bagan" meets all the needs of gardening enthusiasts and nursery owners in one convenient location [4].
5. **Friendly Tree Service:** Friendly Tree Service focuses on delivering tree services but lacks raw material services, consultancy, nursery services, and the ability to purchase pure products. While they do provide delivery services, "Shoker Bagan" offers a more

comprehensive array of services, ensuring users have access to all necessary gardening supplies, expert advice, and localized support [5].

2.2 Compare with Existing Work

Existing Project Name	Project Features					
	Raw Material Service	**Consultants**	**Nursery Service**	**Purchase Pure Products**	**Delivery Service**	**Nearest Area**
Davey	No	Yes	Yes	Yes	Yes	No
Majestic Trees	No	Yes	No	No	No	No
Onetreeplanted	No	No	No	Yes	Yes	No
GreenDrop	No	No	No	No	No	No
Friendly Tree Service	No	No	No	No	Yes	No

Fig: 2.2 Compare with Existing Work

2.3 Target User

- Normal User.
- Nursery Owner
- Consultants.

2.4 Business Goal

The primary business goal of our web application is to establish a comprehensive platform that supports gardening enthusiasts, nursery owners, and consultants, while generating sustainable revenue through a subscription-based model. Our approach begins by offering free access to the platform, allowing users to experience the value and benefits firsthand. This initial phase aims to build a substantial user base and foster user engagement.

We target three main types of users: gardening hobbyists (normal users), nursery owners, and plant consultants. Each user group contributes to the platform's revenue stream in unique ways:

Gardening Hobbyists: Initially, hobbyists will have free access to basic features and resources. As they become accustomed to the platform and recognize its value, we will introduce premium subscription plans. These plans will offer enhanced features such as advanced gardening tips, exclusive access to expert advice, and discounts on gardening supplies. By offering both monthly and yearly subscription options, we aim to provide flexibility and affordability, encouraging long-term commitments.

Nursery Owners: For nursery owners, the platform serves as a marketplace to sell their products directly to gardening enthusiasts. Initially, they can list a limited number of products for free. To expand their offerings and access advanced business management tools, nursery owners can opt for a subscription plan. This plan will include features such as inventory management, marketing tools, and premium placement in search results, helping them reach a broader audience and increase sales.

Plant Consultants: Consultants can join the platform to offer their expertise to a wide range of users. They will start with free access to basic functionalities. To fully leverage the platform's potential, they can subscribe to a premium plan, which provides enhanced visibility, advanced scheduling tools, and marketing support. This not only opens additional income avenues for consultants but also ensures users have access to high-quality advice and services.

By implementing this tiered subscription model, we aim to generate substantial revenue while maintaining high user satisfaction and engagement. Our business projections indicate that this approach will yield significant financial benefits, ensuring the platform's sustainability and growth. Through this strategy, we seek to create a thriving ecosystem that benefits all stakeholders, fostering a robust gardening community.

2.5 Budget

Title	Amount For BDT
Background Study and Requirements Analysis	50000
UI / UX Designing	45000
Frontend Development	115000
Backend Development	240000
API Development	45000
Deploy and Maintenance	35000
1 Year Services	120000
Total =	**700,000**

Fig: 2.5 Budget Details

2.6 Principles of System Analysis

The development of the "Shoker Bagan" web application adheres to rigorous principles of system analysis to ensure technical decision-making is thorough, effective, and aligned with the project's goals. Each principle is crucial in evaluating various aspects of the project, facilitating informed decisions that enhance the platform's functionality and user experience. The following sections discuss the key principles of system analysis as applied to the "Shoker Bagan" project.

Modeling and Simulation: In the "Shoker Bagan" project, modeling and simulation play a pivotal role in understanding and predicting the performance of various system components. By creating detailed models of user interactions, resource management, and service delivery processes, we can simulate different scenarios to identify potential bottlenecks and optimize system performance. This approach allows us to test the impact of new features or changes in a controlled environment before implementing them in the live system, thereby reducing the risk of unforeseen issues.

Trade-Off Analysis: Trade-off analysis is essential for balancing competing requirements and constraints in the "Shoker Bagan" project. We systematically evaluate the trade-offs

between different design options, such as the complexity of features, cost implications, and user convenience. For instance, introducing advanced features like personalized gardening advice must be weighed against the cost of development and the potential increase in subscription fees. By analyzing these trade-offs, we can make informed decisions that align with both our technical capabilities and business objectives.

