

# Nursery Automation App



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# CERTIFICATE

We accept the work contained in the report titled “Nursery Automation APP” as a confirmation to the required standard for the partial fulfillment the degree of BS (IT).

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## Contents

<b>1</b>	<b>Introduction</b>	<b>10</b>
1.1	Project Overview . . . . .	10
1.2	Problem Description . . . . .	11
1.3	Objectives . . . . .	11
1.4	Project Scope . . . . .	11
<b>2</b>	<b>Literature Review</b>	<b>13</b>
2.1	Technologies Review . . . . .	13
2.1.1	Floweret . . . . .	13
2.1.2	Etree.pk . . . . .	14
<b>3</b>	<b>Requirement Specification</b>	<b>17</b>
3.1	Existing System . . . . .	17
3.2	Proposed System . . . . .	17
<b>4</b>	<b>System Design</b>	<b>19</b>
4.1	System Architecture . . . . .	19
4.2	Design Constraints . . . . .	19
4.2.1	Software Requirements . . . . .	19
4.3	Design Methodology . . . . .	19
4.4	Data Flow . . . . .	21
4.4.1	User's Side . . . . .	21
4.4.2	Admin Side . . . . .	22
4.5	Sequence Diagram . . . . .	23
4.6	Use Case Diagram . . . . .	24
4.6.1	Sign-In Use Case Description . . . . .	25
4.6.2	Sign-Up Use Case Description . . . . .	26
4.6.3	View Nurseries Use Case Description . . . . .	27
4.6.4	Place Order Use Case Description . . . . .	28
4.6.5	Add to WishList Use Case Description . . . . .	29
4.6.6	Maintain WishList Use Case Description . . . . .	30
4.6.7	Bill Generation Use Case Description . . . . .	31
4.6.8	View Messages Use Case Description . . . . .	32
4.6.9	Add/Edit/Delete Product Use Case Description . . . . .	33
4.6.10	View Orders Use Case Description . . . . .	34
<b>5</b>	<b>System Summary</b>	<b>36</b>
5.1	Tools and Technologies used . . . . .	36
5.1.1	Environment . . . . .	36
5.1.2	Programming Languages . . . . .	36
5.1.3	Front-end Design . . . . .	36
5.1.4	Database . . . . .	36
5.1.5	APIs Used . . . . .	37
5.1.6	Processing Logic . . . . .	37

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5.2	System Components . . . . .	37
5.2.1	Customer Panel . . . . .	37
5.2.2	Administration panel . . . . .	38
5.2.3	Authentication Panel . . . . .	38
<b>6</b>	<b>System Testing</b>	<b>40</b>
6.1	Installation Testing . . . . .	40
6.1.1	Compatibility Testing . . . . .	40
6.1.2	Exceptional Testing . . . . .	40
6.1.3	Load Testing . . . . .	40
6.1.4	Security Testing . . . . .	41
6.1.5	GUI Testing . . . . .	41
6.1.6	Usability Testing . . . . .	41
6.1.7	Software Performance Testing . . . . .	41
6.2	Test Cases . . . . .	42
6.2.1	Sign-Up page . . . . .	43
6.2.2	Sign-In page . . . . .	44
6.2.3	Reset Password page . . . . .	45
6.2.4	Add product to WishList page . . . . .	46
6.2.5	Add product to cart page . . . . .	47
6.2.6	Shipment and Order page . . . . .	48
6.2.7	Add/Edit/Delete Product page . . . . .	49
<b>7</b>	<b>Conclusion</b>	<b>52</b>
<b>8</b>	<b>User Manual</b>	<b>54</b>
8.1	Dashboard . . . . .	54
8.2	Navigation . . . . .	55
8.3	Sign-Up Page . . . . .	56
8.4	Sign-In Page . . . . .	57
8.5	Products . . . . .	58
8.6	Reset Password . . . . .	59
8.7	Contact Us . . . . .	60
8.8	About Us . . . . .	61
8.9	Admin Login . . . . .	62
8.10	Admin Tasks . . . . .	63
8.10.1	Edit Product Task . . . . .	64
8.10.2	Delete Product Task . . . . .	65
8.10.3	View Messages . . . . .	66
8.11	Forget Password . . . . .	67
8.12	Orders . . . . .	68
8.13	Shipment Details . . . . .	69
8.14	WishList . . . . .	70

## List of Tables

Table 1	Sign-In Use Case Description . . . . .	25
Table 2	Sign-Up Use Case Description . . . . .	26
Table 3	View Nurseries Use Case Description . . . . .	27
Table 4	Place Order Use Case Description . . . . .	28
Table 5	Add to WishList Use Case Description . . . . .	29
Table 6	Maintain WishList Use Case Description . . . . .	30
Table 7	Bill Generation Use Case Description: . . . . .	31
Table 8	View Messages Use Case Description . . . . .	32
Table 9	Add/Edit/Delete Product Use Case Description . . . . .	33
Table 10	View Orders Use Case Description . . . . .	34
Table 11	Sign-Up . . . . .	43
Table 12	Sign-In . . . . .	44
Table 13	Reset Password . . . . .	45
Table 14	Add product to WishList . . . . .	46
Table 15	Add product to cart . . . . .	47
Table 16	Shipment and Order . . . . .	48
Table 17	Add/Edit/Delete Product . . . . .	50

## List of Figures

Figure 1	Plant Nursery . . . . .	10
Figure 2	Floweret website . . . . .	14
Figure 3	Etree.pk website . . . . .	15
Figure 4	System Architecture . . . . .	19
Figure 5	Design Methodology . . . . .	20
Figure 6	User Data Flow Diagram . . . . .	21
Figure 7	Admin Data Flow Diagram . . . . .	22
Figure 8	Sequence Diagram . . . . .	23
Figure 9	Use Case Diagram . . . . .	24
Figure 10	Dashboard . . . . .	54
Figure 11	Navigation . . . . .	55
Figure 12	Sign-Up Page . . . . .	56
Figure 13	Sign-In Page . . . . .	57
Figure 14	Products Page . . . . .	58
Figure 15	Reset Password Page . . . . .	59
Figure 16	Contact Page . . . . .	60
Figure 17	About Us Page . . . . .	61
Figure 18	Admin Login . . . . .	62
Figure 19	Admin Tasks . . . . .	63
Figure 20	Edit Products . . . . .	64
Figure 21	Delete Products . . . . .	65
Figure 22	View Messages . . . . .	66
Figure 23	Forget Password . . . . .	67
Figure 24	Orders . . . . .	68
Figure 25	Shipment Details . . . . .	69
Figure 26	WishList . . . . .	70

## Abstract

According to our research, no such application exists in Pakistan in the 21st century, where everything is becoming increasingly automated day by day, but our application (Nursery Automation APP) is the first to present this concept. Our goal is to automate the current manual approach in plant nurseries. By incorporating new technologies, we made this system more dependable, safe, and simple to use for our consumers, both practically and visually. Nursery Automation APP, in our opinion, has the potential to make our society wiser and more advanced. We really hope that our modest contribution will have a great impact in society.

## Acknowledgement

We would like to express our gratitude to Dr. Moneeb Gohar for his assistance and direction during the development of our application. Furthermore, we would like to express our gratitude to Ma'am Zubaria Inayat, our respected project coordinator, who, despite the limitations of online education, actively interacted with us throughout the academic year in a very effective manner.



**“ We think someone else, someone smarter than us, someone more capable, Someone with more resources will solve that problem. But there isn’t anyone else.”**

Regina E. Dugan

## Abbreviation and Acronyms

<b>API</b>	Application Programming Interface
<b>IDE</b>	Integrated Development Environment
<b>SDK</b>	Software Development Kit
<b>PF</b>	Programming Fundamental
<b>GUI</b>	Graphical User Interface
<b>APP</b>	Application
<b>OOP</b>	Object Oriented Programming
<b>DSA</b>	Data Structure and Algorithm
<b>SQL</b>	Structured Query Language
<b>SE</b>	Software Engineering
<b>XML</b>	Extensible Markup Language

# Chapter 1

## Project Overview

# 1 Introduction

## 1.1 Project Overview

The "Nursery Automation APP" project is an online mobile application that offers a variety of plants. According to our research, the Eco system of different areas can be improved by planting more trees. One of the major source of plantation are nurseries. We developed the app that will help you locate different nurseries in your area[1]. It allows you to buy plants online. It also allows you to view different nurseries along with their locations. There is no need to go to a nursery physically and purchase plants for your home or another location. Customer just have to install the application, register themselves, make order and pay bill through payment mode i.e, Cash on Delivery. The application has a pleasant, appealing user interface and is very simple to use. This project includes a large number of advanced modules. Users can get complete information about different nurseries as well as any type of plants from this application.



