The Tree Valleys, Online Ecommerce for the trees

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This **Project** report has been submitted in finishing of the requirements for the Degree of

Bachelor of Science in Software Engineering.

Department of Software Engineering

Daffodil International University

DECLARATION

I hereby declare that I have taken this project under the supervision of **Md Shohel Arman, Assistant Professor, Department of Software Engineering, Daffodil International University.** I also declare that this project doesn't have been submitted elsewhere for award of any degree.

……

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Acknowledgment

At first i would like to thank almighty Allah. However, I have taken efforts in this project. It would not have been possible without the kind support and help of many persons. I would like to extend my sincere thanks to all of them.

I am really grateful because I managed to complete my project within the time given by Project/Thesis Committee. I also sincerely thank our respected supervisor **Md Shohel Arman** for the guidance and encouragement for finishing this project. I am thankful for his inspirations to work harder and for motivating me to be better.

Finally, I would like to thank my parents for keeping me in their prayers and supporting me to be better at every step of the away. Without their love and support i would not be successful.

To sum up, without the help of the mentioned supports, the project would not be possible.

Dedication

I dedicate this project to my respectable Father and Mother, my supervisor, my Honorable teachers who are always dear and near to me. Without their patience, understanding, unsparing support, care, affection and love it was not possible to come up to this place.

Abstract

The mobile plant nursery project is all about bringing plants and gardening supplies to people in a convenient way. Instead of going to a nursery, the nursery comes to different places, like neighborhoods and events. The project wants to help people connect with nature, learn about plants, and take care of them properly. It also encourages sustainable gardening practices and aims to make plants easily available to everyone. The project wants to make gardening easier and more enjoyable for communities.

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1 Introduction

The introduction of the Software Requirements Specification (SRS) provides an overview of the entire SRS with purpose, scope, definitions, acronyms, abbreviations, references and overview of the SRS. The aim of this document is to gather and analyze and give an in-depth insight of the complete **The Tree Valleys** by defining the problem statement in details. Nevertheless, it also concentrates on the capabilities required by stakeholders and their needs while defining high-level product features. The detailed requirements of **The Tree Valleys** are provided in this document.

1.1 Purpose

The purpose of a mobile plant nursery is to provide convenient and accessible access to a wide variety of plants and gardening supplies. By traveling to different locations, mobile plant nurseries aim to reach individuals and communities who may not have easy access to traditional nurseries. They offer a diverse selection of plants, including ornamental flowers, shrubs, trees, herbs, vegetables, and fruit-bearing plants, catering to various preferences and needs. Mobile plant nurseries also provide educational resources and expert guidance on plant care, gardening techniques, and landscaping ideas, helping customers make informed choices. The convenience of their mobility allows customers to explore and purchase plants without extensive travel, encouraging more people to engage in gardening. By participating in local events and markets, mobile plant nurseries foster community engagement, allowing people to connect with nature and promote green spaces. Moreover, they promote sustainability by offering organic and eco-friendly gardening products, and by advocating the use of native plants adapted to the local environment, which helps conserve natural resources and biodiversity. Overall, mobile plant nurseries serve to make plants accessible, offer education and guidance, enhance convenience, engage communities, and have a positive environmental impact.

1.2 Project Scope

Primarily, the scope pertains to the data of vat collection features for making Vat Ensuring System. It focuses on the programs, the stakeholders and applications, which allow general shop-owners and the general super shop to be connected with the Govt. in an online platform and keep updated and clear relationship between them.

This SRS is also aimed at specifying requirements of software to be developed but it can also be applied to assist in the selection relation between the users. The standard can be used to create software requirements specifications directly or can be used as a model for defining the system requirements.

1.3 Glossary

This subsection contains definitions of all the terms, acronyms, and abbreviations used in the document. Terms and concepts from the application domain are defined.

1.3.1 DIU – Daffodil International University
1.3.2 SRS – System Requirement Specification
1.3.3 SDLC – Software Development Life Cycle
1.3.4 UI – User Interface.

1.4 References

IEEE. *IEEE Std 830-1998 IEEE Recommended Practice for Software RequirementsSpecifications.* IEEE Computer Society, 1998.

1.5 Overview

The mobile plant nursery project aims to provide a convenient and accessible way for individuals and communities to access a wide variety of plants and gardening supplies. Unlike traditional nurseries, the mobile plant nursery travels to different locations, bringing the nursery directly to customers. The project scope includes selecting suitable locations, planning inventory, designing and constructing a mobile unit, sourcing and procuring plants, managing the supply chain, implementing marketing and promotion strategies, focusing on customer experience, providing educational resources, engaging with the community, promoting sustainability, and monitoring performance. By offering diverse plant selections, educational support, and sustainable gardening practices, the project seeks to enhance community engagement, provide convenience, and have a positive environmental impact. The ultimate goal is to make plants more accessible, encourage gardening, and create opportunities for people to connect with nature while fostering community greening initiatives.

2 User Classes and Characteristics

There are three types of users in this system. The first two are, executive member, and general member, the only distinction between them is that executive member are allowed to see the preference and exclusion sets of other users. It is the third type of user, the administrator, who is able to initially setup the system, add new users, and set their authorization level.

User: The next most common type of user is the authorized corporation who has a selective number of super shops across the country. These users have the same permissions as the general shopkeepers with the additional ability to view other member's preference and exclusion set of offers. They are allowed to sell the product without building an initial online shop like the general shop owners do. Also, they have the permission to scan

the product without updating the products info at the first place.

Nursery Owners: Most members of this system will be of the general shop owners. These members are able update and build their store with products name & numbers, see selling information, see the selling history and pay the vat at the end of the year without any hassle. They also can see all the exclusive shop owner's list who has given incentive for given the most vat in the year to this system and be one of them by upgrading their sells. They also can get the exclusive vat cut card facilitates which will include a lot of offers which will reduce the taxation rate.

Admin Panel: Finally, the system administrators are users who are able to setup the system from the initial installation and maintain the systems member accounts. They automatically have the functionality of authorized users within the normal operation of the system; however, have additional menu options which allow them to maintain the system. They can also fix any software and taxation issue after been checked by the authority.

3 Design and Implementation Constraints

Design and implementation constraints are those that we have used to implement this project make successful. It also describes tool that enables developers and testers to view and interact with the user interface (UI) elements of this application.

3.1 User Interface Technology

User interface (UI) is everything designed into a system view that which person's associates with this system may like the interface of this system.

3.1.1 Programming Language

For developing this system, we will use PHP as a programming language. PHP (recursive acronym for *PHP: Hypertext Pre-processor*) is a widely-used open-source general-purpose scripting language that is especially suited for web development and can be embedded into HTML. PHP is a server scripting language, and a powerful tool for making dynamic and interactive Web pages.

3.1.2 JavaScript and jQuery Library

The most common use of JavaScript is to add client-side behavior to HTML pages, also known as Dynamic HTML (DHTML). Scripts are embedded in or included from HTML pages and interact with the Document Object Model (DOM) of the page.

jQuery is a JavaScript library. jQuery greatly simplifies JavaScript programming. jQuery UI is a curated set of user interface interactions, effects, widgets, and themes built on top of the jQuery JavaScript Library. Whether you're building highly interactive web applications or you just need to add a date picker to a form control, jQuery UI is the perfect

choice. jQueryUI is built for designers and developers alike. We've designed all of our plug-ins to get you up and running quickly while being flexible enough to evolve with your needs.

3.1.3 CSS Framework

CSS is a language that describes the style of an HTML document. CSS describes how HTML elements should be displayed. Build responsive, mobile-first projects on the web with the world's most popular front-end component library.

Bootstrap is an open-source toolkit for developing with HTML, CSS, and JS. Quicklyprototype your ideas or build your entire app with our Sass variables and mix INS, responsive grid system, extensive prebuilt components, and powerful plug-ins built on jQuery.

The bootstrap code is included minified, which means that white spaces are removed to make the file size smaller and therefore make the load time faster for the file which improves the load time for the whole page. The main design that bootstraps ads without specifically adding design to elements is that when hovering over a link. This is fixed with some simple CSS- code added to the CSS-file, unless the bootstrap CSS-file is included after the original, then bootstrap will override the custom ones and the changes will not be seen. Having some basic knowledge about how Bootstrap works before starting to use it would increase the efficiency and speed one might achieve the goal one has in mind for including bootstrap into the project.

