

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

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Software Graduation Project



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Submitted on :

Sep 2024

Presented in partial fulfillment of the requirements for Bachelor's
degree in Computer Engineering.

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Dedication:

First and Foremost, we extend our sincere thanks to God. His blessings have guided us through every step of our educational journey.

To our beloved Mohammad , may God bless him and grant him peace, who conveyed the message and illuminated our path.

To those who taught us the virtues of success and patience, and who exemplified the art of giving selflessly .To those who stood by us, endured challenges, and whose prayers were the source of our success
To our families, friends and everyone who supported us with their encouragement and wisdom.

To everyone who contributed to our growth with their knowledge and insight. This humble work is dedicated to all of you.

Acknowledgment:

Firstly, we thank our supervisor, Dr. Samer Arandi , for his continuous support . also we would like to thank the doctors of Computer Engineering Department for what they gave us during our educational process.

Disclaimer:

This report was written by Lujain Darwazeh and Noor Hamdan at the Computer Engineering Department, Faculty of Engineering, An-Najah National University. It has not been altered or corrected, other than editorial corrections, because of assessment and it may contain language as well as content errors. The views expressed in it together with any outcomes and recommendations are solely those of Lujain Darwazeh and Noor Hamdan. An-Najah National University accepts no responsibility or liability for the consequences of this report being used for a purpose other than the purpose for which it was commissioned.

Abstract:

PlantPat : This application encourages people to incorporate green spaces into their living spaces, promoting a healthier and more sustainable lifestyle also Interaction with plants has been proven to reduce stress and improve mental well being.

This application provides a user friendly interface that organizes plants into sections. users can easily navigate through different sections to find and explore specific plants , then they can add the plants to their shopping cart and to their wishlist .

also our application provide Secure Payment System use cash or visa ,and Delivery System with tracking order to ensure safe delivery of plants.

The application supports in mobile and in web.

Chapter 1: Introduction

1.1 Statement of Problem

Customers often find that visiting nurseries and farms to purchase plants is exhausted and time consuming. Additionally, customers may face difficulty getting detailed information about plants, making it challenging for customers to make well decisions about what they need to buy. Our application simplifies the process, it allows customers to browse plants, access detailed information about them, and purchase them from their own homes.

1.2 Objective

The objective of this project is to develop an online shopping system designed specifically for the sale of plants. This application aims to simplify the purchasing process for customers, offering a user-friendly interface to browse, select, and purchase diverse plants. The application enhances the overall shopping experience and makes it easier for customers to acquire plants with convenience and confidence.

1.3 Scope of work

This application provides a personal account for each customer, as well as a manager account and a delivery service employee. This application offers many services:

- ❖ Specific screen for each section of plants to make it easy for customers to find their needs.
- ❖ Search function to help customers find the plant easily.

- ❖ Multi Language like Arabic and English ensures that users can navigate, understand, and use the app more effectively.
- ❖ Messaging System to communicate between Customer and Admin to take advice about plant , also exist Messaging between admin and delivery employee.
- ❖ Secure Payment System.
- ❖ Tracking Order.

1.4 Importance of the work

- ❖ encourages people to add green spaces into their living space.
- ❖ enhance user convenience, simplify access to plants information.

1.5 Organization of the report

The report is structured as follows: In Chapter 2, constraints and standards and Earlier Coursework, we had a thorough detailed discussion about the coursework. The third chapter contains literature review. Methodology , and The resources , techniques at our disposal will be explained in Chapter 4.

The fifth chapter, results and analysis , that we found. Chapter 6 Discussion, which will also emphasize the strengths and weaknesses of the study.

Chapter 2: Constraints, Standards, and earlier course work

2.1 Constraints

❖ **Size and weight:**

For the app to download quickly and run smoothly, especially on mobile devices, its lightweight design is crucial. The application size needs to be reasonable to prevent performance latency. To enable consumers to download and save the application on their devices, users' devices' storage space must also be decreased.

❖ **Coast:**

The project's cost must stay within the within budget.

❖ **Communicate with the rest of the design and system:**

A third party needs to be integrated into the application, in order to provide secure payment gateways ,a variety of user-friendly payment options like Stripe, the ability to track requests using additional Google services like maps, artificial intelligence-powered recommendation systems that enhance application performance, and a search function, Autocomplete functions such making recommendations while searching for products, can expedite the process.

❖ **Specific programming languages or specific systems:**

The application requires to be created with a version visible on mobile phones and on web also. Additionally, you should use strong programming languages like Node.js for the back end and Flutter for the front end when creating the app.

2.2 Standards

In order to create a high quality, scalable, and easily maintained application, we have employed agile development approaches. These practices facilitate the early creation of the application as well as its maintenance, problem detection, and feature addition.

2.3 Earlier Coursework

We used what we learned in web programming to develop our application , also we made advantage of the database design course and Advance Software to build our backend using Node JS .in addition ,to flutter courses.

Chapter 3: Literature Review

in recent years online plant shops has experienced rapid growth. driven by the interest gardening, and house plants, and the Comfort and relaxation offered by e commerce platforms.

Plants provide many benefits, including social, physiological, emotional, mental (Rihn & Behe, 2023), Recent research has shown increasing interest in the healing and therapeutic potential of nature and interest in the potential of greencare interventions for the benefit of mental health(Jordan, 2014).

The value of home gardens has become more apparent among tenants forced into isolation in difficult and uncertain times arising since the COVID-19 pandemic started at the beginning of 2020. While gardens make a significant contribution to the social and ecological environment of cities, most studies have focused on public green spaces. A study was conducted by publishing an online survey.The findings showed that while home gardens are less common among people with low levels of education and larger gardening spaces, they are more likely to be maintained by them. Weed problems and other garden maintenance issues also seem to have an impact. The findings also show that home gardens are critical because they support mental health, underscoring the need of encouraging home gardening before, during, and after epidemics. (Basarir, Al Mansouri, & Ahmed, 2022).

There are several similar applications, such as Bloomscape its a website of plants with a focus on sending customers' doors with fully-grown, healthy houseplants, They take great care in selecting the best products for customers that will help support and enhance your plant's life(Bloomscape, n.d.).

In our application we focus on customer comfort at the first place we support easy shopping process with easy deliver products to customers by our track order service.

Chapter 4: Methodology

We go into great details on the mobile phone and on web application in this chapter, along with their purposes, to give you a complete grasp of the project and how it operates.

4.1 Software needs

❖ Database:

Firestore database in Firebase for messaging and notification and order track, MySQL Database to store users and plants.

❖ Programming Language:

1. **Flutter** : use in client side to create mobile and web screens.
2. **Node Js**: use in server side to create the APIs that manage the logic and handle the requests.
3. **JavaScript** :use in client side to connect with server.

4.2 Tools

❖ Visual Studio Code

❖ Android Studio

❖ Postman

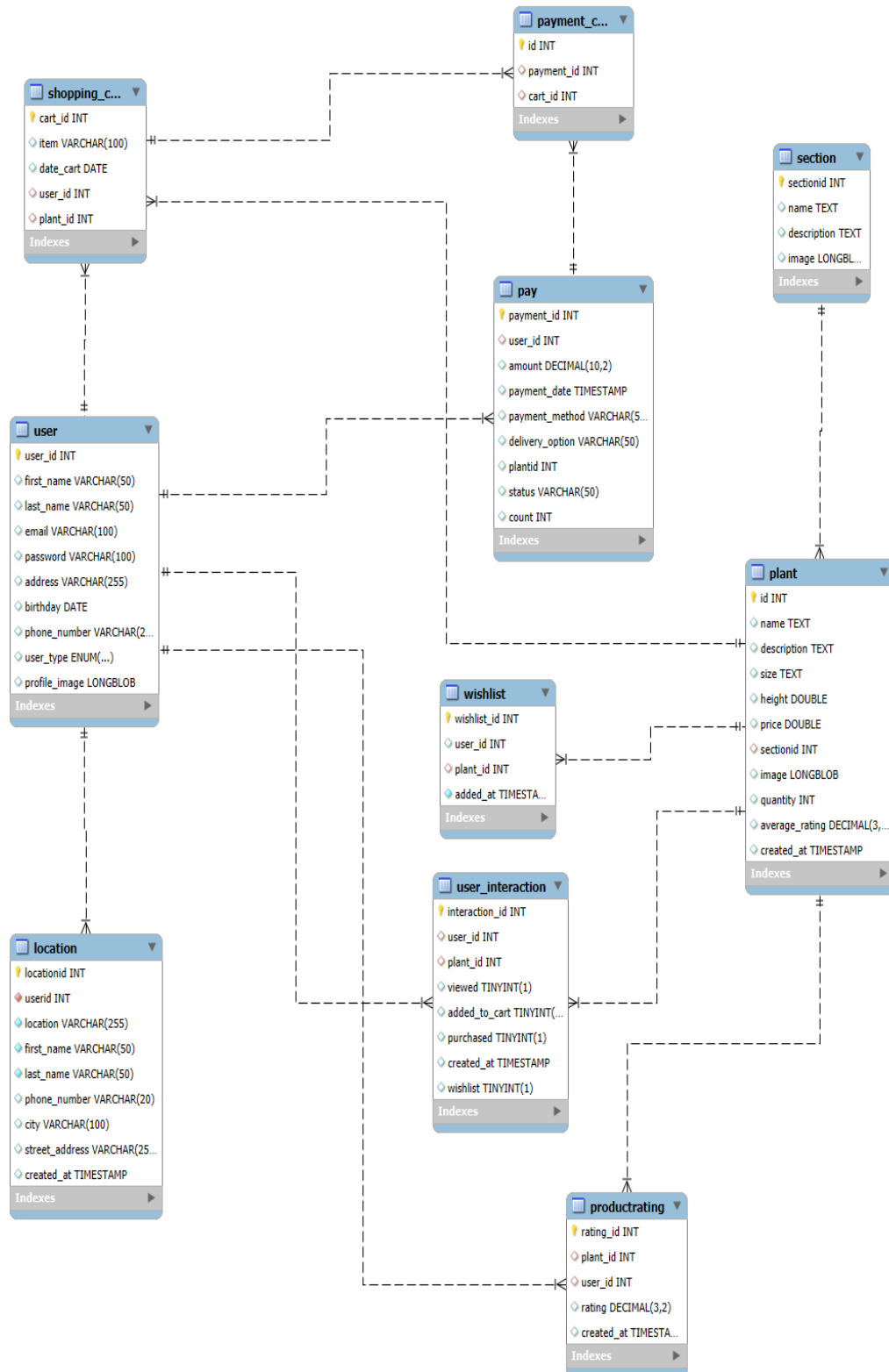
❖ MYSQL Database

❖ Firebase

❖ Github



4.3 UML Diagram



4.4 Mobile application

In our application we have 3 user type (Admin, Buyer, Delivery employee) when the user enter our mobile application the screens will be:

❖ **Splash Screen:**

When the user open the application its firstly appear the 'splash screen'.



Figure 1: Splash Screen

❖ **Log in and sign up Screen's :**

If user have account it will login using email and password .

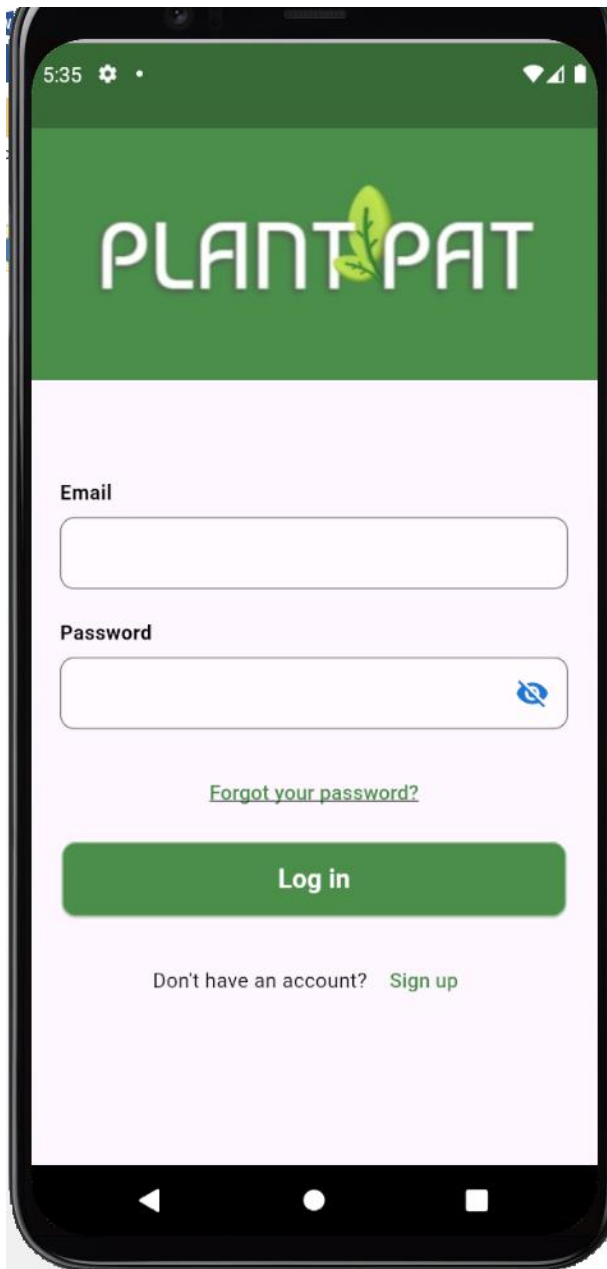


Figure 2: Log in Screen

But if user don't have account it can press on sign up to appear 'sign up screen'

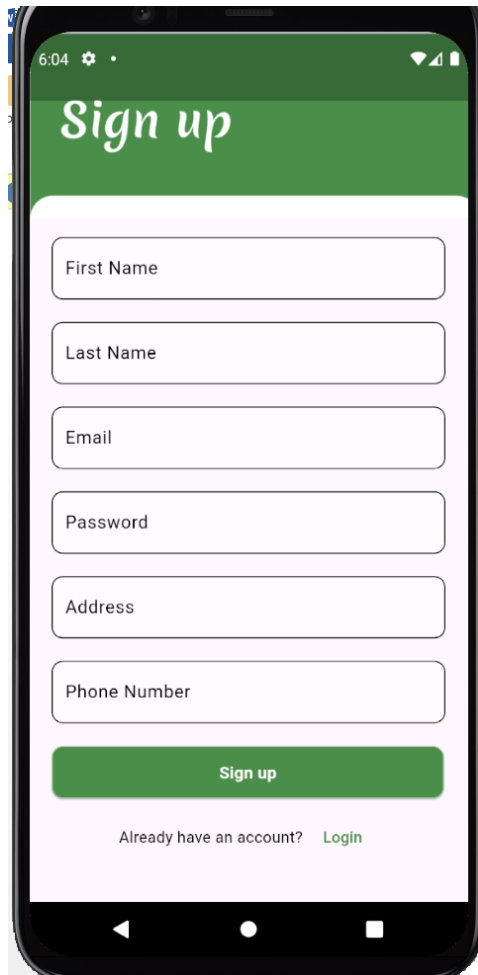


Figure 3:Sign up Screen

In 'sign up screen' we added validation for example some field are empty, invalid email address.

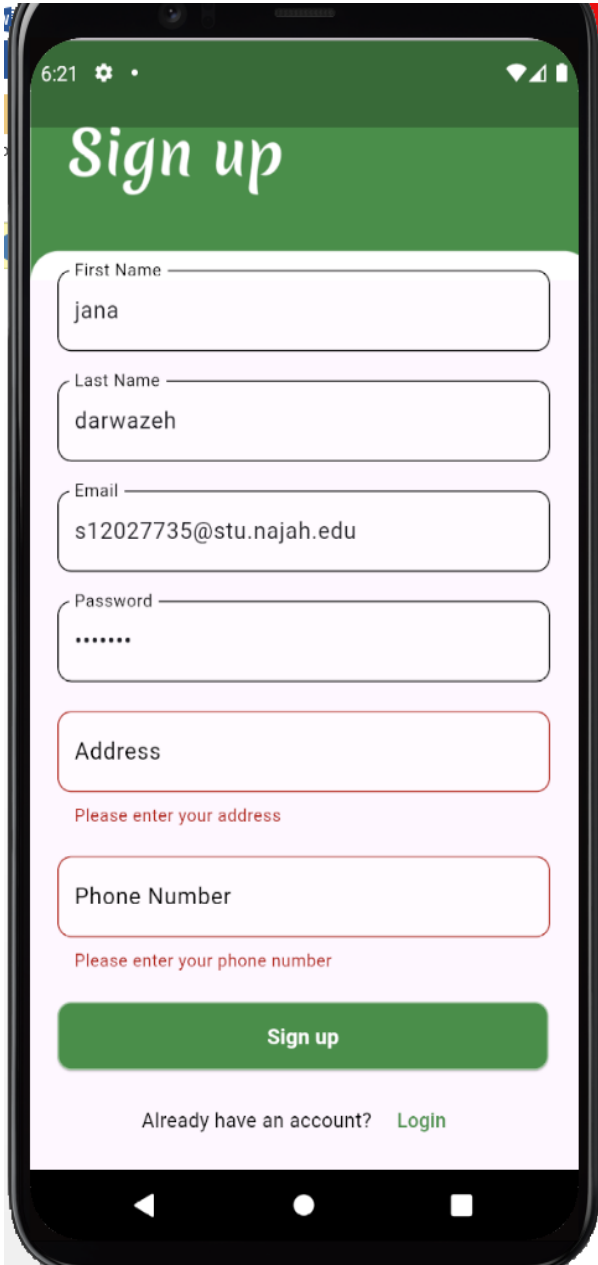


Figure 4:some field are empty !

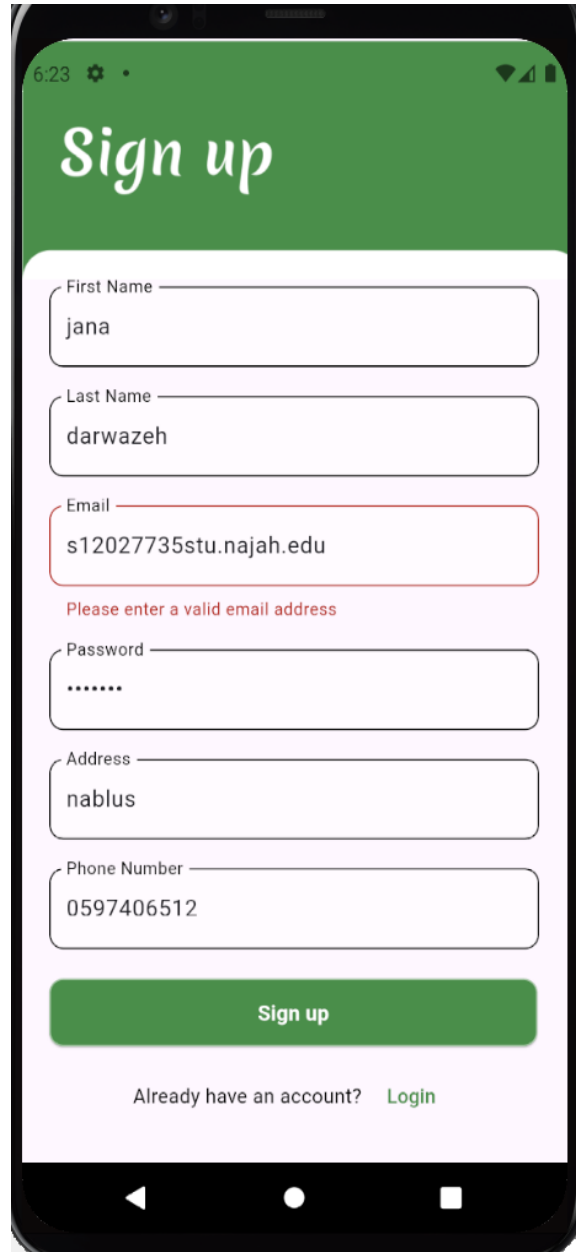


Figure 5:invalid email address

When enter valid information and press on sign up it will open 'verify email screen' to verify the entered email .

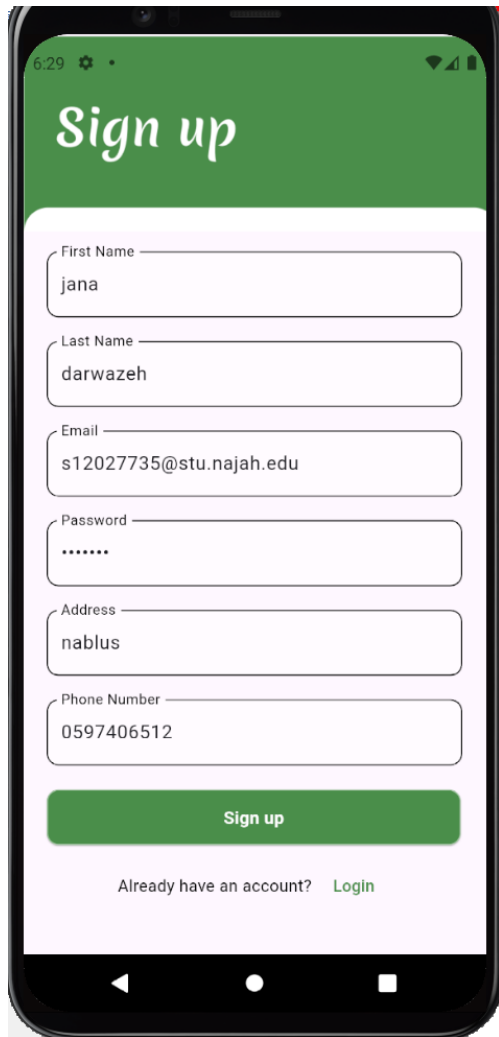


Figure 6:Correct filed

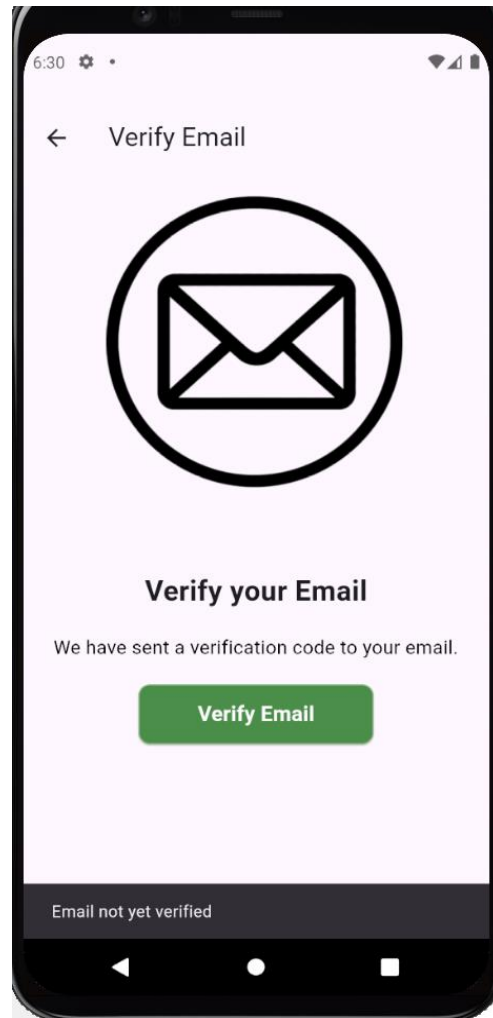


Figure 7:email not yet verified

After email verified successfully it will go to login screen...

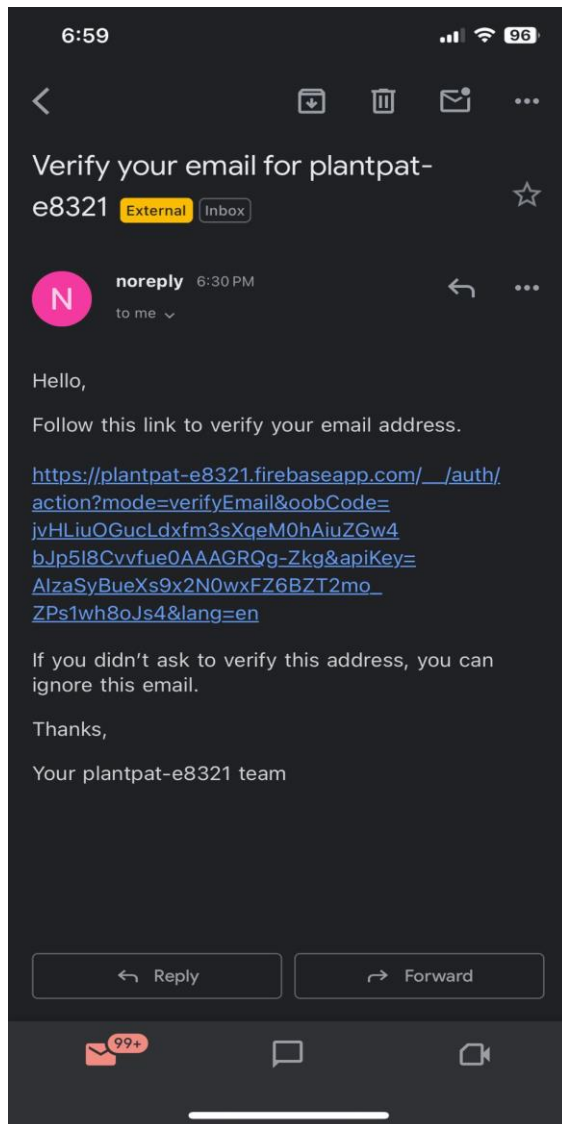


Figure 8:verify email on gmail



Figure 9: after click on link

In 'login screen' if the user try to log in with empty or wrong field then log in process will fail.

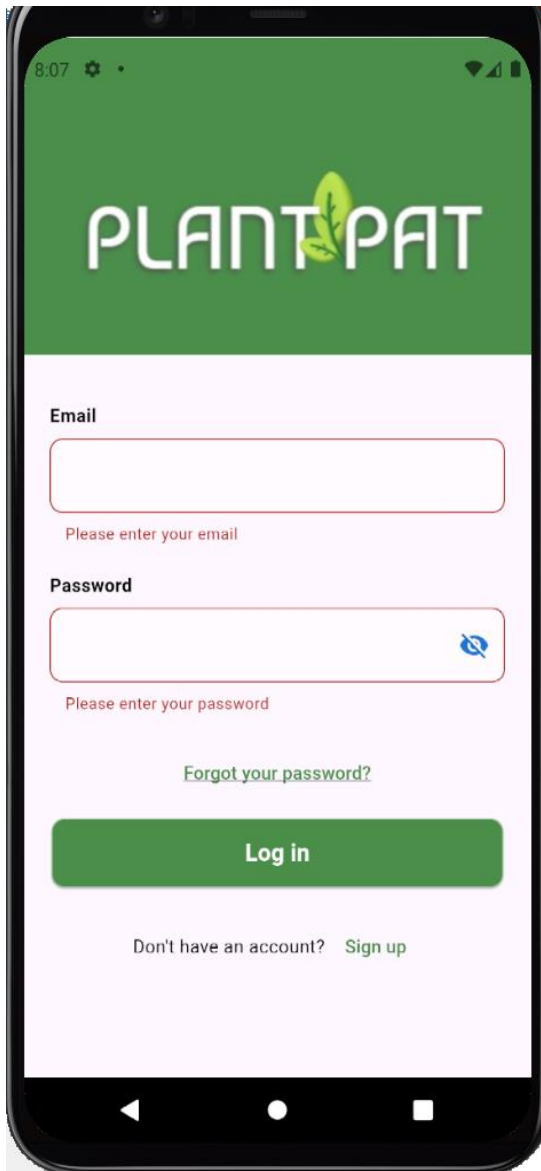


Figure10 :empty field

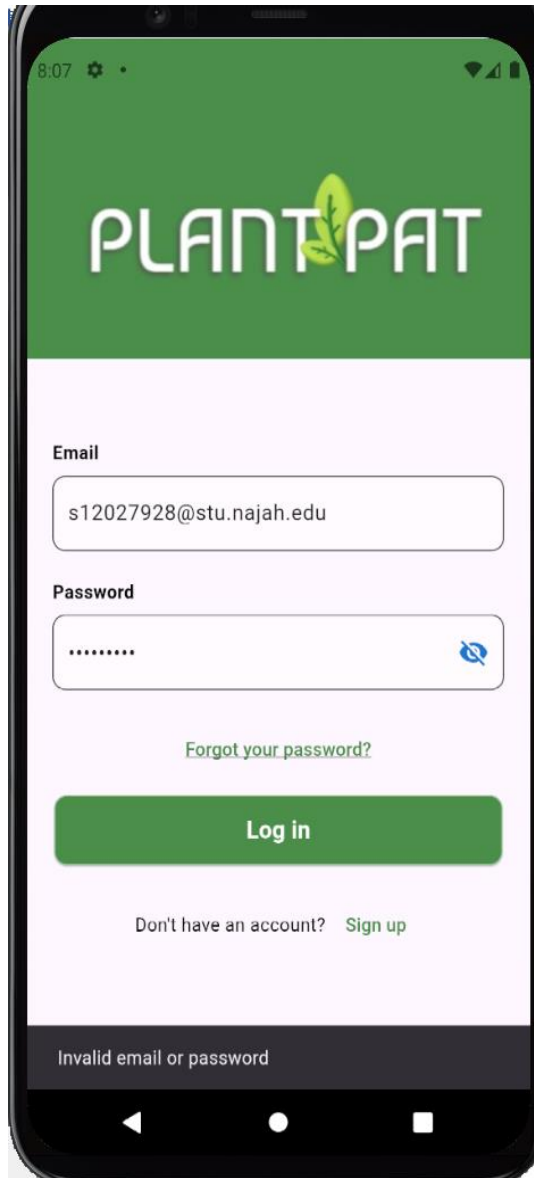


Figure 11: invalid login information

❖ **Forgot Password screen's:**

If the user forget his password he can click on 'Forgot Your Password' shown in Figure 11 then 'Forgot Password screen' will appear where user can enter his email to reset his password.

After enter email and click on 'Reset Password' as shown in Figure 12. then 'verification code screen ' will appear as shown in Figure 13.

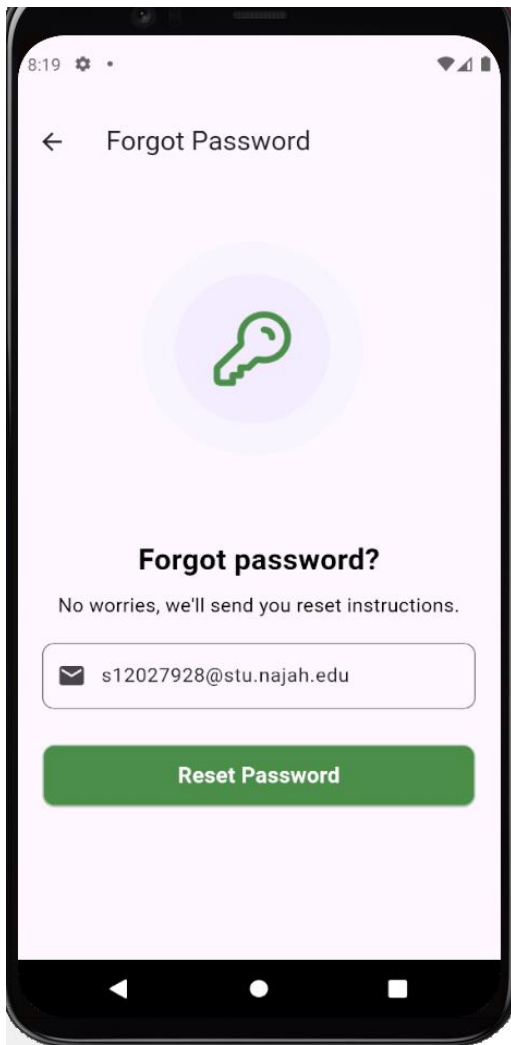


Figure 12:Forgot Password Screen

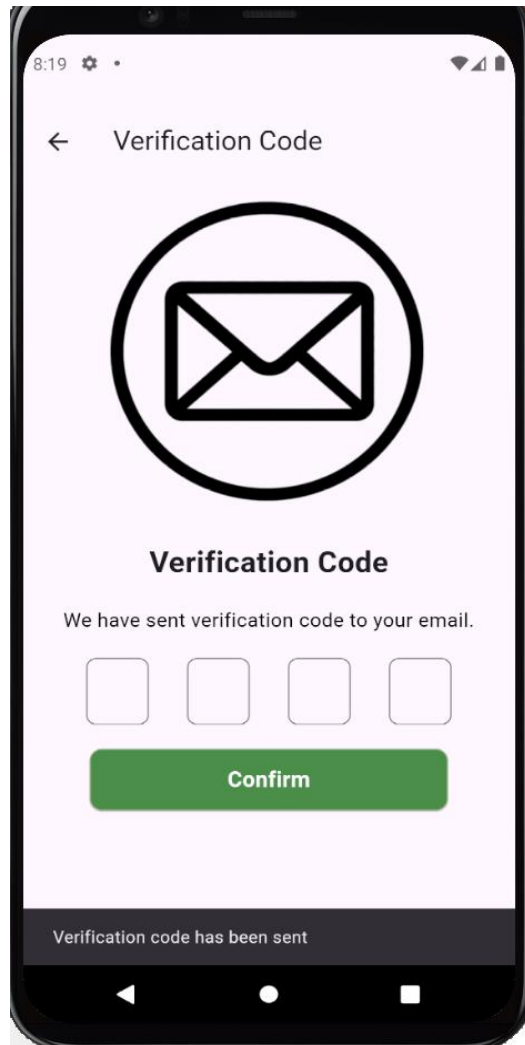


Figure 13:verification code screen

verification code will send for the entered email its contain 4 Random digits numbers as shown in Figure 14.