Figure 1: Plant Nursery

## 1.2 Problem Description

Main purpose of this project is to provide facility for plants lovers to buy different kinds of plants online. Basically, sometimes there are different diseases of woods ornamental and trees in nurseries[2]. The initial cost is so high. It needs an efficient and Technical person in the permanent nursery. Transportation cost is high. Due to all these reasons we came up with this idea. Managing all the information about plants categories is the main problem arises.

## 1.3 Objectives

The main objective of developing this project is to provide an online service for purchasing plants. This online service is Nursery Automation Application, which is used to provide information related to nurseries, their plants. It involves order process, payment mode, management of wishlist, sales, purchasing history, and ease in Viewing nurseries and their products, earnings growth, customer satisfaction and a friendly environment.

Another major objective of this project is to create an application program to reduce labor work.

## 1.4 Project Scope

The wide of this project is to automate their current manual system. Because there is no proper application or automation system for buying plant from nurseries in Pakistan. So, in order to accomplish this goal, we've introducing new technology to the world, we made this system more feasible, safe, and user-friendly for our customers, both practically and visually. Because of application interactive interface, this system is simple to use for any user.

## Chapter 2

# Literature Review

## 2 Literature Review

We must do a thorough study of our competition to identify the shortcomings of existing systems in the market. At present there is not a single widely used application for Pakistan on Google Play Store. Most of the existing applications are usually in India or other countries. They have thousands of downloads and lack of any promising reviews. Pakistan have some websites that are working like applications but as we see some reviews there are some shortcomings that need to be identified.

In this section we are discussing some applications and websites to compare their features with our nursery automation application.

### 2.1 Technologies Review

According to our research, there is no such application which involves different nurseries in a single application but our application is the very first to introduce this idea.

The current industry in the service industry has a lot of applications related to Nursery Automation Application but these applications are operational in India and other countries but not in Pakistan. This development was driven by applications like Pandamart and Uber in Pakistan, which automated the grocery delivery and cab-pickup process through streamlined mobile applications. This has created a huge ripple effect across the industry, this kind of services, applications spreading across every domain and area.

After carefully analyzing these applications, we created a plan to make the Nursery Automation application that is unique and more efficient as compared to its competitors.

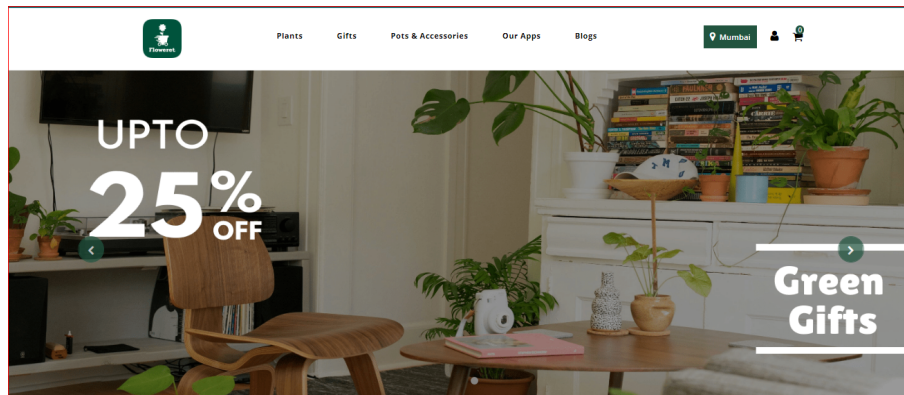
Here below, we will review some of the existing Android applications and websites similar to the Nursery Automation system.

- Floweret
- Etree.pk

#### 2.1.1 Floweret

As automated system for plant nurseries is more demanding features from the users because manually buying plants is sometimes seems to be more difficult task.

Floweret is one of the most leading online plants delivery application that operates in India. So people can buy their desired plant online by using this application.



**Figure 2: Floweret website**

#### 2.1.1.1 Shortcomings

Here are the some shortcomings:

- One of the most highlighted issue is that this application is only operates in India. Pakistan has no such application right now.
- This application does not supports all the cities of country also sometimes is difficult to deliver in remote areas because of absence of nurseries in particular remote areas.
- They take a lot of delivery time. Due to the time constraint mostly plants get rot.
- This application is not up-to-date. Whenever you wants to order some products, it mostly out of stock and there is no such feature of notifying when the product is restock. Regular update should proceed for the additional add-on-features, changes and security updates etc.
- Lack of covering the latest and existing trending features in application will lose attractions among the users.
- Most important this application involves only one nursery and its products.

#### 2.1.2 Etree.pk

Etree.pk is an online plants delivery website that operates in Pakistan. It provides all the plants and plants related services. With the increasing demand of such type of platform. It is the first solution in Pakistan in order to resolve the challenging issue of buying plants manually.



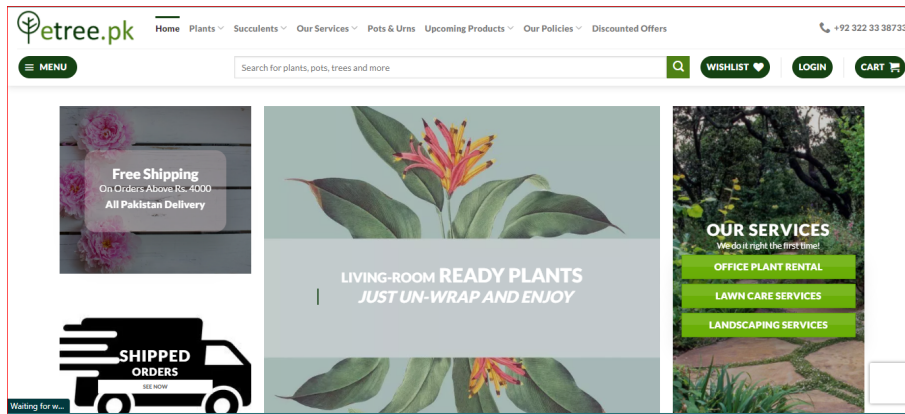


Figure 3: Etree.pk website

#### 2.1.2.1 Shortcomings:

Here are the some shortcomings:

- One of the main issue in this application is, this is website, not an application. Pakistan still has a vacant of an automated application.
- Websites perform their actions slower than application because in websites, data need to be fetched from the web server and that can take few seconds to minutes depending upon the network speed. But in applications, data stores locally on your devices.
- Also the user interface of Etree.pk is bit complex to understand at first for the users.
- Another issue is that, to use website we need to open browser and search the desired website which takes a lot of time, whereas mobile application is only one push away, it only needs to install one time.

# **Chapter 3**

## **Requirement Specification**

## 3 Requirement Specification

### 3.1 Existing System

As we've discussed in chapter 2, there's no proper application of buying online plants in Pakistan or any application which involves different nurseries and provides their plants related information. Google play store has still vacant for such type of applications. With the demanding need of such type of platform, Pakistan comes up with the solution of online plants websites that little bit somehow solve the issue of buying plants manually. But these sites have a lot of shortcomings, users has to face some problems that we've discussed in previous chapter. As to manage and use the mobile application is easier than the websites.

We don't need to go through the entire process like open the browser then search the desired website and then take time to first understand the interface. We just need to install application at once and then it's just always one push away from us.

So from all of these stuff, we came up with the idea of making mobile application which is "Nursery Automation APP". In the hope that it will ease the process of buying plants online for people.

### 3.2 Proposed System

Nursery Automation is an online application that sells a wide range of plants and provide full information about nurseries and its products. This application addresses a variety of client concerns that earlier websites were unable to address. The main purpose is to automate plant nurseries current manual system. We made this system more reliable, safe, and easier to use for our customers both practically and visually by integrating new technology.

The main focus of this application development is to provide ease in online ordering process and payment method, as well as simplicity of product discovery, revenue growth, customer happiness, and a welcoming environment. The application has a nice, appealing design in order to attract its customers. There are several advanced modules in this nursery automation application. This application provides their customer's detailed information related to nursery and its products.

# Chapter 4

## System Design

## 4 System Design

### 4.1 System Architecture

This figure describes the system's overall architecture. It demonstrates that the system is working properly. Customers can view the nurseries and their products in this application without logging in, but when they want to order their desired plant, they must have to create an account, after that they can place an order, view their order, choose payment mode (cash on delivery ) and at last generate bill.