3.2 Implemented Tools and Platform

Every business plan, campaign, or project comes down to Tactics, Tools, and Strategies. To conceive, develop, and implement a sound social media marketing strategic plan thatwill be successful needs to have those three critical components.

3.2.1 Web Server

A Web server is a program that uses HTTP (Hypertext Transfer Protocol) to serve the files that form Web pages to users, in response to their requests, which are forwarded by their computers' HTTP clients. Dedicated computers and appliances may be referred to as Web servers as well. We will use the Apache HTTP server to implement this project

3.2.2 Database Server

We will use MySQL database server to store all of the information of this system. The reasonbehind to choose the database server are given below:

- Security
- Reporting and Data Mining
- Replication
- Fault tolerance
- Performance diagnostics

4 Use Case Diagram

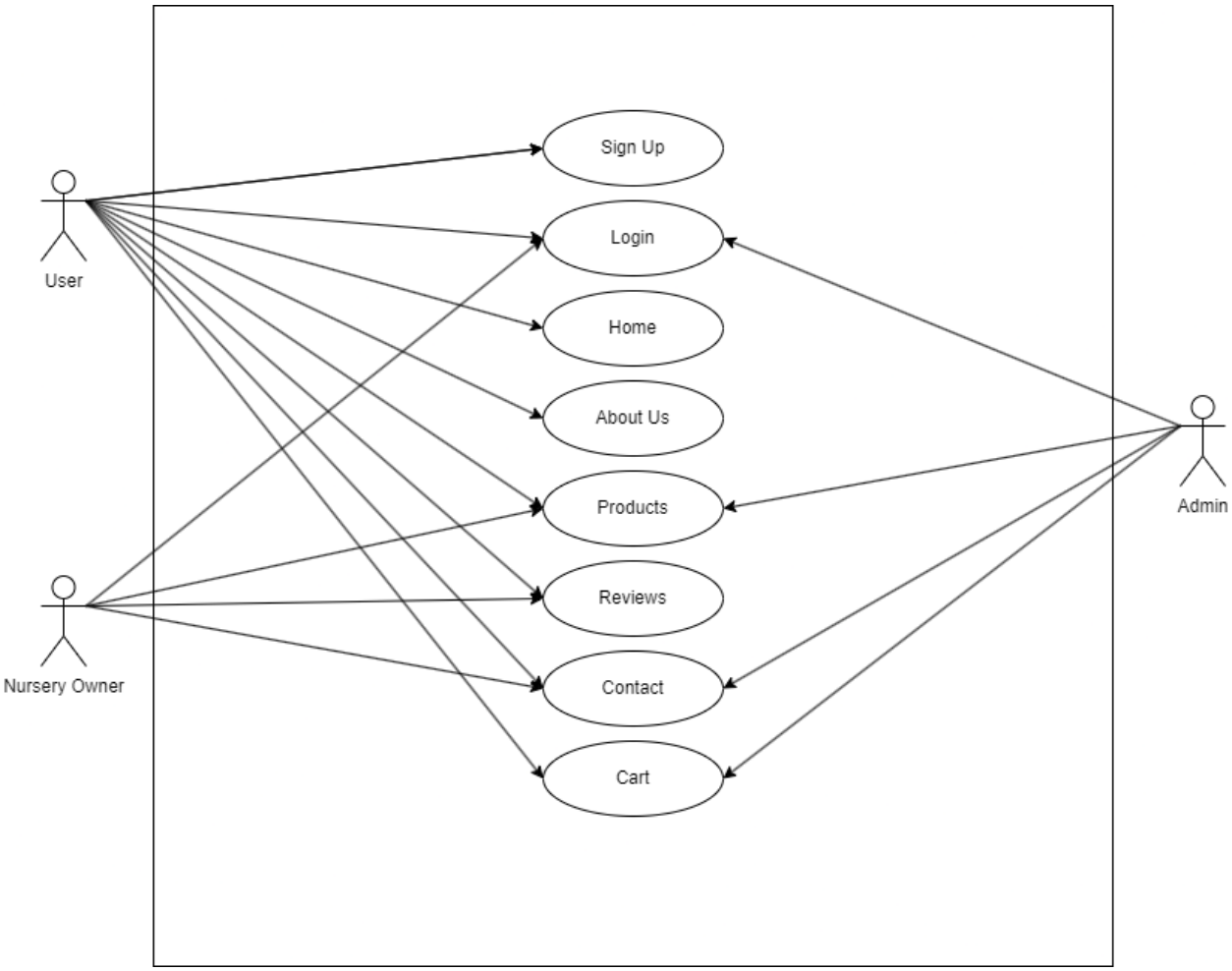


Figure 4.1: Use Case Diagram of '*The Tree Valleys*'

5 Requirement Specification

The complete requirement specification based on the elicitation process is described in thissection.

5.1 Functional Requirements

The Functional Requirements Specification is designed to be read by a general audience. Readers should understand the system, but no particular technical knowledge should be required to understand the document.

FR 01	**Registration**
Description	By using a user name, password, email, password every user will be able to complete their registration.
Stakeholder	User

FR 02	**Authentication and Login**
Description	After registration, users can login in the system. Every time Authentication is not required when a user first logs into this system (e.g., OTP) and is not required during the next login. Admin and corporations are also able to see who has logged into the system.
Stakeholder	User, Nursery, Admin

FR 03	Dashboard
Description	This module helps the shop owner to know total buying History, suggestions. Admin can see this dashboard but can’t change anything.
Stakeholder	User, Admin

FR 04	About Us
Description	In these modules, the shop owner sees the about us of our company.
Stakeholder	User, Nursery

FR 05	Products
Description	To buy a product, the owner has to select the products, then select the quantity of this product as well. As a result, in the products info module, it will be seen how many types of goods the buyer has taken, how much the price and how much his total bill will come.
Stakeholder	User, nursery, Admin

FR 06	**Reviews**
Description	User can see the reviews; the nursery can do the same.
Stakeholder	User, Nursery

FR 07	**Cart**
Description	User will the products that you have added in their cart.
Stakeholder	User, Admin

5.3 Performance Requirements

A requirement that specifies a performance characteristic that a system or system or systemcomponent must possess; for example, speed, accuracy, frequency.

5.2.1 Speed and Latency Requirements

The system is required a fair amount of speed especially while browsing game lists to takebet on a posted game.

PR-01	The Landing page will response within a second
Description	While the user's browsing the system the landing page will show within a second. It also depends on user's internet connection.
Stakeholders	User, Nursery, Admin

5.2.2 Precision and Accuracy Requirements

There are no specific precision and accuracy requirements

5.2.3 Capacity Requirements

The system is able to manage all the information of passed out Shopkeeper and the corporation.

PR-02	Initially the system will store 1,00,000 Shop's information
Description	The information of Products will be stored in database.
Stakeholders	User, Nursery, Admin

5.3 Dependability Requirement

The flexibility of current frameworks encourage system architects to enable reconfiguration mechanisms that refocus the available, safe resources to support the most critical services rather than over-provisioning to build failure-proof system. Therefore, these requirements are essentials.

5.3.1 Reliability and Availability

In order to support global and smooth operations the system must be available around the clock. On the other hand most services in this system are not mission-critical. Even better the game posting can handle times of downtime as the users usually interact with high- availability from third party website. This system will be able to catch up with their data onceit's up and running again.

DR-01	The system must be available 24x7
Description	• The system must be available 24 hours in a day • The system must be updated regularly • The system must publish the notice, events and job posting andupdate these regularly
Stakeholders	User, Nursery, Admin

5.3.2 Robustness and Fault Tolerance Requirements

The system will almost ensure 0% crush in any single minor error and don't give any wrongcalculation.

DR-02	The system handles over access and system errors
Description	Sometimes multiple users can over access to this system. The system can handle multiple user access
Stakeholders	N/A

5.3.3 Safety Critical Requirements

There are no specific safety critical requirements.

5.4 Maintainability and Supportability

Supportability is the degree to which system design characteristics and planned logistics resources meet system requirements. Supportability is the capability of a total system design to support operations and readiness needs throughout the life-cycle of a system at an affordable cost.