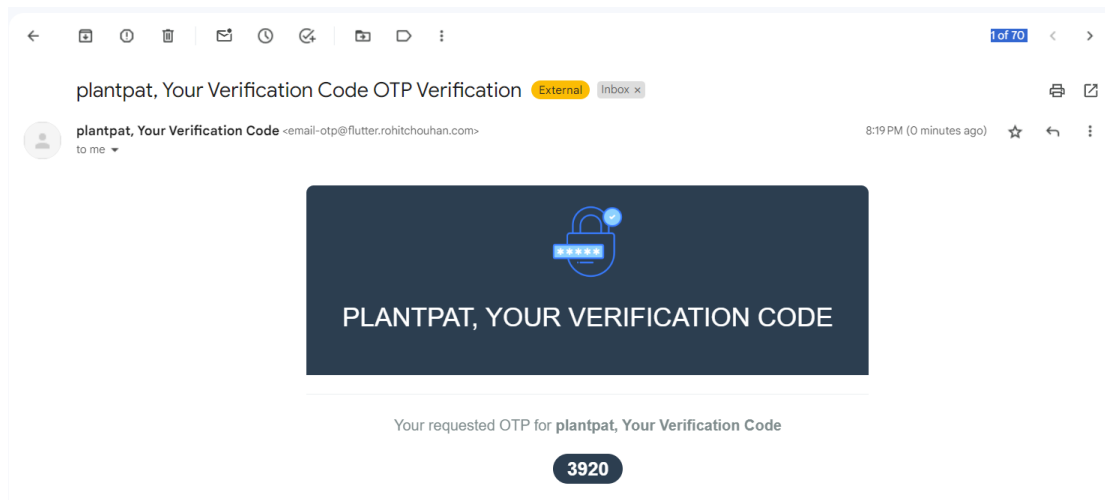


Figure 14:Verification code

when user try to enter invalid verification code as shown in Figure 15. Then 'update password screen' will not appear.

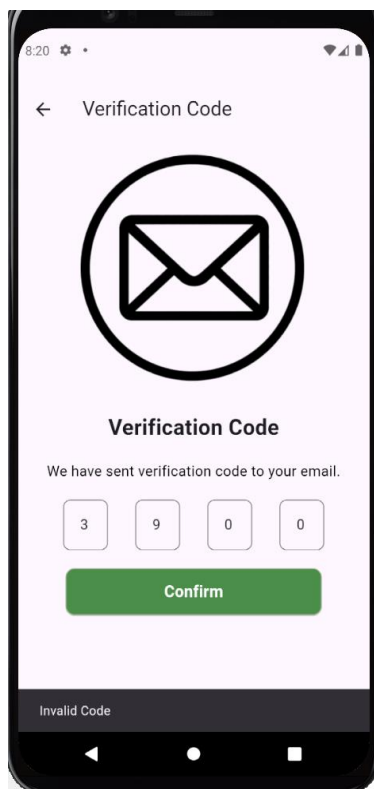


Figure 15:invalid code

❖ Update Password screen:

After user enter correct verification code then it will open 'Update Password screen' as shown in Figure 16 ,where user can update his password.

If two password are not match as shown in Figure 17 , then update password failed and don't go to 'login screen'.

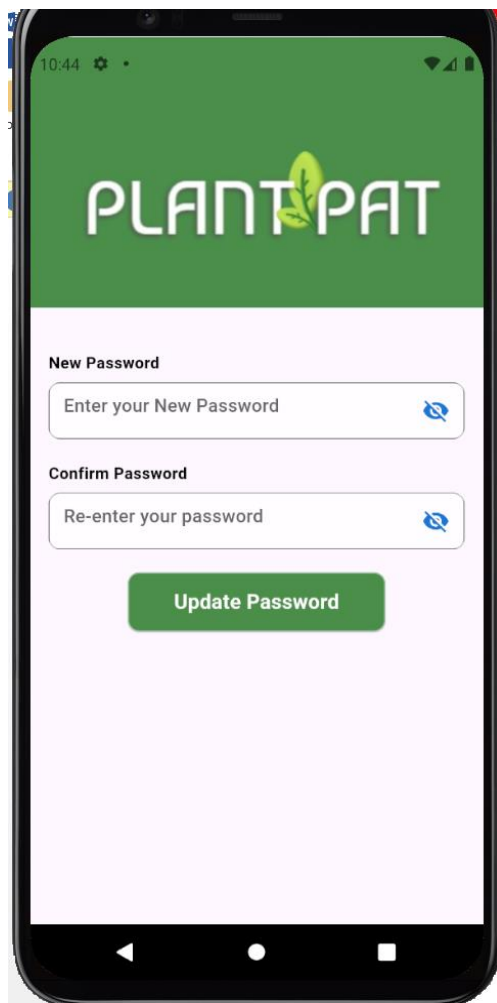


Figure 16:update password screen

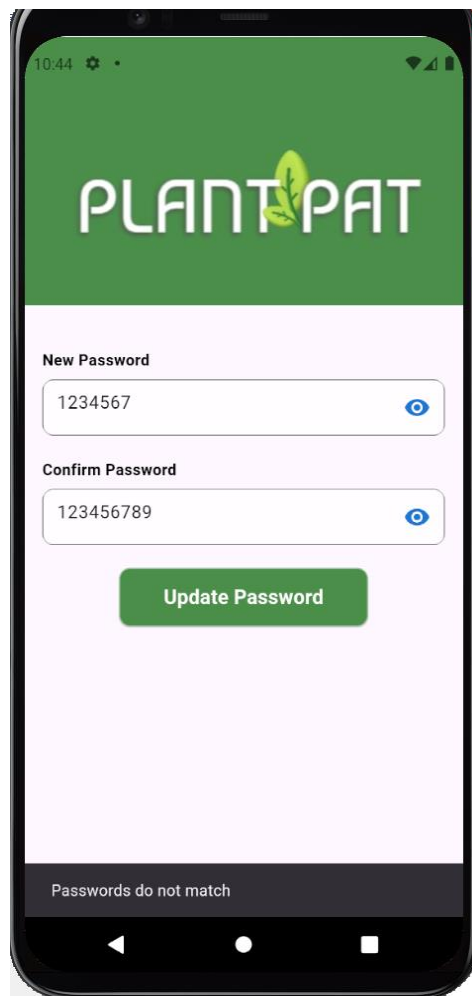


Figure17 :passwords do not match

After enter match passwords and press on 'Update Password' then 'login screen' will appear and now user can login with his email and password to enter 'home screen' as shown in Figure 18 and Figure 19 .

❖ **Home screen:**

This screen allow user to navigate to multi screen :

- ✚ Section screen
- ✚ Detailed page screen
- ✚ Search screen
- ✚ Shopping cart screen
- ✚ Chat screen
- ✚ Setting screen
- ✚ Notification screen

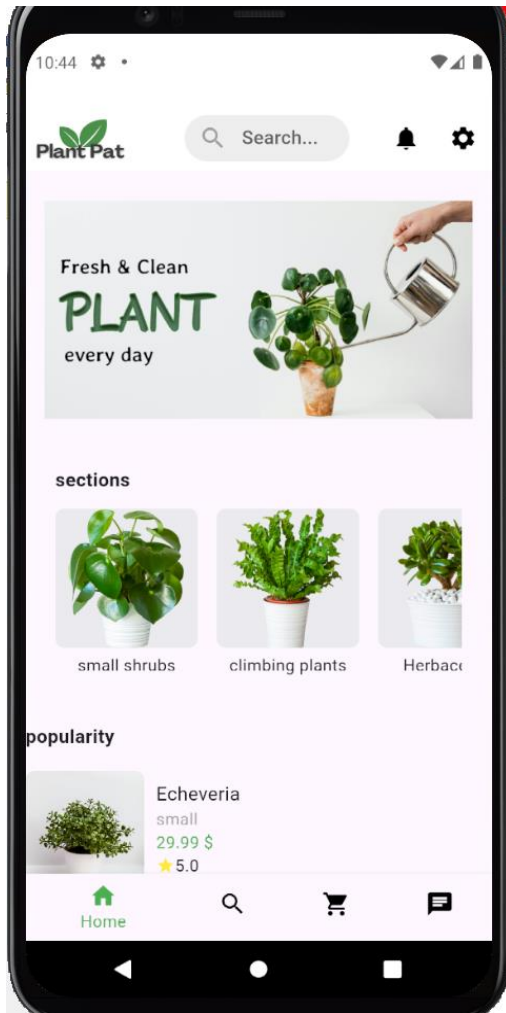


Figure 18:home screen

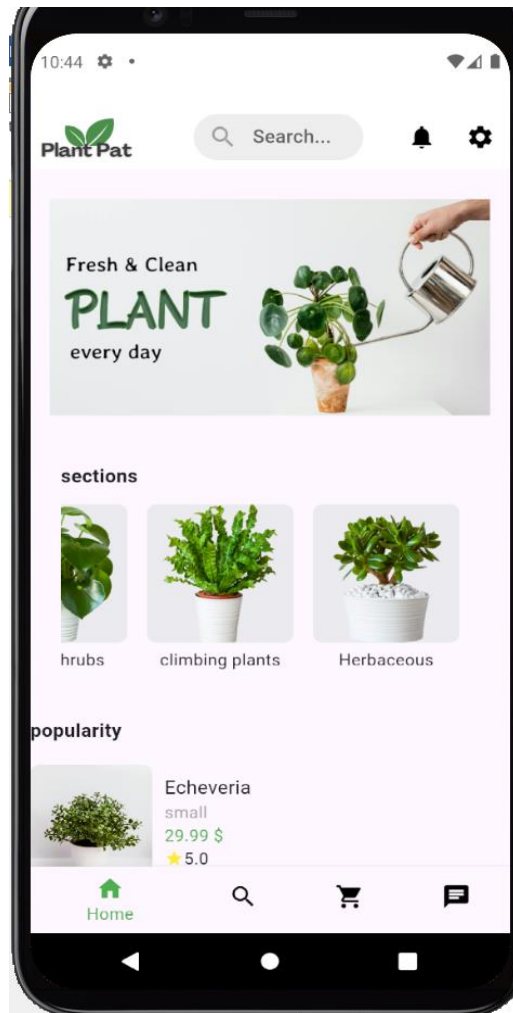


Figure19 :home screen

home page display the section's that we have in our application like small shrubs, climbing plants, Herbaceous and any other section's the admin will add from his home page (home admin page) we will explain it later..

on the Home page, the plant appears to the user according to two part as shown in Figure 20 ,first part is popularity part for the maximum two average Rate of plants in our application ,where each user can rate the plant after buy it and we will compute average rate for each plant..

the second part is Recommended part (AI Recommendation system) we use a content based algorithm that depends on what user interaction and some feature of the plant.

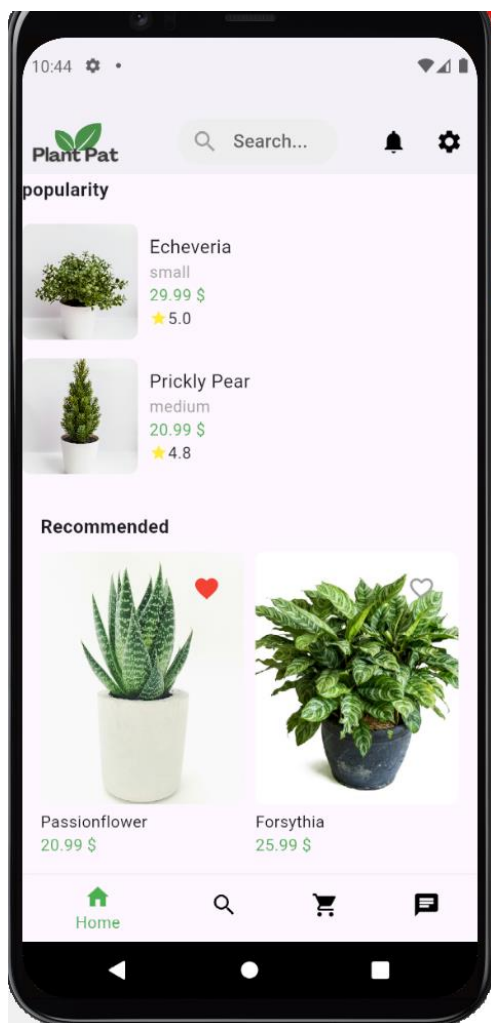


Figure 20:popularity and Recommended

❖ **Section screen:**

user can select any section in home page to see all plant's who belonged to this section as shown in Figure 21, Figure 22.

Also user can interact with plant by put it in his wishlist to return to it later..

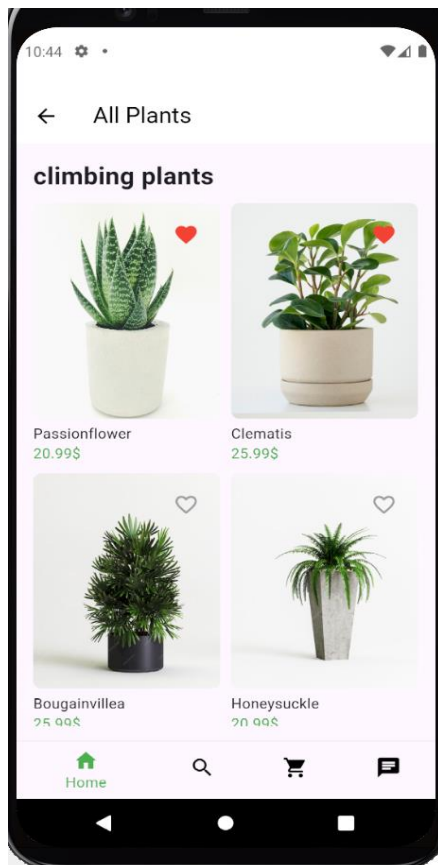


Figure 21:climbing plants

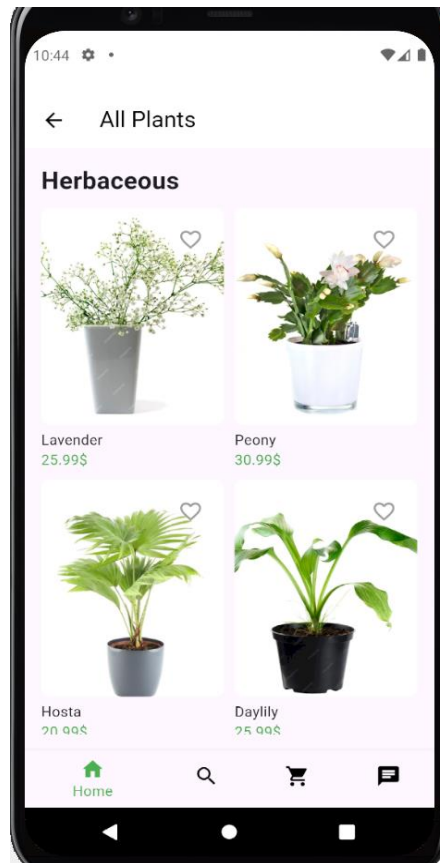


Figure 22:Herbaceous plants

❖ Detailed page screen:

When user select any plant he will enter to detailed page to see all information related to this plant like name, description, size, height, price and name of section that this plant belong as shown in Figure 23, Figure 24.

Also user can interact with plant by put it in his wishlist or put it in his shopping cart to return to it later..

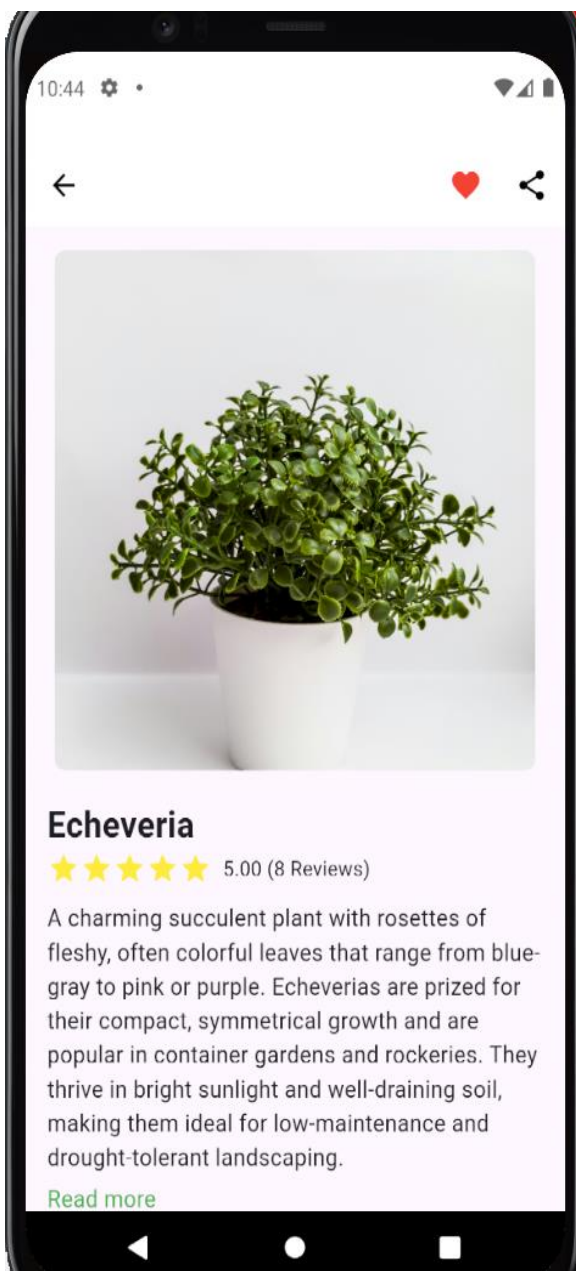


Figure 23:Detailed page screen

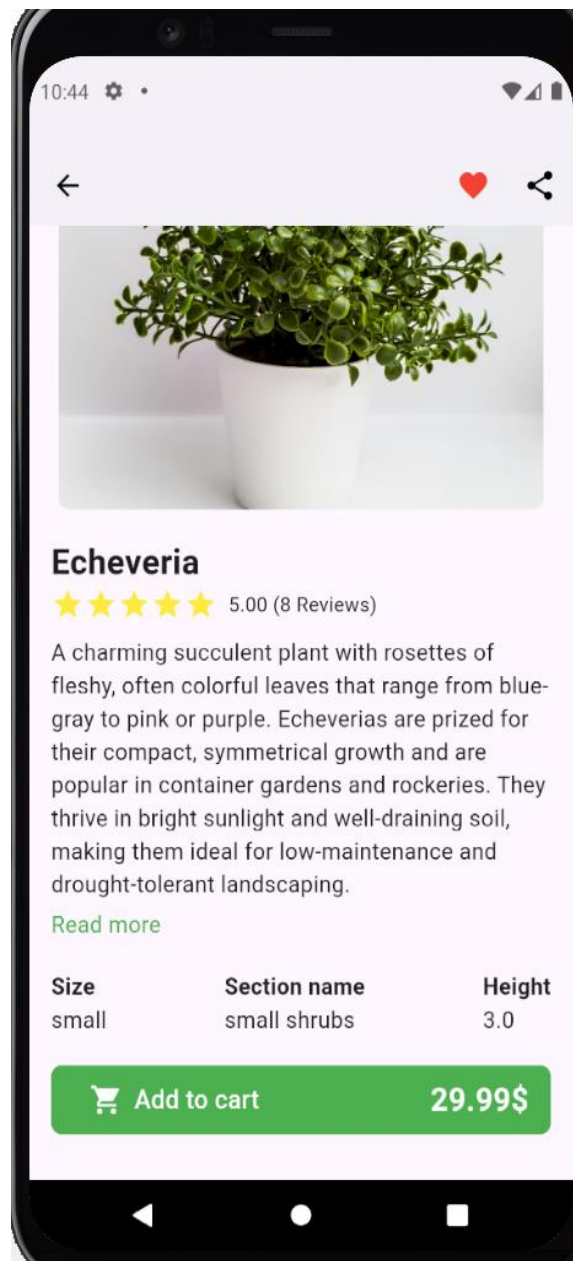


Figure 24:Detailed page screen

❖ **Search screen:**

user can search about any plant he need ,when user start to write our search system will help the user by give suggestions about what to continue write as shown in Figure 26, Figure 27, Figure 28 .



Figure25 :search screen

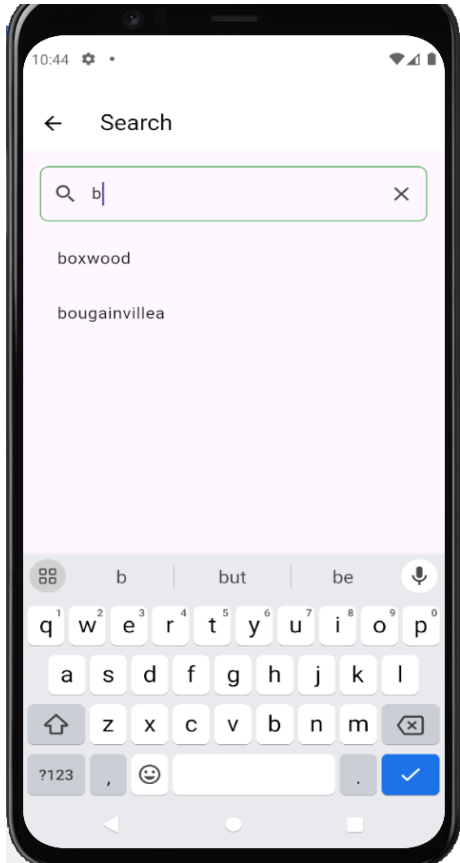


Figure 26:search suggestion

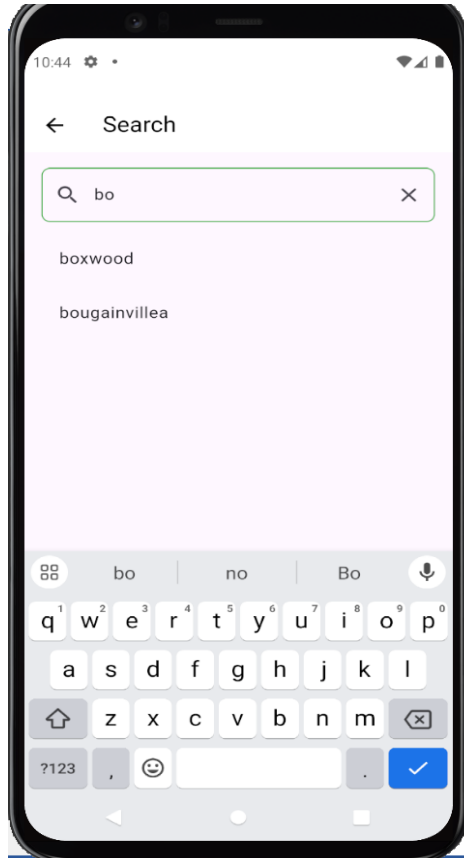


Figure 27:search suggestion

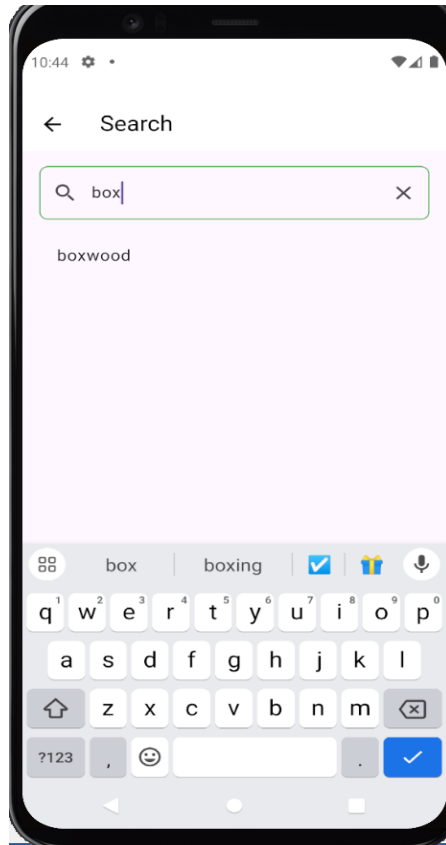


Figure 28:search suggestion

❖ **Result of search screen:**

After user select plant from search suggestion in our case 'Boxwood' then 'result of search screen' will display all plants with this name as shown in Figure 31.

in our case we have two plant with name 'Boxwood' with different details we can select each one to see its details as shown in Figure 29, Figure 30.

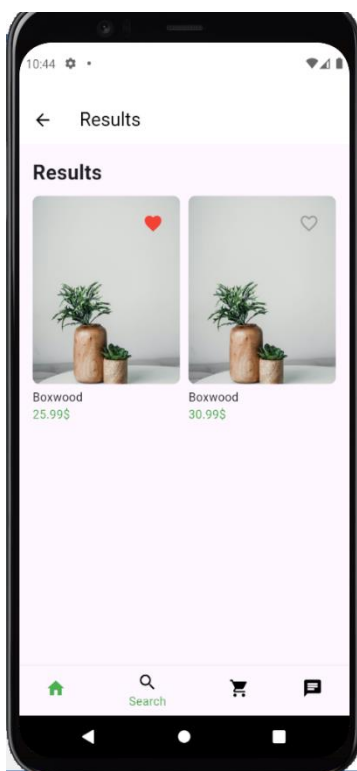


Figure 31:Result of search screen

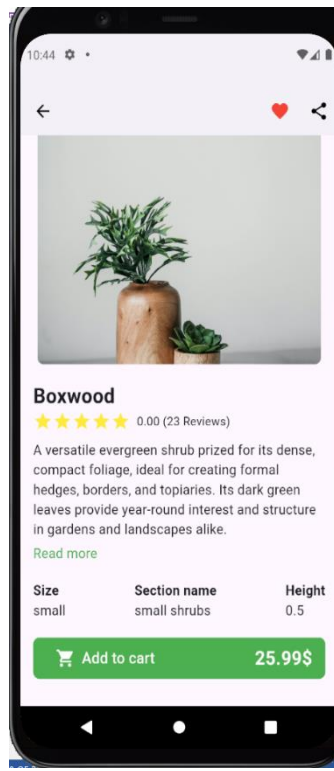


Figure 29:Detailed page screen

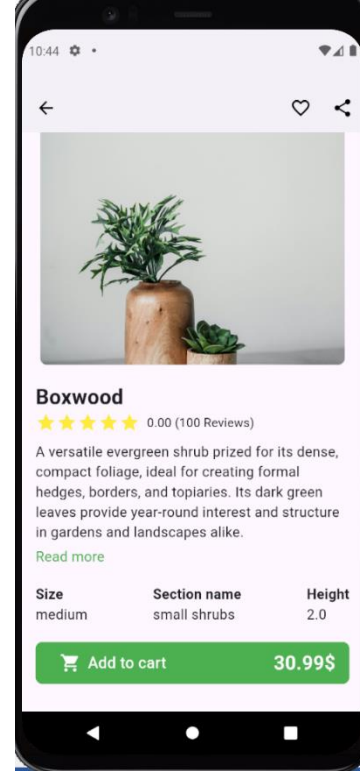


Figure 30:Detailed page screen

user can add any plant to his shopping cart when he press on ' Add to cart' Then our application will print to user message to show success add to cart as shown in Figure 32.

But if plant added before to shopping cart it will not add it again and will print message to user to show failed add to cart as shown in Figure 33.

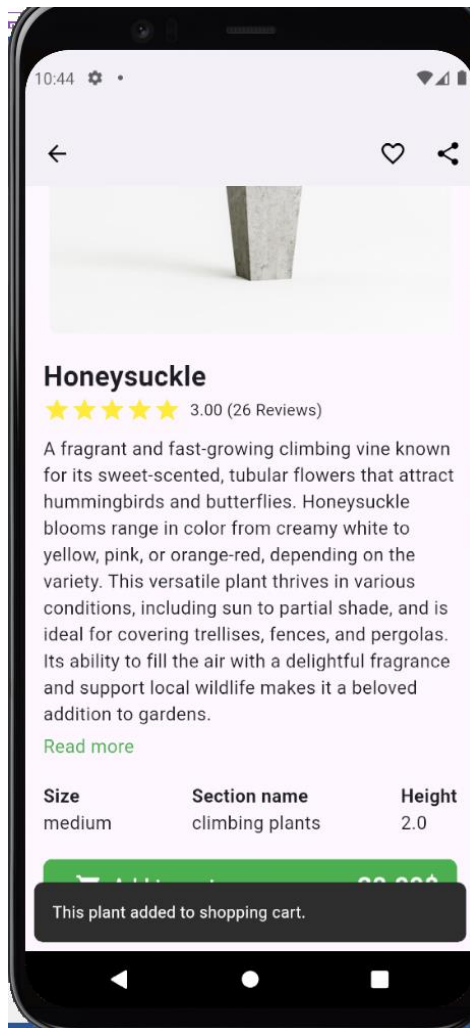


Figure 32:Success Add to cart

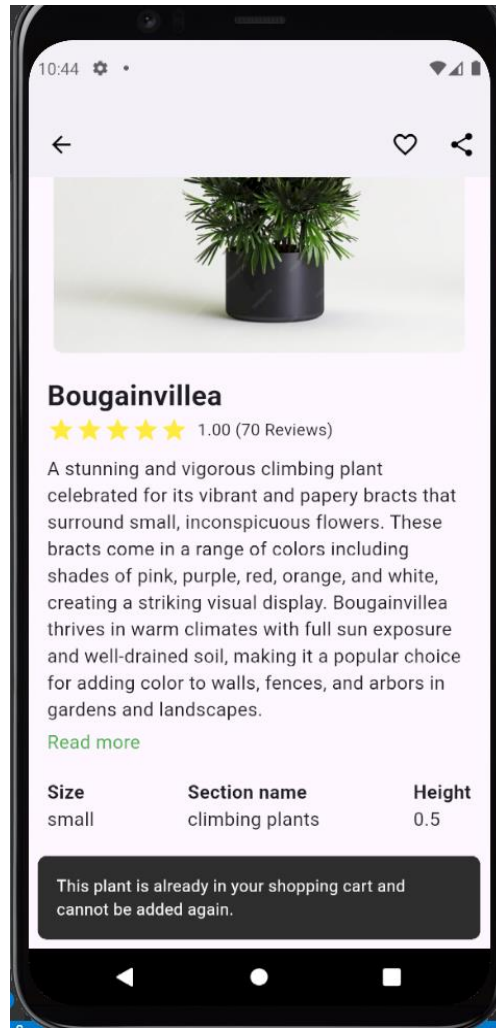


Figure33 :Failed Add to cart

user can add any plant to his Wishlist when he press on Love icon
Then application will print to user message to show success add to favorite as shown in Figure 34.

Also user can remove plant from wishlist Then application will print to user message to show success remove from favorite as shown in Figure 35.