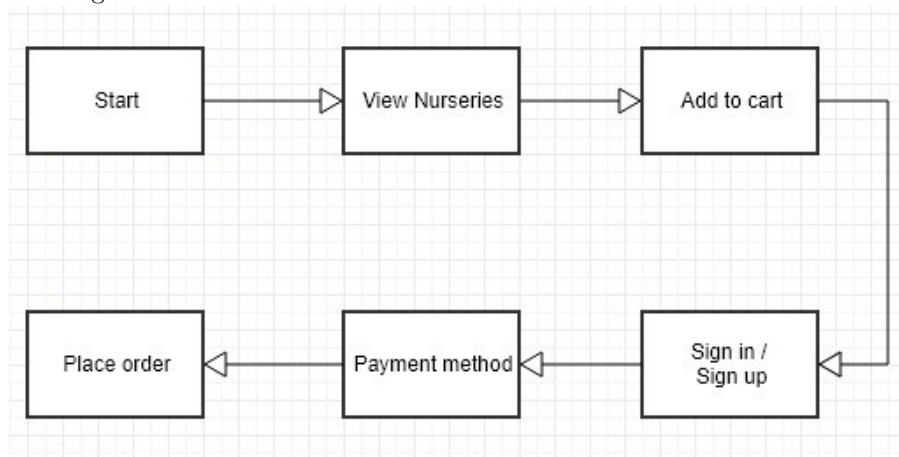


Figure 4: System Architecture

### 4.2 Design Constraints

#### 4.2.1 Software Requirements

- Android Studio
- Java
- Firebase Real time Database
- Google Map API

### 4.3 Design Methodology

This application operates efficiently and provides a user-friendly environment. Without logging into the application, the user can view all of the nurseries, their locations on Google Maps and their products. Users can also view products with detailed descriptions. When the user is ready to make order, they must first login to their account in order to place their order, can view their order and pay their bill in the manner of their choice, i.e., cash on delivery.