5.4.1 Maintenance Requirements

MS-01	The system helps to update any information in any time
Description	The admin alumni see feedback and can enable to change or update any information in any situation
Stakeholders	Admin

5.4.2 Supportability Requirements

In order to understand the system's behavior' on a technical support required by the system operator. The reason for reading them might be

- System malfunction has occurred and the system operator has to find the exact pointof time when this happened
- System produces wrong results and the developers must be able to reproduce the dataflow through the system
- Hacker tried to breach the system's security mechanisms and the system operator mustunderstand what he did.

5.4.3 Adaptability Requirements

There are no specific adaptability requirements.

5.5 Security Requirements

There are no access requirements beside those that have been outlined in the below:

- The software must validate all user input to ensure it does not exceed the sizespecified for that type of input
- The server must authenticate every request accessing the restricted Web pages
- After authenticating the browser, the server must determine whether that browser isauthorized to access the requested restricted Web pages
- The system must have security controls to protect against denial-of-service attacks
- The system must encrypt sensitive data transmitted over the Internet between theserver and the browser.

To get access to this system or a specific module the system must provide a central authentication mechanism. In order to prevent anyone to exploit stolen all users password must be encrypted in hash process.

5.5.1 Access Requirements

To get access to the system, the system provides authorization/authentication way. This system uses various modules.

SR-01	The system provides security strategies.
Description	The system is designed in way that allows all modules to access a mechanism that provides security services.
Stakeholders	User, Nursery, Admin

5.5.2 Integrity Requirements

To protect credentials of user from being stolen, all passwords are stored in encrypted form. The Requirements significantly reduces the value of stolen user credentials, it’s not easy to decrypt the password.

5.5.3 Privacy Requirements

The system provides a protection of the database in the server. However, the system will haveto increment this level of protection because of the personal data mode available on the system & the larger share of people that will be having access to it through the system's registration. The user's privacy will be granted by the limited access that the log in process is going to give to the database.

SR-02	All data will be protected
Description	The main requirement in the context is the generation of shopkeeper's and corporation's data for analysis.
Stakeholders	User, Nursery

5.6 Usability and Human Integrity Requirements

These Requirements define how to meet the physical and cognitive needs of the intendedusers of your website or application.

5.6.1 Ease of Use Requirements

The system is easy to use and can easily be understandable.

UH-01	The system must be usable for shopkeepers with all associate stakeholders.
Description	The system indicates the several possibilities that the shopkeeper hasto go on in using the system. The admin panel are allowed to undo any of the operation.
Stakeholders	User, Nursery, Admin

5.6.2 Understand-ability and Politeness Requirements

This section describes more requirements of Vat Ensuring system to add more features infuture

UH-02	The features of The Tree Valleys
Description	The system is more efficiently ease of use more added features. T h e system is understand-ability for both user. The system will not use any term that is not specified in this system.
Stakeholders	Admin

5.6.3 Accessibility Requirements

There are no access requirements beside those that have been outlined in

the below:AR-1: Log in as a User.

AR-2: Log in as a Nursery.

AR-3: Log in as a Admin.

AR-4: Log out as a Admin.

AR-5: Log out as a User.

AR-6: Log out as a Nursery.

To get access to this system or a specific module the system must provide a central authentication mechanism. In order to prevent anyone to exploit stolen all user's password must be encrypted in hash process.

5.6.4 User Documentation

UH-03	The system developer documentation
Description	To develop this project, we have specified requirement of user documentation. The teams are involved to this project documentation.
Stakeholders	Vat Ensuring system

5.7 Look and Feel Requirements

The look and feel requirements describe the intended spirit, the mood, or the style of the product's appearance. These requirements specify the intention of the appearance, and are nota detailed design of an interface.

5.7.1 Appearance Requirements

It should be clear to the admin and shopkeeper, corporation which fields need to be filled and which can be leftblank in this system.

LF-01	Labels of mandatory fields must be bold
Description	Labels of mandatory fields must be bold to identify them as being of mandatory.
Stakeholders	Admin, Nursery

5.7.2 Style Requirements

We will provide a web-based user interface. This requirement does not only define the necessity to use a CSS but although the requirements regarding the CSS's content as well as CSS framework like bootstrap.

LF-02	The look and feel must be controllable using style sheet.
Description	The styling of the elements of the web-based user interface will be Defined using CSS, JS and bootstrap.
Stakeholders	Admin, Nursery

5.8 Operational and Environmental Requirements

This requirement focus on how the users will operate the system, including interfaces and interoperability with other systems. The requirements establish how well and under what conditions the system must perform.

5.8.1 Expected Physical Requirements

There are no specific expected physical requirements

5.8.2 Requirement for Interfacing with Adjacent System

There is no specific interfacing with adjacent system requirements.

5.8.3 Release Requirements

There are no specific release requirements but in the project schedule section it was describedbriefly.

5.9 Legal Requirements

These requirements consider any violence of rules and regulation and which rules should befollowed to maintain this system

5.9.1 Compliance Requirements

There are no specific compliance requirements

5.9.2 Standard Requirements

There are no specific standard requirements.

Chapter 04

4.1. Project Scenario

This project is intend to solve these issue. Here we will enlist all the shops in this country. Every single shop will be enlisted to the Govt. through the designated website or mobile app. Every goods or products can be traced through Bar Code/ QR Code or by updating the online store through the App which will be in Govt. Database. Then the enlisted shop owners will receive the products and update those data to the site. At the end of the year, the govt. will able to calculate 95% percent owners vat and can reduce the current vat from 15-20 to 12-15 percent which will encourage people to give tax. They can pay the vat from the mobile app also via mobile Banking system.

4.2. Stakeholders

There are three types of Stakeholders in this system. The first two are, Shop-owners and the corporation, the only distinction between them is that Corporations are allowed to see the preference and exclusion sets of other users. It is the third type of user, the administrator, who is able to initially setup the system, add new users, and set their authorization level.

Shop Owners: Most members of this system will be of the general shop owners. These members are able update and build their store with products name & numbers, see selling information, see the selling history and pay the vat at the end of the year without any hassle. They also can see all the exclusive shop owner's list who has given incentive for given the most vat in the year to this system and be one of them by upgrading their sells. They also can get the exclusive vat cut card facilitates which will include a lot of offers which will reduce the taxation rate.

Corporation: The next most common type of user is the authorized Corporation who has a selective amount of super shops across the country. These users have the same permissions as the general shopkeepers with the additional ability to view other member's preference and exclusion set of offers. They are allowed to sell the product without building an initial online shop like the general shop owners do. Also they have the permission to scan the product without updating the products info at the first place.

Admin Panel: Finally, the system administrators are users who are able to setup the system from the initial installation and maintain the systems member accounts. They automatically have the functionality of authorized users within the normal operation of the system; however have additional menu options which allow them to maintain the system. They can also fix any software and taxation issue after been checked by the authority.