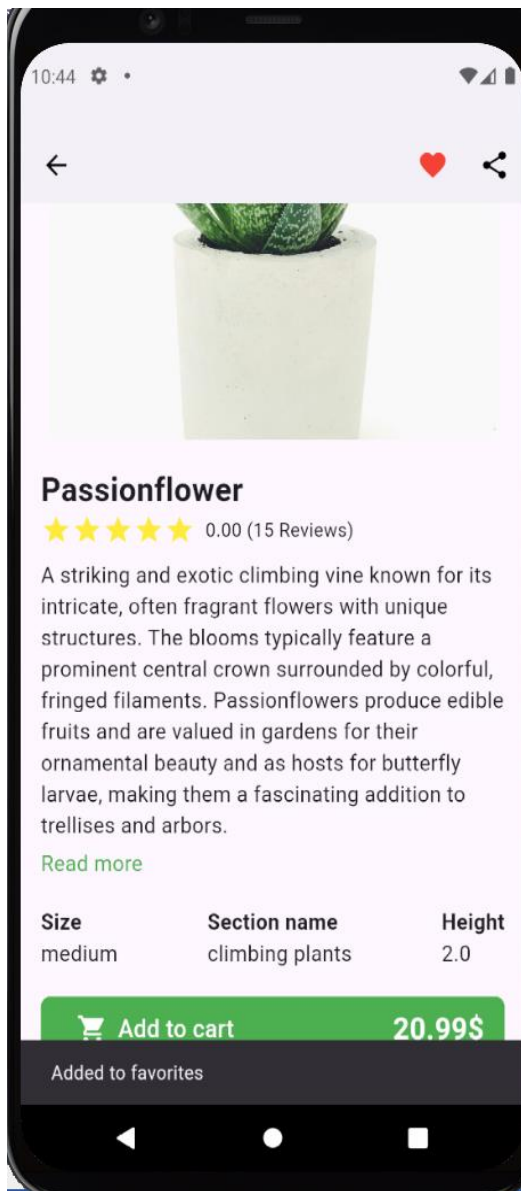


Figure 34:Success add to favorite

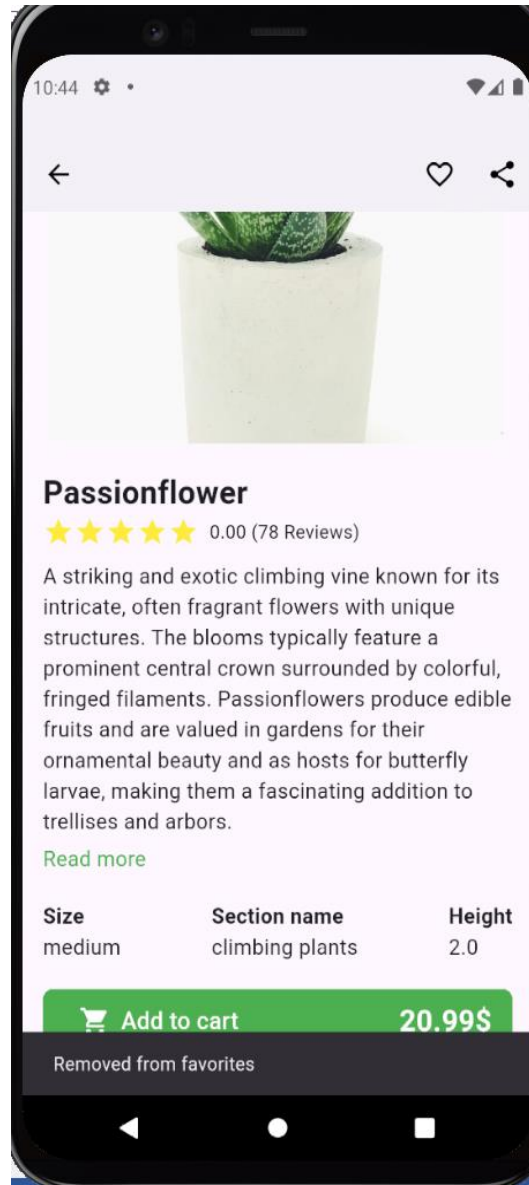


Figure35 : Remove from favorite

❖ Shopping cart screen:

user can press on cart icon exist in 'home screen' to see all plants added to his shopping cart as shown in Figure 36.

Also user can increase quantity for each plant by click on plus icon and can decrease it by click on minus icon.

If user try to increase quantity more than what in stock Then application will print to user message to show Failed increase quantity as shown in Figure 37.

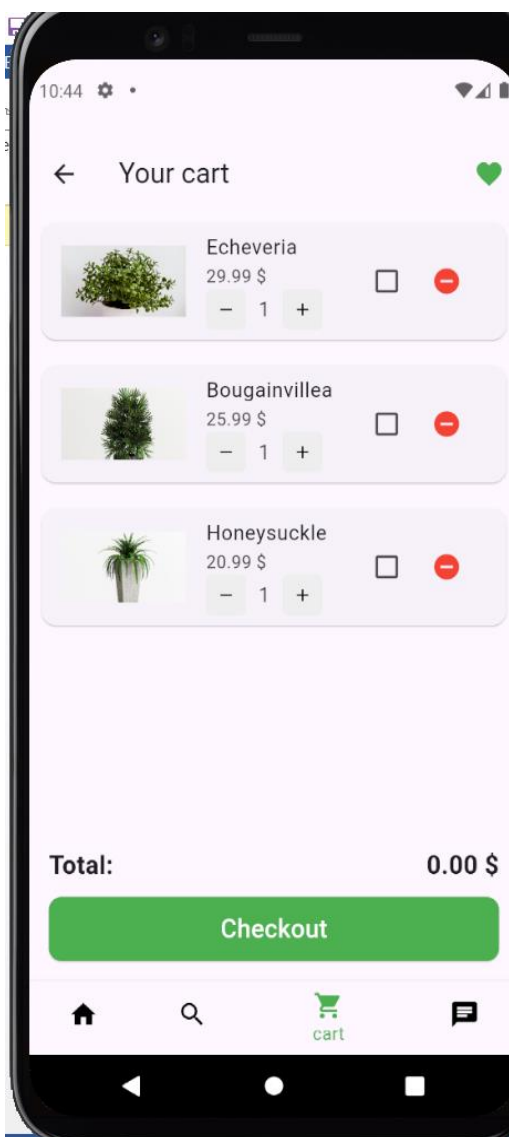


Figure 36: Shopping cart screen

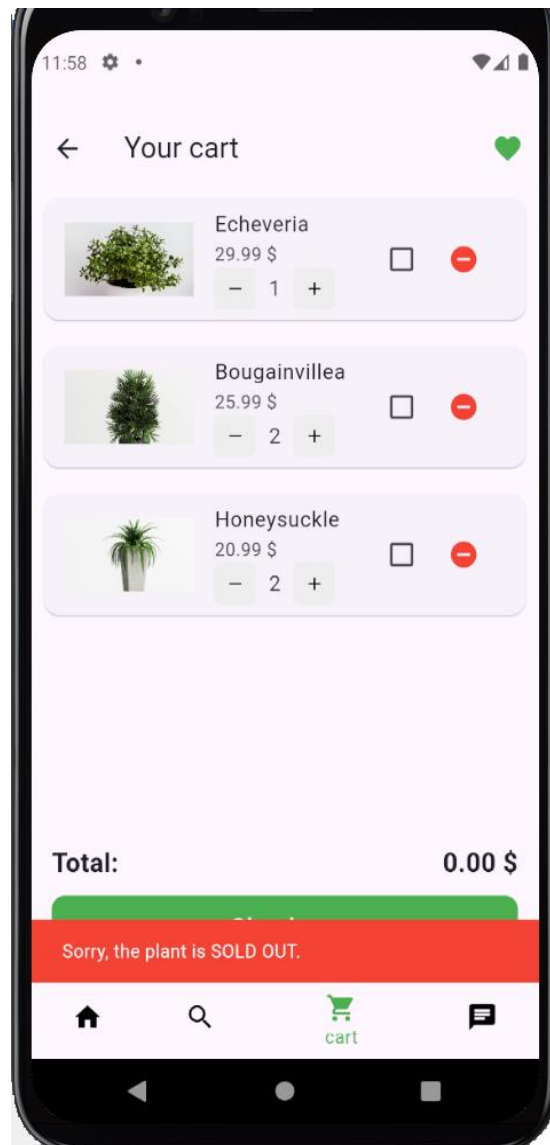


Figure 37: SOLD OUT

user can select the plants he want to buy by placing a checkbox then the total price will display automatically as shown in Figure 38.

Also user can remove plant by press on icon remove Then application will print to user message to show success remove from Shopping cart as shown in Figure 39.

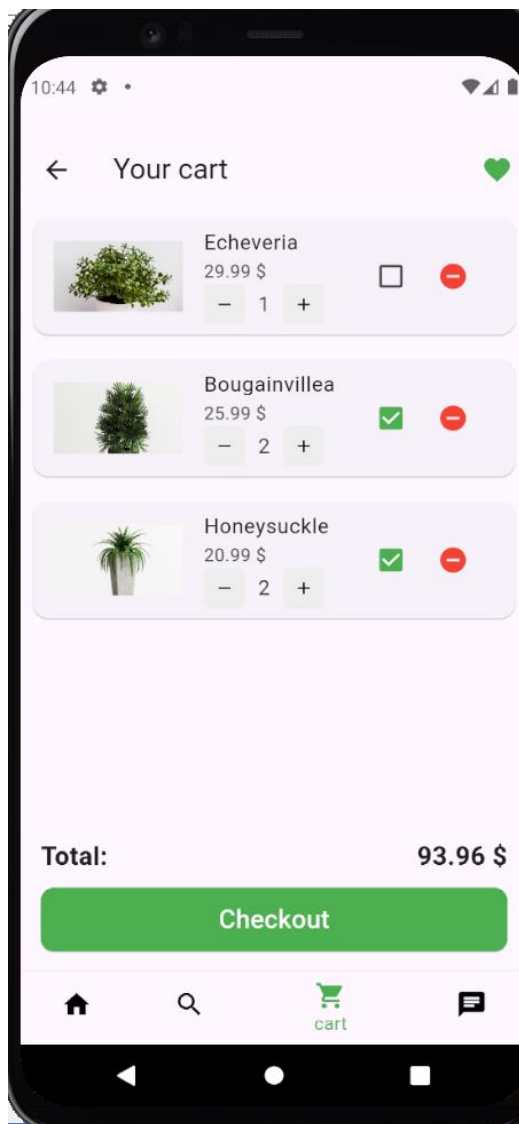


Figure 38:Shopping cart total price

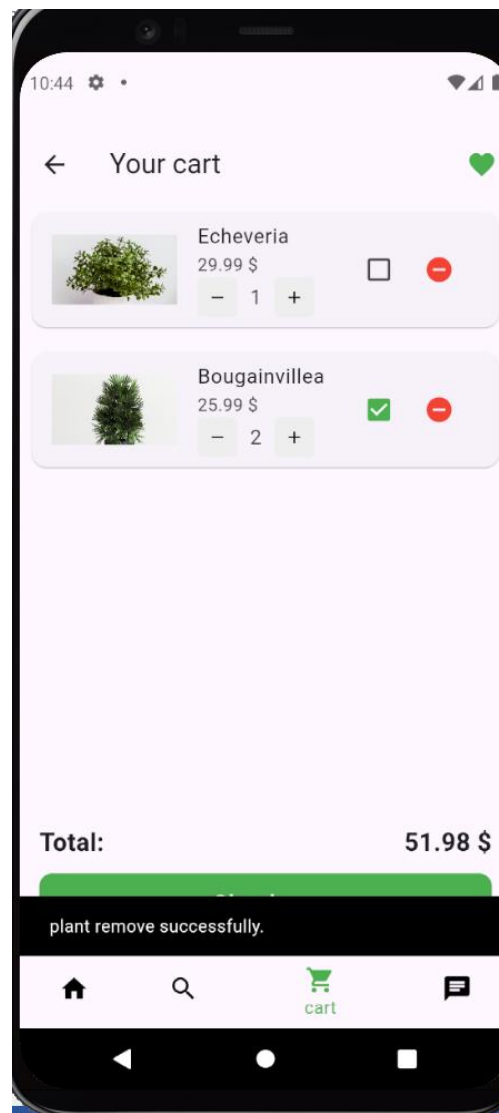


Figure39 :success remove from shopping cart

❖ Wishlist screen:

User can see all plants he added to his wishlist by click on love icon as shown in Figure 40.

after click on this icon 'Wishlist screen' will appear as shown in Figure 41.

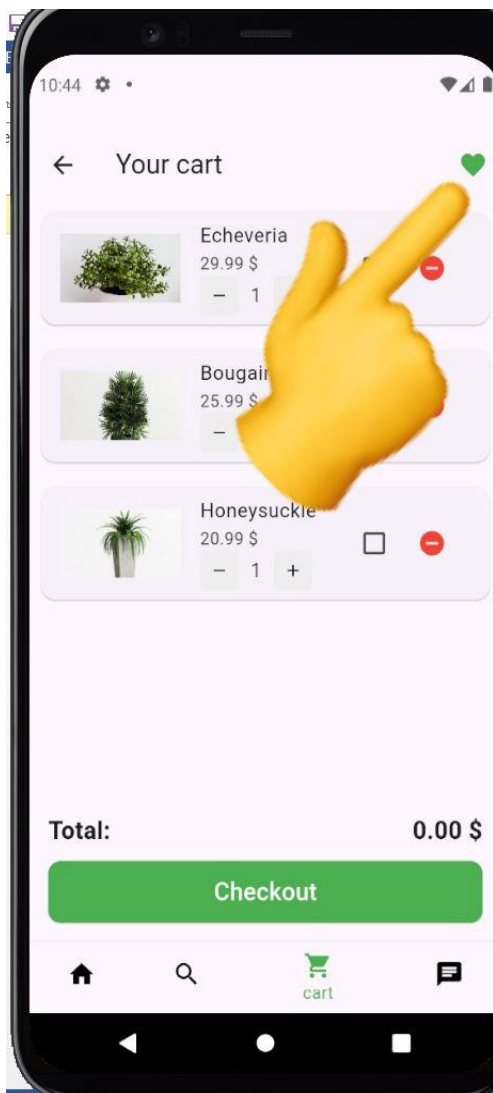


Figure 40:wishlist icon

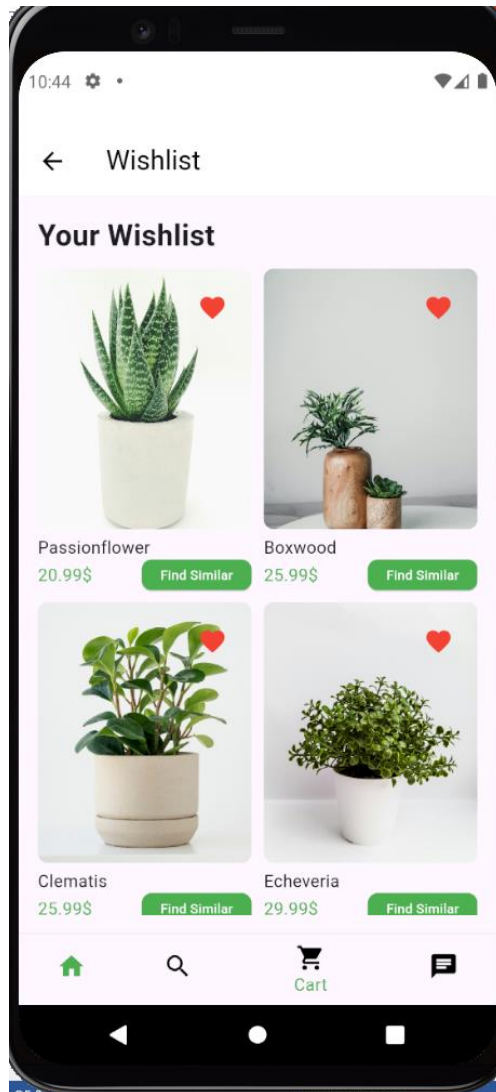


Figure 41:wishlist screen

❖ Similar Plant screen:

user can see all similar plant for each plant in his wishlist by press on 'Find Similar' button exist under each plant in wishlist as shown in Figure 41.

After user press on 'Find Similar' then 'Find Similar screen' will display as shown in Figure 42.

Where Similar plant will be plants with same section belong and same size for the selected plant.

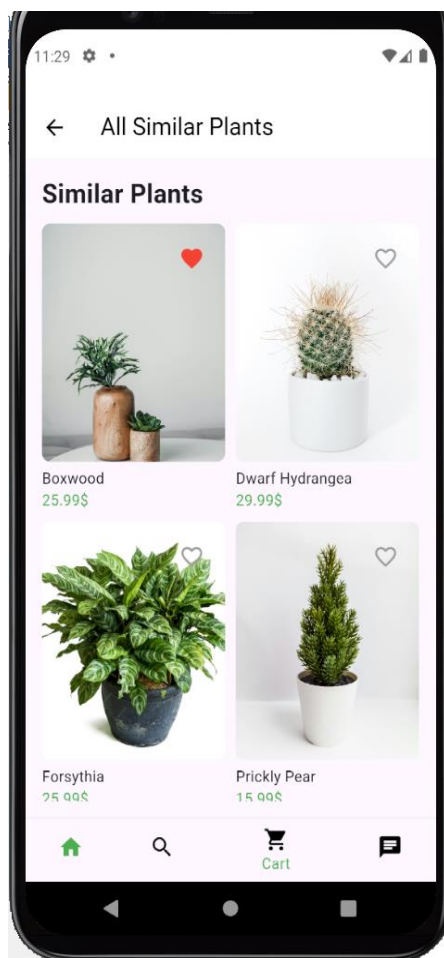


Figure 42:similar plant screen

❖ Shipping Address screen:

After user select the plants that he need to buy then he can click on 'Checkout' button as shown in Figure 43.

After that 'shipping Address screen' will appear with last buying information added by this user as shown in Figure 44. also user can change all this information as he need for example it can change the location by write it by his hand or he can use google map by click on map icon as shown in next page.

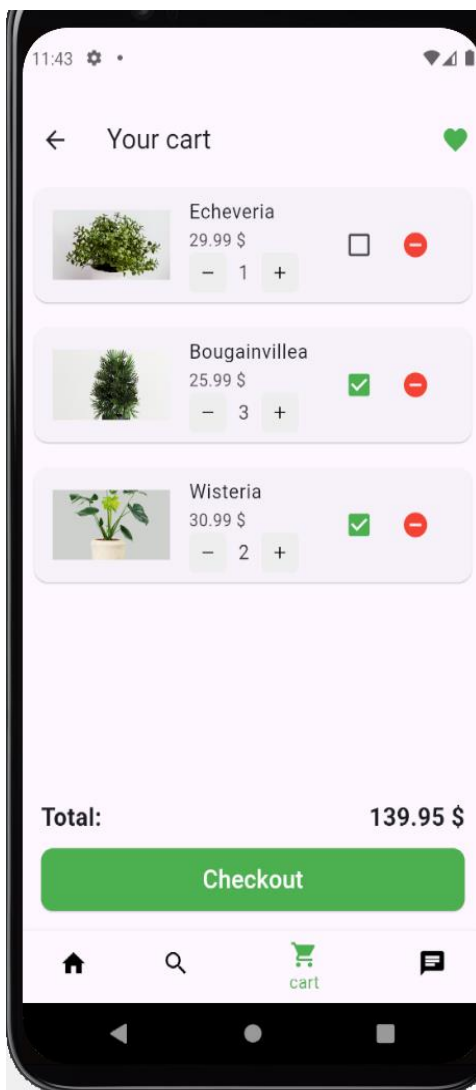


Figure 43:shopping cart check out

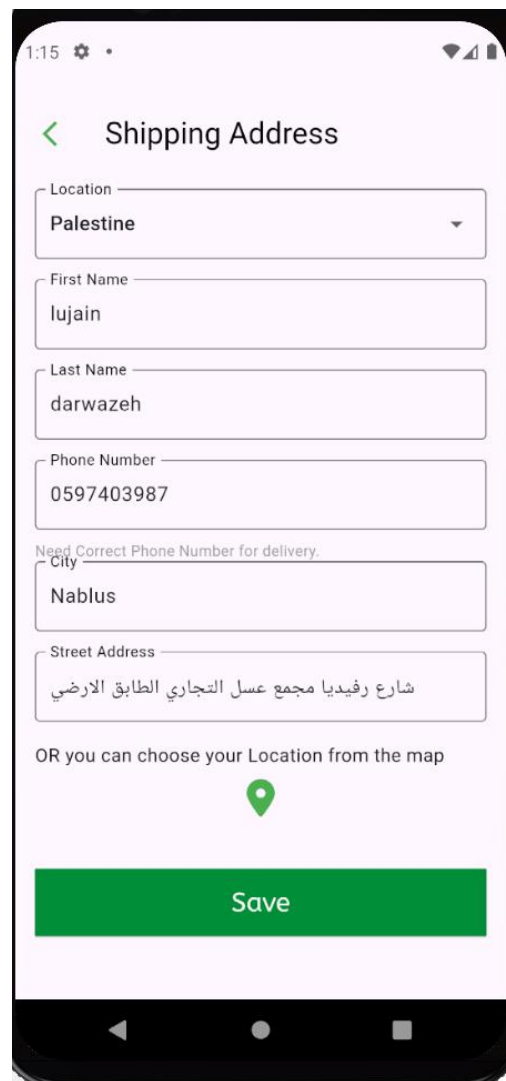


Figure 44:shipping Address screen

❖ Map Select location screen:

When user click on map icon exist in 'Shipping Address screen' then 'map select location screen' will open to allow user to select location shown in Figure 45.

user must select location and then press on 'done', If user try to finish process without select location by press on done Then application will print to user message as shown in Figure 46.

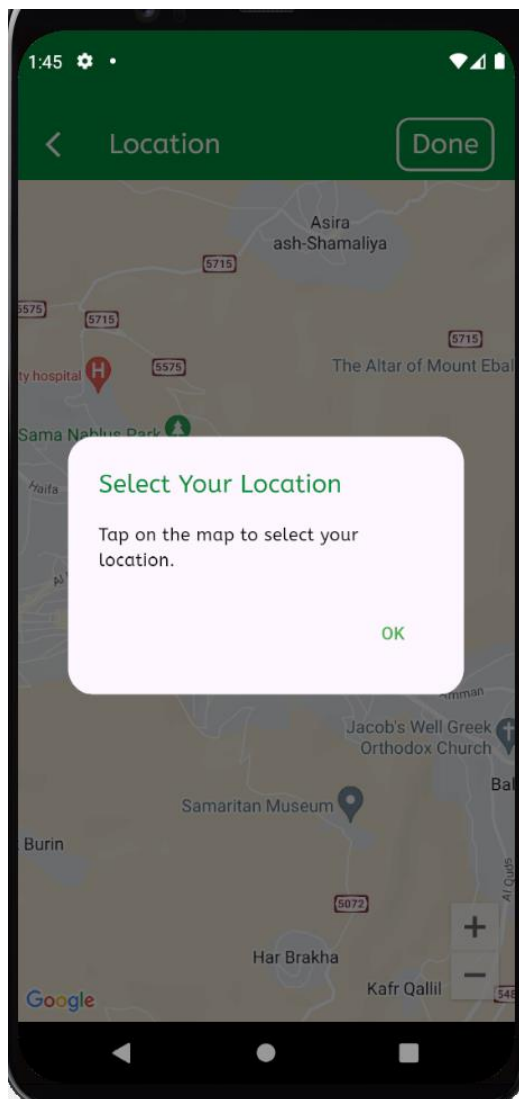


Figure 45:select location screen

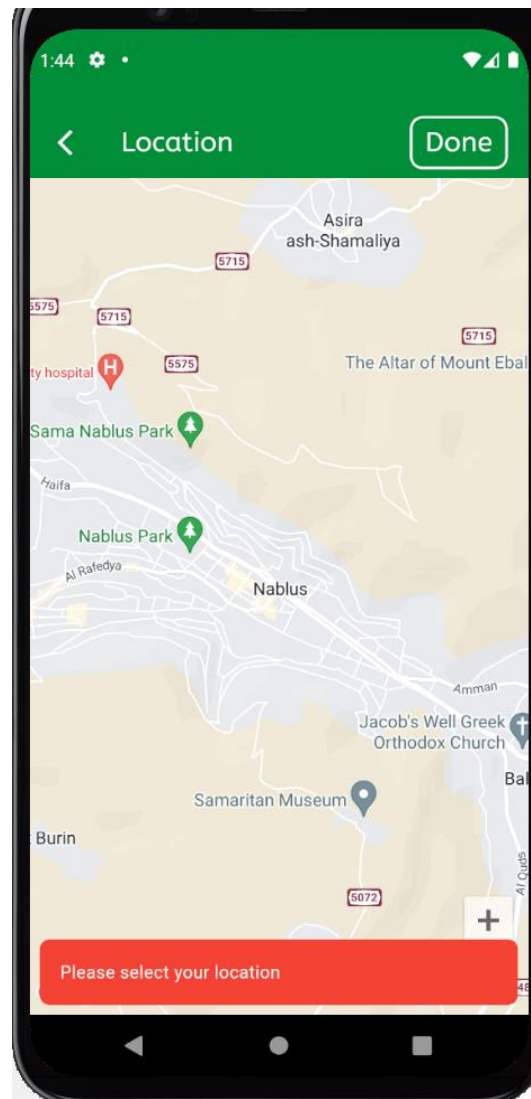


Figure 46:try to finish process without select location

Now After user selected the location he can press on save button exist in 'shipping Address screen' to continue the order process..

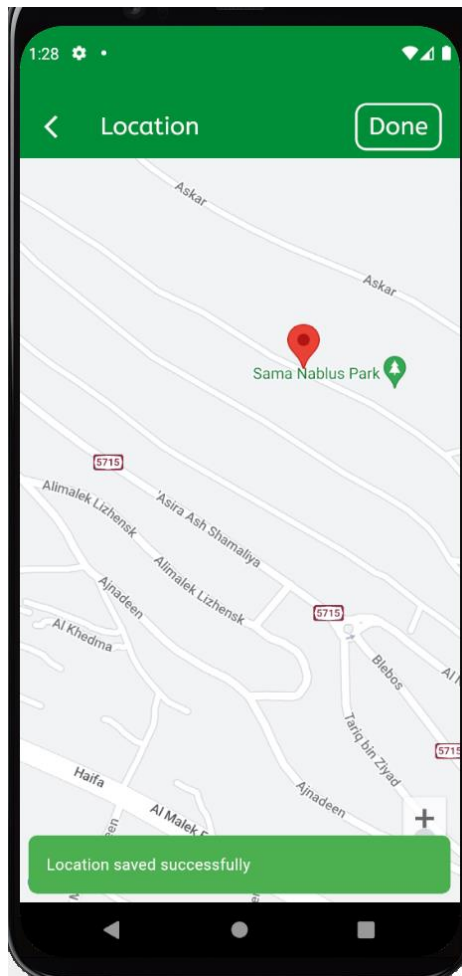


Figure 47: selected location saved

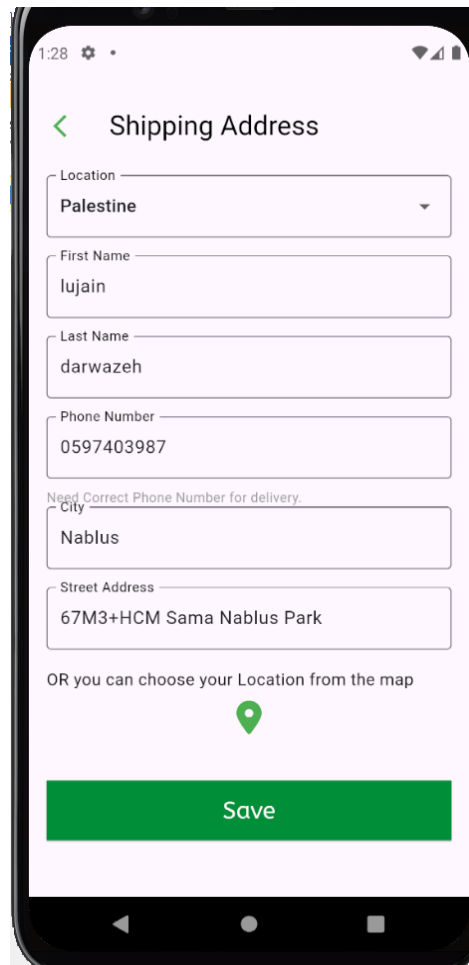


Figure 48: shipping address new

❖ Option screen:

After press on save button 'option screen' will appear to allow user to select Delivery option and Payment method as shown in Figure 49.

In our application we have two Delivery option :Free pickup point or our delivery system .

Also we have two payment method :using cash or using card.

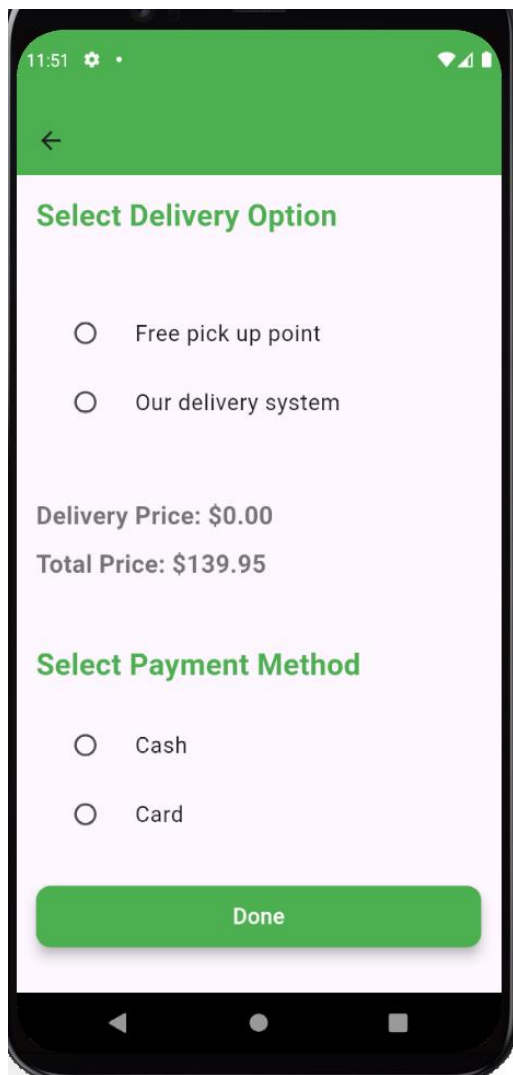


Figure 49:option screen

if user select Free pickup point as Delivery option then Delivery Price equal to zero and Total Price will be the price of plants only as shown in Figure 50.

But if user select our delivery system as Delivery option then Delivery Price equal to 20\$ and Total Price will be the price of plants with add delivery price as shown in Figure 51.

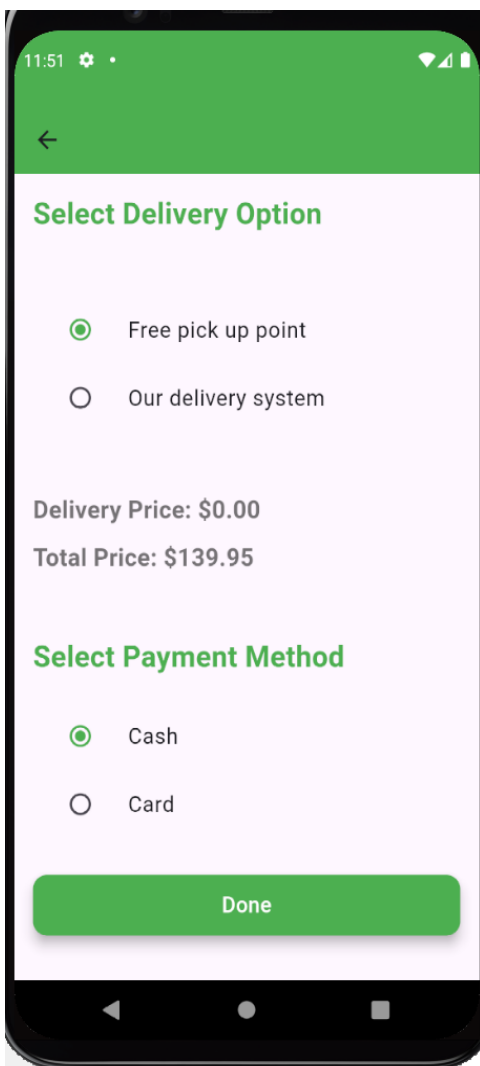


Figure 50:Free pick up option

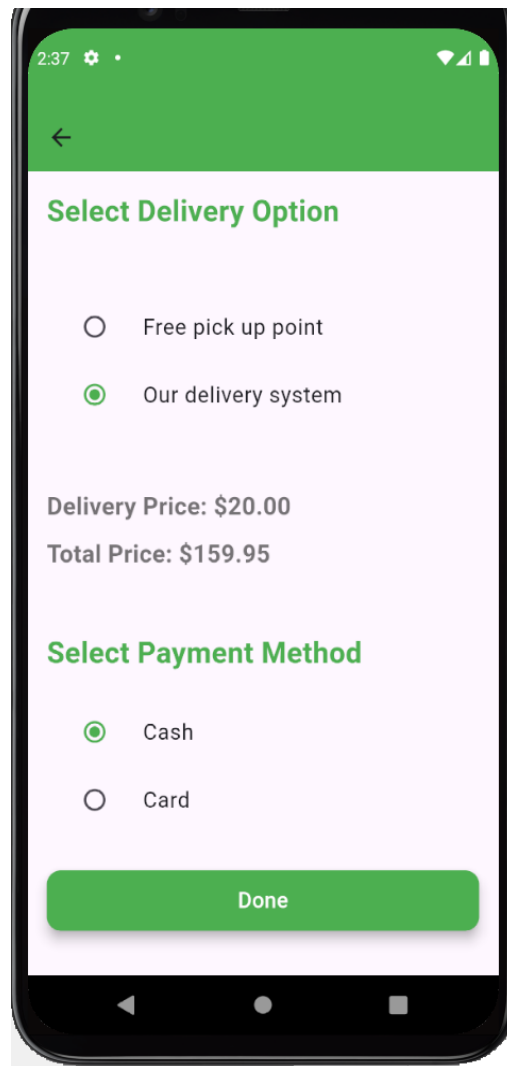


Figure 51:our delivery system option

If user select Free pickup point as Delivery option and cash as payment method then press 'Done' as shown in Figure 52. The Purchased plants will delete from shopping cart as shown in Figure 53.

then our application will send two notification to this user first one is to tell user about our free pickup point location and the second is about ask user to Rate the Purchased plants as we will explain next page .