Cost Analysis: Cost analysis is a critical component in ensuring the financial viability of the "Shoker Bagan" project. This involves evaluating the costs associated with developing, maintaining, and scaling the platform. We conduct detailed cost-benefit analyses for each major decision, such as integrating new technologies or expanding service offerings. This analysis helps us allocate resources efficiently, ensuring that expenditures are justified by the anticipated benefits and revenue potential.

Technical Risk Analysis: Technical risk analysis helps us identify, assess, and mitigate potential risks that could impact the success of the "Shoker Bagan" project. We systematically evaluate risks related to technology adoption, system security, data integrity, and user privacy. For each identified risk, we develop mitigation strategies to reduce the likelihood and impact of adverse events. This proactive approach ensures that we can address challenges promptly and maintain the platform's reliability and security.

Feasibility Analysis: Feasibility analysis is conducted to determine the practicality and viability of proposed solutions within the "Shoker Bagan" project. This involves assessing technical, operational, and economic aspects to ensure that the project can be successfully implemented within the given constraints. For example, before adding a new feature like real-time expert consultations, we evaluate the technical requirements, potential user demand, and cost implications. This analysis ensures that each new feature aligns with our overall project goals and resources.

CHAPTER 3

3.1 The System Design

3.1.1 The Entity Relationship Diagram

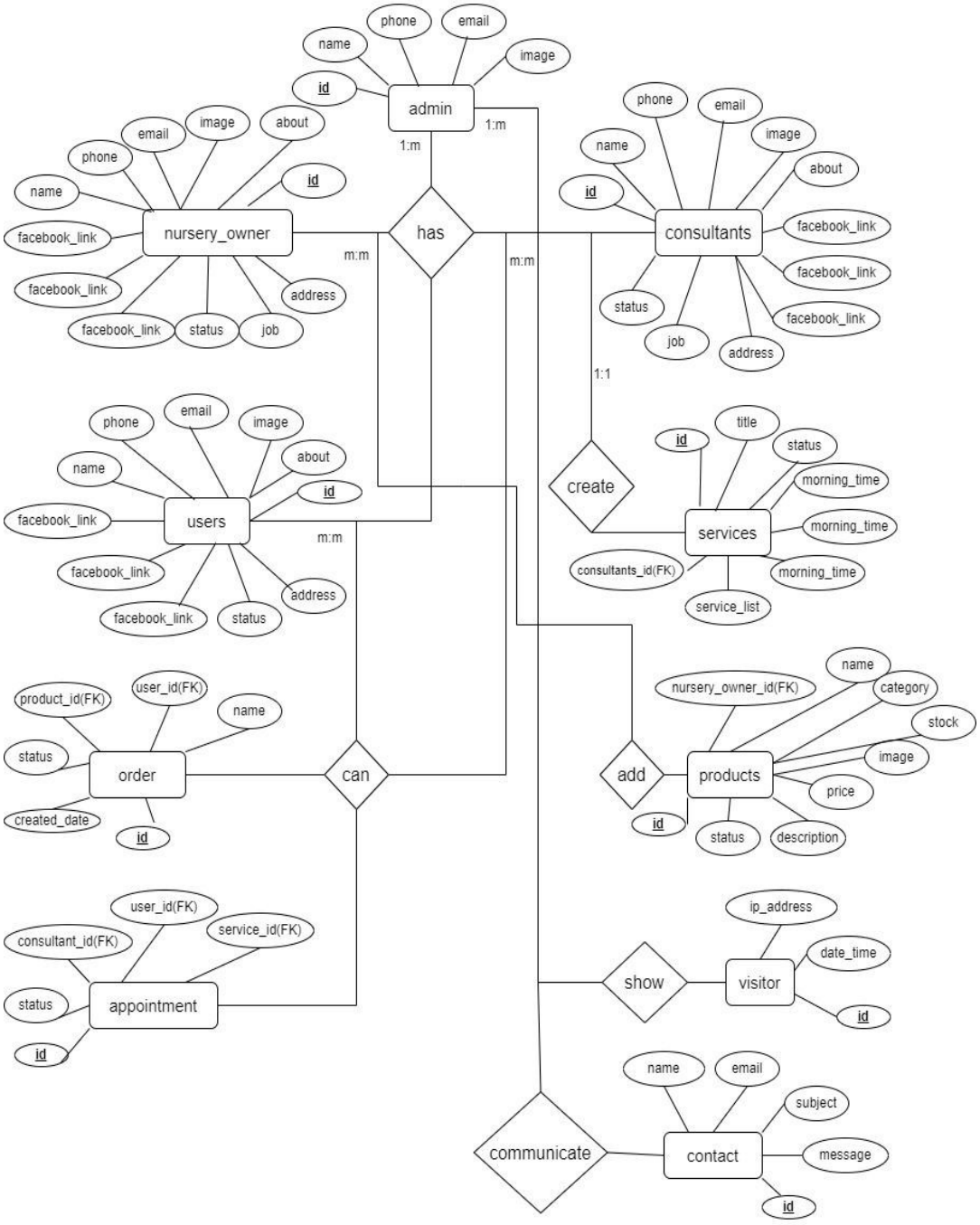