4.3. Activity Diagram

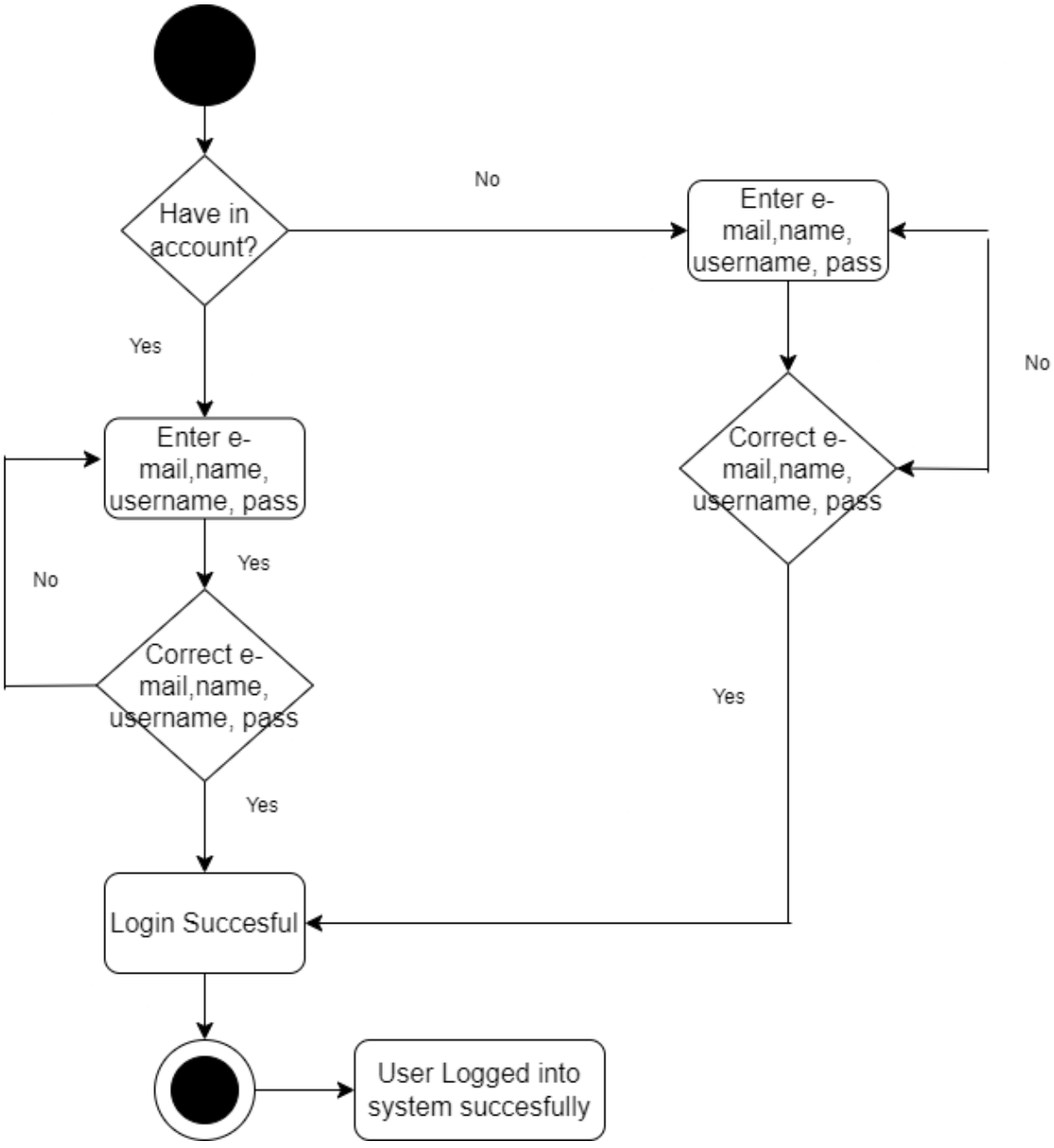


Figure 4.6.1: **Activity Diagram for Sign-In**

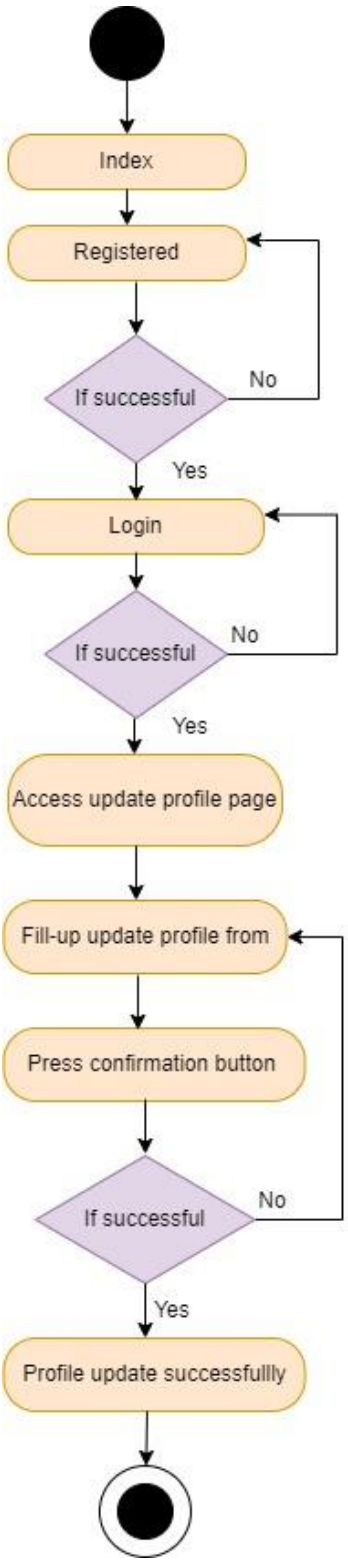


Figure 4.6.2: **Activity Diagram for Update Profile**

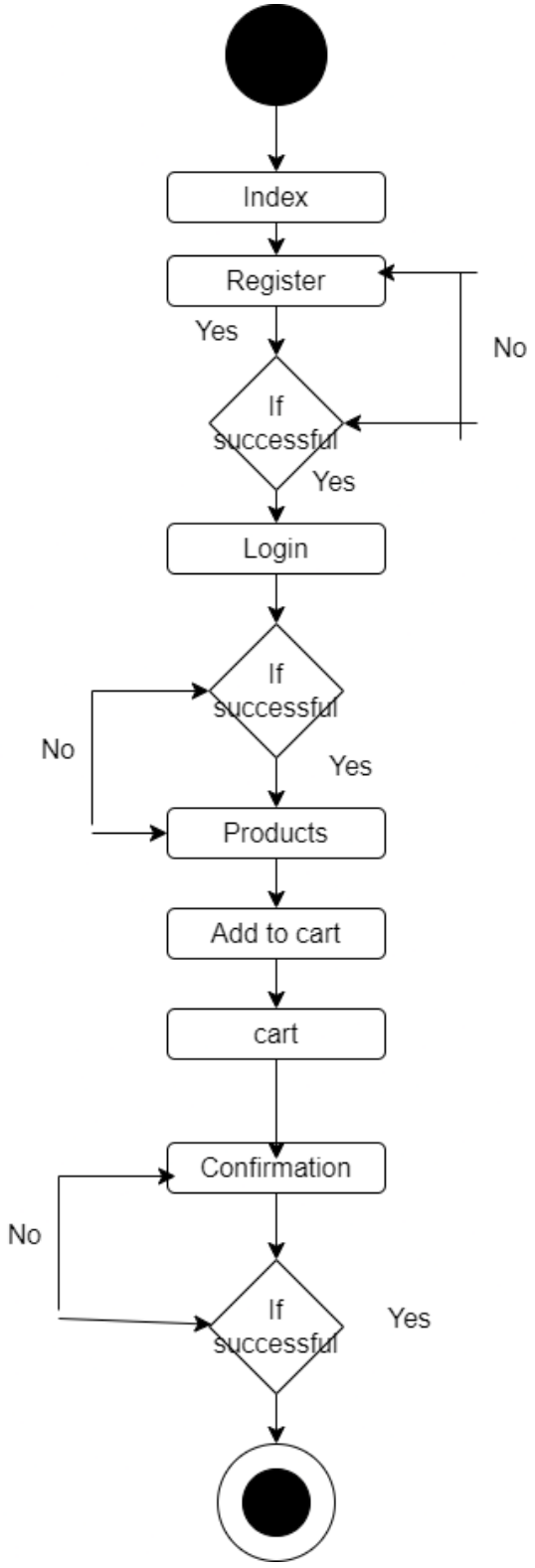