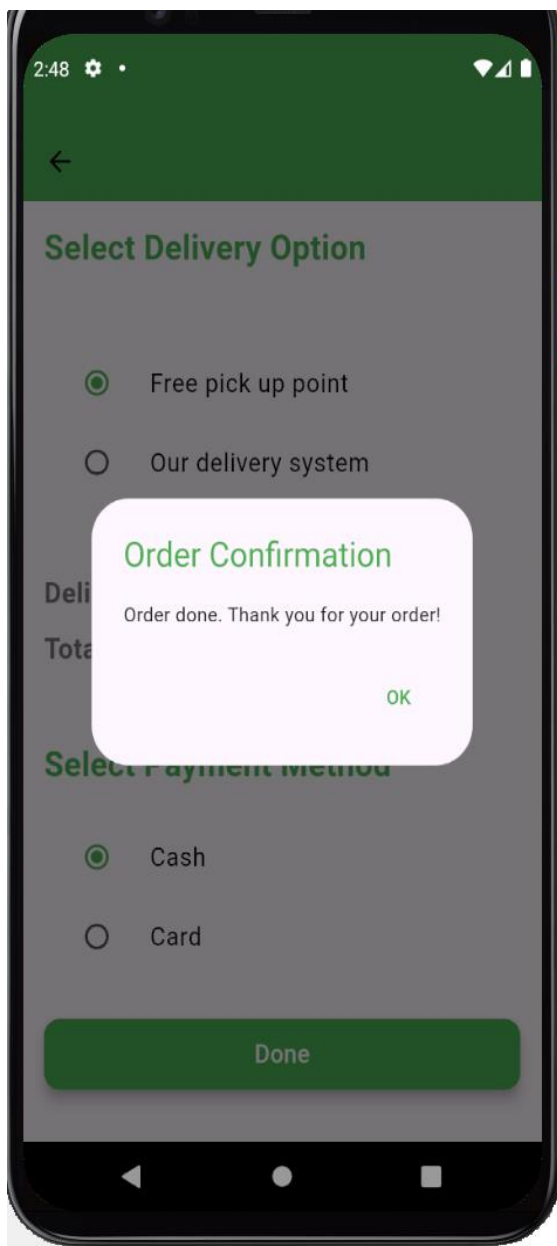


Figure 52:order confirmation



Figure53 :delete from cart after order

If user press on notification icon exist in home page he can see all his notifications we will explain it later.

In case user select Free pickup point as Delivery option and cash as payment method ,the first notification have title 'Free pick up point' as shown in Figure 54. if user click on this notification it will open map Free pick up point for plantpat as shown in Figure 55. where our Free pick up point located in Rafidia.

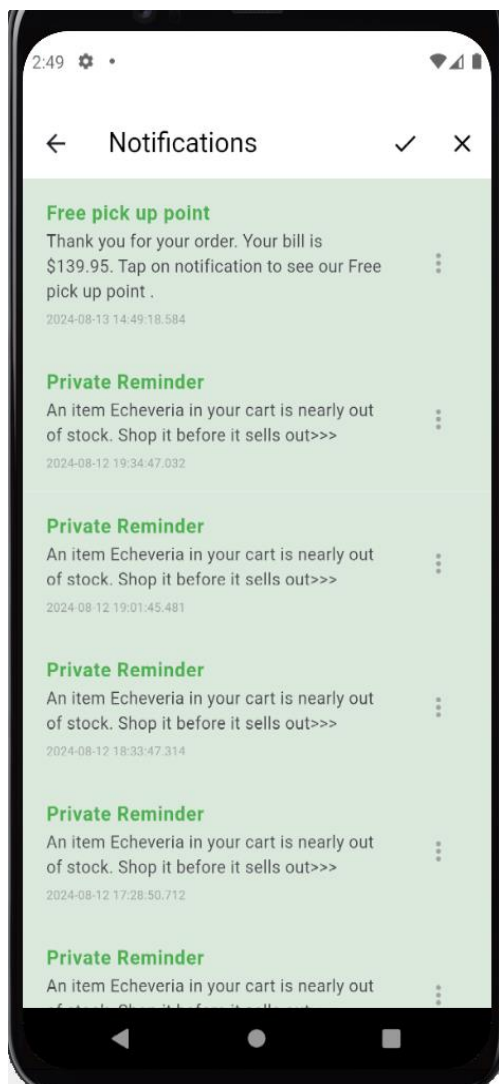


Figure 54:Free pick up point notification

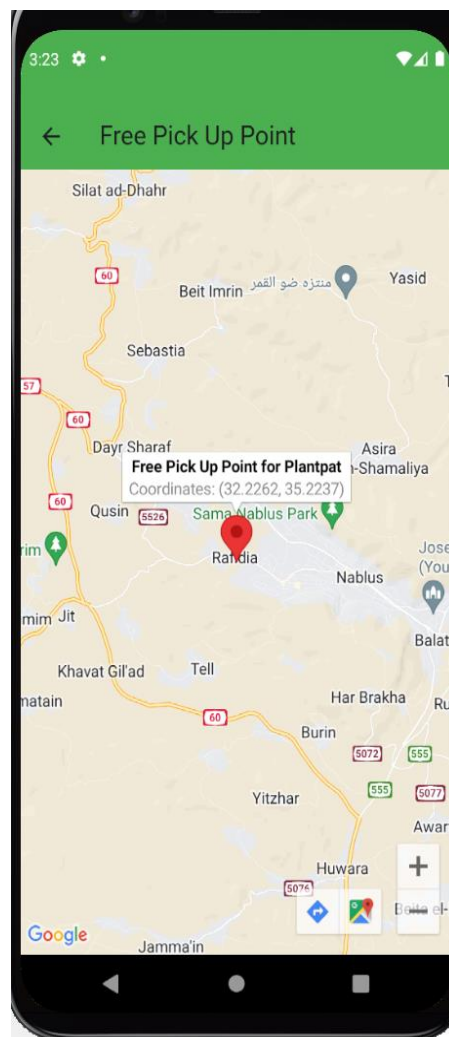


Figure55 :Free pick up point map

After user click on notification with title 'Free pick up point' then it will mark as read so its background color convert to white as shown in Figure 56.

The second notification for our case have title 'Rating product' as shown in Figure 56. when user click on this notification our application will open 'Plant Ratings screen' to allow user to Rate the Purchased plants as we will explain next page.

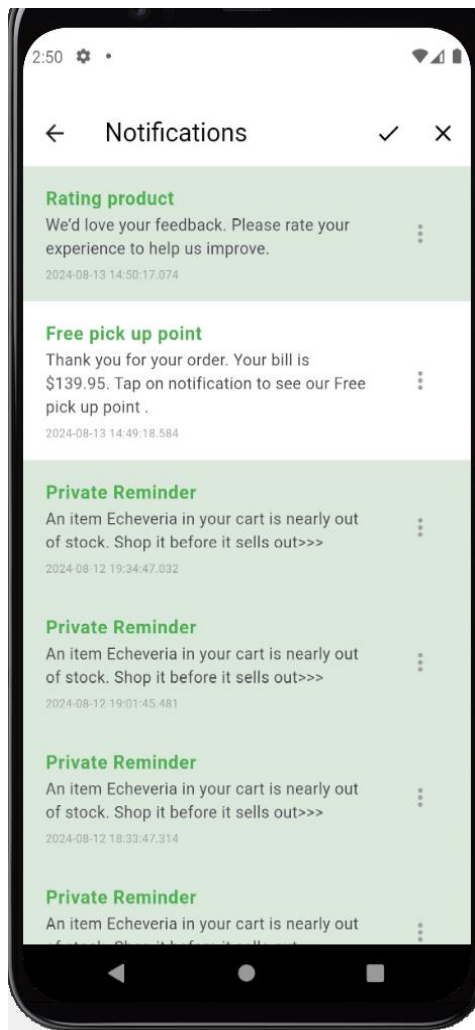


Figure 56: Rating product notification

❖ Plant Ratings screen:

this screen displayed image for each plant Purchased by this order as shown in Figure 57 .

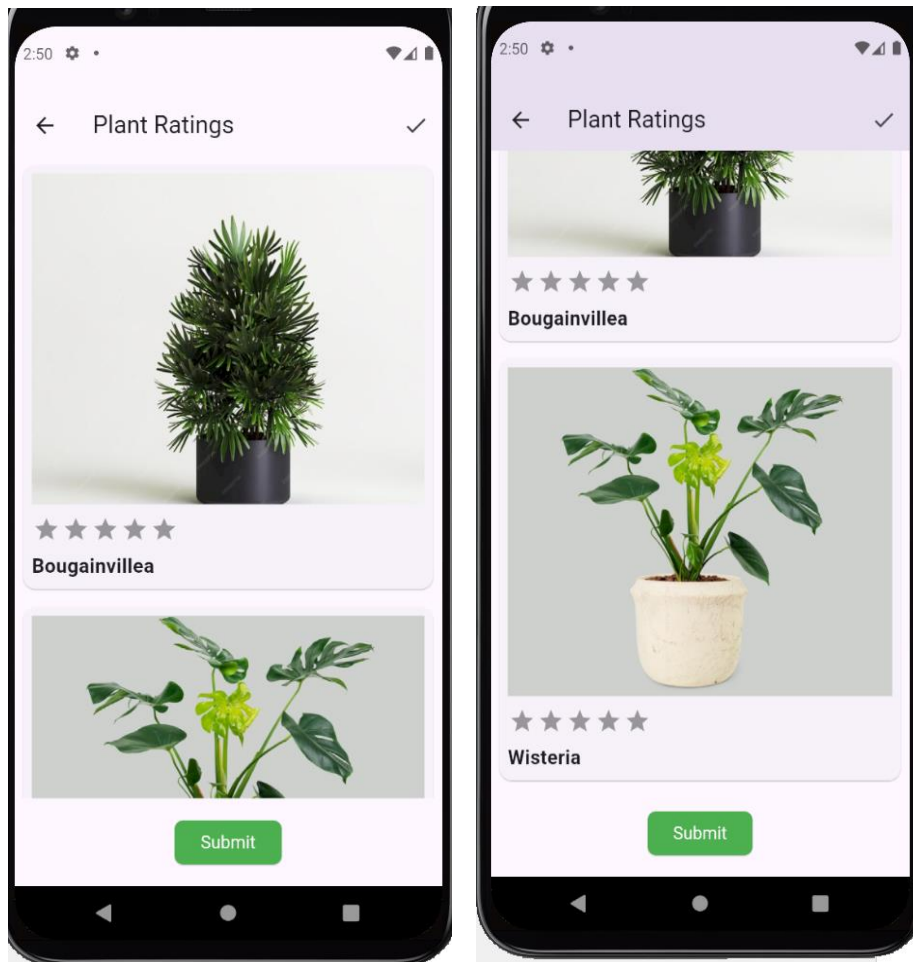


Figure 57:plant Rating screen

user can click on star icons that exist under each plant to Rate it as shown in Figure 58. and after he finish Rate he can click on 'Submit'.

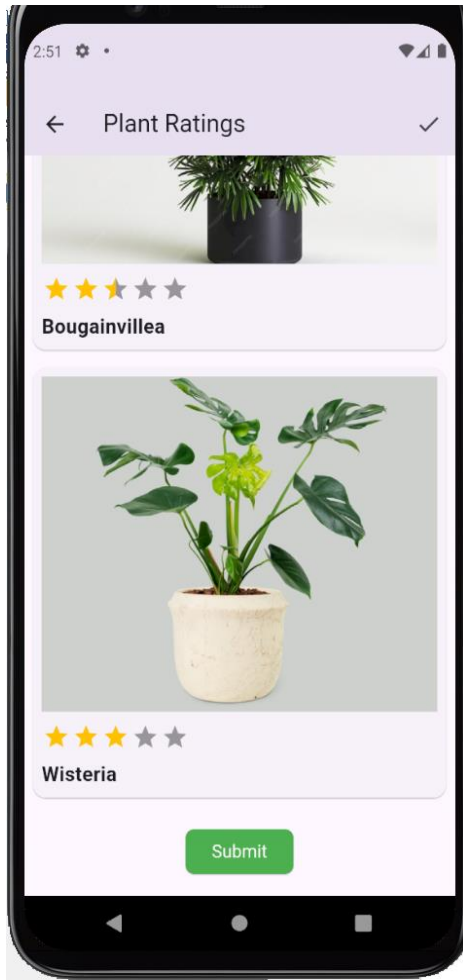


Figure 58:after plant Rating

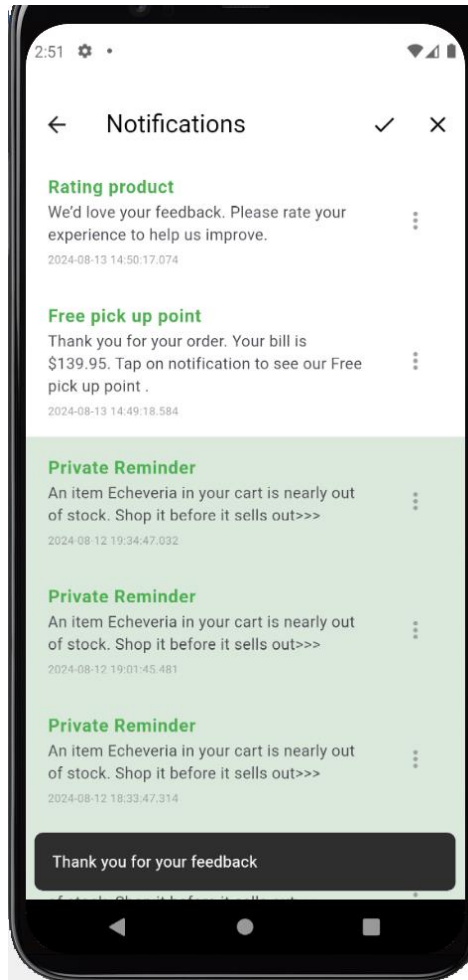


Figure59 :after submit

if user make order with select Free pickup point as Delivery option and card as payment method and press 'Done' as shown in Figure 60. Then user can pay by visa as shown in Figure 61.

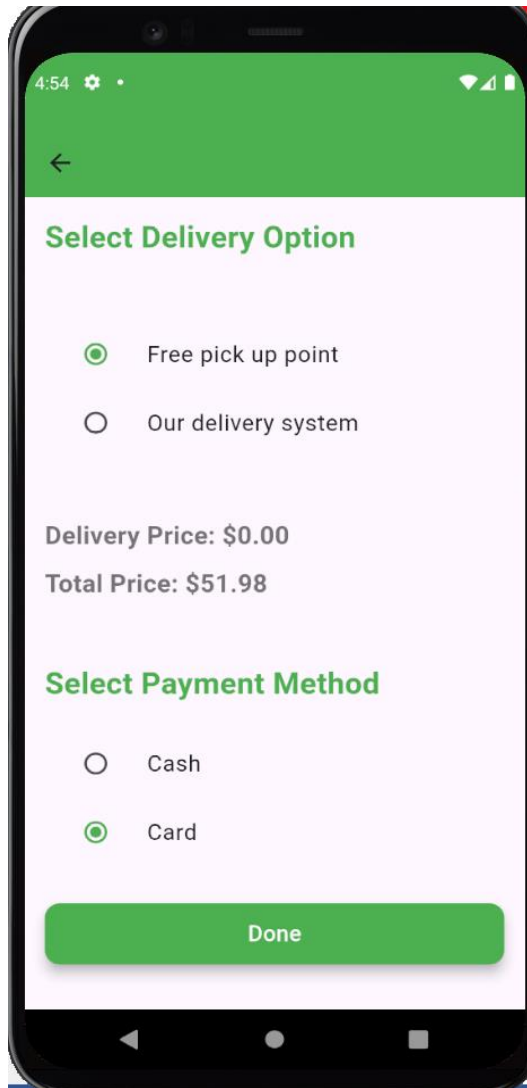


Figure 60:card option

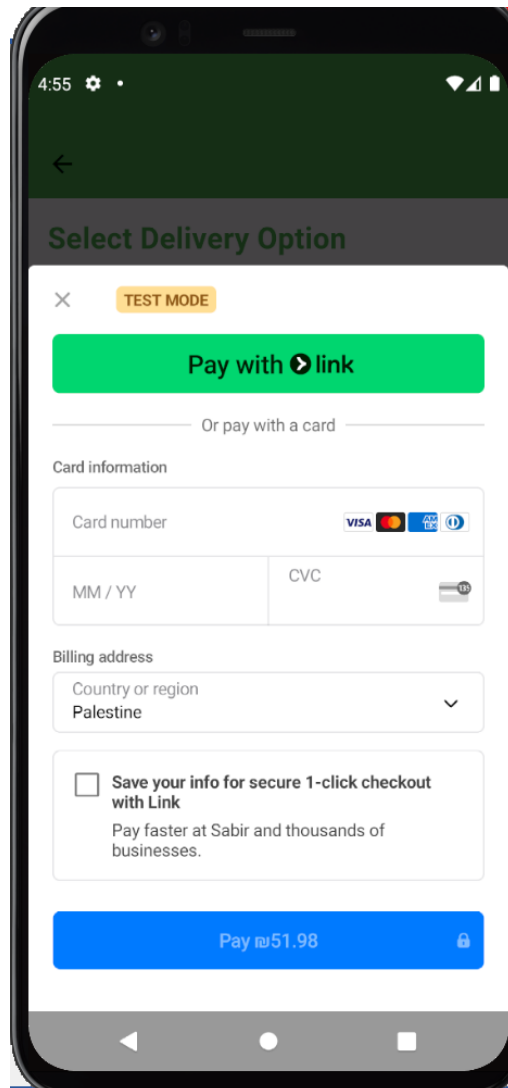


Figure 61:visa screen

user can enter details of visa and card number as shown in Figure 62.

Also in this case will arrive to user two notification as shown in Figure 63.

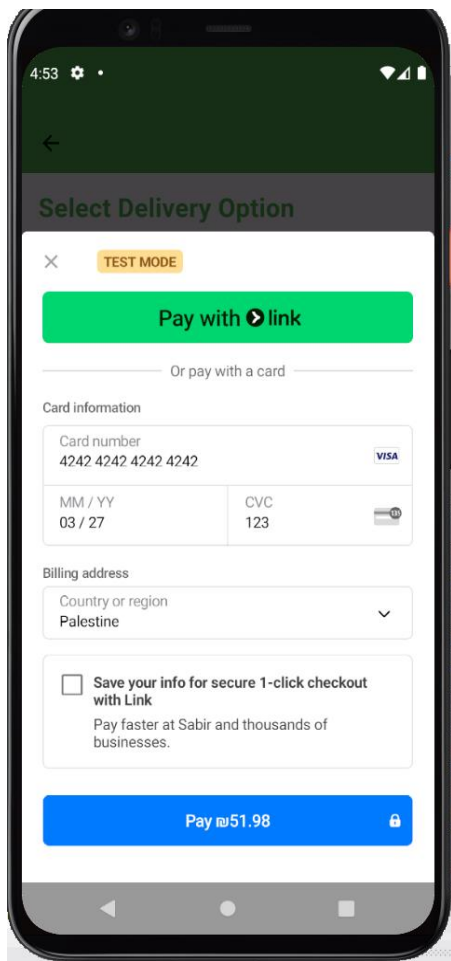


Figure 62:add visa information

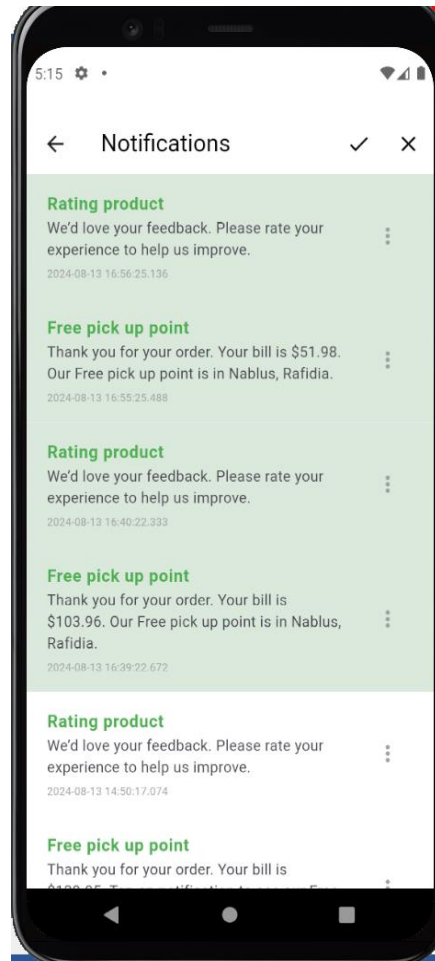


Figure 63:notification user

Amount	Payment method	Description	Customer	Date	Refunded date	Decline reason
₪51.98 ILS Succeeded ✓	VISA **** 4242	pi_3PnLB6B1hJuWT9ZM2BjvuXhg		Aug 13, 1:55 PM	—	—

Figure 64:payment done

If user select 'our delivery system' as Delivery option as shown in Figure 65.it will have two notification the first is to Rate the Purchased plants and the second is sent from delivery employee when he start delivering user order to allow user to track his order we will explain it later.

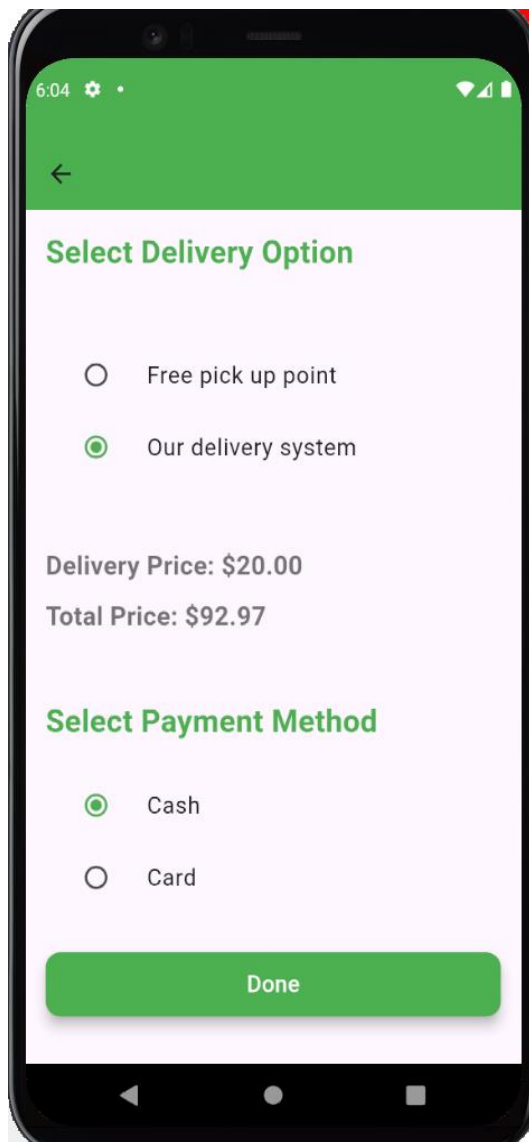


Figure 65:our delivery system option

❖ Chat screen:

user can click on chat icon exist in his home page to ask the professional (Technical support) and take advice about any plant in system. he can chat him use texting and insert image also as shown in Figure 66.



Figure 66:chat screen

❖ Settings screen:

user can click on setting icon exist in his home page and from setting screen he can do multi actions as shown in Figure 67:

- 🚦 Profile screen
- 🚦 Delete account
- 🚦 Change password screen
- 🚦 Log out
- 🚦 Multi language
- 🚦 About us

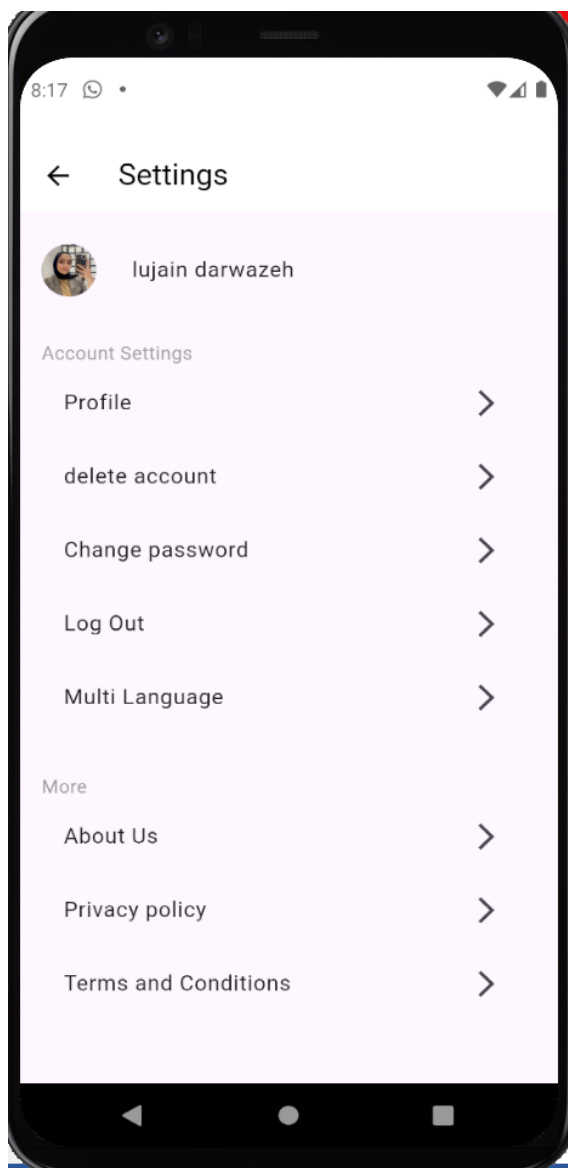


Figure 67:settings screen

❖ Edit profile screen:

if user click on 'profile' from 'settings screen' then he can see all his information as shown in Figure 68.

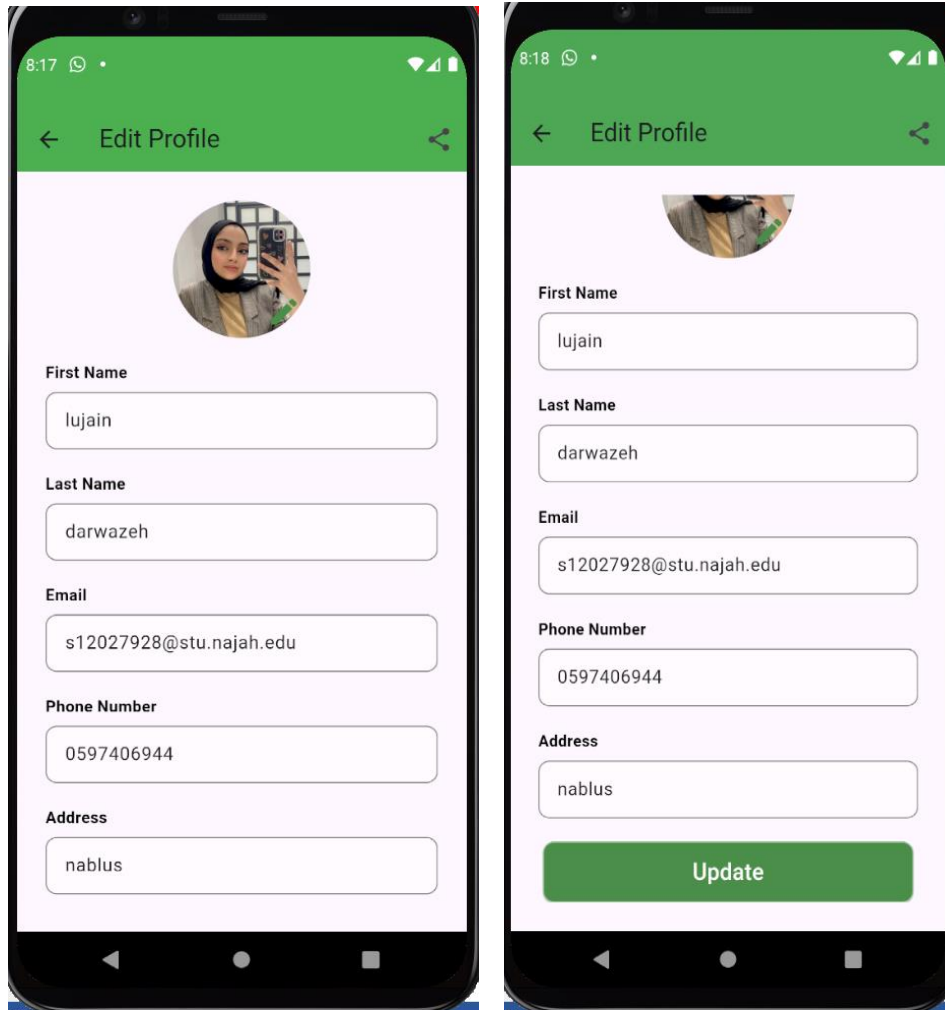


Figure 68: edit profile screen

user can edit any information then press on 'Update' Then application will print to user message to show success update profile as shown in Figure 69.

Also user can edit his profile image by click on pencil icon exist in 'Edit profile screen' and select image from gallery then the new image will appear as shown in Figure 70.

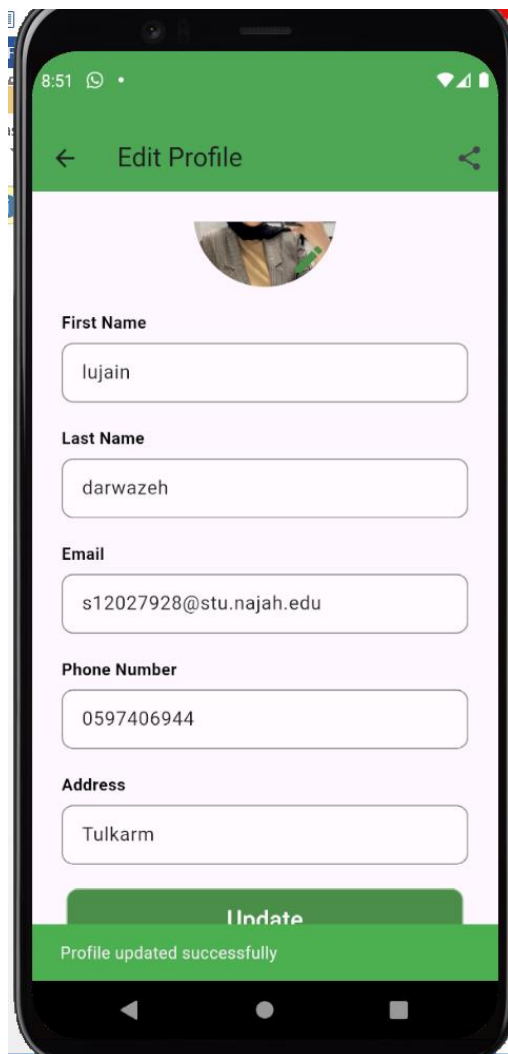


Figure 69:edit profile successfully

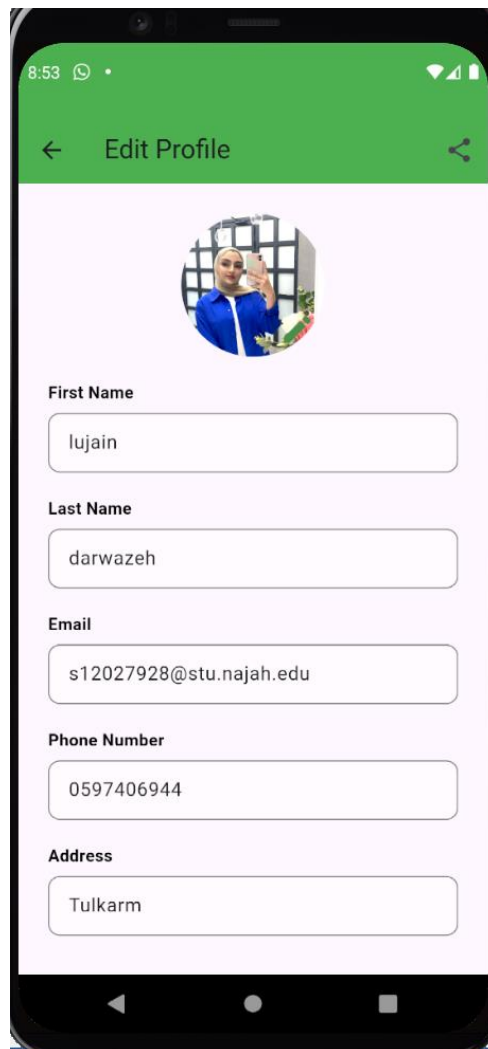


Figure70 :edit profile image successfully

if user click on 'delete account' from 'settings screen' then the application will display box to ask user if he sure to delete his account as shown in Figure 71.