Fig:3.1.1 Entity Relationship Diagram

3.1.2 The Database Diagram

Fig:3.1.2 Database Diagram

3.1.3 The Activity Diagram

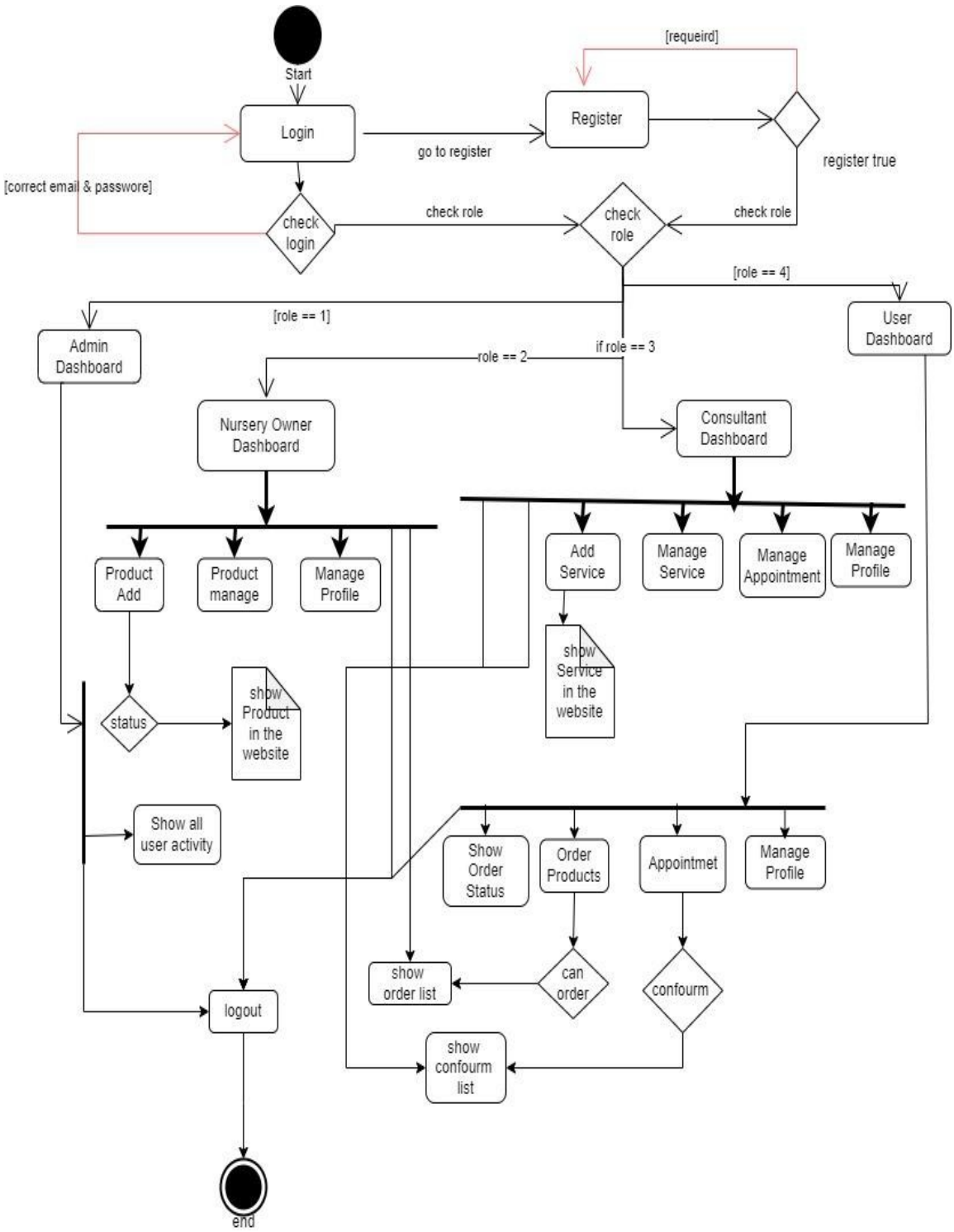

Fig:3.1.3 Activity Diagram

3.2 Software & Hardware used in the project

3.2.1 Technology used

Particular	The Technologies That Can Be Used
Programming Language	PHP 8.3.6 +
Designing	HTML5, CSS3, Bootstrap5x
Others Scripting	JavaScript, jQuery
Database	MySQL

3.2.2 Software Used

- PHPStorm
- Web Storm
- Visual Studio Code
- Postman
- Laragon
- Adobe XD

3.3 Overview of programming instruction

This product is mainly developed by combining dependencies of PHP, Laravel. JavaScript plays the biggest role here; without JavaScript our project would never have been possible to complete. Laravel, a popular framework for PHP, is used as the backend. PHPStorm and Web Storm are very useful development tools for professionals. PHPStorm is used to write PHP and Laravel code, and WebStorm is used to write JavaScript and REST API code. Visual Studio Code is a development tool that has been used as a helping hand in many ways. Postman is a very powerful testing tool for API testing. Laragon is used as the local server. MySQL is used as the database. All in all, with the help of these development tools and programming languages, we succeeded in completing our dream project.

CHAPTER 4
RESULTS AND DISCUSSION

4.1 Testing Implementation

Testing implementation is the process of testing the upcoming implementation of a system, where tester or system architect will see cases and specification, is it implementable or has limitations.

Test Case	Test Input	Expected Outcome	Obtained Outcome	Pass/ fail