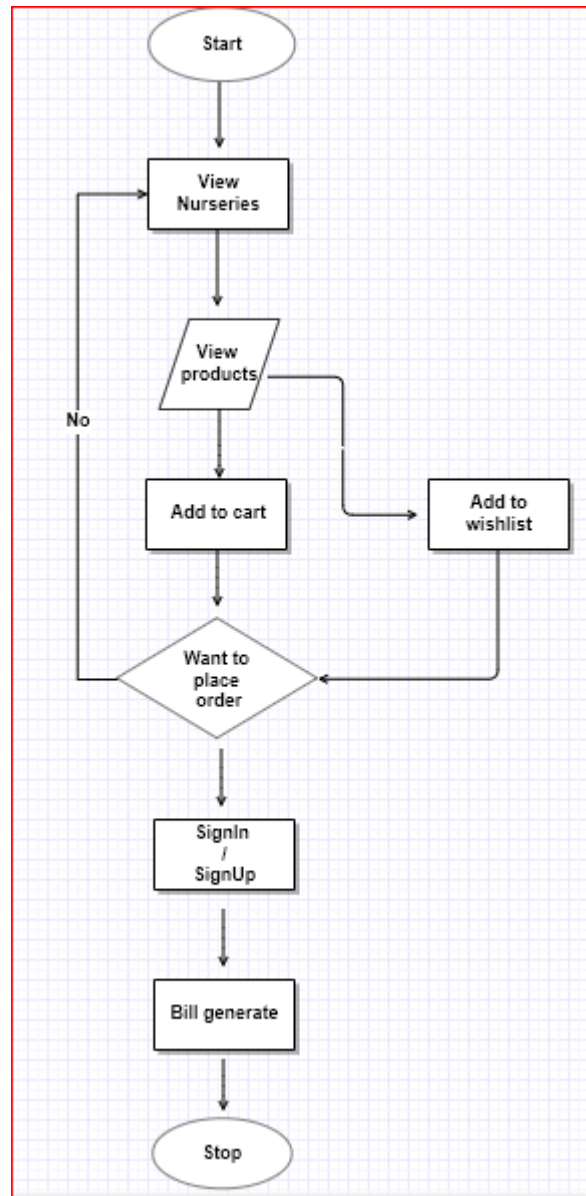


Figure 5: Design Methodology

#### 4.4 Data Flow

##### 4.4.1 User's Side

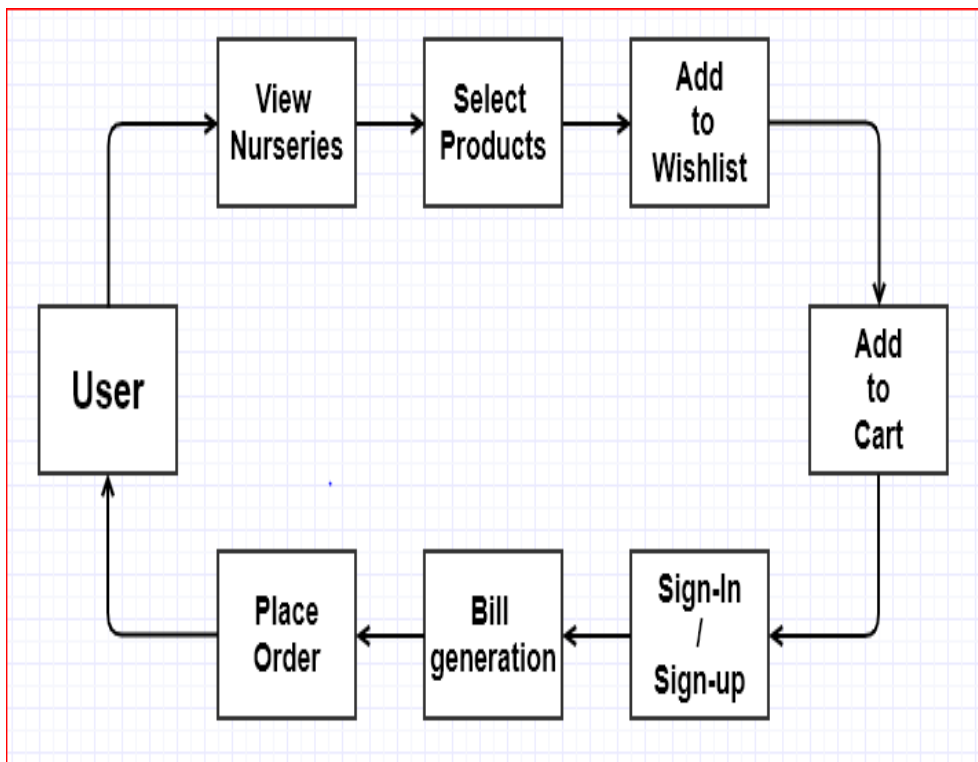


Figure 6: User Data Flow Diagram

4.4.2 Admin Side

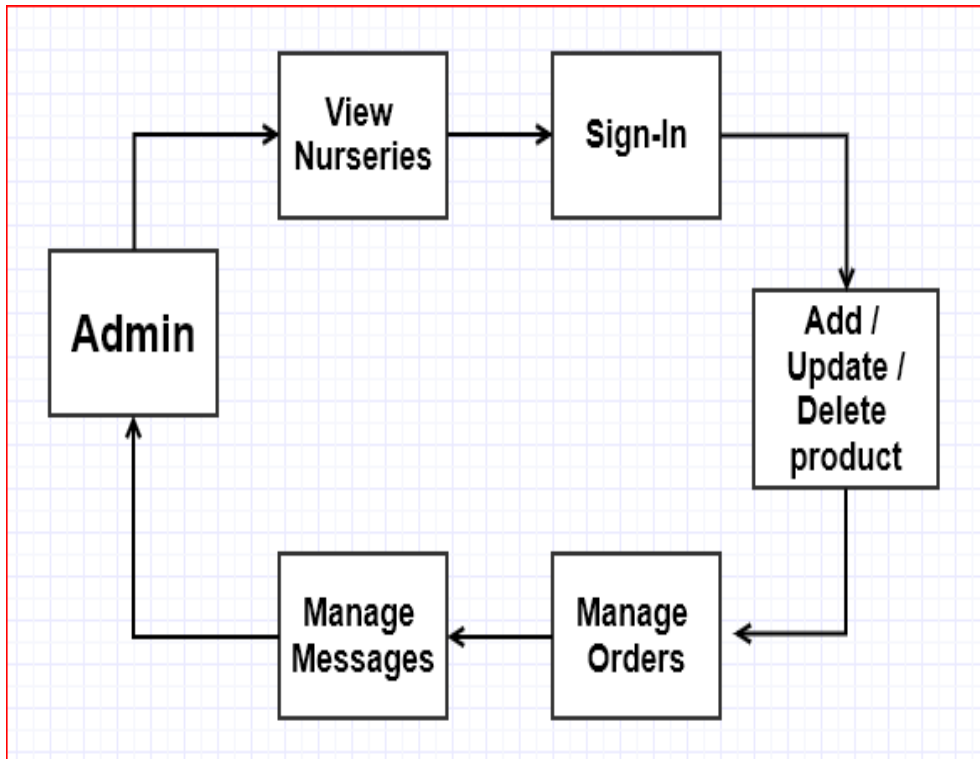


Figure 7: Admin Data Flow Diagram



#### 4.5 Sequence Diagram

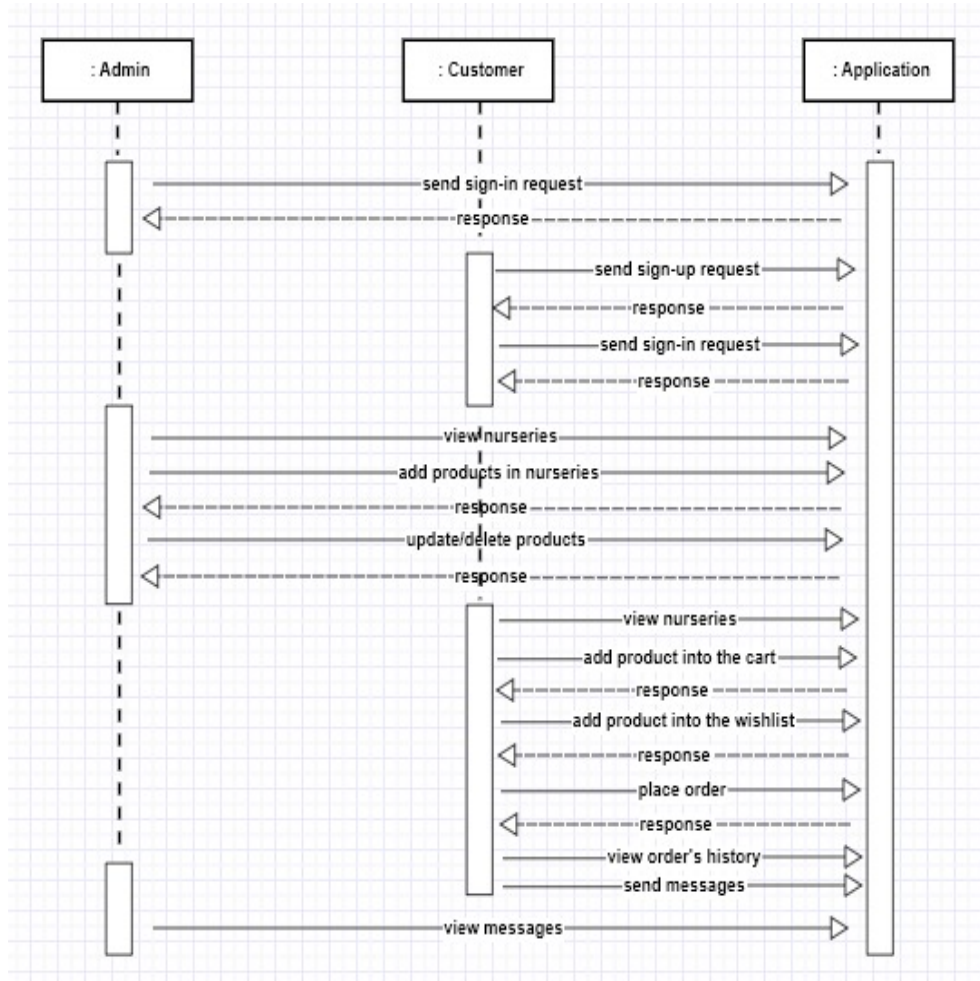


Figure 8: Sequence Diagram

### 4.6 Use Case Diagram

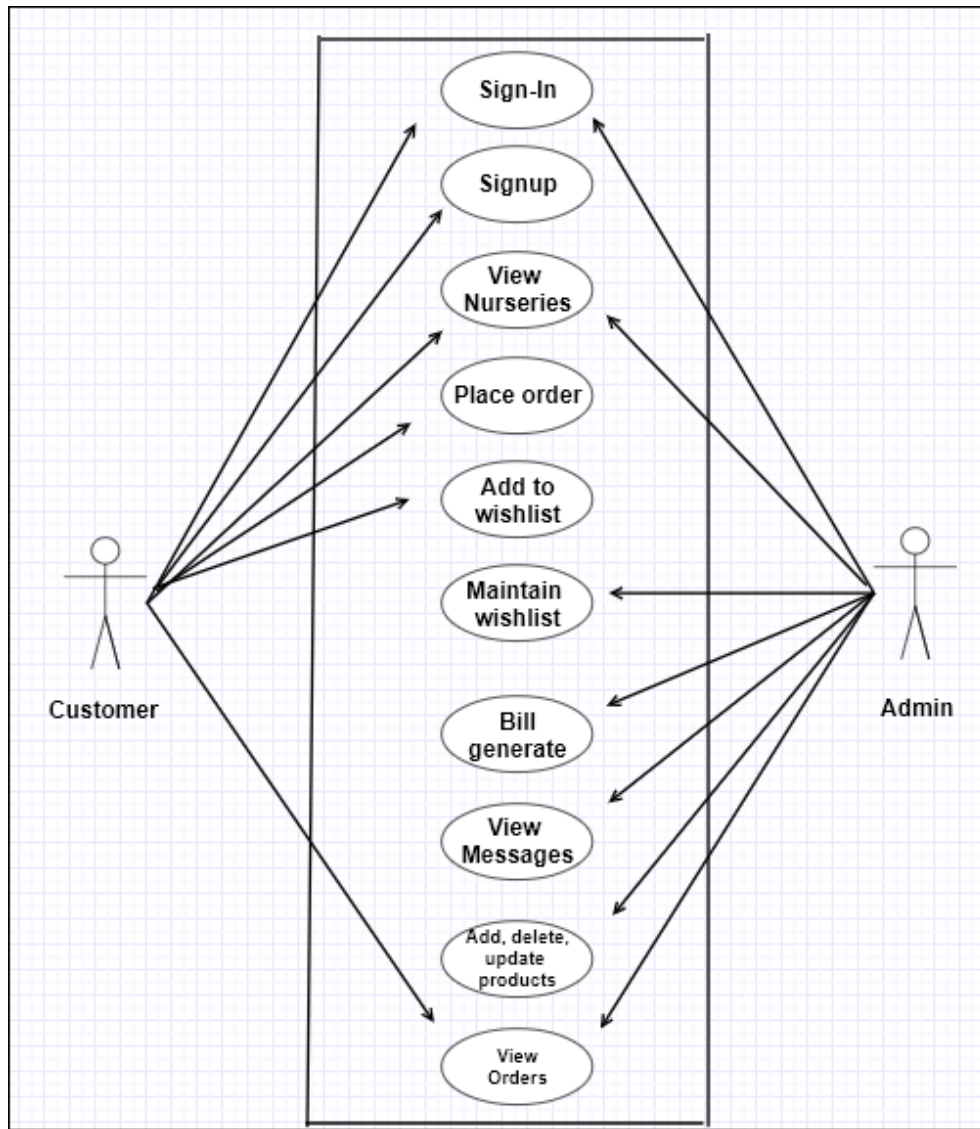


Figure 9: Use Case Diagram

## 4.6.1 Sign-In Use Case Description

<b>Use Case ID</b>	<b>UC-01</b>
<b>Use Case Name</b>	Sign-In
<b>Description</b>	Describes how actors can successfully login to their account
<b>Scope</b>	Nursery Automation App
<b>Level</b>	Customer, Admin
<b>Primary Actor</b>	Customer, Admin
<b>Pre-Conditions</b>	Customer and admin data must present in the Database
<b>Post-Conditions</b>	System validates the actor's credentials.
<b>Main Success Scenario</b>	Actors can successfully logged in to their account
<b>Failed End condition</b>	Customer cannot place their order and admin cannot make changes to the application
<b>Special Requirement</b>	Internet connection is required
<b>Alternative</b>	None

Table 1: Sign-In Use Case Description

## 4.6.2 Sign-Up Use Case Description

<b>Use Case ID</b>	<b>UC-02</b>
<b>Use Case Name</b>	Sign-Up
<b>Scope</b>	Nursery Automation App
<b>Description</b>	Describes how customer can creates their account
<b>Level</b>	Customer
<b>Actor</b>	Customer
<b>Pre-Conditions</b>	Customer must fill required data fields
<b>Post-Conditions</b>	System redirects the actor to the Sign-In page.
<b>Main Success Scenario</b>	Customer account created successfully
<b>Failed End condition</b>	Actors cannot logged-In to the system
<b>Special Requirement</b>	Internet connection is required
<b>Alternative</b>	None

Table 2: Sign-Up Use Case Description

## 4.6.3 View Nurseries Use Case Description

<b>Use Case ID</b>	<b>UC-03</b>
<b>Use Case Name</b>	View Nurseries
<b>Description</b>	Describes how Actors can view nurseries
<b>Scope</b>	Nursery Automation App
<b>Level</b>	User , Admin
<b>Actor</b>	User, Admin
<b>Pre-Conditions</b>	Actors must open nursery panel in order to view nurseries, their products and location
<b>Post-Conditions</b>	After opening nurseries section, all products must be visible to the actors.
<b>Main Success Scenario</b>	User can visit the nurseries and view products while admin can add/edit/delete Nursery products.
<b>Failed End condition</b>	Customer will not be able to view nurseries products, cannot place order and actor cannot make changes in the nurseries
<b>Special Requirement</b>	Internet connection is required
<b>Alternative</b>	None