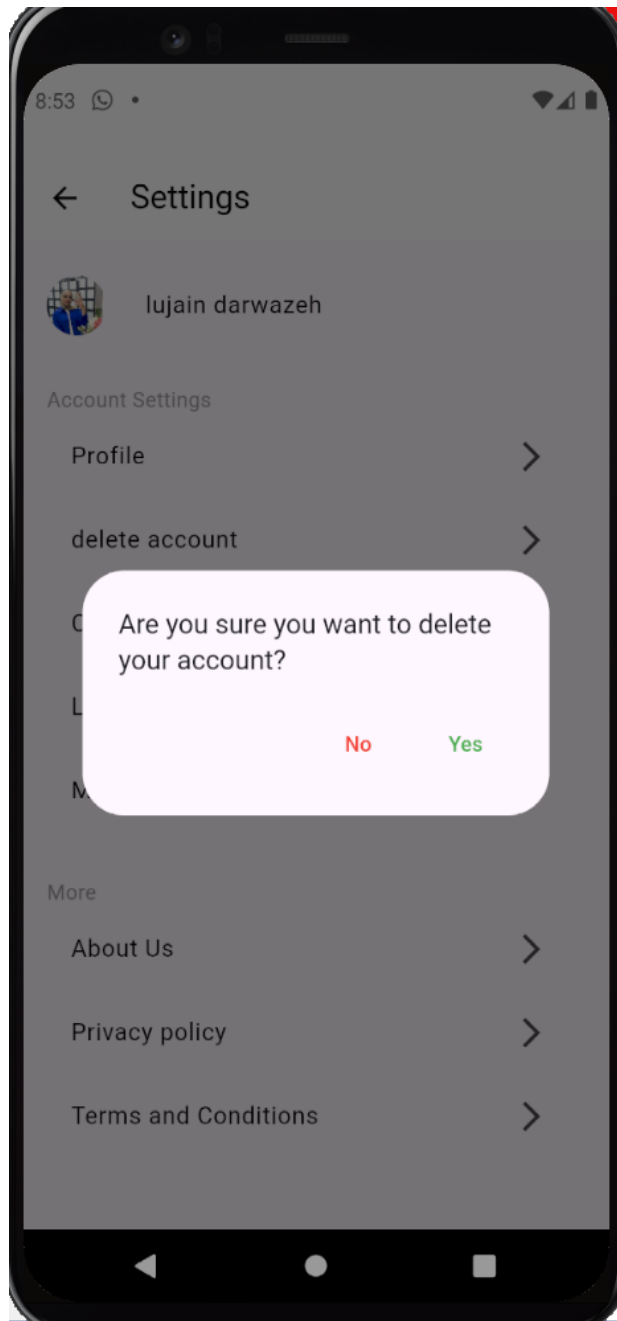


Figure 71:delete account

❖ **Change password screen:**

if user click on 'change password' from 'settings screen' then 'Change password screen' will appear as shown in Figure 72.

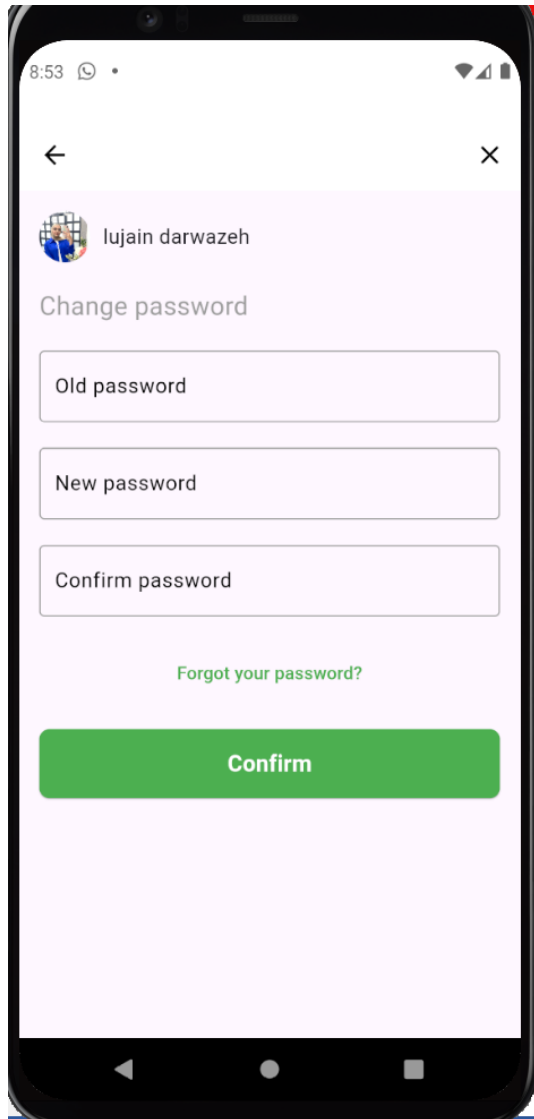


Figure 72:change password screen

user must firstly add his old passwod to allow him to change the password ,if old password is wrong Then application will print to user message as shown in Figure 73.to solve this issue user can click on link 'Forgot Your password' as we explain before then'Forgot Password screen' will appear as shown in Figure 12.

If password update successfully Then application will print to user message to show success update password as shown in Figure 75.

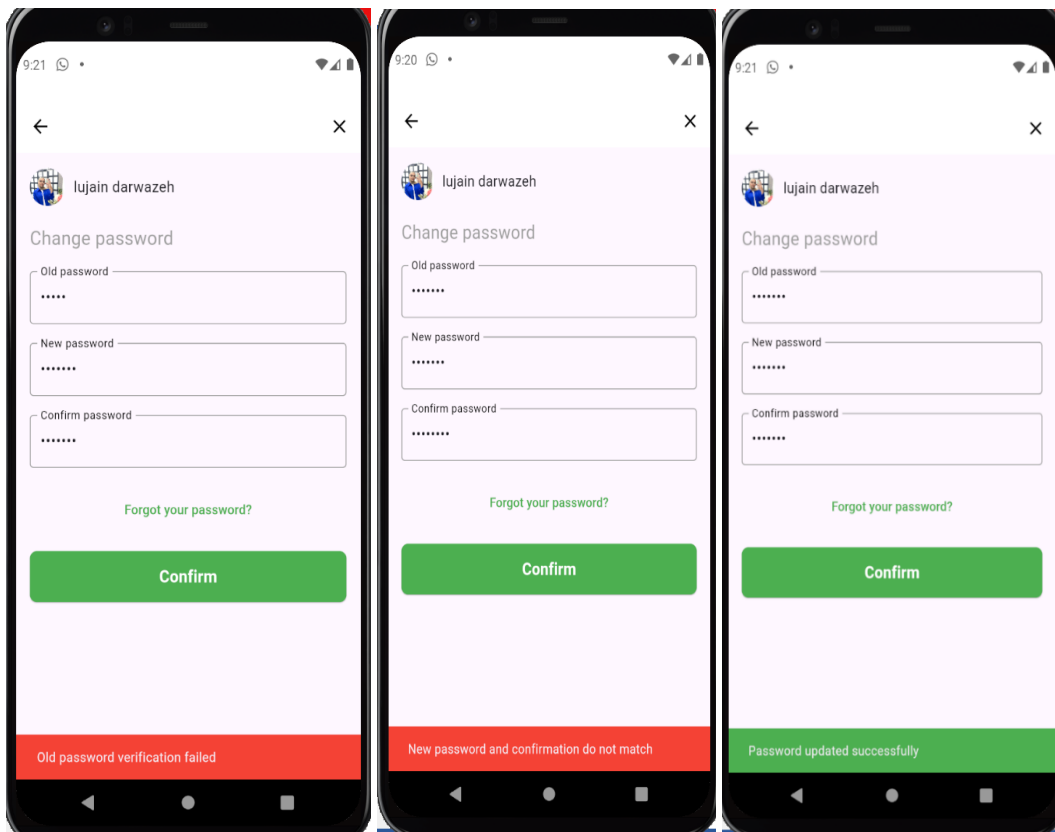


Figure73 :wrong old password

Figure 74:not match password

Figure 75:sucussfully update

❖ About us screen:

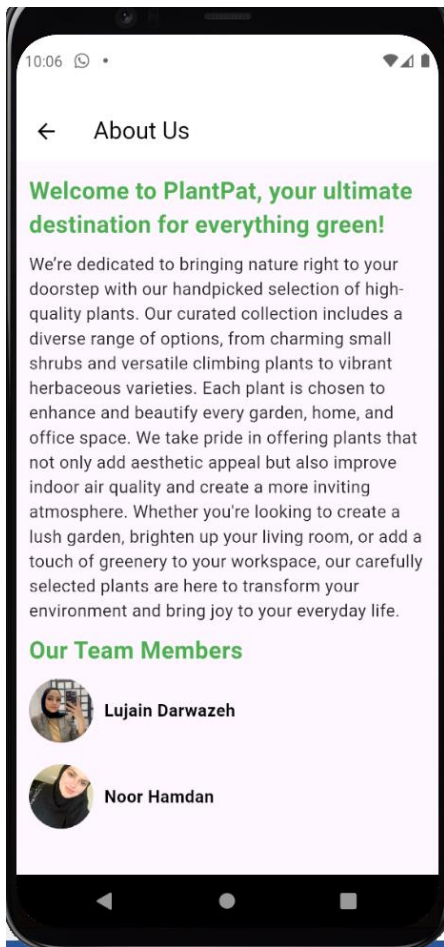


Figure 76:About us screen

❖ **Multi language screen:**

User can select language he need , our application support Arabic and English as shown in Figure 77.

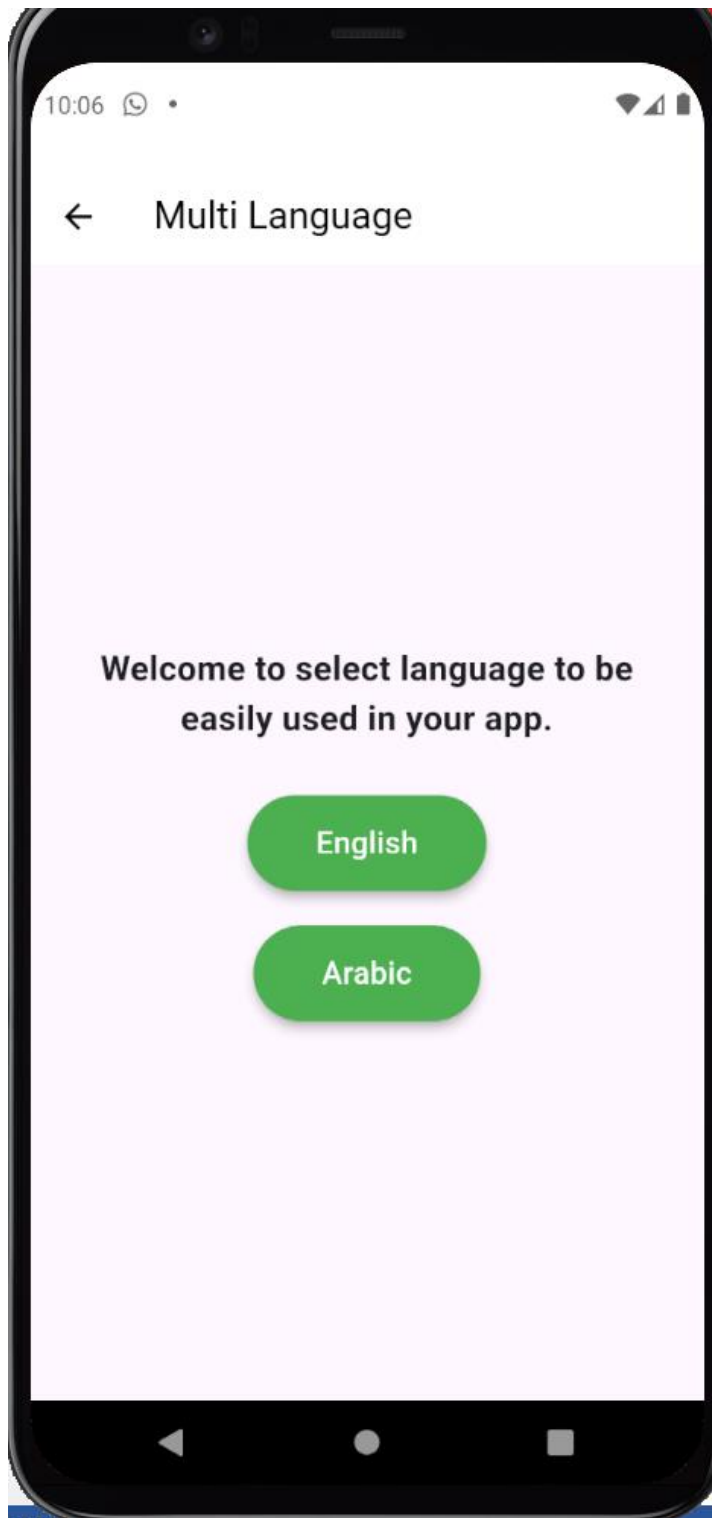
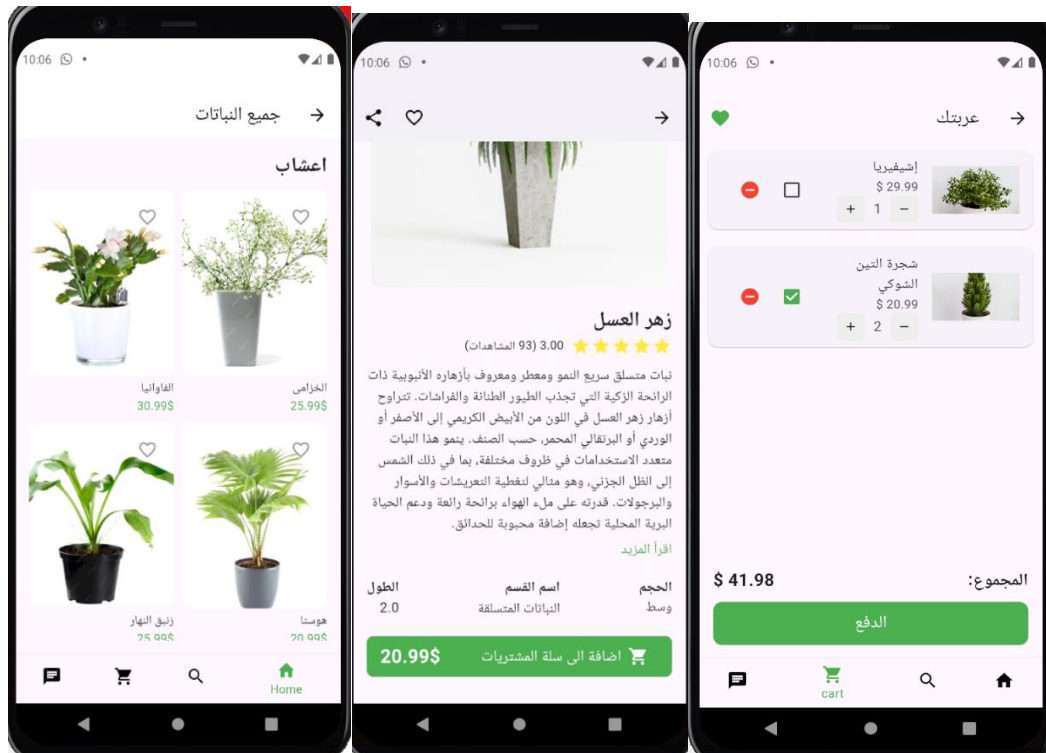
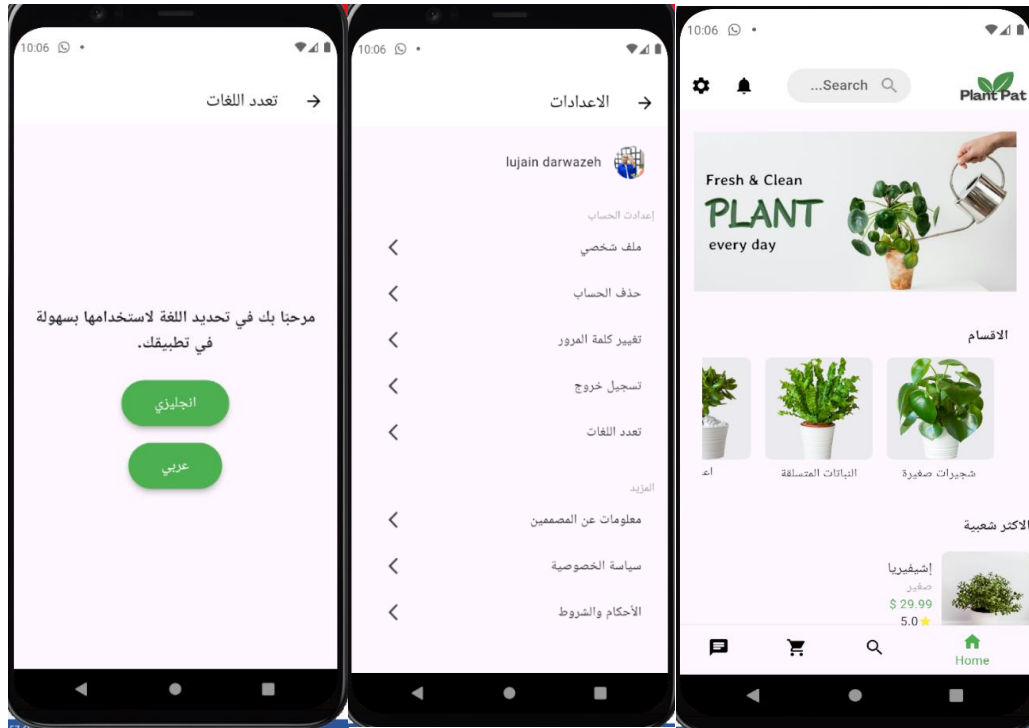
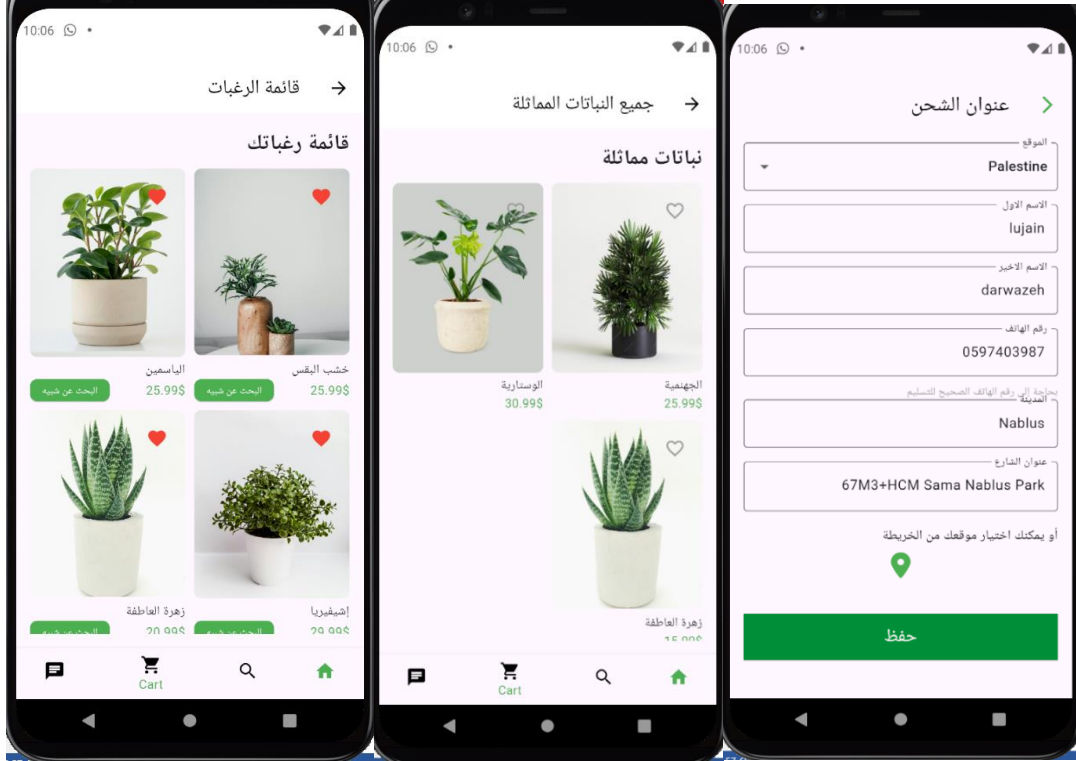


Figure 77:multi language screen

After user select 'Arabic' then our application will be as :





❖ **Notifications screen:**

user can click on notification icon exist in home page to see all notifications that reached to him as shown in Figure 79.

Also, Figure 78 shows examples of a notifications that reaches the user.

'private Reminder' :when user has plant in his cart that nearly becomes sold out this notification is a warning to the user to purchase it before it finished.

'New Collection' : when admin add new plant to the system and its depends on the interest of the user , if user interested with the added plant then our application will send to this user a notification to inform him that the new collection was added.

'Order Track' : when our Delivery employee start deliver the order it will send this notification to user to allow him to track his order.

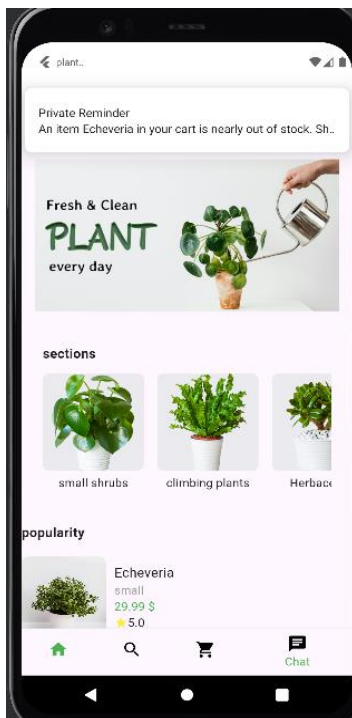


Figure78 :examples of notifications

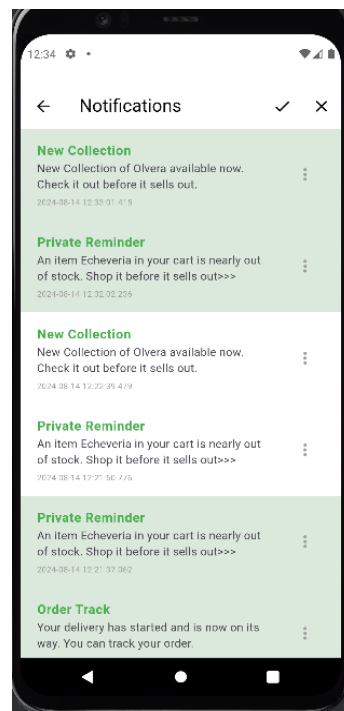
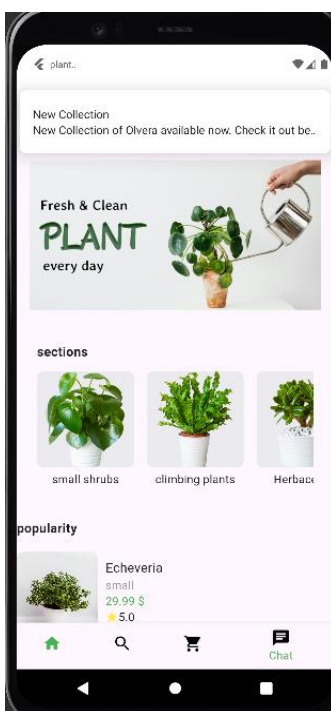


Figure 79:notifications screen

❖ Delivery employee Home screen:

In our application we have one Delivery employee, he can login with his account as shown in Figure 80 .

After our Delivery employee login then 'Delivery employee Home screen' will appear as shown in Figure 81.

in Delivery employee Home screen the delivery can go to multi screen like:

- Notifications screen to see all orders from users whose select 'our delivery system' as Delivery option.
- Settings screen to see and update his information.
- Chat screen to chat with admin .

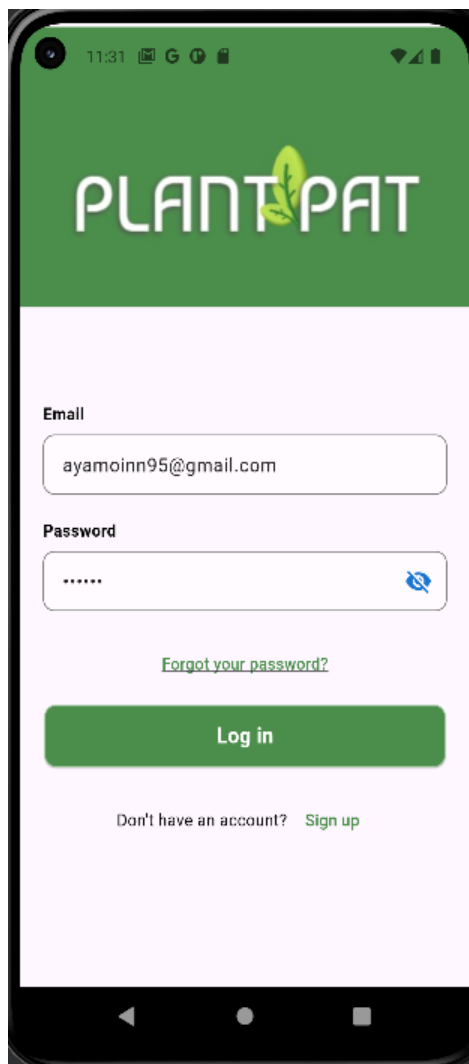


Figure 80:login delivery

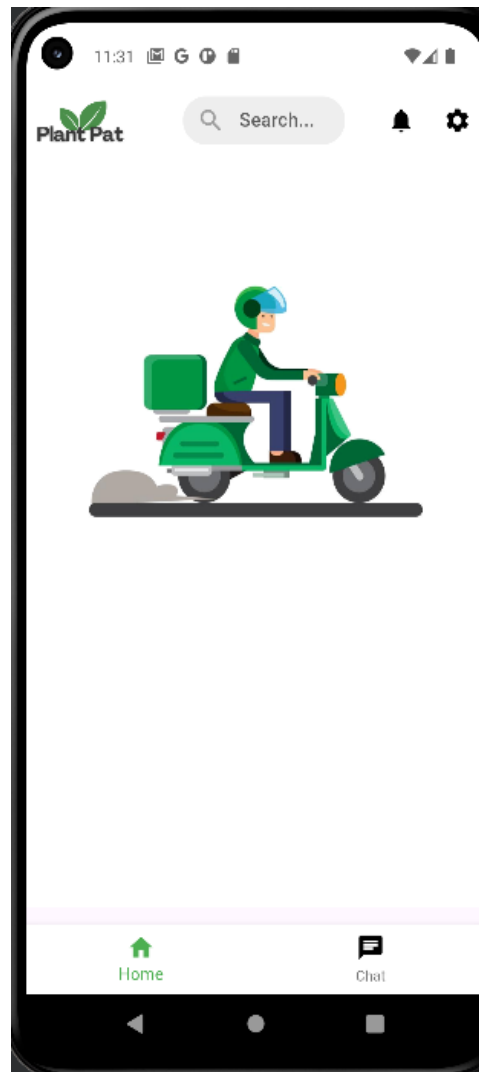


Figure 81:delivery home screen

❖ Delivery employee Notifications screen and order Details screen :

When delivery employee press on notification icon exist in his home page then 'Delivery employee Notifications screen' will appear as shown in Figure 82.

delivery employee can click on notification to see 'order details screen' as shown in Figure 83. Also Delivery employee can press on 'open map to start delivery' as we will explain in next page.

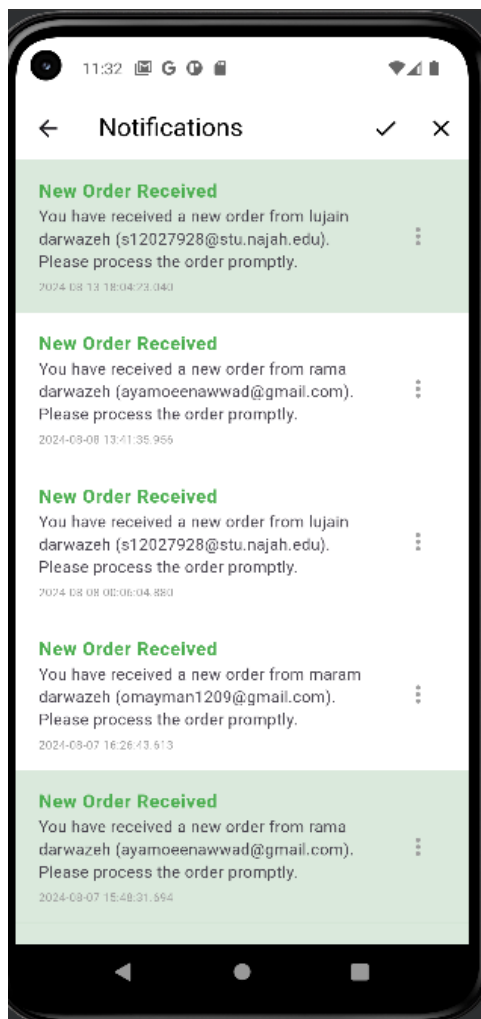


Figure 82:delivery employee notification

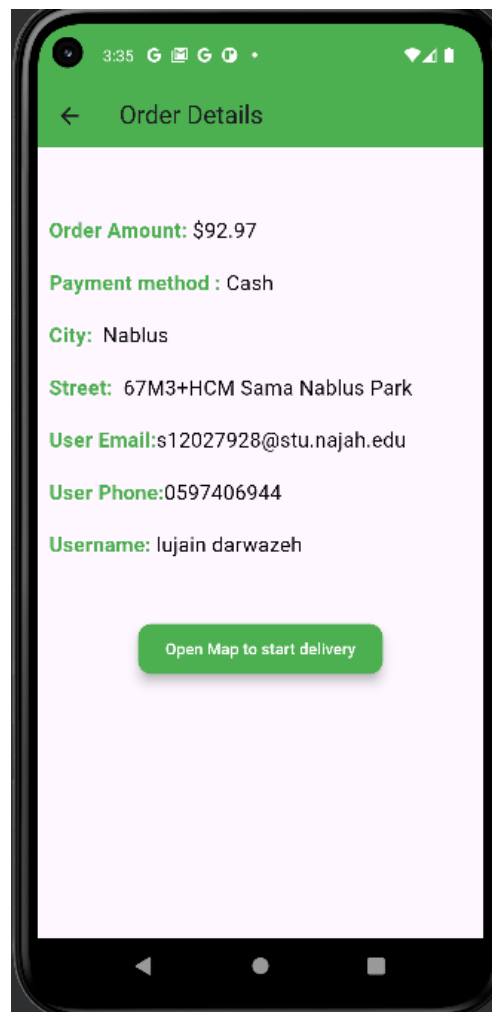


Figure83 :order details screen

❖ **Delivery employee map screen:**

When Delivery employee press on 'open map to start delivery' then 'google map screen' will appear to delivery as shown in Figure 84 ,and he can select his location 'green marker' ,also he can see the user location 'blue marker' as shown in Figure 85.

If delivery want to start deliver the order he can press on run icon, then notification will send to user with title 'Order Track' as shown in Figure 86.after that user can press on this notification to track his order as shown next page.