Figure 4.6.3: **Activity Diagram for Add to cart**

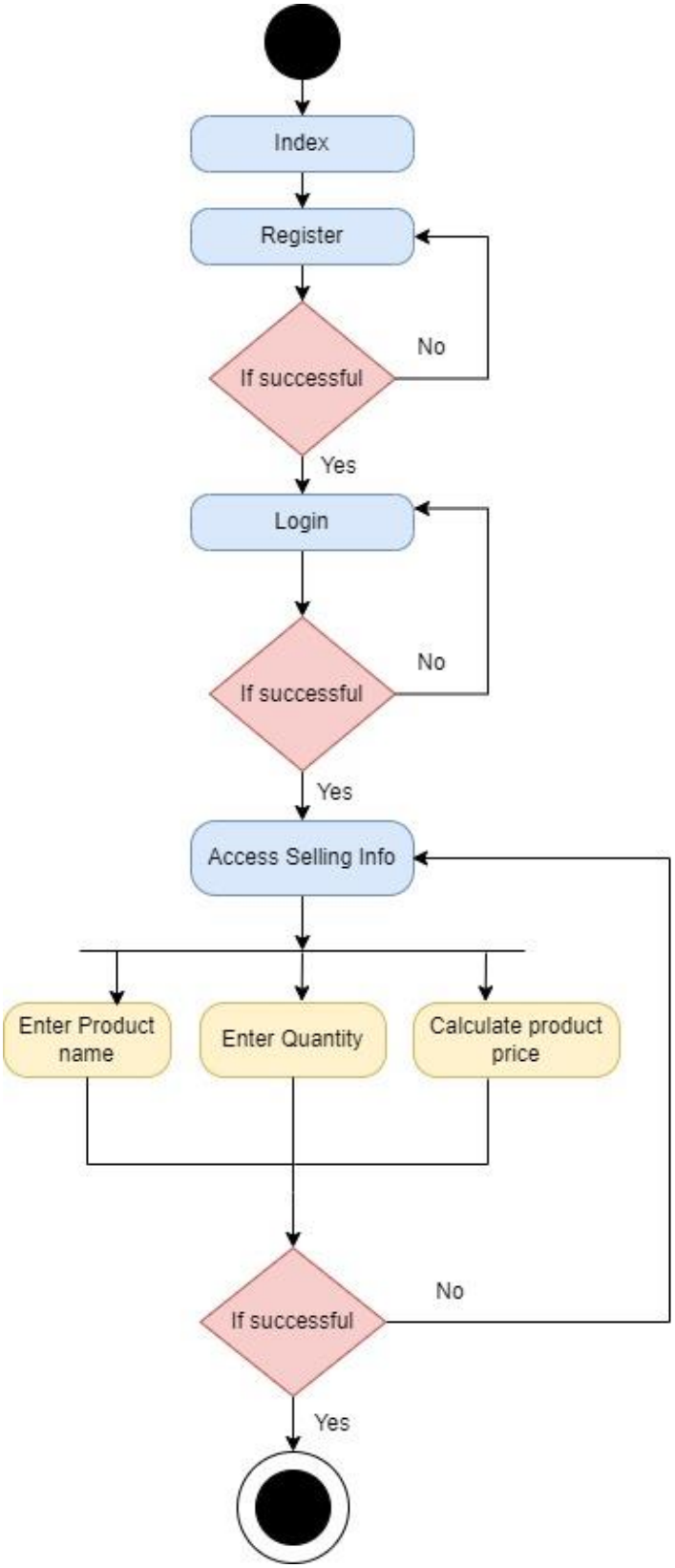


Figure 4.6.4: **Activity Diagram for Selling Info (Nursery)**

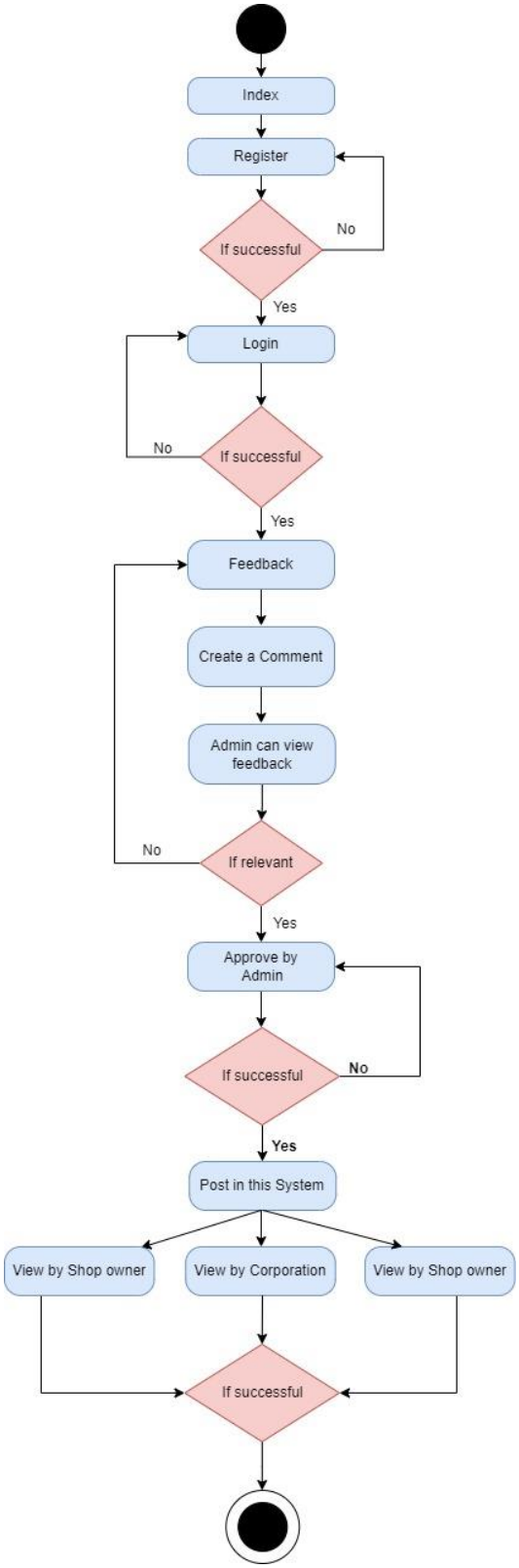


Figure 4.6.5: **Activity Diagram for Feedback**