Table 3: View Nurseries Use Case Description

## 4.6.4 Place Order Use Case Description

<b>Use Case ID</b>	<b>UC-04</b>
<b>Use Case Name</b>	Place Order
<b>Description</b>	Describes how customer can place their orders
<b>Scope</b>	Nursery Automation App
<b>Level</b>	Customer
<b>Primary Actor</b>	Customer
<b>Pre-Conditions</b>	Customer must have an account
<b>Post-Conditions</b>	System takes shipment details, verify and after that System saves new order in order list
<b>Main Success Scenario</b>	Customer can successfully place their order
<b>Failed End condition</b>	Customer cannot place their order, can just view nurseries and their products
<b>Special Requirement</b>	Internet connection is required
<b>Alternative</b>	None

Table 4: Place Order Use Case Description

## 4.6.5 Add to WishList Use Case Description

<b>Use Case ID</b>	<b>UC-05</b>
<b>Use Case Name</b>	Add to WishList
<b>Description</b>	Describes how customer can add products to the wish List panel for future use
<b>Scope</b>	Nursery Automation App
<b>Level</b>	Customer
<b>Primary Actor</b>	Customer
<b>Pre-Conditions</b>	Product must exists in the Database
<b>Post-Conditions</b>	By selecting ADD TO WISHLIST button, product should add to the wishlist section
<b>Main Success Scenario</b>	If customer wants to buy some products in future, he can successfully add desired product to the wishlist section
<b>Failed End condition</b>	Customer cannot keep their products for future use
<b>Special Requirement</b>	Internet connection is required
<b>Alternative</b>	None

Table 5: Add to WishList Use Case Description

## 4.6.6 Maintain WishList Use Case Description

<b>Use Case ID</b>	<b>UC-06</b>
<b>Use Case Name</b>	Maintain Wishlist
<b>Description</b>	Describes how admin can maintain, modify Wishlist section
<b>Scope</b>	Nursery Automation App
<b>Level</b>	Admin
<b>Primary Actor</b>	Admin
<b>Pre-Conditions</b>	Products must present in the wishlist section
<b>Post-Conditions</b>	Admin should keep track of all wishlist products
<b>Main Success Scenario</b>	Admin can successfully maintain wishlist section
<b>Failed End condition</b>	Admin will not be able to maintain, modify <u>wishlist</u> panel
<b>Special Requirement</b>	Internet connection is required
<b>Alternative</b>	None

Table 6: Maintain WishList Use Case Description



## 4.6.7 Bill Generation Use Case Description

<b>Use Case ID</b>	<b>UC-07</b>
<b>Use Case Name</b>	Bill Generation
<b>Description</b>	Describes how bill is generated
<b>Scope</b>	Nursery Automation App
<b>Level</b>	Admin
<b>Primary Actor</b>	Admin
<b>Pre-Conditions</b>	Customer must order some product
<b>Post-Conditions</b>	Bill should be generated
<b>Main Success Scenario</b>	Customer can easily make order and after that bill is generated successfully
<b>Failed End condition</b>	Customer will not be able to see the bill
<b>Special Requirement</b>	Internet connection is required
<b>Alternative</b>	None

Table 7: Bill Generation Use Case Description:

## 4.6.8 View Messages Use Case Description

<b>Use Case ID</b>	<b>UC-08</b>
<b>Use Case Name</b>	View messages
<b>Description</b>	Describes how admin will be able to view all messages sent from the customer
<b>Scope</b>	Nursery Automation App
<b>Level</b>	Admin
<b>Primary Actor</b>	Admin
<b>Pre-Conditions</b>	Customer sends some message
<b>Post-Conditions</b>	Admin should keep track of all the messages send by the customer
<b>Main Success Scenario</b>	Admin can successfully receive messages from the customer and keep record of all messages.
<b>Failed End condition</b>	Admin will not be able to view any messages which are sent by the customer
<b>Special Requirement</b>	Internet connection is required
<b>Alternative</b>	None

Table 8: View Messages Use Case Description

## 4.6.9 Add/Edit/Delete Product Use Case Description

<b>Use Case ID</b>	<b>UC-09</b>
<b>Use Case Name</b>	Add/Edit/Delete Product
<b>Description</b>	Describes how admin can make changes and perform different tasks in the application
<b>Scope</b>	Nursery Automation App
<b>Level</b>	Admin
<b>Primary Actor</b>	Admin
<b>Pre-Conditions</b>	Data must present in the Database for editing and deleting process.
<b>Post-Conditions</b>	Admin should keep updated data of the product
<b>Main Success Scenario</b>	Admin can successfully add, update and delete existing product and keep application up-to-date
<b>Failed End condition</b>	Admin will not be able to make any changes in the application
<b>Special Requirement</b>	Internet connection is required
<b>Alternative</b>	None

Table 9: Add/Edit/Delete Product Use Case Description

## 4.6.10 View Orders Use Case Description

<b>Use Case ID</b>	<b>UC-10</b>
<b>Use Case Name</b>	View Orders
<b>Description</b>	Describes how admin can view orders made by the customer
<b>Scope</b>	Nursery Automation App
<b>Level</b>	Admin, customer
<b>Primary Actor</b>	Admin, customer
<b>Pre-Conditions</b>	Some Order must be made by the customer
<b>Post-Conditions</b>	Admin should keep record of the all orders made by customer
<b>Main Success Scenario</b>	Both admin and customer can successfully view the details of all orders
<b>Failed End condition</b>	Admin will not be able to keep track of the orders made by the customer
<b>Special Requirement</b>	Internet connection is required
<b>Alternative</b>	None

Table 10: View Orders Use Case Description

# Chapter 5

## System Implementation

## 5 System Summary

The Nursery Automation App is an android-based application for buying plants online. It incorporates some of the most popular user interface aspects of modern applications and merges them into a unified and comfortable user experience for the customer, allowing them to simply buy plants at their leisure. The user may have numerous nurseries with different number of plants. They may simply see them and compare pricing, as well as this platform involves different nurseries. As a result, nurseries may offer the same products at different rates depending on their quality and brand name. As a result, users are able to select desired nursery from where they want to buy plants.

This system runs smoothly and products can be updated as needed. It includes different nurseries products as product image, price, detail description and other related information. Firebase Real time Database handled all of this work at the backend.

### 5.1 Tools and Technologies used

The tools and technology used in developing this project are listed below:

#### 5.1.1 Environment

It includes:

- Android studio IDE

#### 5.1.2 Programming Languages

It includes:

- Java
- XML

#### 5.1.3 Front-end Design

It includes:

- Android XML

#### 5.1.4 Database

It includes:

- Firebase Realtime database

### 5.1.5 APIs Used

It includes:

- Firebase
- Google Play Services
- Google location Services
- Google Map API

### 5.1.6 Processing Logic

The application's processing logic includes:

- Fetching the location of the nurseries
- Displaying all customer messages to the admin account
- Adding a product, deleting a product and updating all products when they are out of stock or a new product is introduced.
- Ensuring that customer information, such as their address, email, phone number information is saved securely.
- Keeping full track of record of total orders made by the customers.

## 5.2 System Components

The following are:

- Customer Panel
- Administration panel
- Authentication panel

### 5.2.1 Customer Panel

As UI is very dynamic and familiar, the customer module of this application is quite straightforward and easy to comprehend.

Customers who want to buy plants can do so by logging in to the application and place their order. Customer can keep track of their history of all orders. Customers can obtain information about the nursery of their choice, as well as nursery location on a Google map. Customers who simply wish to look at the products, learn more about plants and nurseries can use this application without logging in.

### **5.2.2 Administration panel**

In terms of appearance and interface, the administration side is fairly similar to the customer module. On the other hand, admin can login to the application, add a product, update an existing product, and delete products. Admin can also controls the application and has access to client responses, messages and requests. Admin can also keep tracks of the record of the orders made by the customer. Using the firebase Realtime database, the admin plays a main role in managing and keeping the data up-to-date.

### **5.2.3 Authentication Panel**

We used the FirebaseAuth library to authenticate users to the application, which is a highly secure and dependable authentication mechanism designed by Google's Firebase Dev Team. It provides backend services, simple SDKs, and ready-to-use user interface frameworks.



## **Chapter 6: System Testing and Evaluation**

## 6 System Testing

### 6.1 Installation Testing

Nursery automation application is easy to set up and use. When a user first uses the application after installation, they are welcomed by a splash screen with an animation in the center of the screen and the main title/text of Nursery Automation App. This application has undergone the following testing stages like:

- Graphical User Interface Testing
- Usability Testing
- Software Performance Testing
- Compatibility Testing
- Exceptional Testing
- Load Testing
- Security Testing

#### 6.1.1 Compatibility Testing

All devices running Android 4.0 or higher can use the nursery automation app. This covers almost 98.9 percent of all Android devices on the market today. Nursery Automation Application will not work on any device that isn't running Android 4.0 or higher.