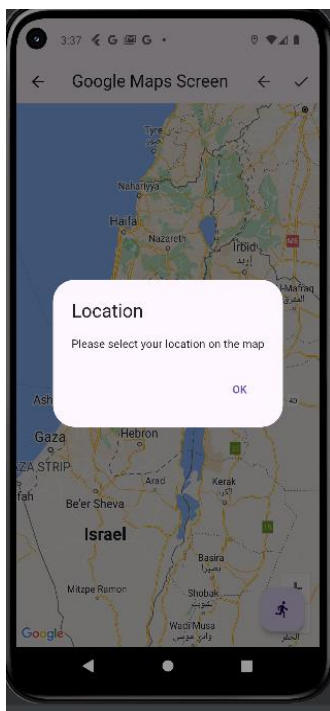


Figure84 :delivery map screen

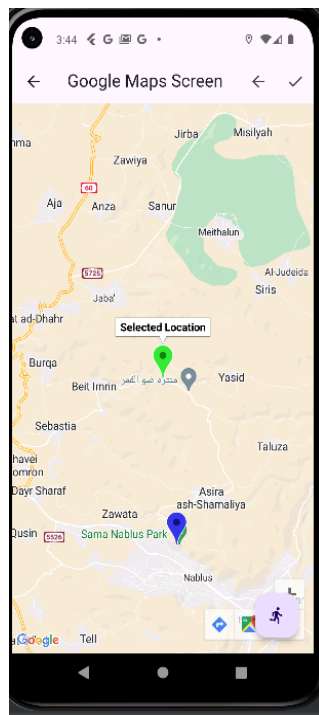


Figure 85:select location

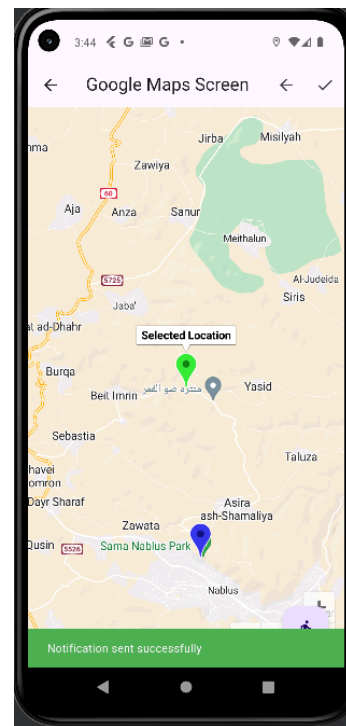


Figure 86:sent notification order track

❖ **User Track order screen :**

After sent notification to user with title 'Order Track' as shown in Figure 79. user can press on this notification then 'User Track order screen' will appear as shown in Figure 87.

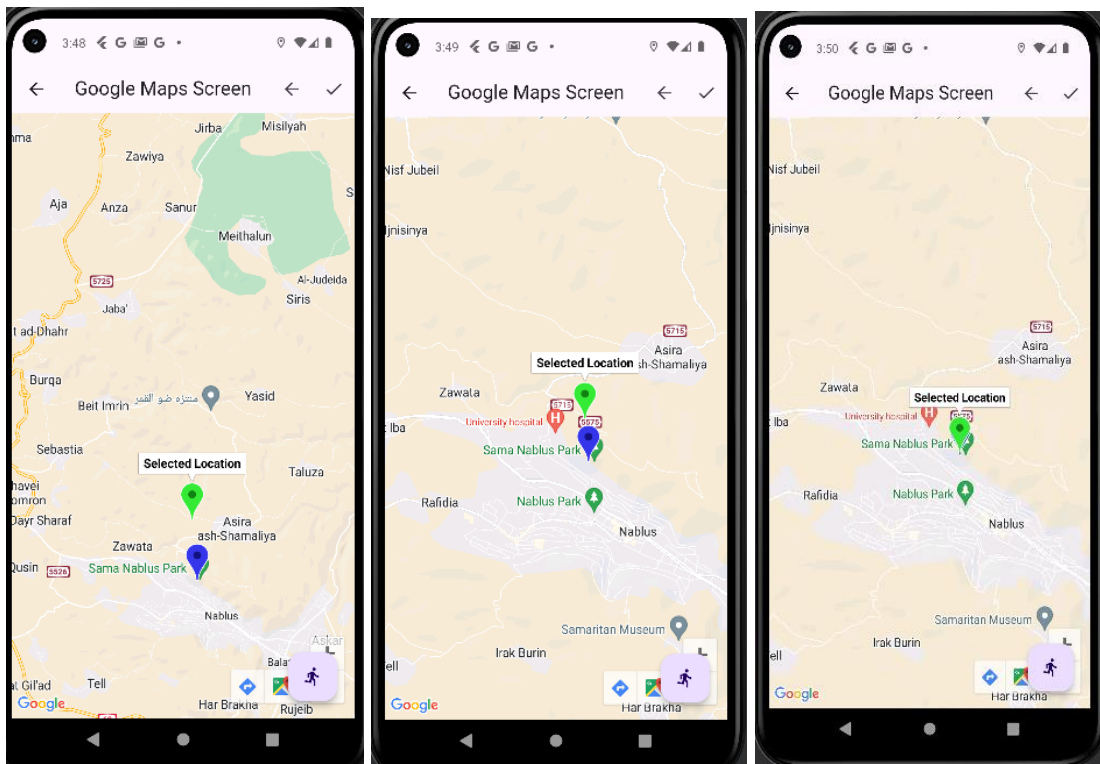
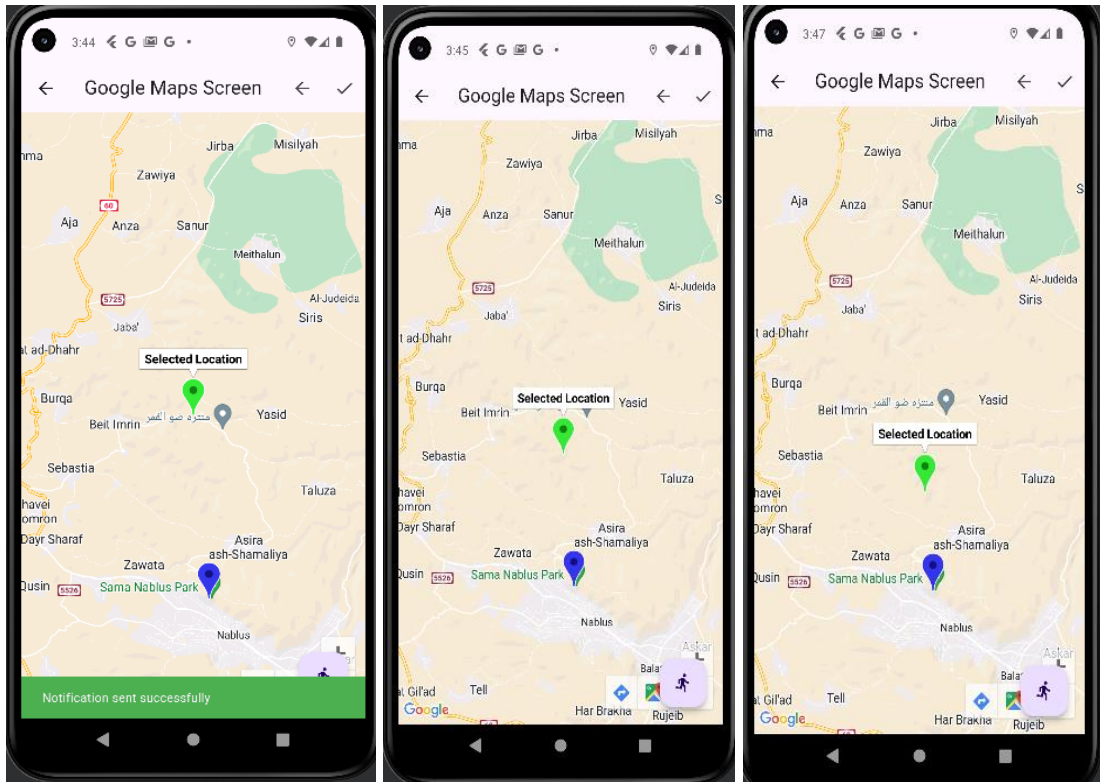
We used background location service to track order so if delivery employee exit from his 'map screen' then the location will continuously update to reach the user location.

In next page ,example if delivery employee select his location in 'منتزه ضو القمر'. And user location 'سما نابلس بارك' so the delivery employee will travel from selected location to user location and he will stop when select location reach user location . and user can track the order from ' User Track order screen ' .

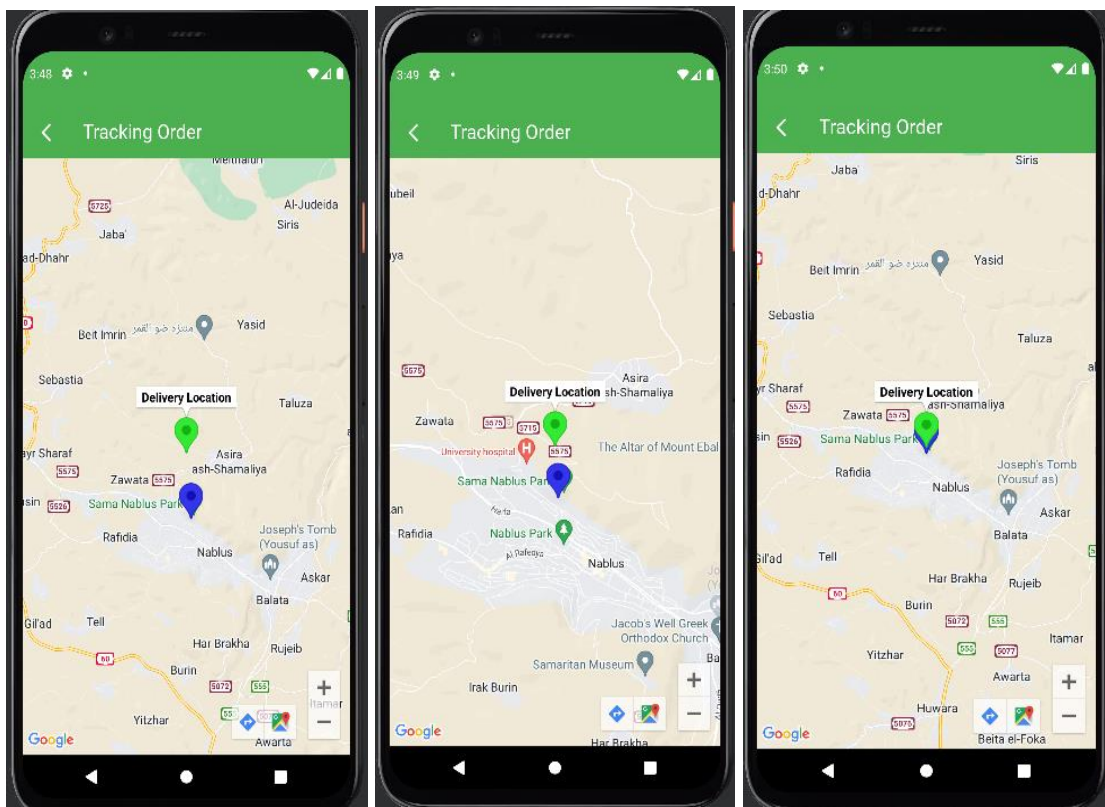
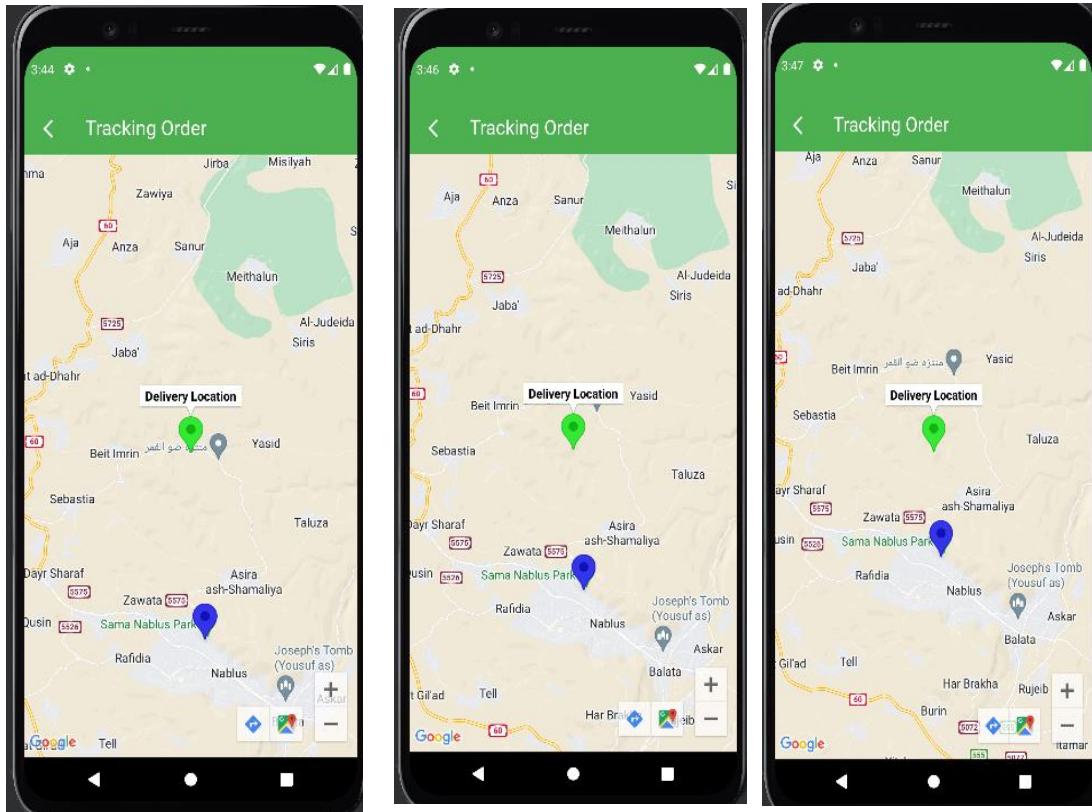


Figure 87:track order screen

Delivery employee map screen:



User Track order screen:



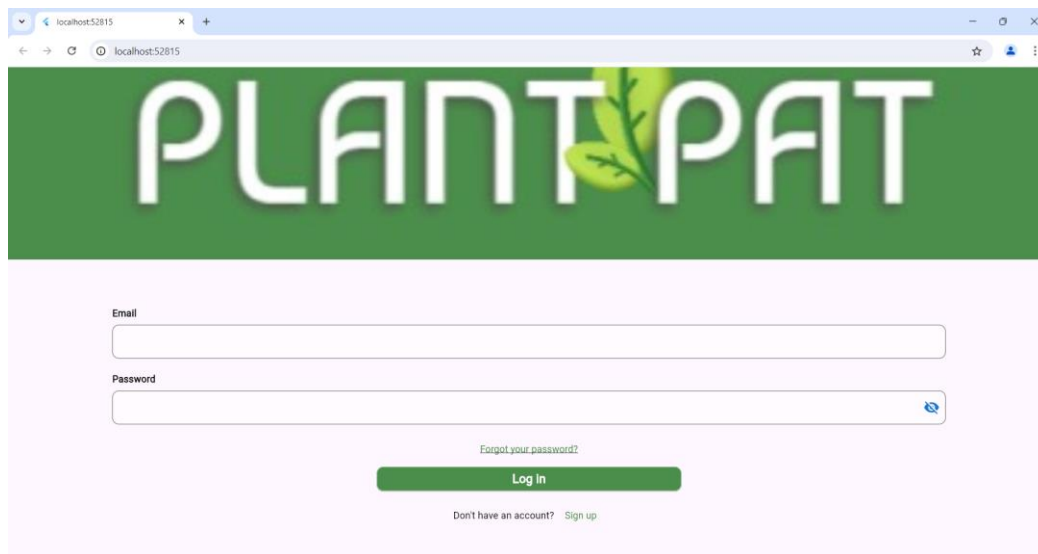
4.5 Web application

Our application support user and admin web application with full access as we will explain next pages.

❖ Log in web Screen :

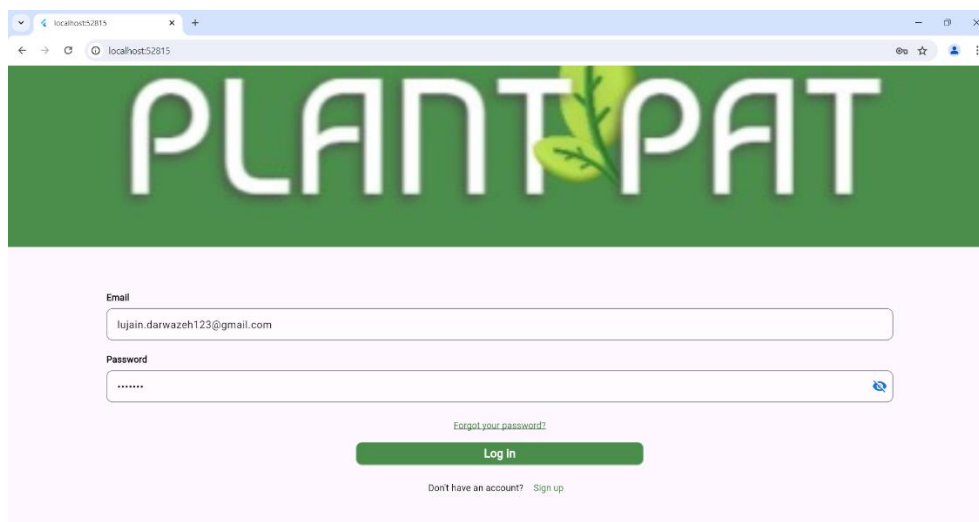
users and admin can login using this page shown in Figure 88.

If admin login use his account as shown in Figure 89 then home admin page will appear as shown next page.



The screenshot shows a web browser window with the URL 'localhost:52815'. The page has a green header with the text 'PLANTPAT' and a small green leaf icon. Below the header, there is a light pink background. On the left, there are two input fields: 'Email' and 'Password'. The 'Email' field is empty, and the 'Password' field is also empty. To the right of the 'Password' field, there is a small blue eye icon. Below the input fields, there is a green button with the text 'Log In'. Above the 'Log In' button, there is a link that says 'Forgot your password?'. Below the 'Log In' button, there is a link that says 'Don't have an account? Sign up'.

Figure 88:log in web



The screenshot shows a web browser window with the URL 'localhost:52815'. The page has a green header with the text 'PLANTPAT' and a small green leaf icon. Below the header, there is a light pink background. On the left, there are two input fields: 'Email' and 'Password'. The 'Email' field contains the text 'lujain.darwazeh123@gmail.com'. The 'Password' field contains several dots. To the right of the 'Password' field, there is a small blue eye icon. Below the input fields, there is a green button with the text 'Log In'. Above the 'Log In' button, there is a link that says 'Forgot your password?'. Below the 'Log In' button, there is a link that says 'Don't have an account? Sign up'.

Figure 89:log in admin account

❖ Home admin Screen :

When admin click on drawer as shown in Figure 90, he can go to multi screen like:

- Dashboard screen.
- Orders screen.
- Chat screen.
- Products screen.

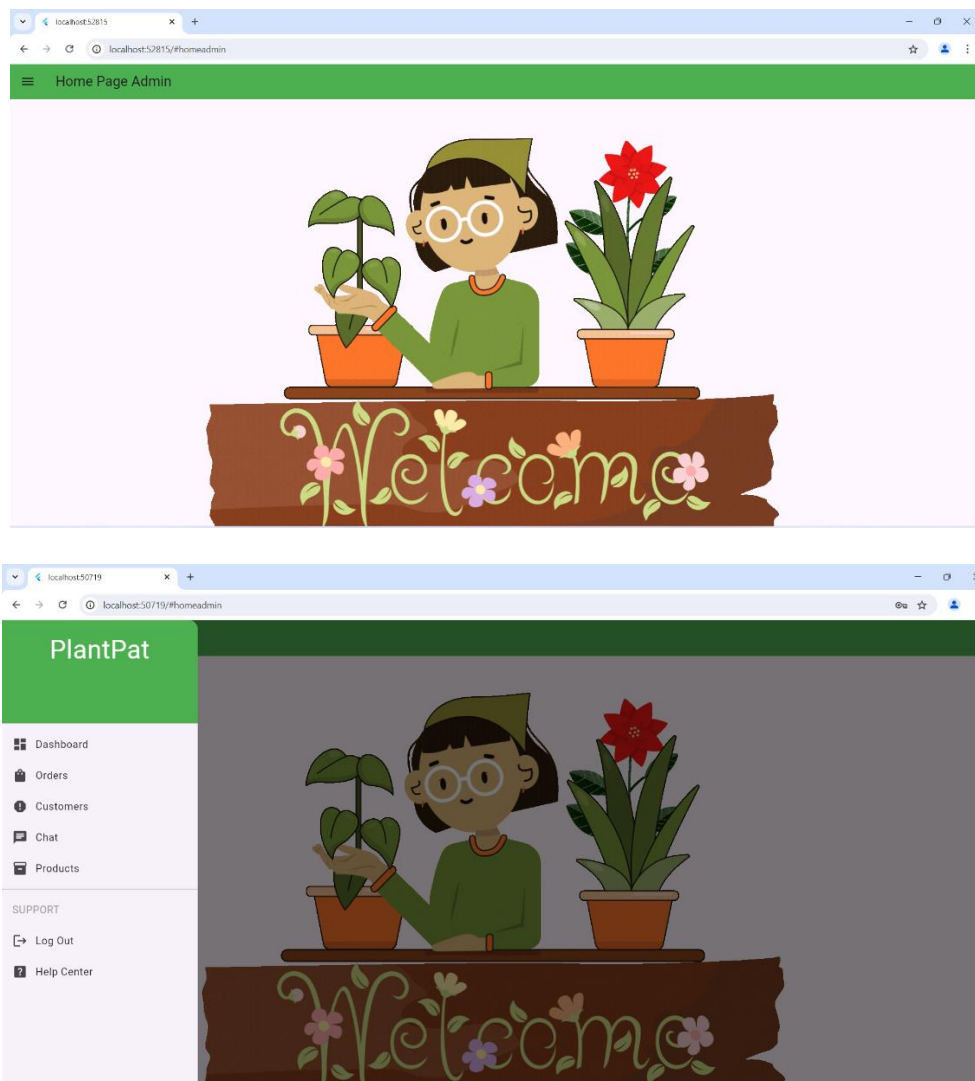


Figure 90:home admin screen

❖ **Dashboard screen:**

In this screen admin can see the total Revenue, Total orders number, Total customers number, Total product number .

he can also see the best selling products from max revenue to min revenue. and the Recent users orders with option 'our delivery system' as Delivery option as shown in Figure 91.

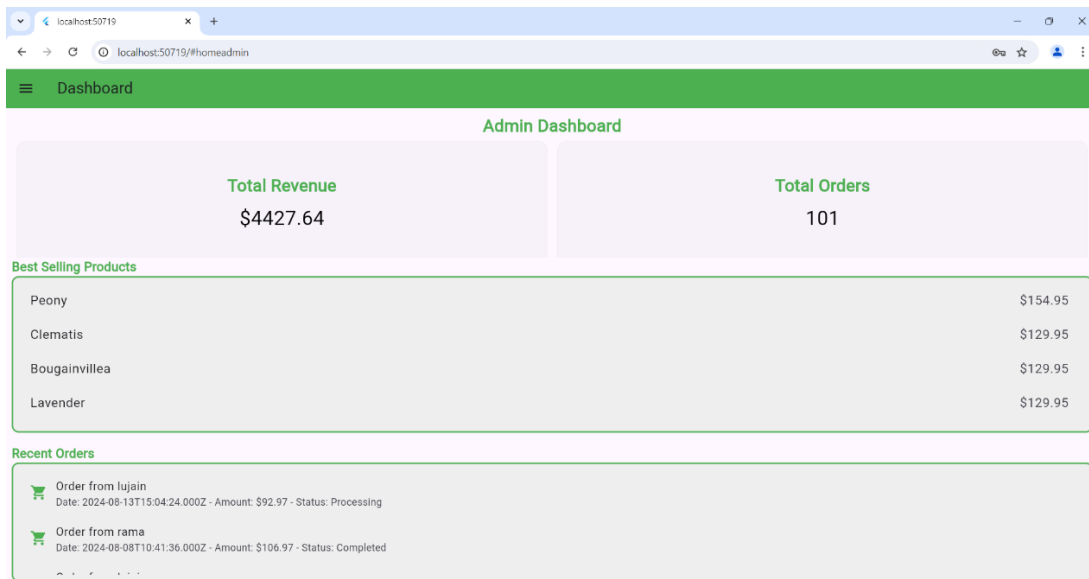
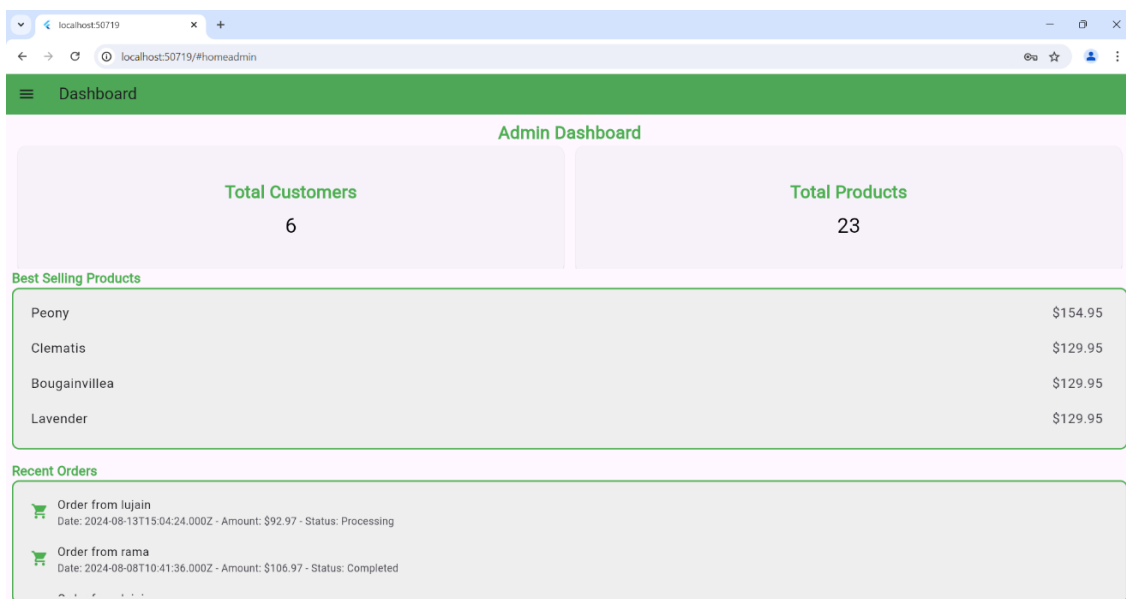
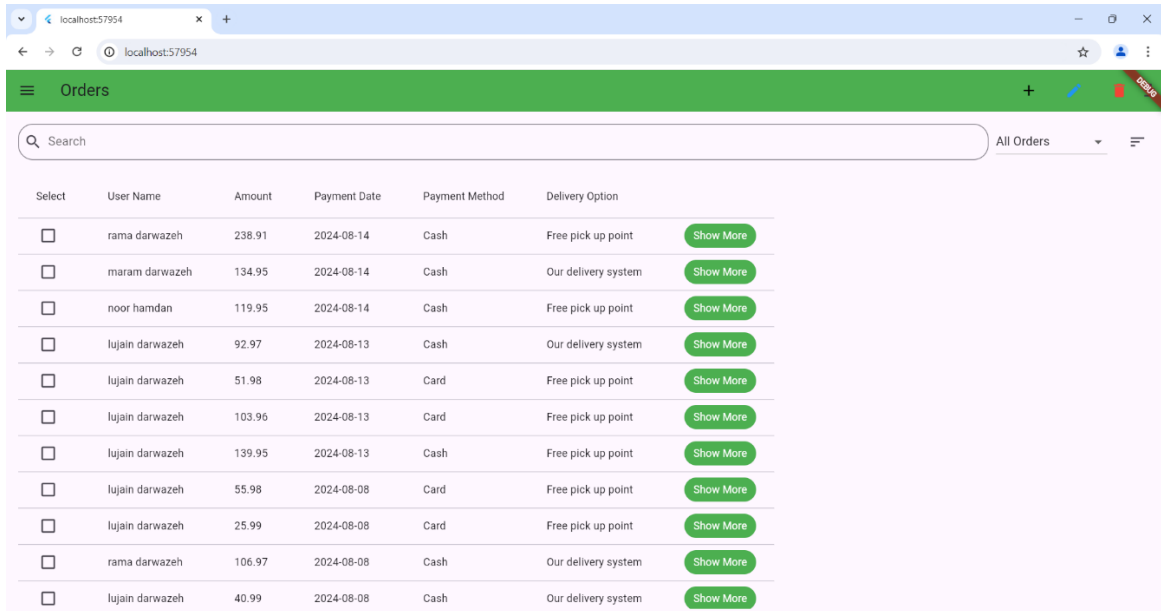


Figure 91:Dashboard screen



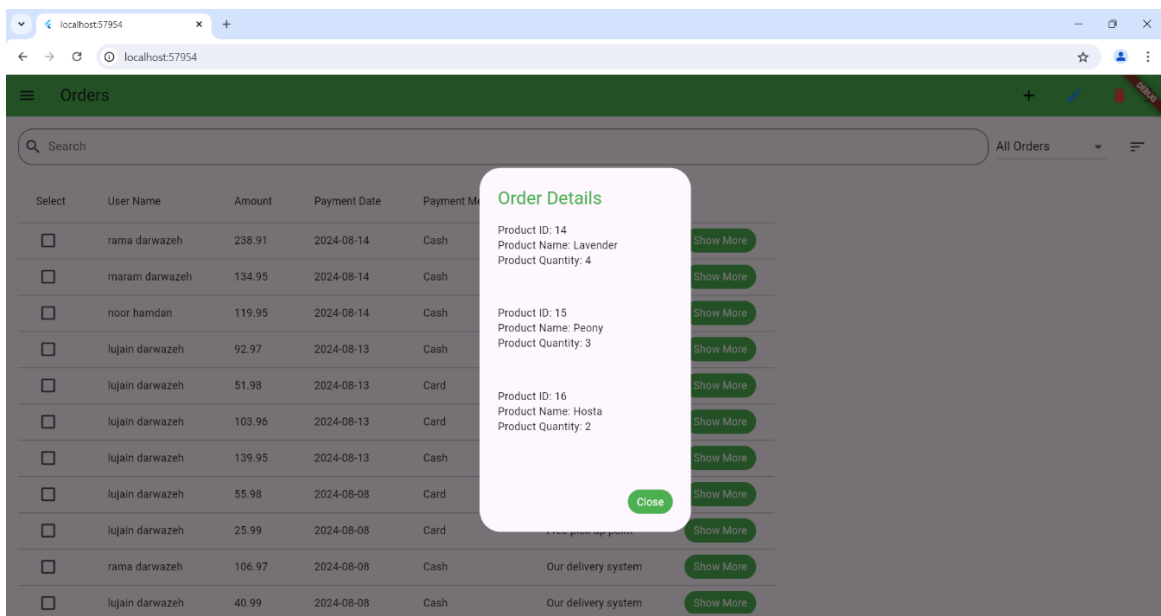
❖ Orders screen:

in this screen admin can see all the orders as shown in Figure 92.also he can press on 'show more' to see details for each order as shown in Figure 93.



Select	User Name	Amount	Payment Date	Payment Method	Delivery Option	
<input type="checkbox"/>	rama darwazeh	238.91	2024-08-14	Cash	Free pick up point	Show More
<input type="checkbox"/>	maram darwazeh	134.95	2024-08-14	Cash	Our delivery system	Show More
<input type="checkbox"/>	noor hamdan	119.95	2024-08-14	Cash	Free pick up point	Show More
<input type="checkbox"/>	lujain darwazeh	92.97	2024-08-13	Cash	Our delivery system	Show More
<input type="checkbox"/>	lujain darwazeh	51.98	2024-08-13	Card	Free pick up point	Show More
<input type="checkbox"/>	lujain darwazeh	103.96	2024-08-13	Card	Free pick up point	Show More
<input type="checkbox"/>	lujain darwazeh	139.95	2024-08-13	Cash	Free pick up point	Show More
<input type="checkbox"/>	lujain darwazeh	55.98	2024-08-08	Card	Free pick up point	Show More
<input type="checkbox"/>	lujain darwazeh	25.99	2024-08-08	Card	Free pick up point	Show More
<input type="checkbox"/>	rama darwazeh	106.97	2024-08-08	Cash	Our delivery system	Show More
<input type="checkbox"/>	lujain darwazeh	40.99	2024-08-08	Cash	Our delivery system	Show More

Figure 92:Orders screen



Select	User Name	Amount	Payment Date	Payment Method	Delivery Option	
<input type="checkbox"/>	rama darwazeh	238.91	2024-08-14	Cash	Free pick up point	Show More
<input type="checkbox"/>	maram darwazeh	134.95	2024-08-14	Cash	Our delivery system	Show More
<input type="checkbox"/>	noor hamdan	119.95	2024-08-14	Cash	Free pick up point	Show More
<input type="checkbox"/>	lujain darwazeh	92.97	2024-08-13	Cash	Our delivery system	Show More
<input type="checkbox"/>	lujain darwazeh	51.98	2024-08-13	Card	Free pick up point	Show More
<input type="checkbox"/>	lujain darwazeh	103.96	2024-08-13	Card	Free pick up point	Show More
<input type="checkbox"/>	lujain darwazeh	139.95	2024-08-13	Cash	Free pick up point	Show More
<input type="checkbox"/>	lujain darwazeh	55.98	2024-08-08	Card	Free pick up point	Show More
<input type="checkbox"/>	lujain darwazeh	25.99	2024-08-08	Card	Free pick up point	Show More
<input type="checkbox"/>	rama darwazeh	106.97	2024-08-08	Cash	Our delivery system	Show More
<input type="checkbox"/>	lujain darwazeh	40.99	2024-08-08	Cash	Our delivery system	Show More

Order Details

Product ID: 14
Product Name: Lavender
Product Quantity: 4

Product ID: 15
Product Name: Peony
Product Quantity: 3

Product ID: 16
Product Name: Hosta
Product Quantity: 2

Close

Figure 93:after press on show more

Admin can also filter the orders as shown in Figure 94, he can filter by payment method as shown in Figure 95 or by Delivery option as shown in Figure 96.