4.4. *Sequence Diagram*

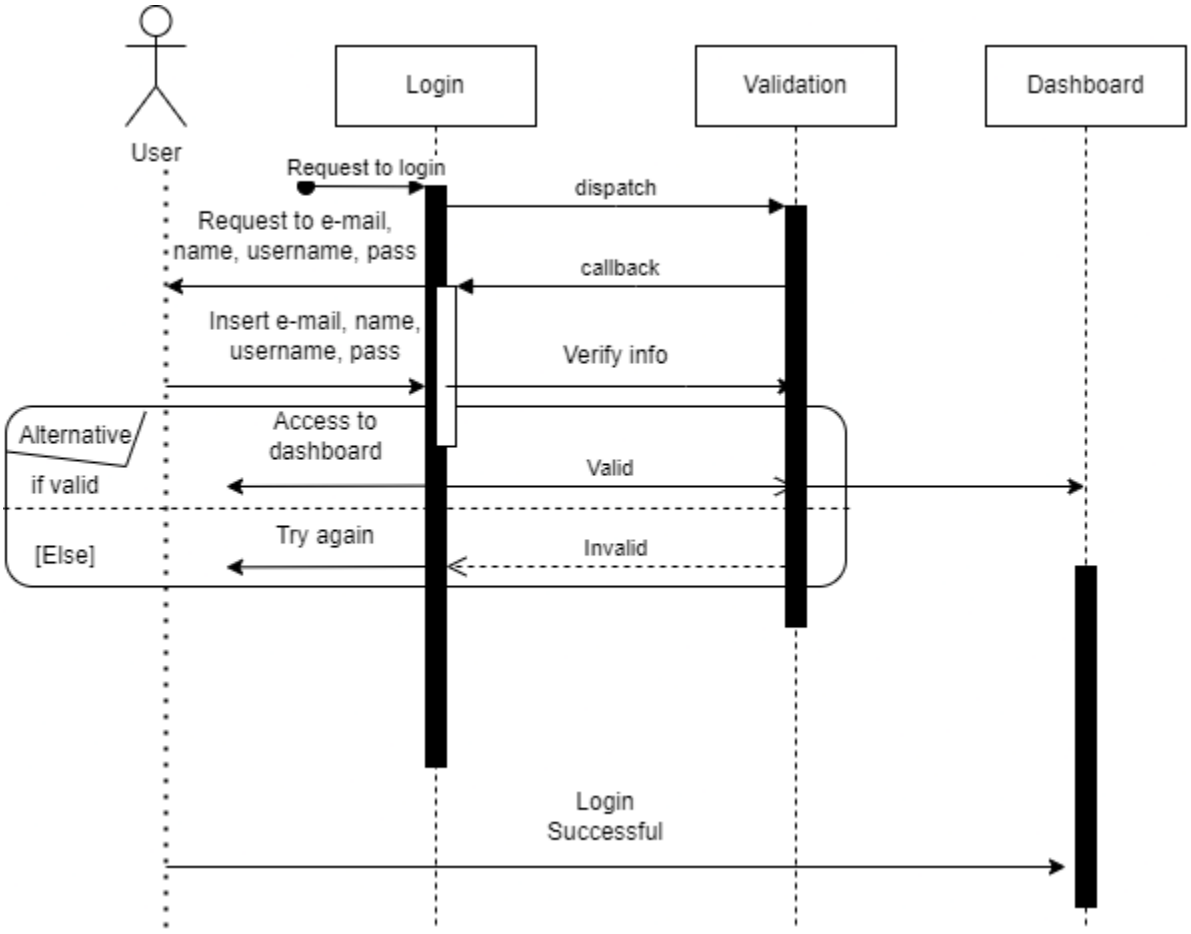


Figure 4.7.1: **Sequence Diagram for Login**

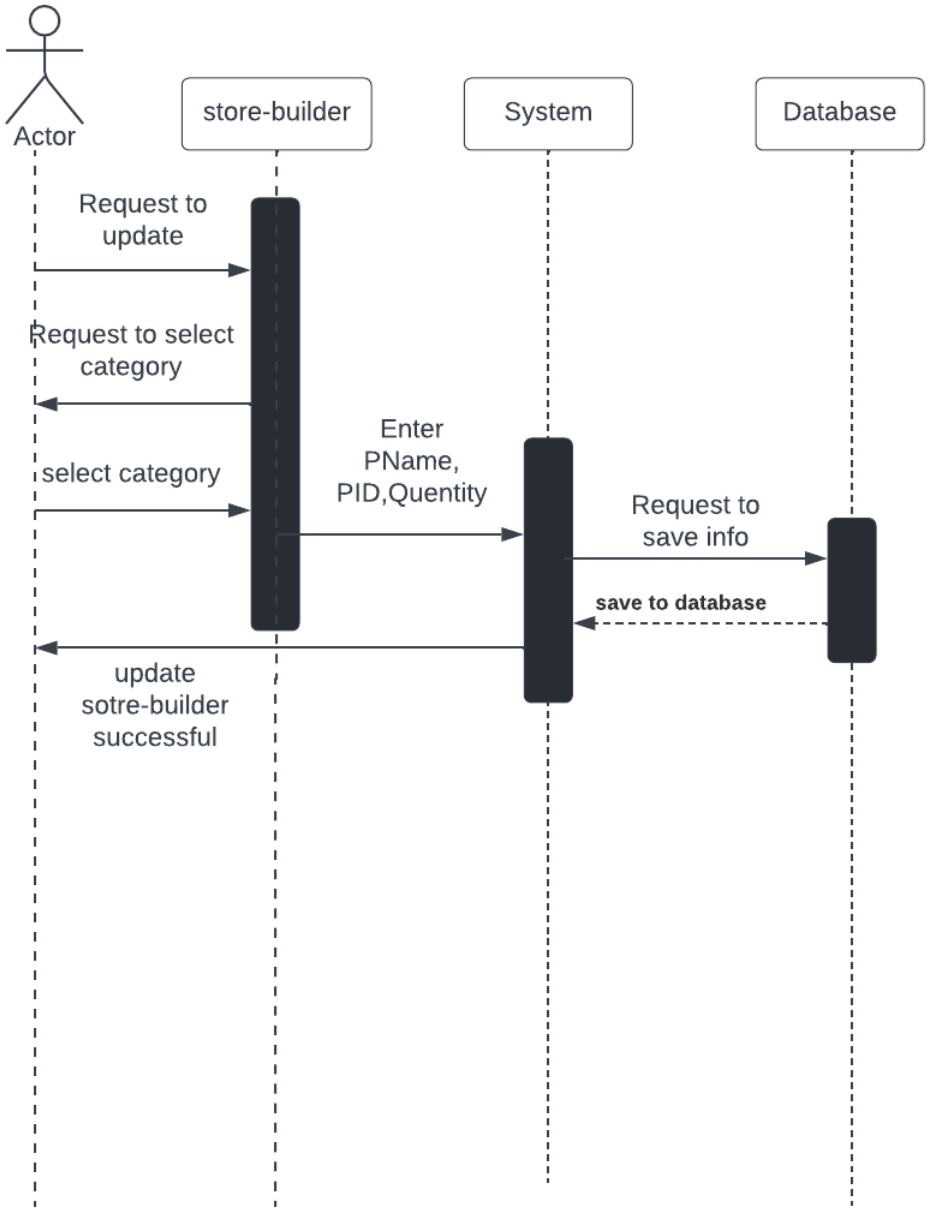


Figure 4.7.2: **Sequence Diagram for add to store (Nursery)**

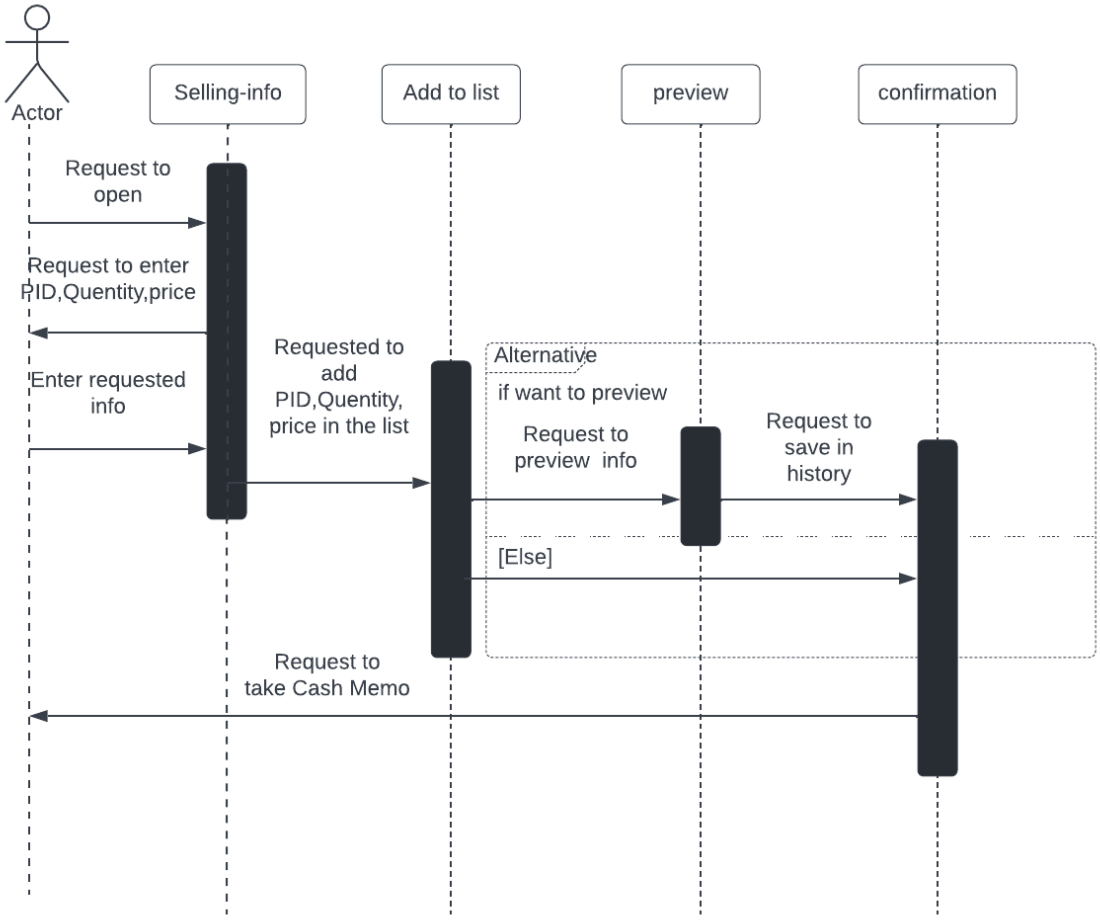