#### 6.1.2 Exceptional Testing

Exceptions are thrown when unspecific input is provided for a specific set of output. We've built proper exception handling into our application at every point of input where an exception has been thrown. As a result, the application will function as expected and will not encounter an unexpected event that necessitates additional processing.

#### 6.1.3 Load Testing

As application allows numerous users to log in at once, so we discovered no significant delay or latency in the response time of any user operations when many users logged in and accessed our application. Google Firebase is used as the backend database, which ensures this. However, there may be a slight latency if a large number of users are simultaneously logged into the database.

#### **6.1.4 Security Testing**

In our application, Users can view all of the products, nurseries and their information on our application without logging in, but they must log in to make an order because only authenticated user with registered accounts are able to make order. Proper credentials are validated from the backend using the FirebaseAuth library while logging in. When a user enters an invalid email address or password, they are confronted with a error message that informs them that their entered credentials are invalid.

#### **6.1.5 GUI Testing**

We kept some of the best GUI (Graphical user interface) characteristics of some of the best performing applications on the Android app stores in mind while designing the nursery automation application Graphical user interface. We developed nursery automation application as concise and to-the-point as much as possible without many bells and whistles by examining existing effective GUI designs.

We took a minimalist approach, with the entire GUI based around one basic navigation drawer where you can found all the main modules of this application and also a dashboard where you can view all nurseries that sell variety of plants, along with their location on a Google map.

All of the application's functionality is handled on the back-end and the user interface is kept simple, concise, and minimal for the ease of our customer. This application is simple to use for anyone.

#### **6.1.6 Usability Testing**

We've done our best to make this application user-friendly so that anyone can quickly check the availability of products within the application. Our main goal was to make our application accessible to everyone, therefore we've tried to make it as graphically rich as possible to achieve that goal. Because our application's name implies that it is a nursery automation app, the user can see all of the nurseries on the dashboard and buy their products online through payment mode i.e, cash on delivery.

#### **6.1.7 Software Performance Testing**

The following are:

- Reliability
- Efficiency

##### **Reliability**

Although this application will undoubtedly run on Android devices, it is possible that the system could cease to function in the event of a server crash on Google's servers due to its dependency on Google Maps and Firebase.

Furthermore, it may cease to reply if it is unable to communicate with the Firebase Realtime database due to any other issue, such as a lack of internet connectivity on the device where the application is running.

### **Efficiency**

This application's efficiency can be calculated by implementing different stages of processing throughout the application separately. The code written throughout the nursery automation application has been kept as light weighted and optimized as possible to increase efficiency and fluency and also ensuring that the user experience and speed are not compromised even when a device does not have a good internet connection.

## **6.2 Test Cases**

## 6.2.1 Sign-Up page

<b>Test Case 01</b>			
<b>Sign Up</b>			
<b>Functional Requirement 01</b>			
<b>Steps</b>	<b>Tasks</b>	<b>Expected outcomes</b>	<b>Result</b>
<b>1.</b>	Click on SIGNUP button.	Successful OR Fail	Successful
<b>2.</b>	Check page is opening properly or not.	Successful OR Fail	Successful
<b>3.</b>	Check All fields by entering details.	Successful OR Fail	Successful
<b>4.</b>	Check Button is submitting all information or not.	Successful OR Fail	Successful
<b>5.</b>	Check Page is working or not.	Successful OR Fail	Successful

Table 11: Sign-Up

## 6.2.2 Sign-In page

<b>Test Case 02</b>			
<b>Sign In</b>			
<b>Functional Requirement 02</b>			
<b>Steps</b>	<b>Tasks</b>	<b>Expected outcomes</b>	<b>Result</b>
1.	Click on SIGN-IN button.	Successful OR Fail	Successful
2.	Check page is working or not.	Successful OR Fail	Successful
3.	Check All fields are taking data or not.	Successful OR Fail	Successful
4.	Check E-mail address can be entered or not.	Successful OR Fail	Successful
5.	Check password can be entered or not.	Successful OR Fail	Successful
6.	Check Button is submitting all the details or not.	Successful OR Fail	Successful

Table 12: Sign-In

## 6.2.3 Reset Password page

<b>Test Case 03</b>			
<b>Reset Password</b>			
<b>Functional Requirement 03</b>			
<b>Steps</b>	<b>Tasks</b>	<b>Expected outcomes</b>	<b>Result</b>
1.	Click on Forget Password button.	Successful OR Fail	Successful
2.	Check page is opening or not.	Successful OR Fail	Successful
3.	Check E-mail address can be entered or not.	Successful OR Fail	Successful
4.	Check through E-mail address password can be recovered or not.	Successful OR Fail	Successful
5.	Check Button is working or not.	Successful OR Fail	Successful

Table 13: Reset Password

## 6.2.4 Add product to WishList page

<b>Test Case 04</b>			
<b>Add Product To WishList</b>			
<b>Functional Requirement 04</b>			
<b>Steps</b>	<b>Tasks</b>	<b>Expected outcomes</b>	<b>Result</b>
1.	Click on ADD TO WISHLIST icon.	Successful OR Fail	Successful
2.	Check product is added to the wishlist or not?	Successful OR Fail	Successful
3.	Click on Wishlist Panel from navigation	Successful OR Fail	Successful
4.	Check page is opening or not.	Successful OR Fail	Successful
5.	Check wishlist product is available there or not.	Successful OR Fail	Successful
6.	Check all buttons are working or not.	Successful OR Fail	Successful
7.	Click on Delete wishlist product button	Successful OR Fail	Successful
8.	Check product is deleted from the wishlist or not.	Successful OR Fail	Successful

Table 14: Add product to WishList



## 6.2.5 Add product to cart page

<b>Test Case 05</b>			
<b>Add Product To Cart</b>			
<b>Functional Requirement 05</b>			
<b>Steps</b>	<b>Tasks</b>	<b>Expected outcomes</b>	<b>Result</b>
<b>1.</b>	Click on ADD TO CART icon.	Successful OR Fail	Successful
<b>2.</b>	Check product is added to the cart or not?	Successful OR Fail	Successful
<b>3.</b>	Check system redirects the user to the shipment page or not?	Successful OR Fail	Successful
<b>4.</b>	Check page is opening or not.	Successful OR Fail	Successful
<b>5.</b>	Check all buttons are working or not.	Successful OR Fail	Successful

Table 15: Add product to cart

## 6.2.6 Shipment and Order page

<b>Test Case 06</b>			
<b>Shipment and Order</b>			
<b>Functional Requirement 06</b>			
<b>Steps</b>	<b>Tasks</b>	<b>Expected outcomes</b>	<b>Result</b>
<b>1.</b>	Click on ADD TO CART icon.	Successful OR Fail	Successful
<b>2.</b>	Check product is added to the cart or not?	Successful OR Fail	Successful
<b>3.</b>	Click system redirects the user to the shipment page or not?	Successful OR Fail	Successful
<b>4.</b>	Check page is opening or not.	Successful OR Fail	Successful
<b>5.</b>	Check all fields by entering data.	Successful OR Fail	Successful
<b>6.</b>	Check Place order button is working or not.	Successful OR Fail	Successful

Table 16: Shipment and Order

## 6.2.7 Add/Edit/Delete Product page

<b>Test Case 07</b>			
<b>Add/Edit/Delete Product from the Nursery</b>			
<b>Functional Requirement 07</b>			
<b>Steps</b>	<b>Tasks</b>	<b>Expected outcomes</b>	<b>Result</b>
1.	Login to the admin panel.	Successful OR Fail	Successful
2.	Check panel is opening or not.	Successful OR Fail	Successful
3.	Check admin dashboard is visible or not.	Successful OR Fail	Successful
4.	Click on ADD PRODUCT button.	Successful OR Fail	Successful
5.	Check button is working or not.	Successful OR Fail	Successful
6.	Check system redirects the admin to the valid pages or not.	Successful OR Fail	Successful

7.	Check every field by entering details of new product.	Successful OR Fail	Successful
8.	Click on add product button.	Successful OR Fail	Successful
9.	Check product is added to the nursery or not.	Successful OR Fail	Successful
10.	Click on EDIT/DELETE PRODUCT button.	Successful OR Fail	Successful
11.	Check page is opening or not.	Successful OR Fail	Successful
12.	Check by clicking on EDIT/DEL buttons, product is edited/deleted or not.	Successful OR Fail	Successful

Table 17: Add/Edit/Delete Product

# Chapter 7

## Conclusion

## 7 Conclusion

We've finished this detailed description based report of Nursery Automation APP project. Our motivation for this project stems from the fact that at the time of this expanding technology, there was no online plant buying application available in Pakistan. People must visit physically to the nurseries to buy plants. We have provided a lot of detailed information about nurseries on websites, as well as their location on Google Maps, but still no application.