1.Registration	Empty name, email, user type, password, confirm password	Show restriction to Fill all the fields	Fields must be filled by data.	Pass
2. Login	Login email and, password	Successfully login	Successfully login	Pass
3. Password	Incorrect password or empty field	Warning the incorrect password or field is empty	Show warning	Pass
4. Profile settings	View profile, Update profile	Show and update profile information	Show and update information successfully	Pass
5. Add Product	Add product, update product.	Successfully add product, and update product.	Successfully add product, and update product.	Pass
6. Visitor Tracking	Visitor User	Successfully Track.	Successfully Visitor Track.	Pass
7. Consultance service	Add service and time.	Successfully updated service section.	Successfully update.	Pass

8. User order	user product order and confirm appointment.	Successfully user product order and confirm appointment.	Successfully user product order and confirm appointment.	Pass

CHAPTER 5
CONCLUSION

5.1 Conclusion

Using our website analysis system, users can register with us here and then provide the URL of their website, and we will create a code on their entire site based on the address of the URL. When you update your site's index tag, it will be activated in our system, which shows the user an overview of the site where he can learn how much time he has spent online and what percentage of men and women are on the site. We can give him good advice on how he can improve his website if he wants and he can find the right competitor for this competition.

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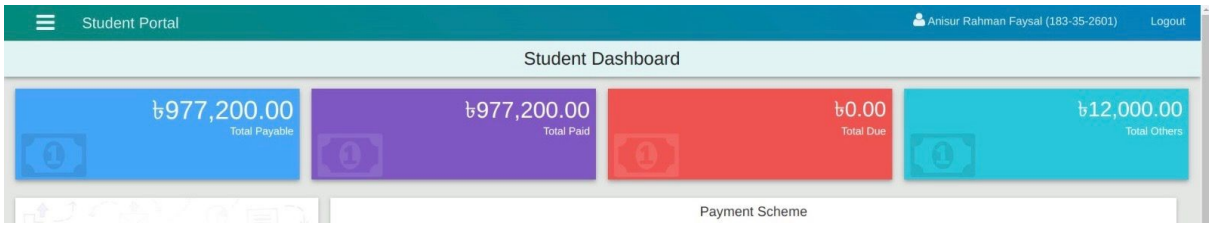

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