Select	User Name	Amount	Payment Date	Payment Method	Delivery Option	
<input type="checkbox"/>	rama darwazeh	238.91	2024-08-14	Cash	Free pick up point	Show More
<input type="checkbox"/>	maram darwazeh	134.95	2024-08-14	Caash	Our delivery system	Show More
<input type="checkbox"/>	noor hamdan	119.95	2024-08-14	Cash	Free pick up point	Show More
<input type="checkbox"/>	lujain darwazeh	92.97	2024-08-13	Cash	Our delivery system	Show More
<input type="checkbox"/>	lujain darwazeh	51.98	2024-08-13	Card	Free pick up point	Show More
<input type="checkbox"/>	lujain darwazeh	103.96	2024-08-13	Card	Free pick up point	Show More
<input type="checkbox"/>	lujain darwazeh	139.95	2024-08-13	Cash	Free pick up point	Show More
<input type="checkbox"/>	lujain darwazeh	55.98	2024-08-08	Card	Free pick up point	Show More
<input type="checkbox"/>	lujain darwazeh	25.99	2024-08-08	Card	Free pick up point	Show More
<input type="checkbox"/>	rama darwazeh	106.97	2024-08-08	Cash	Our delivery system	Show More
<input type="checkbox"/>	lujain darwazeh	40.99	2024-08-08	Cash	Our delivery system	Show More

Figure 94:filter orders

Select	User Name	Amount	Payment Date	Payment Method	Delivery Option	
<input type="checkbox"/>	rama darwazeh	238.91	2024-08-14	Cash	Free pick up point	Show More
<input type="checkbox"/>	maram darwazeh	134.95	2024-08-14	Cash	Our delivery system	Show More
<input type="checkbox"/>	noor hamdan	119.95	2024-08-14	Cash	Free pick up point	Show More
<input type="checkbox"/>	lujain darwazeh	92.97	2024-08-13	Cash	Our delivery system	Show More
<input type="checkbox"/>	lujain darwazeh	139.95	2024-08-13	Cash	Free pick up point	Show More
<input type="checkbox"/>	rama darwazeh	106.97	2024-08-08	Cash	Our delivery system	Show More
<input type="checkbox"/>	lujain darwazeh	40.99	2024-08-08	Cash	Our delivery system	Show More
<input type="checkbox"/>	maram darwazeh	139.96	2024-08-07	Cash	Our delivery system	Show More
<input type="checkbox"/>	lujain darwazeh	82.97	2024-08-07	Cash	Free pick up point	Show More
<input type="checkbox"/>	noor hamdan	46.98	2024-08-06	Cash	Free pick up point	Show More
<input type="checkbox"/>	rama darwazeh	102.97	2024-08-06	Cash	Our delivery system	Show More

Figure 95:filter by payment method

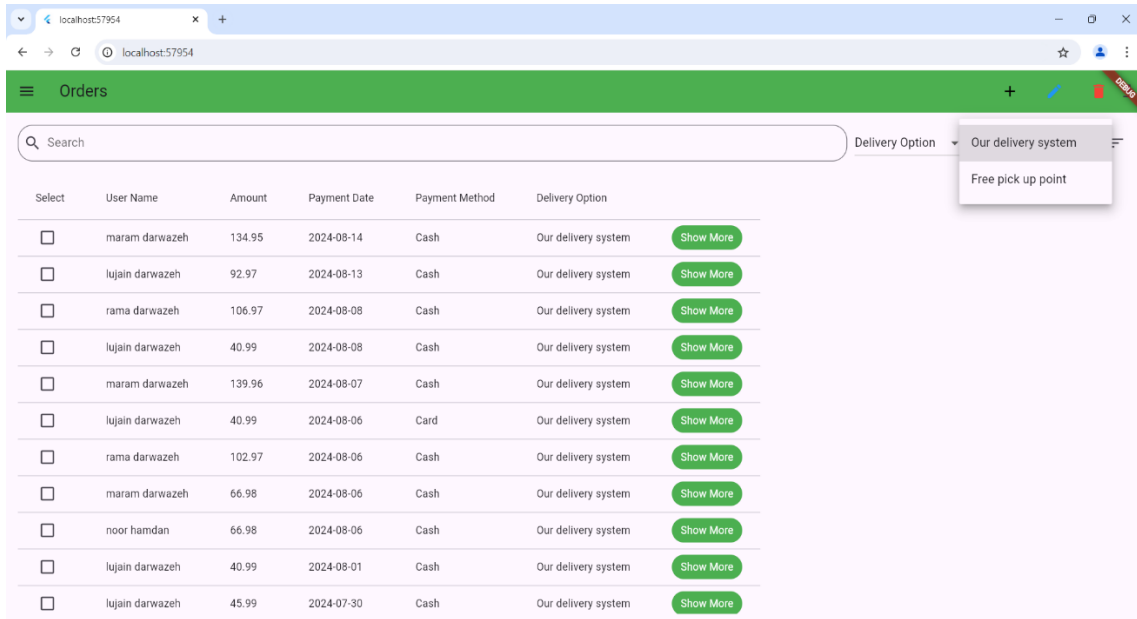


Figure 96:filter by delivery option

admin can select order and then press on pencil icon to edit the order as shown in Figure 97 .

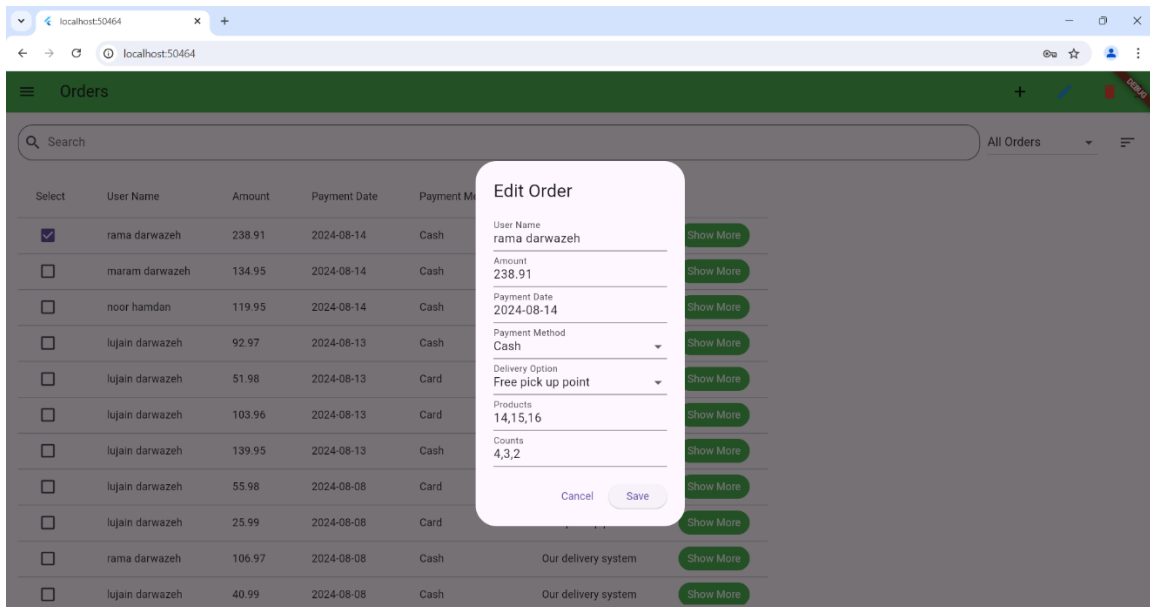


Figure 97:edit order

Figure 98 shows example of edit the count of products in specific order. then the total amount will recompute automatically with the edited information as shown in Figure 99.

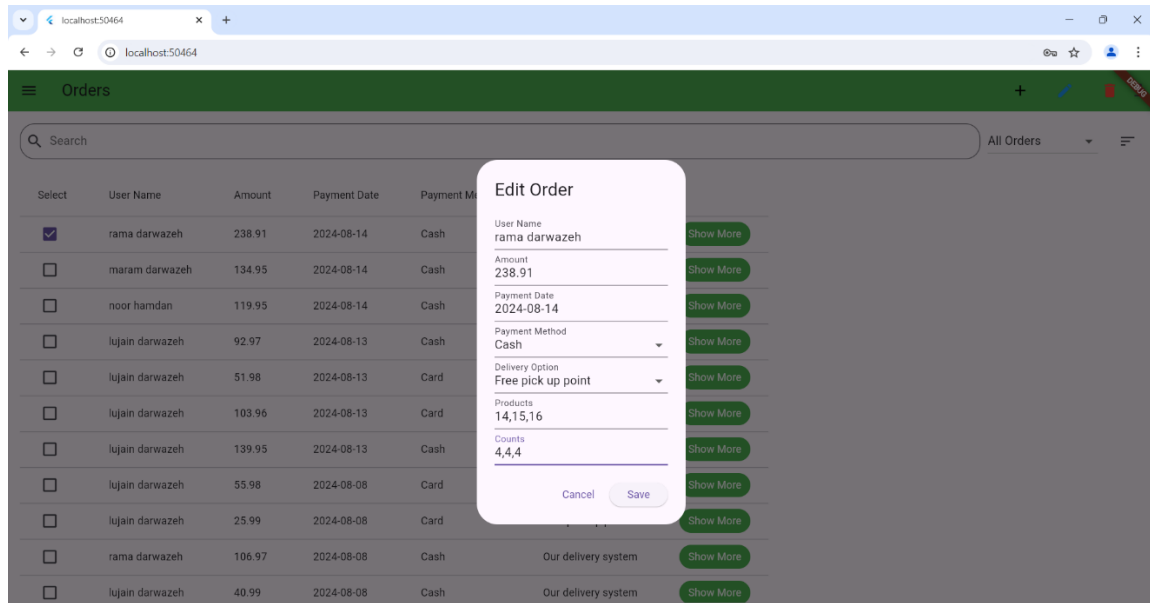


Figure 98:example edit order

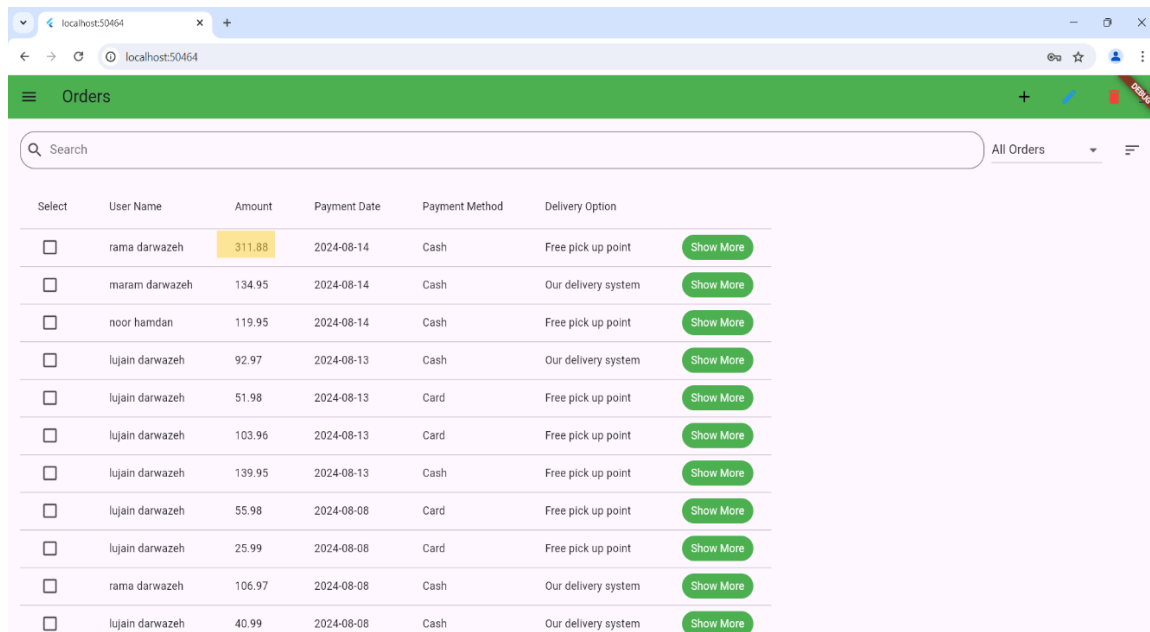


Figure 99:edit amount automatically

Admin can also add order by press on plus icon then add order Dialog will appear as shown in Figure 100.

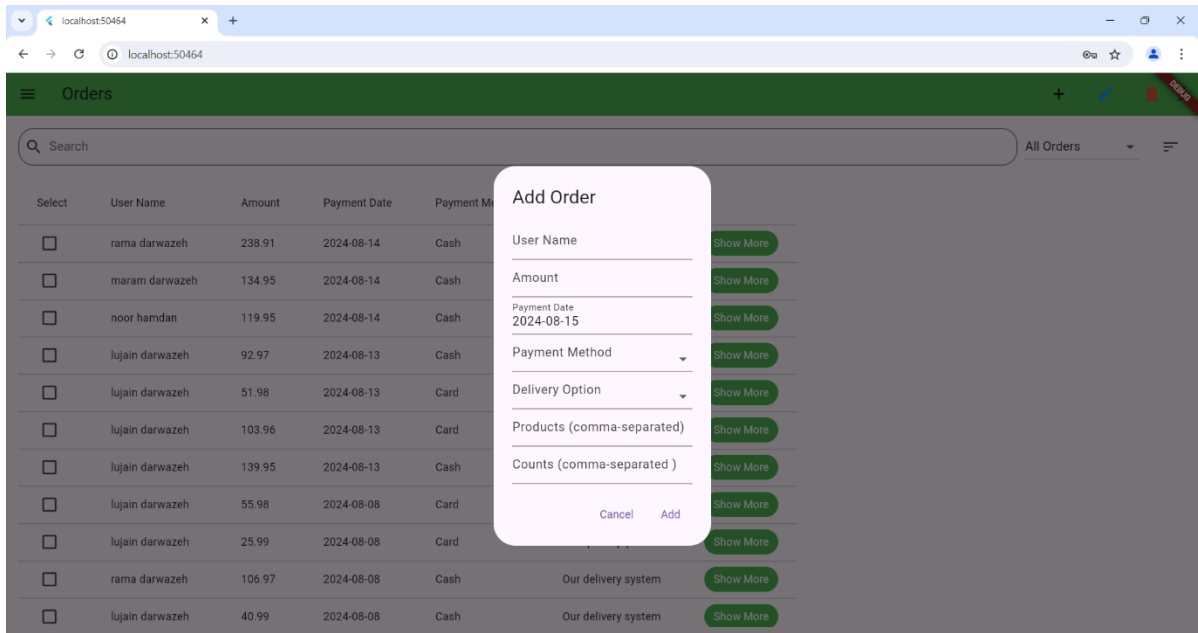


Figure 100:add order dialog

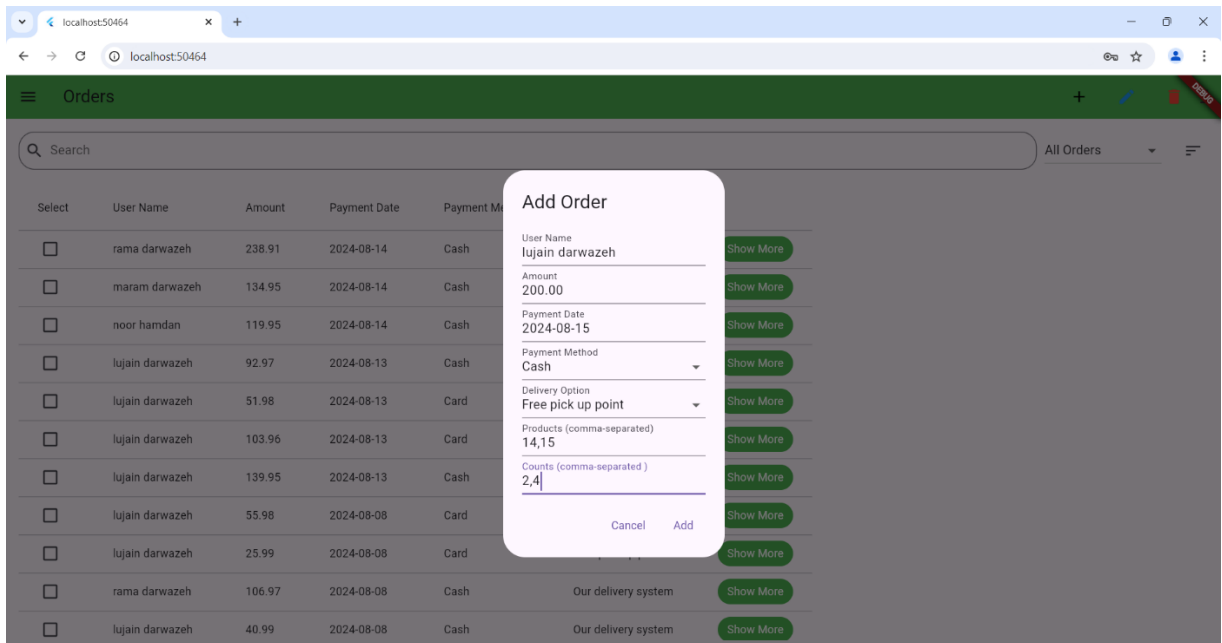


Figure 101:add order example

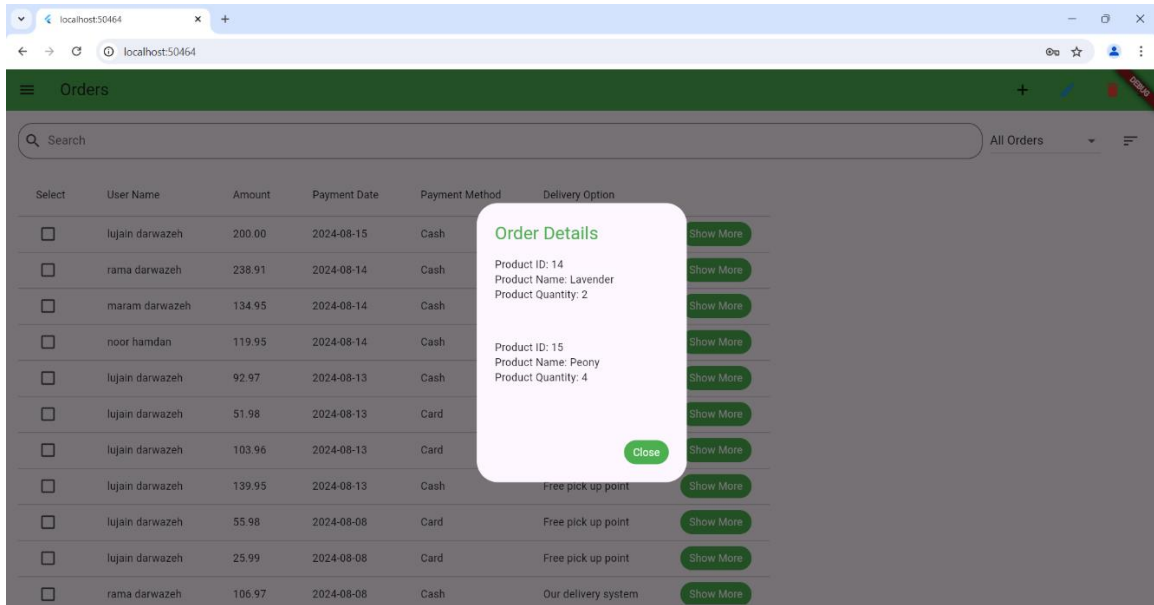


Figure 102:press on show more after add order

Admin can also select order then press on rubbish icon to delete it as shown in Figure 103.

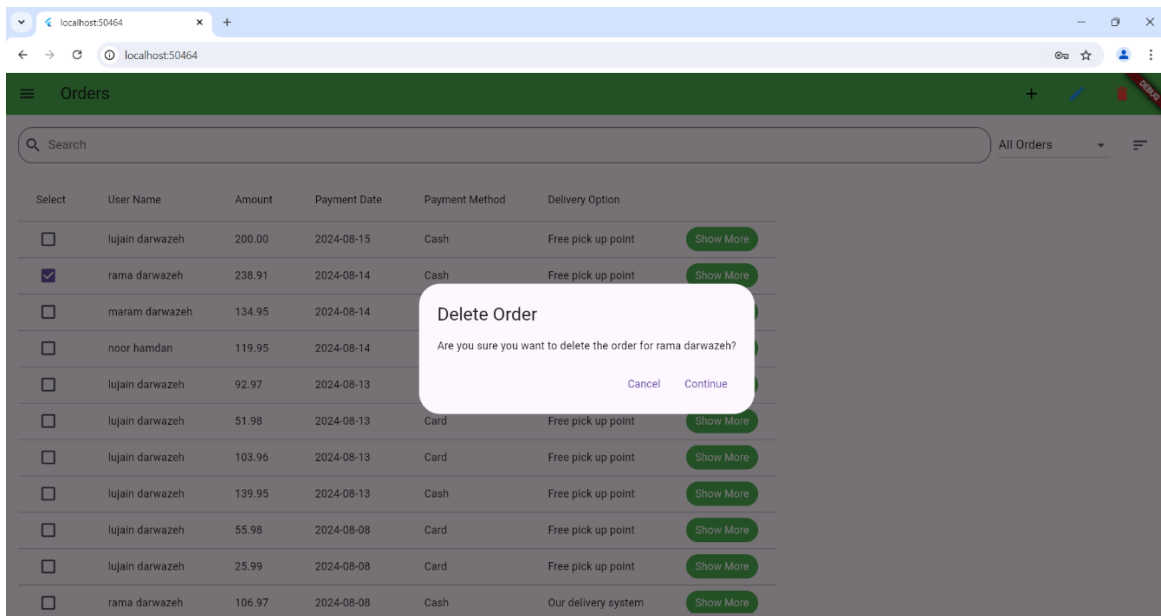
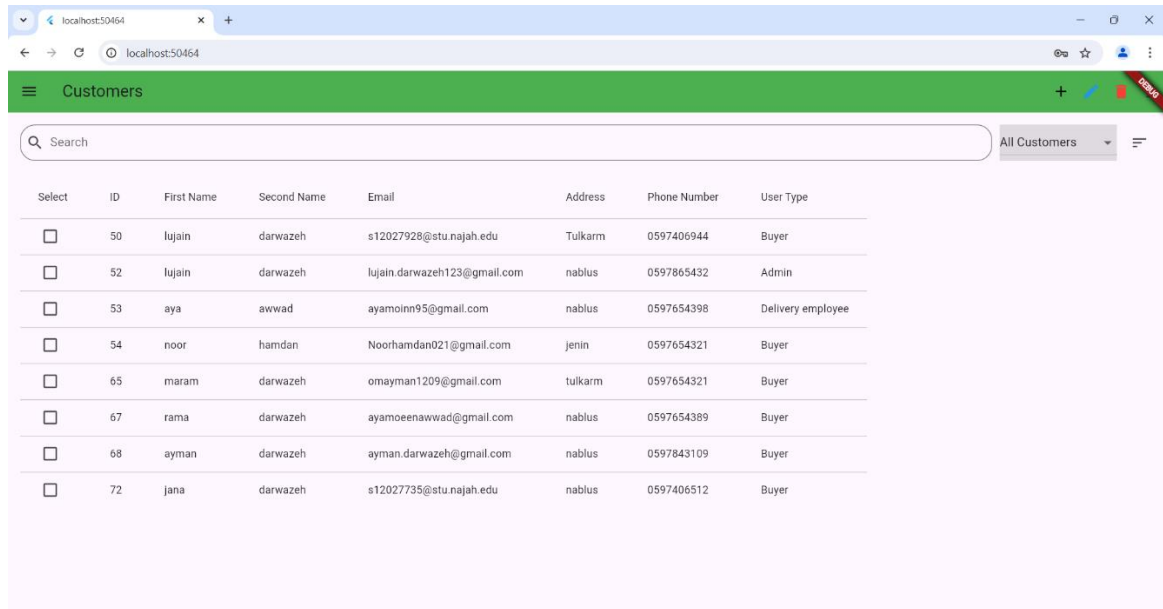


Figure 103:delete order

❖ Customers screen:

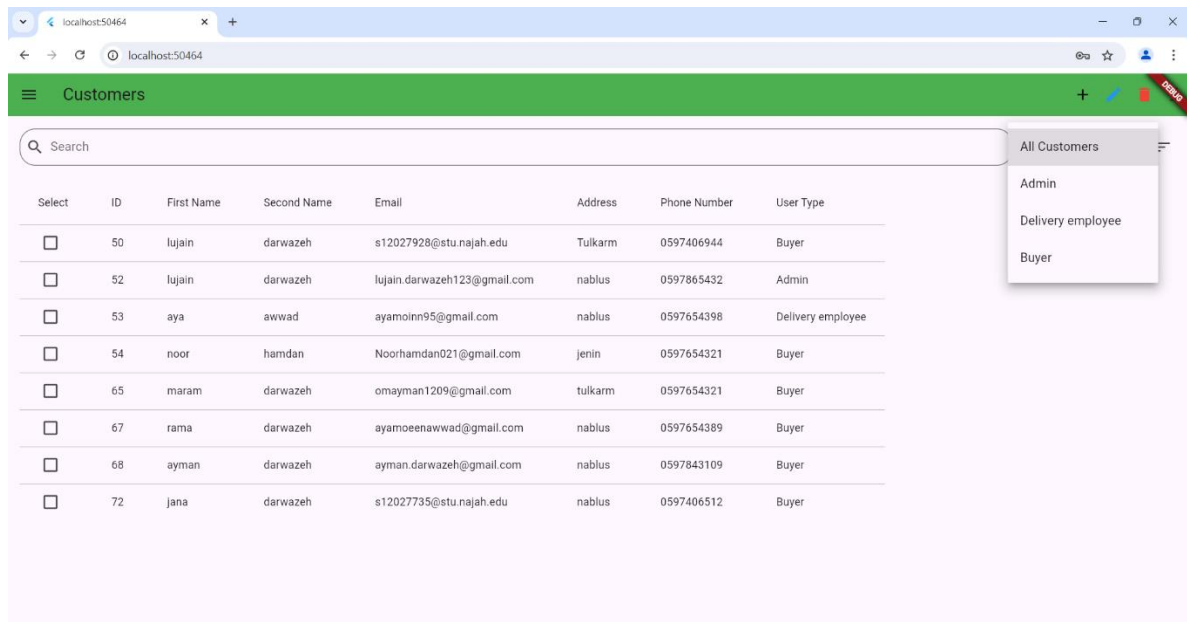
Admin can see all customers exist in system as shown in Figure 104. and he can filter customers by their type as shown in Figure 105.



The screenshot shows a web browser window with the URL localhost:50464. The page title is "Customers". There is a search bar and a dropdown menu labeled "All Customers". Below the search bar is a table with 8 columns: Select, ID, First Name, Second Name, Email, Address, Phone Number, and User Type. The table contains 8 rows of customer data.

Select	ID	First Name	Second Name	Email	Address	Phone Number	User Type
<input type="checkbox"/>	50	lujain	darwazeh	s12027928@stu.najah.edu	Tulkarm	0597406944	Buyer
<input type="checkbox"/>	52	lujain	darwazeh	lujain.darwazeh123@gmail.com	nablus	0597865432	Admin
<input type="checkbox"/>	53	aya	awwad	ayamoinn95@gmail.com	nablus	0597654398	Delivery employee
<input type="checkbox"/>	54	noor	hamdan	Noorhamdan021@gmail.com	jenin	0597654321	Buyer
<input type="checkbox"/>	65	maram	darwazeh	omayman1209@gmail.com	tulkarm	0597654321	Buyer
<input type="checkbox"/>	67	rama	darwazeh	ayamoeenawwad@gmail.com	nablus	0597654389	Buyer
<input type="checkbox"/>	68	ayman	darwazeh	ayman.darwazeh@gmail.com	nablus	0597843109	Buyer
<input type="checkbox"/>	72	jana	darwazeh	s12027735@stu.najah.edu	nablus	0597406512	Buyer

Figure 104:customers screen



The screenshot shows the same Customers screen as Figure 104, but with a dropdown menu open next to the "All Customers" filter. The dropdown menu lists the following options: All Customers, Admin, Delivery employee, and Buyer.

Select	ID	First Name	Second Name	Email	Address	Phone Number	User Type
<input type="checkbox"/>	50	lujain	darwazeh	s12027928@stu.najah.edu	Tulkarm	0597406944	Buyer
<input type="checkbox"/>	52	lujain	darwazeh	lujain.darwazeh123@gmail.com	nablus	0597865432	Admin
<input type="checkbox"/>	53	aya	awwad	ayamoinn95@gmail.com	nablus	0597654398	Delivery employee
<input type="checkbox"/>	54	noor	hamdan	Noorhamdan021@gmail.com	jenin	0597654321	Buyer
<input type="checkbox"/>	65	maram	darwazeh	omayman1209@gmail.com	tulkarm	0597654321	Buyer
<input type="checkbox"/>	67	rama	darwazeh	ayamoeenawwad@gmail.com	nablus	0597654389	Buyer
<input type="checkbox"/>	68	ayman	darwazeh	ayman.darwazeh@gmail.com	nablus	0597843109	Buyer
<input type="checkbox"/>	72	jana	darwazeh	s12027735@stu.najah.edu	nablus	0597406512	Buyer

Figure 105:filter customers

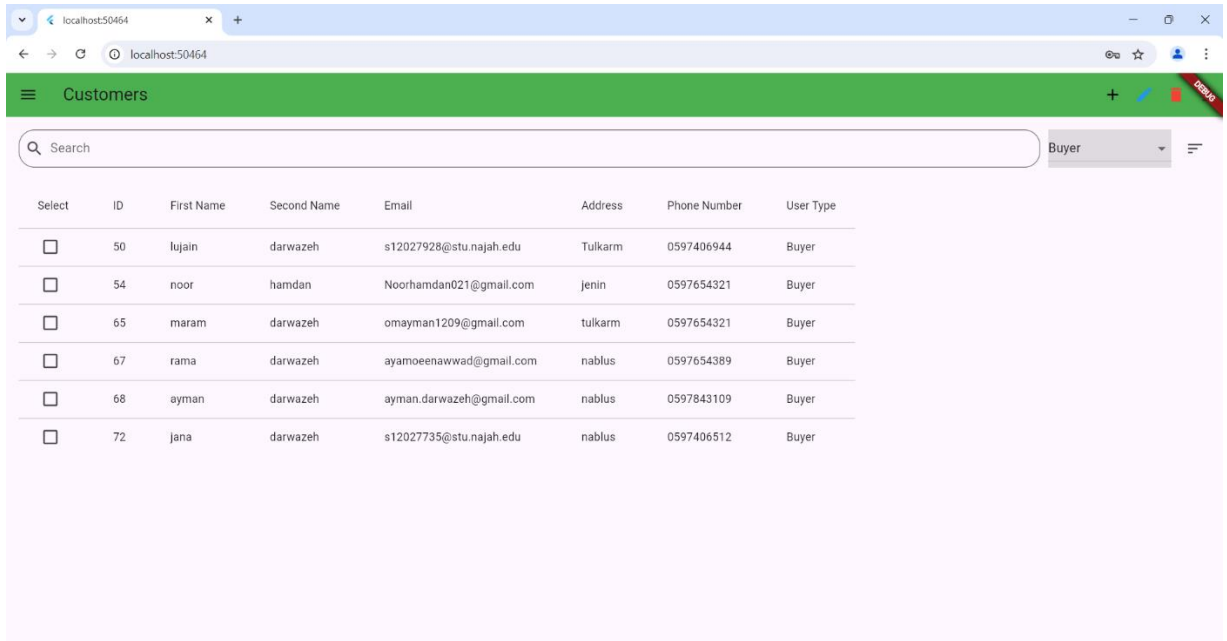


Figure 106:example filter buyer customers

admin can select customer and then press on pencil icon to edit customer information as shown in Figure 107.