The mobile application is easier to use, administer and utilize than websites. We don't have to go through the entire process of opening the browser, searching for the required website, and then spending time discovering how to use the interface for our required goal. We only need to install the application once in our mobile phones/tablets and then we're only a one push away. So we came up with this idea and we've finally finished it. Both practically and graphically, this application is more reliable, safe, and simple to use. variety of advanced modules are included in the nursery automation app. This application provides complete information about any type of plant to the customer. Due to the excellent Graphical User Interface, the application has an appealing appearance that attracts customers.

## References

- [1] M. Arnoldi and C. M. Shackleton, "The potential influence of commercial plant nurseries in shaping the urban forest in south africa," *Urban Forestry & Urban Greening*, vol. 64, p. 127254, 2021.
- [2] R. K. Jones, D. M. Benson, *et al.*, *Diseases of woody ornamentals and trees in nurseries*. American Phytopathological Society (APS Press), 2001.

# Appendix A

## 8 User Manual

The user manual will guide the user how to operate the application. It provides the overview of the complete system. The user guide of this application is given below.

### 8.1 Dashboard

This tab will allow you to select Nurseries.



Figure 10: Dashboard



## 8.2 Navigation

This tab displays overall content and information of the application.

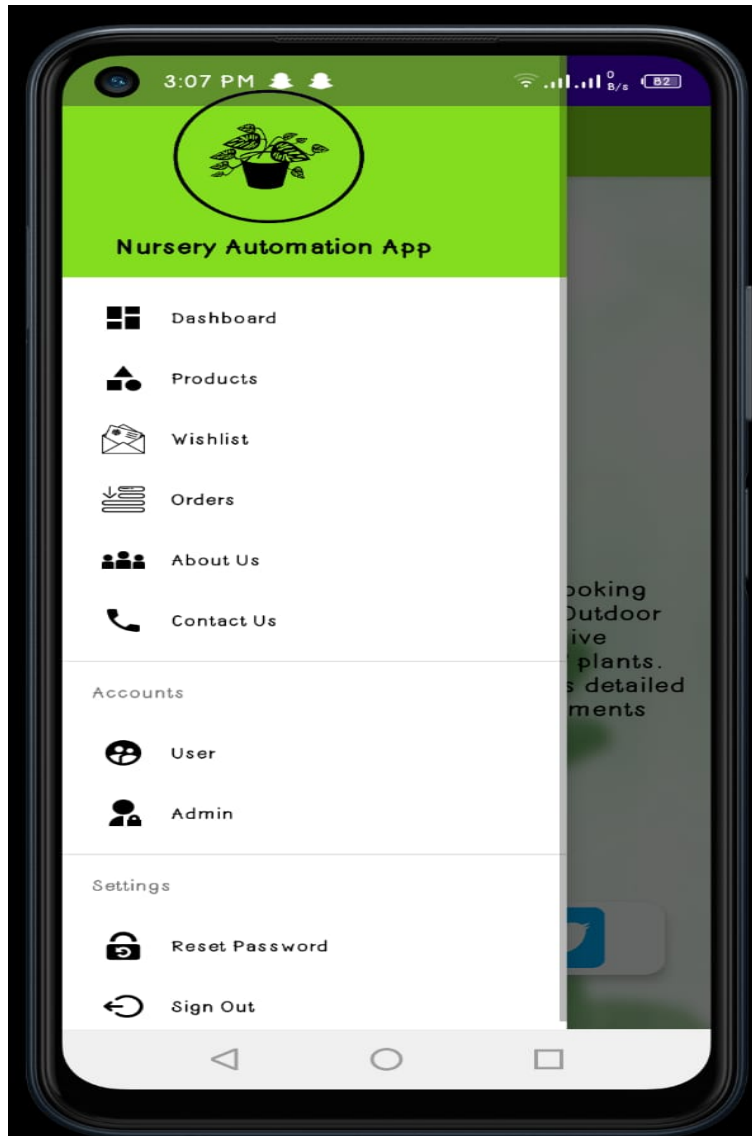


Figure 11: Navigation

### 8.3 Sign-Up Page

This tab will allow Customer to create their account.

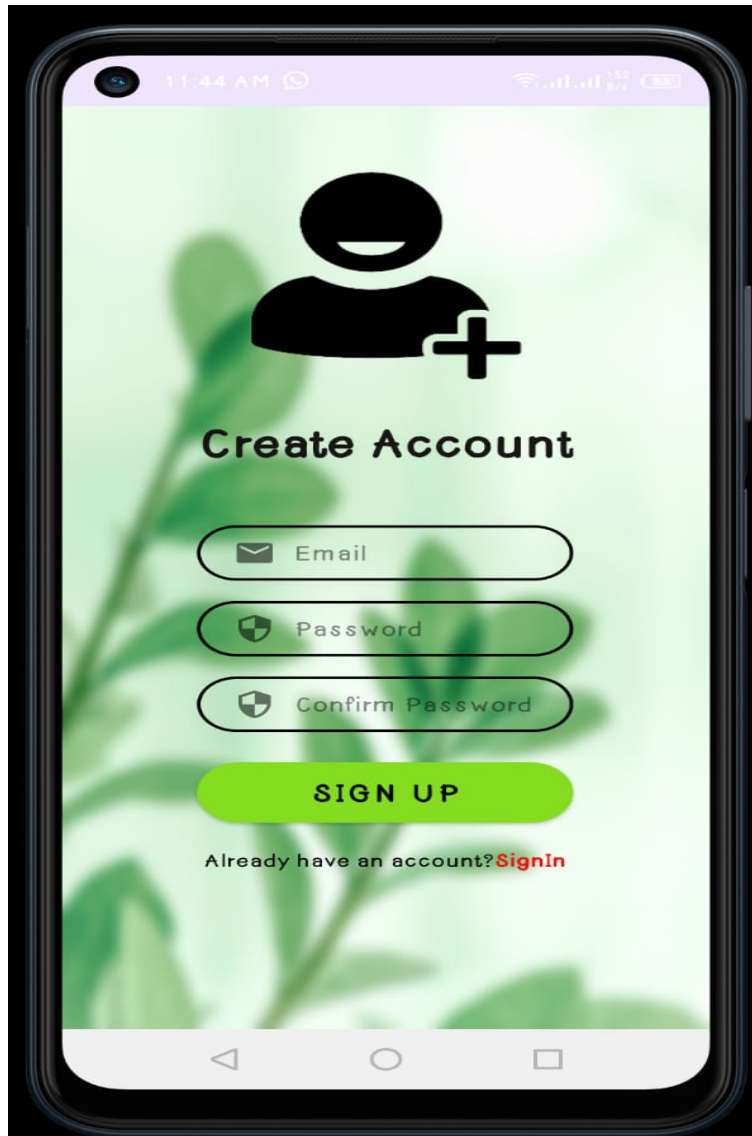


Figure 12: Sign-Up Page

## 8.4 Sign-In Page

This tab will allow Customer to Log In to their account.



Figure 13: Sign-In Page

## 8.5 Products

This tab will allow customer to view all the products.



Figure 14: Products Page

## 8.6 Reset Password

This tab will allow Customers to to change their password.