Figure 4.7.3: **Sequence Diagram for add to cart**

4.5. *Entity Relationship Diagram*

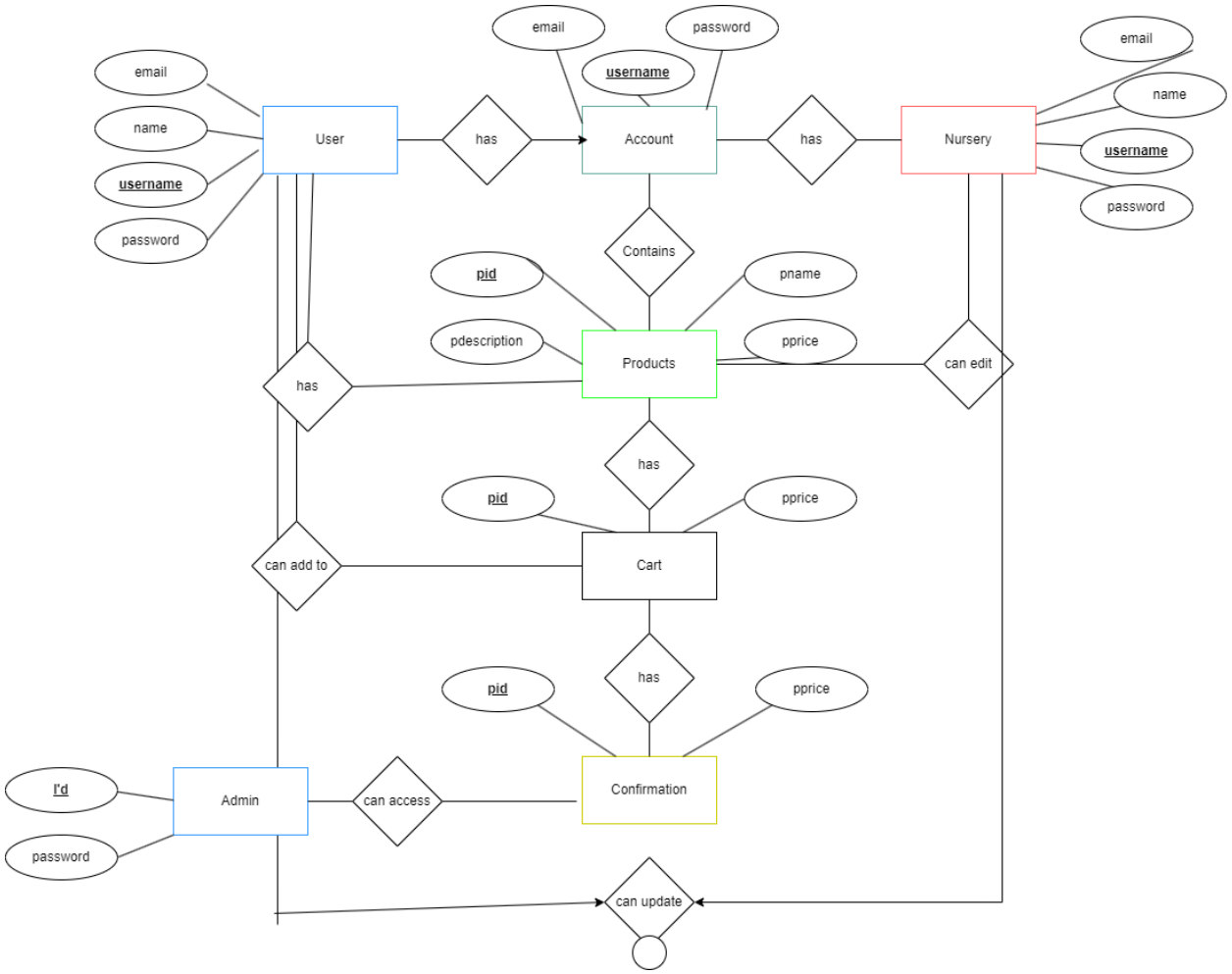
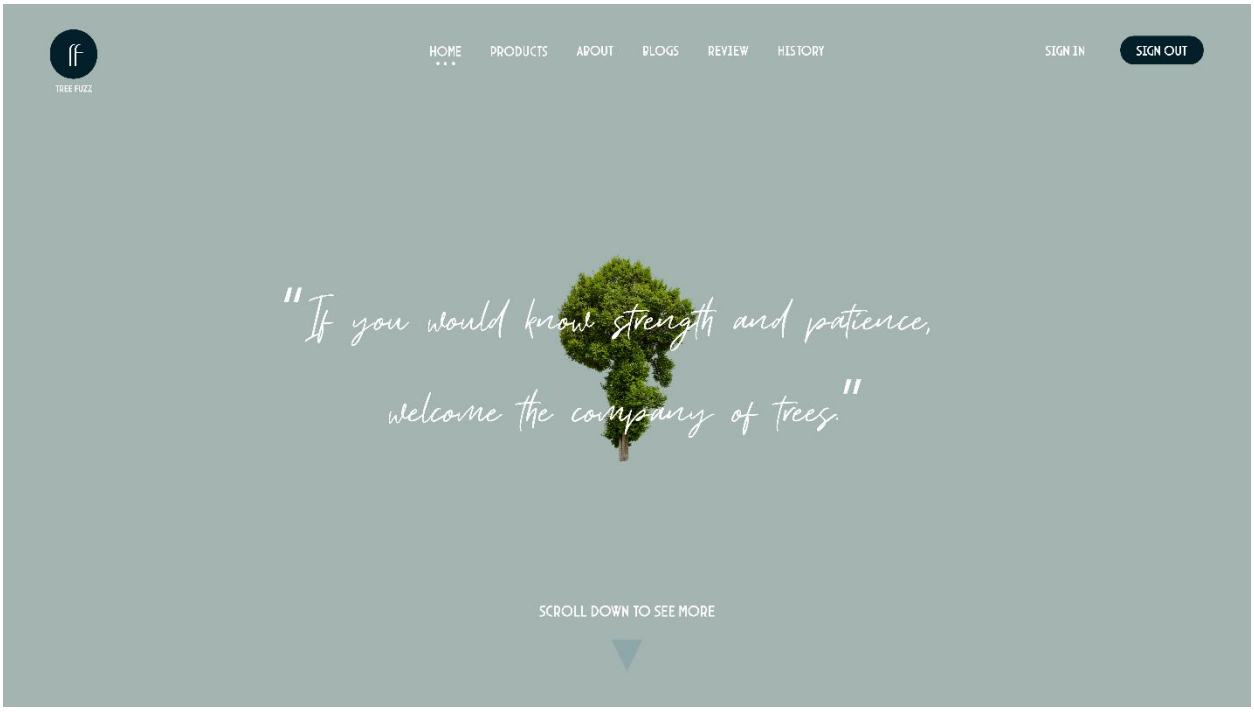
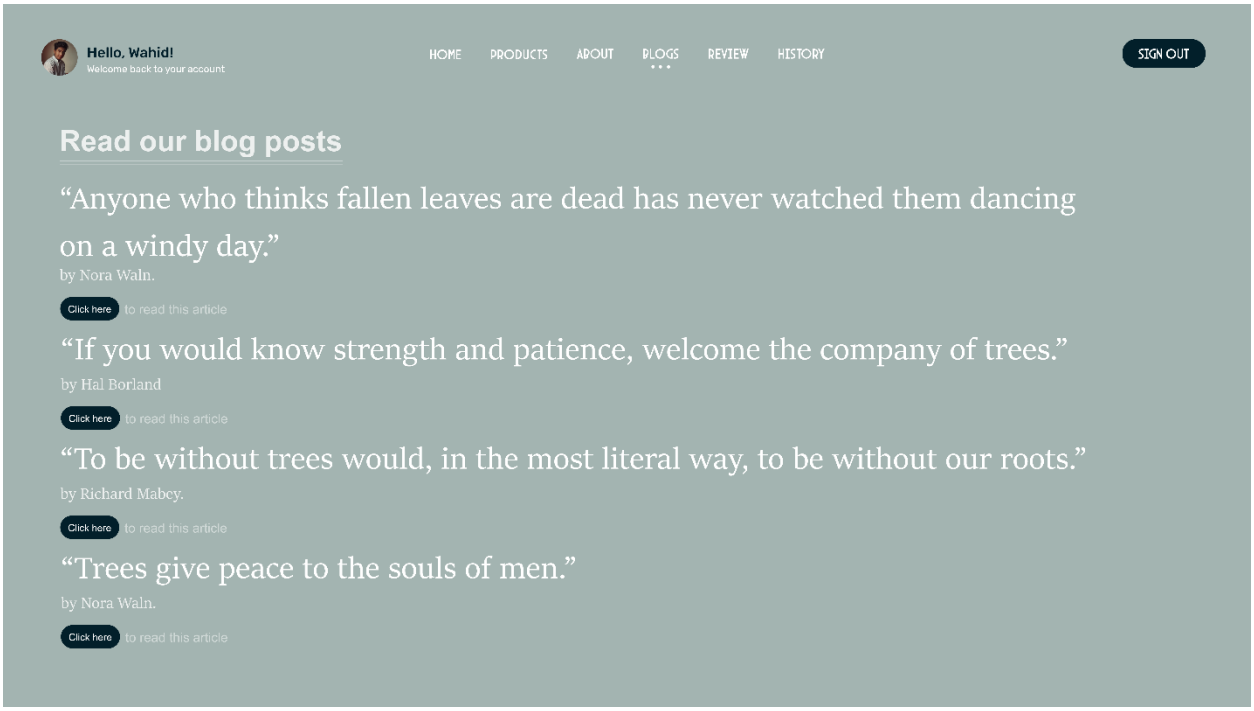
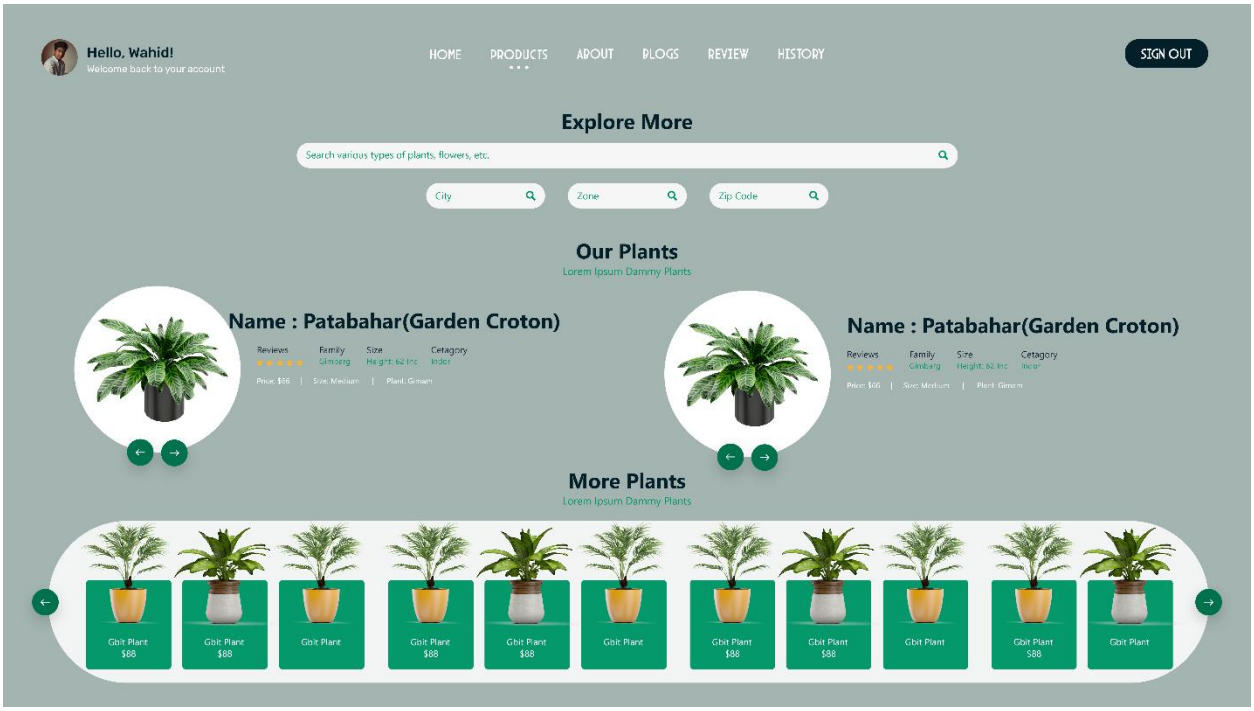