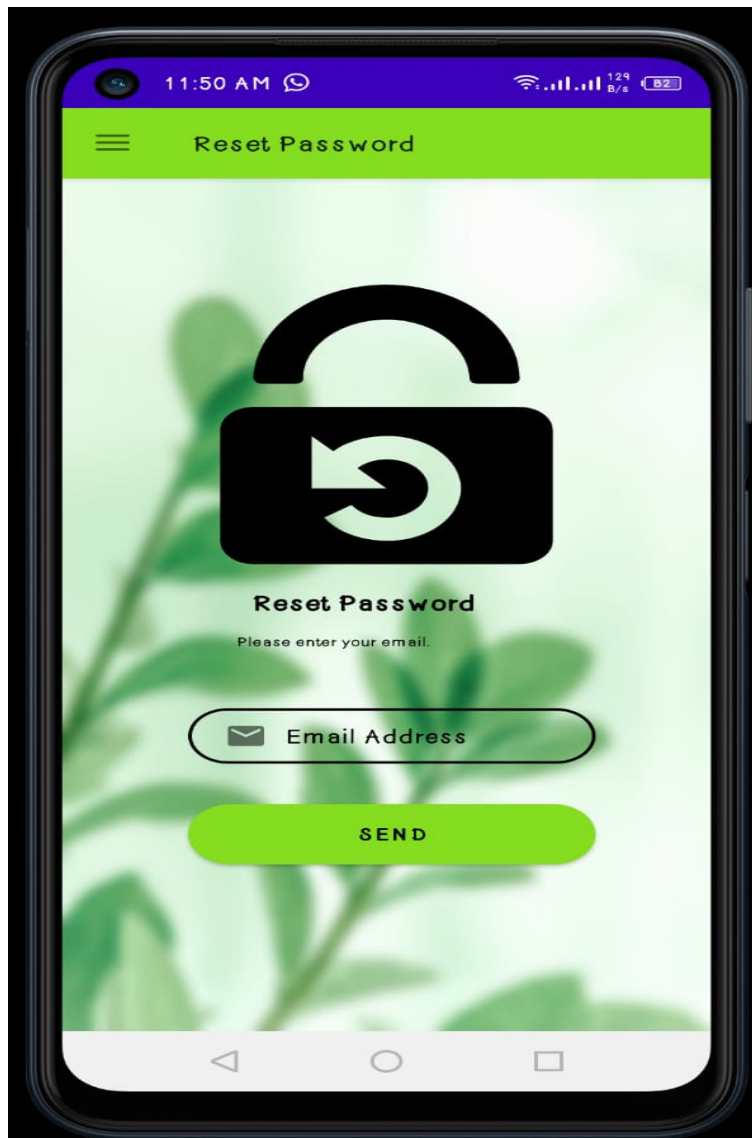


Figure 15: Reset Password Page

## 8.7 Contact Us

This tab will allow Customers to send messages to the Admin.



Figure 16: Contact Page

## 8.8 About Us

This tab shows the details about the application.

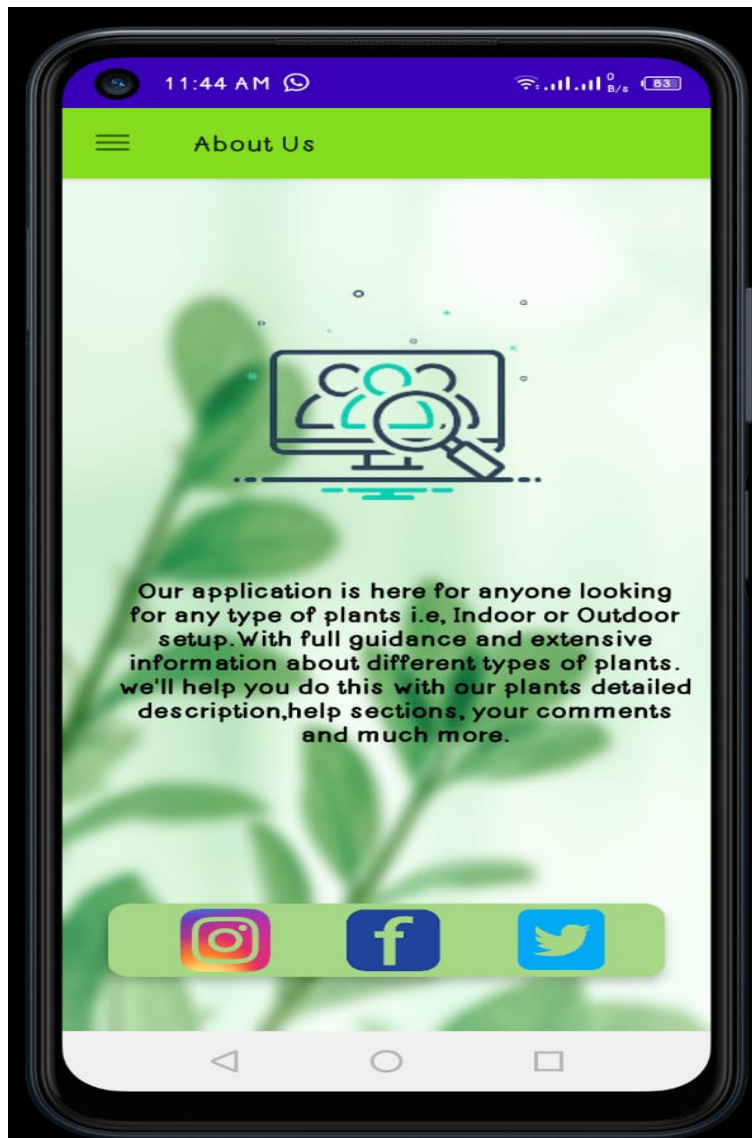


Figure 17: About Us Page

## 8.9 Admin Login

This tab will allow you to enter valid information and log in to the account.



Figure 18: Admin Login



## 8.10 Admin Tasks

This tab will allow admin to perform different tasks of specific Nursery.



Figure 19: Admin Tasks

### 8.10.1 Edit Product Task

This tab will allow admin to Edit or delete Products from specific Nursery.



Figure 20: Edit Products

### 8.10.2 Delete Product Task

This tab will allow Admin to delete products.



Figure 21: Delete Products

### 8.10.3 View Messages

This tab will allow Admin to view Messages sent from the customers.



Figure 22: View Messages

### 8.11 Forget Password

This tab will allow customer to recover their password.



Figure 23: Forget Password

## 8.12 Orders

This tab will allow customer to view their orders.

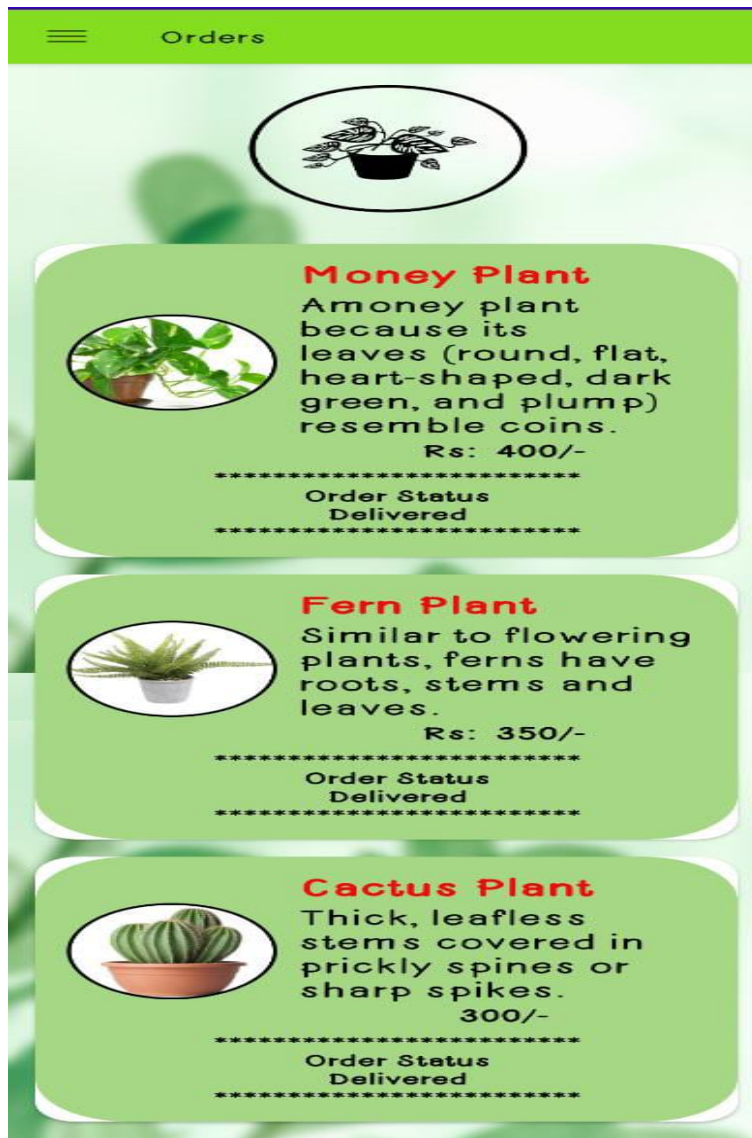


Figure 24: Orders

### 8.13 Shipment Details

This tab will allow customer to enter their details to place order.



The screenshot displays a mobile application interface for entering shipment details. At the top, the status bar shows the time as 11:43 AM and various connectivity icons. The main content area has a light green background with a faint pattern of leaves. In the center, there is a cartoon illustration of a green plant with a smiling face in a white pot. Below the illustration, the text "SHIPMENT DETAILS!!" is displayed in bold. The form consists of several input fields: "First Name" and "Last Name" are side-by-side rounded rectangles; "Email" is a single wide rounded rectangle; "Phone No" and "Address" are also single wide rounded rectangles. Below these fields is a radio button labeled "Cash on Delivery". At the bottom of the form is a large, rounded green button with the text "ORDER NOW" in white. The bottom of the screen shows the standard Android navigation bar with back, home, and recent apps icons.

Figure 25: Shipment Details

## 8.14 WishList

This tab will allow customer to add their products to this panel for later use.



Figure 26: WishList