Figure 4.8: **Entity Relationship Diagram for The Tree Valleys**

4.6. *Prototype*






Hello, Wahid!
Welcome back to your account
HOME
PRODUCTS
ABOUT
BLOGS
REVIEW
HISTORY
SIGN OUT
Explore More
Search various types of plants, flowers, etc.
City
Zone
Zip Code
Our Plants
Lorem Ipsum Dammy Plants
Name : Patabahar(Garden Croton)
Reviews
Family
Size
Cetagory
Name : Patabahar(Garden Croton)
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Size
Cetagory
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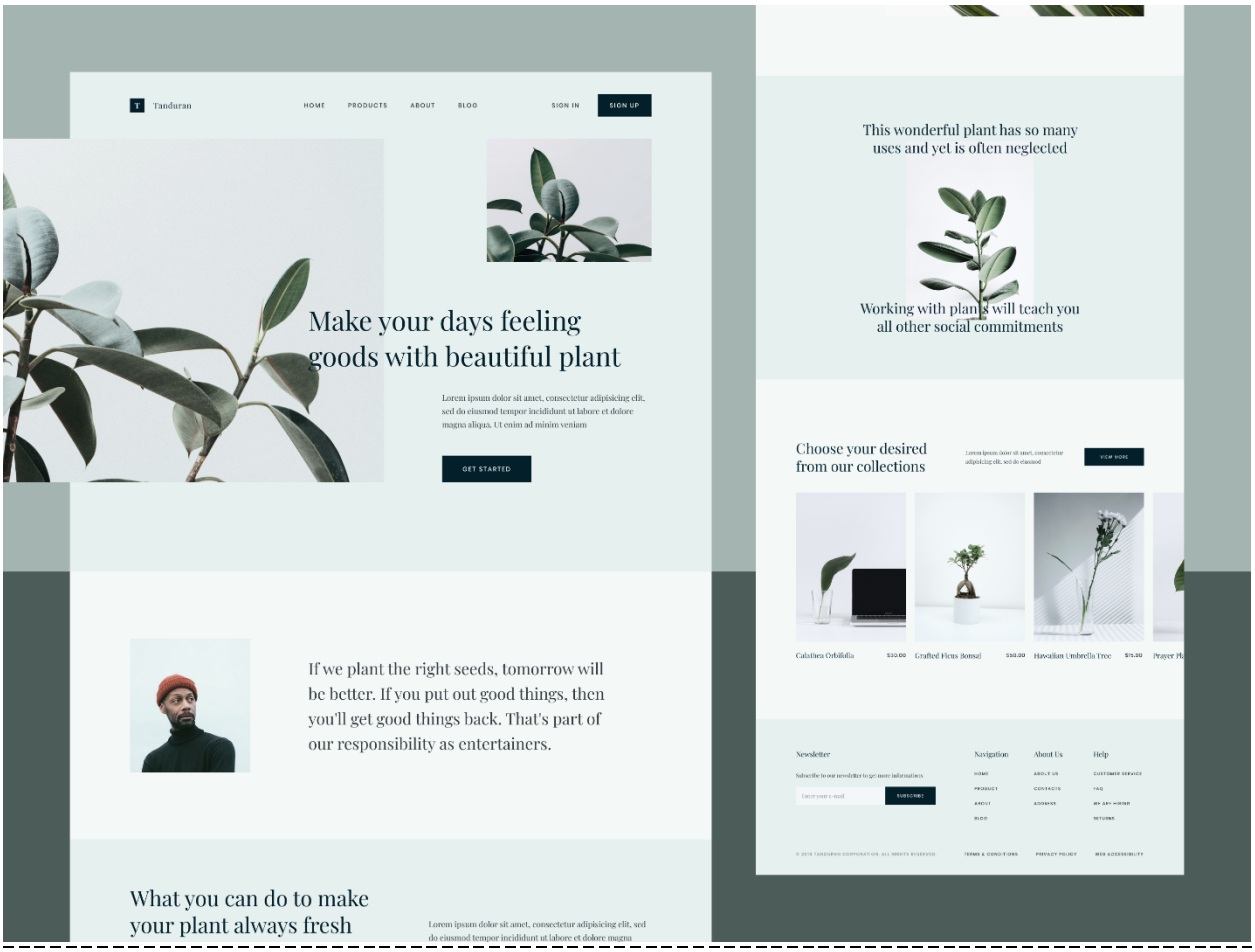
Gbit Plant
$88


Tanduran
HOME
PRODUCTS
ABOUT
BLOG
SIGN IN
SIGN UP
Make your days feeling goods with beautiful plant
Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam
GET STARTED
If we plant the right seeds, tomorrow will be better. If you put out good things, then you'll get good things back. That's part of our responsibility as entertainers.
What you can do to make your plant always fresh
Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna
This wonderful plant has so many uses and yet is often neglected
Working with plants will teach you all other social commitments
Choose your desired from our collections
VIEW MORE
Calathea Orbifolia
$30.00
Crafted Ficus Bonsai
$50.00
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Help

Chapter 6

6.1. Conclusion

In this documentation, we tried to solve the problems of plant purchasing and selling for our user and nursery.