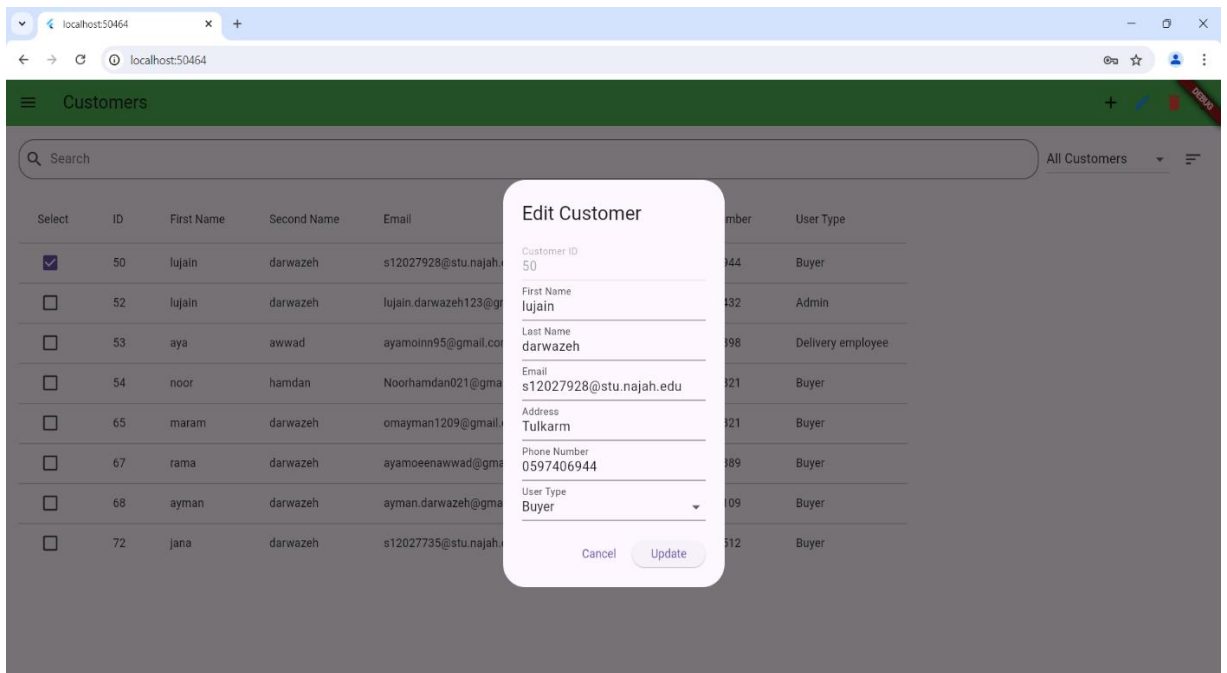


Figure 107:edit customer

Admin can also select customer then press on rubbish icon to delete it as shown in Figure 108.

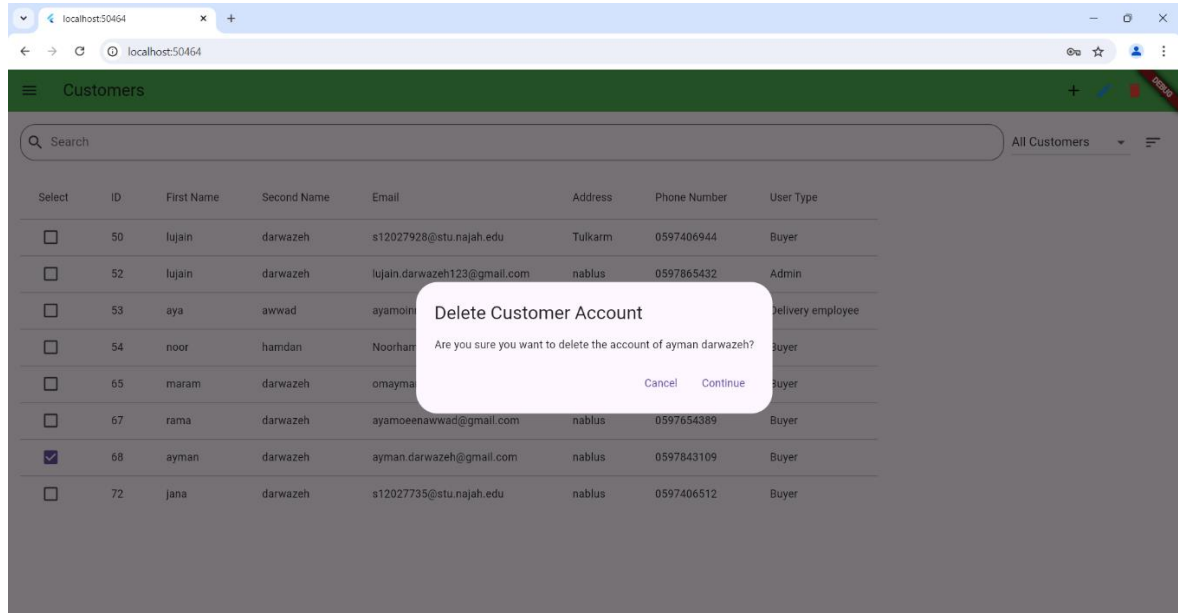


Figure 108:delete customer

Admin can also add customer by press on plus icon then add customer Dialog will appear. Figure 109 show example for add customer.

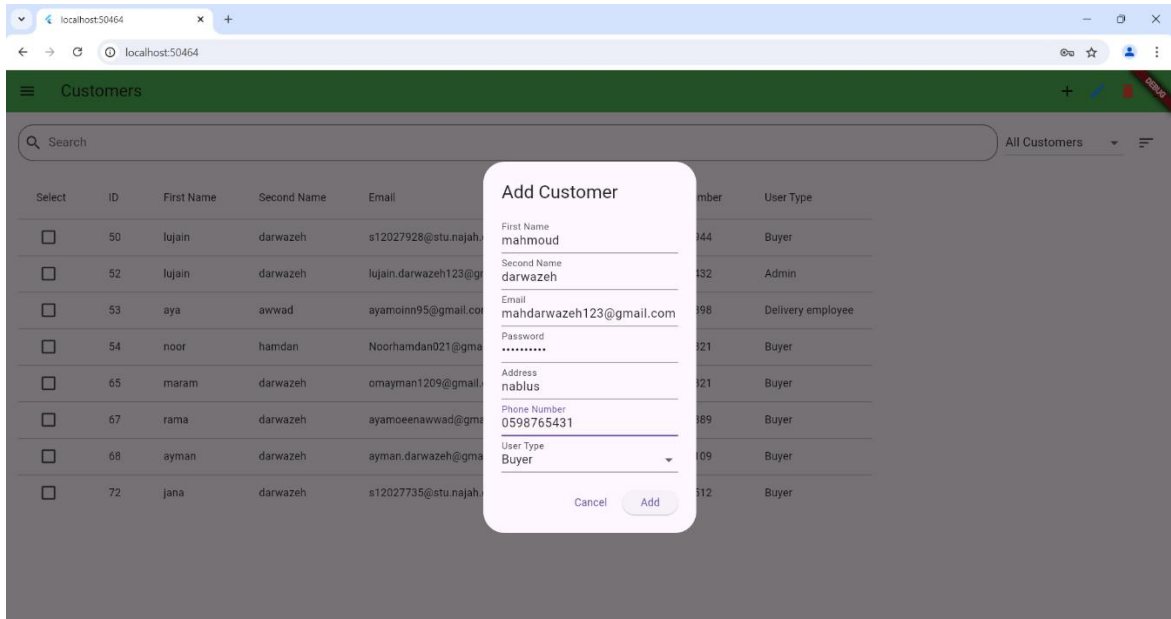


Figure 109: Add customer

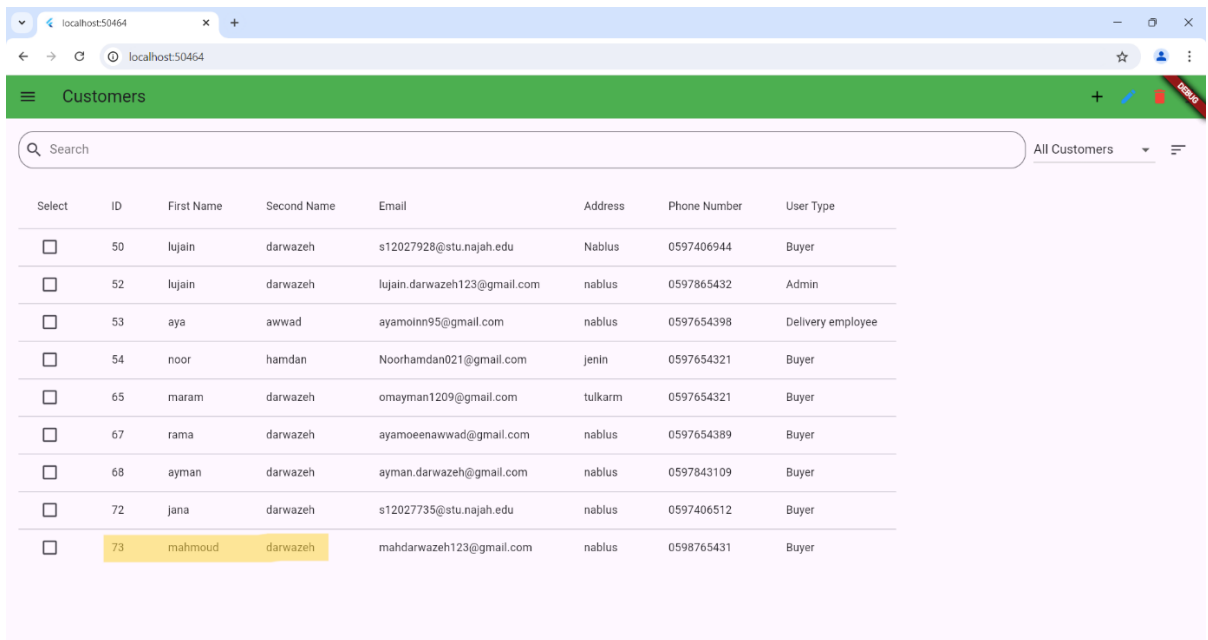


Figure 110: after add customer

❖ Chat screen:

Admin can see all received messages from users and from delivery employee as shown in Figure 111.

admin can click on user chat to see the messages come from him as shown in Figure 112 and he can also reply as shown in Figure 113.

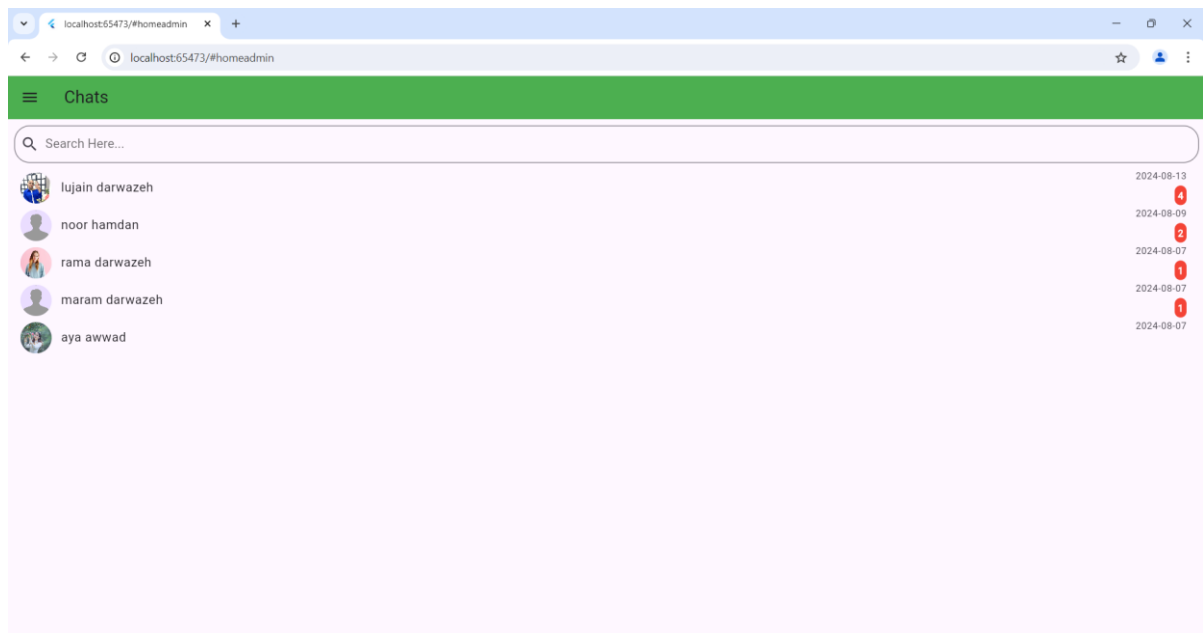


Figure 111:chat screen



Figure 112:see received messages

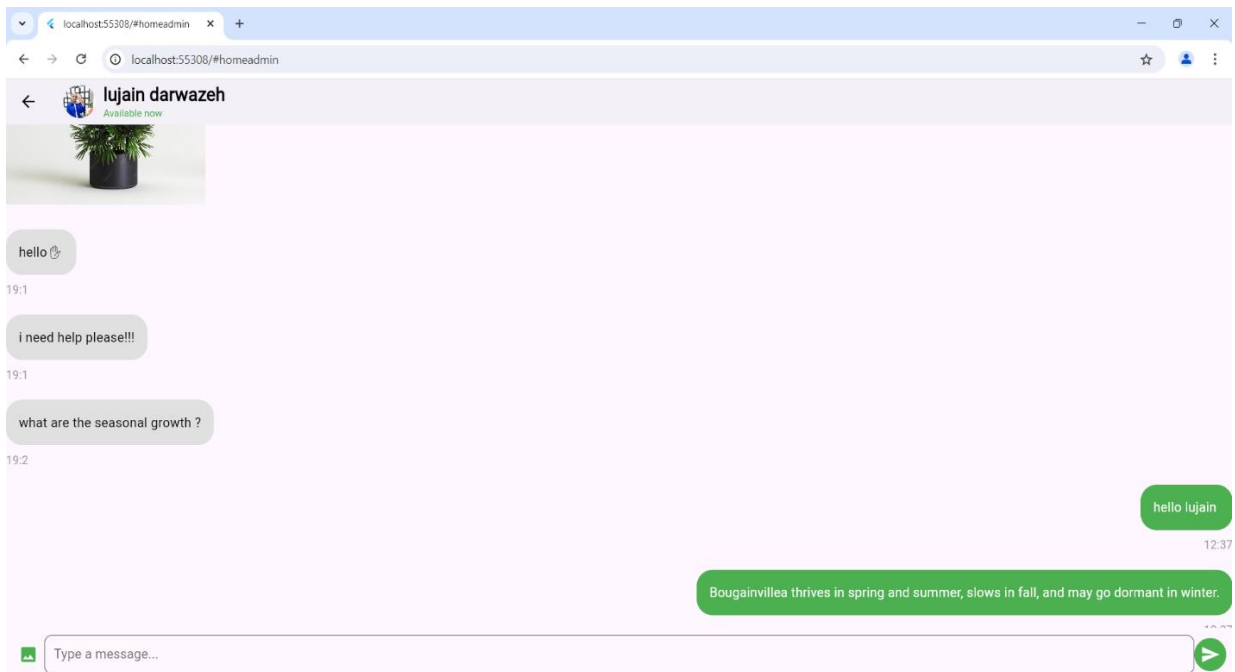


Figure 113:reply to messages

❖ **products screen:**

in this screen admin can do several tasks like :

- ✚ Add product.
- ✚ Add section.
- ✚ See and edit Product details.

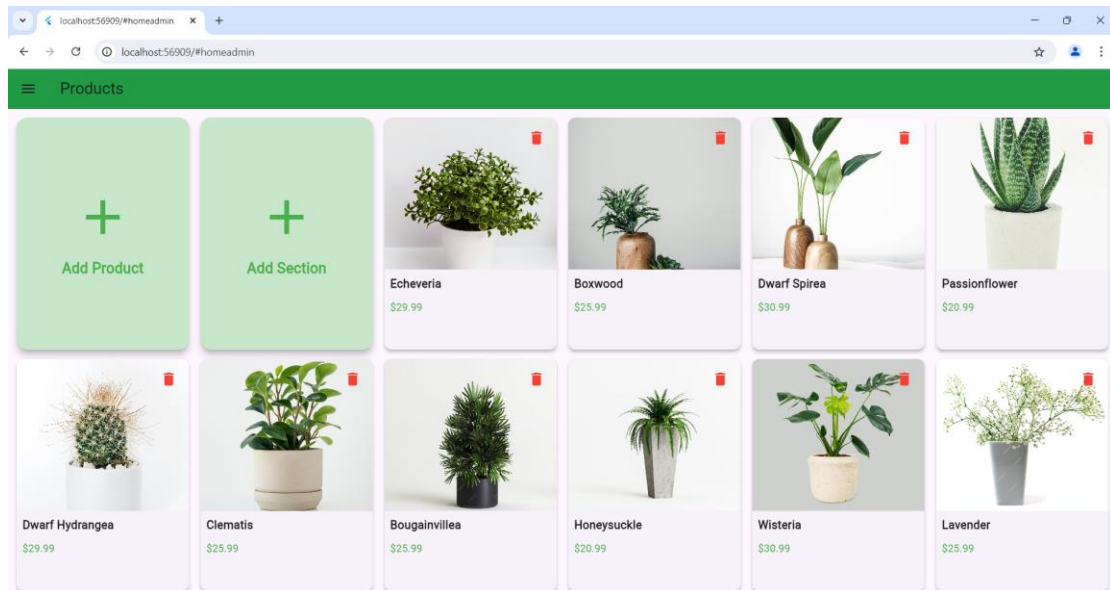


Figure 114:products screen

When Admin press on 'add product' then Add product Dialog will appear.

Figure 115 , and Figure 116 shows example for add new product to the system.

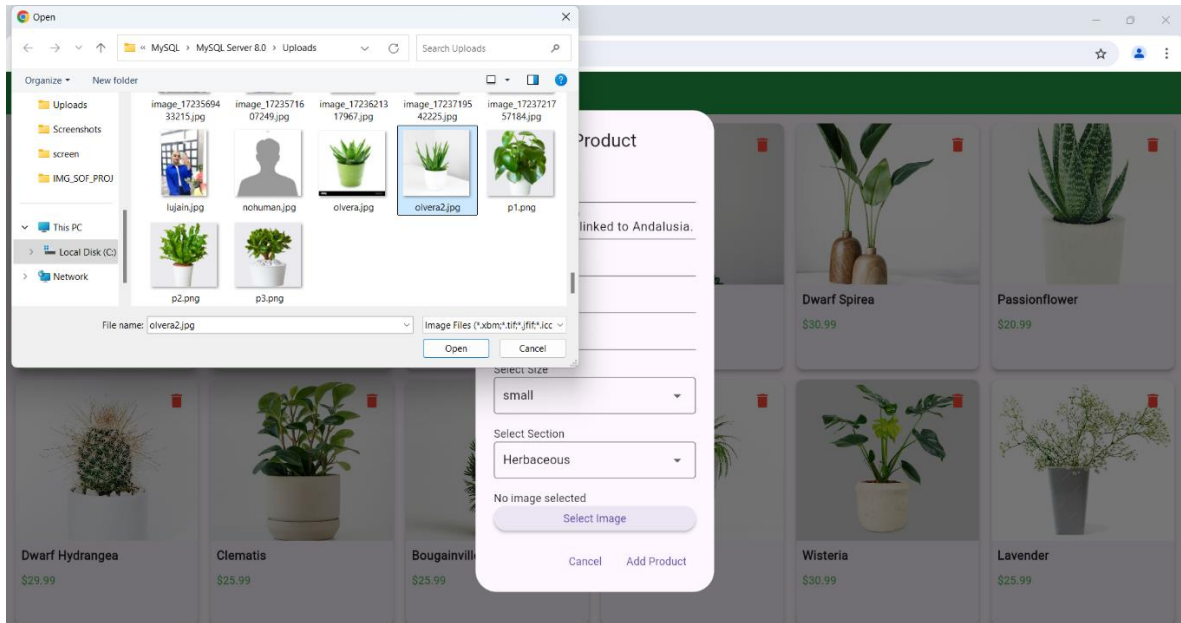


Figure 115:add product example

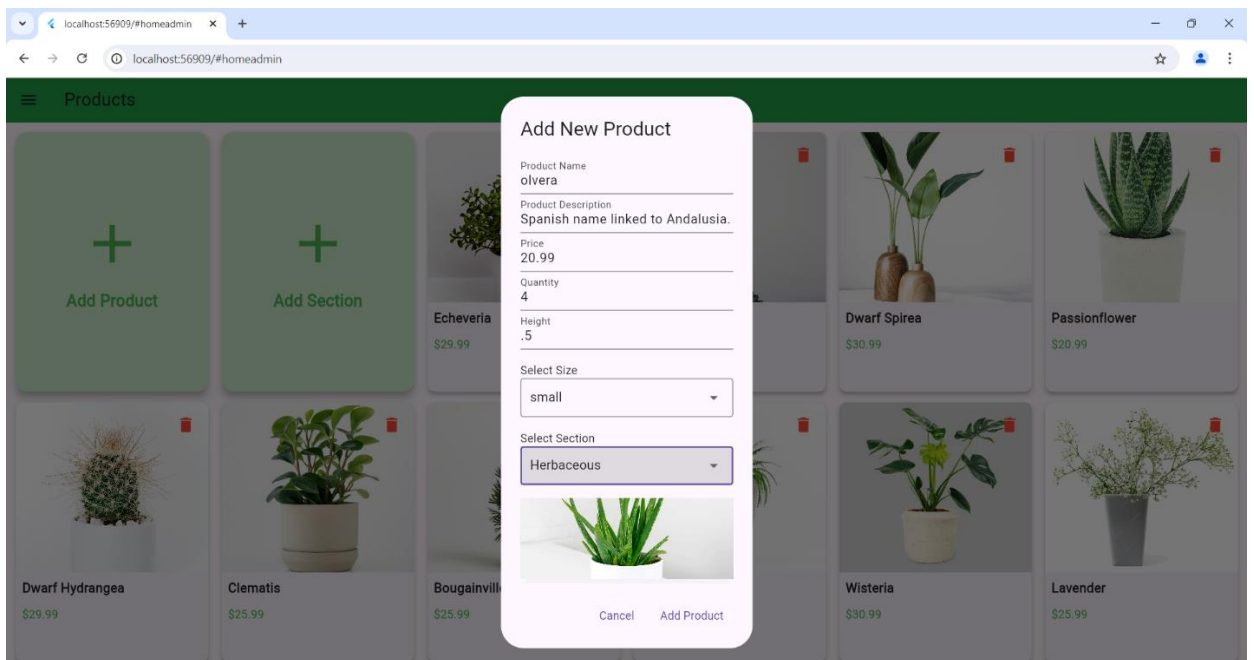


Figure 116:add product example

Figure 117 shows add product successfully by admin and Figure 118 shows product appear to users successfully in user side.

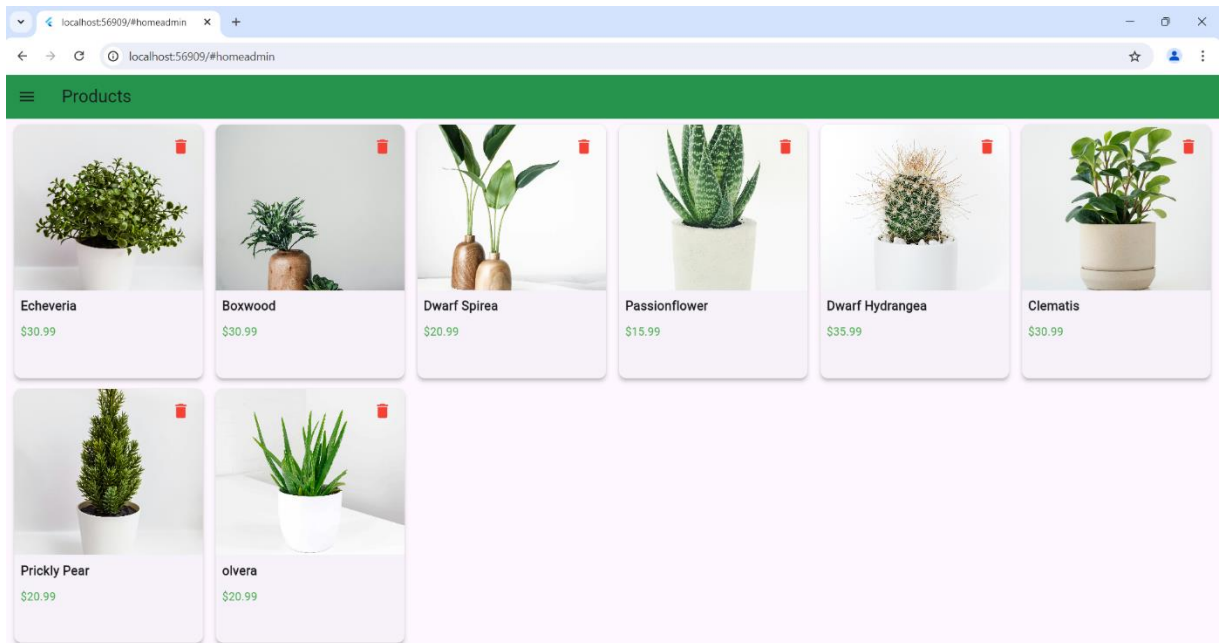


Figure 117: add product successfully by admin

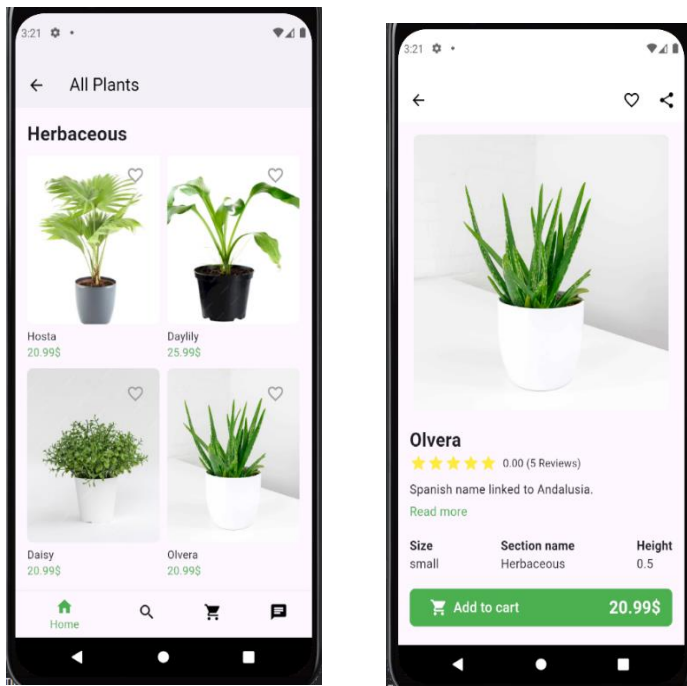


Figure 118: product appear to users successfully

When Admin press on 'add section' then Add section Dialog will appear.

Figure 119 , and Figure 120 shows example for add new section to the system.

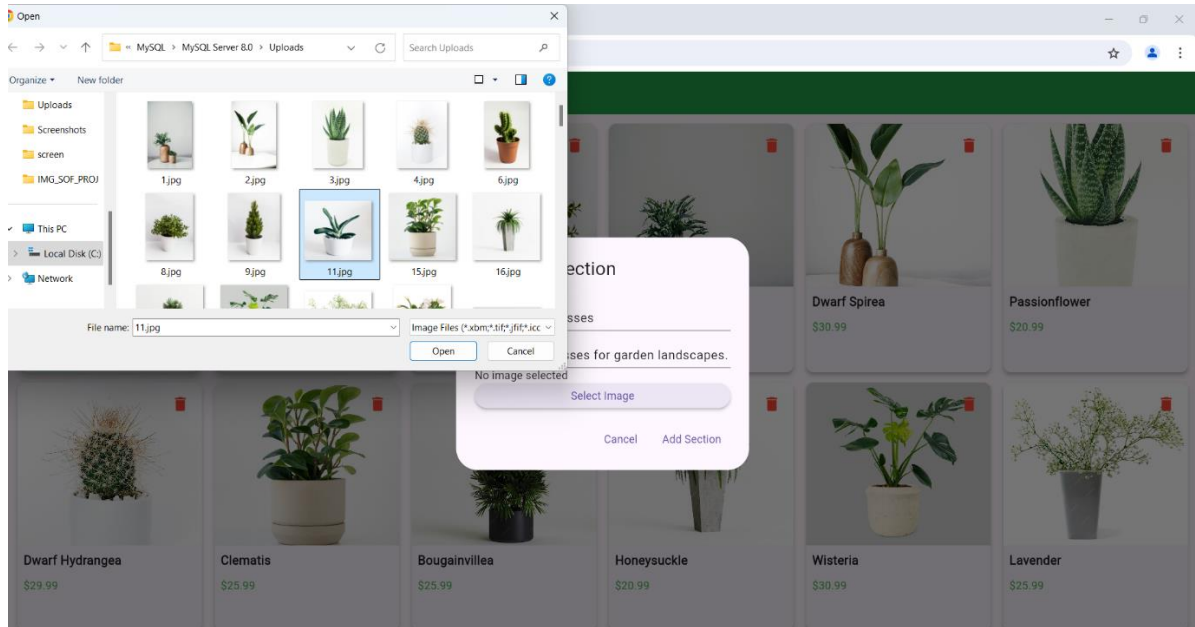


Figure 119:add section example

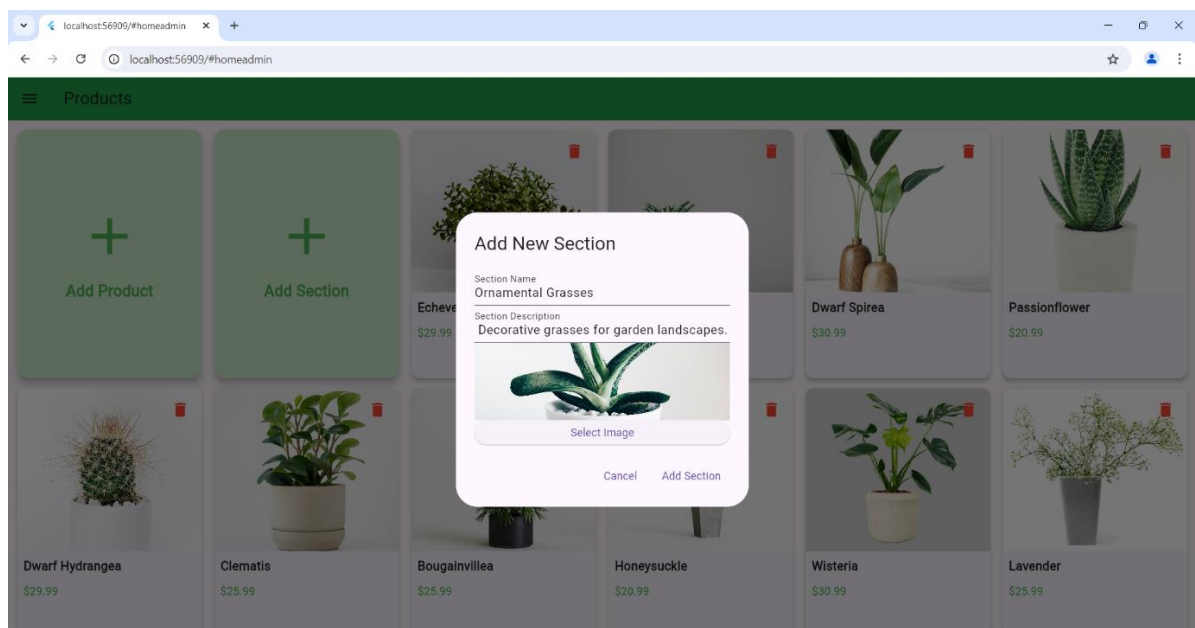


Figure 120:add section example

After admin add the new section now he can add products to it. he can press on 'add product' then he will see the new added section exist in the section options as shown in Figure 121.

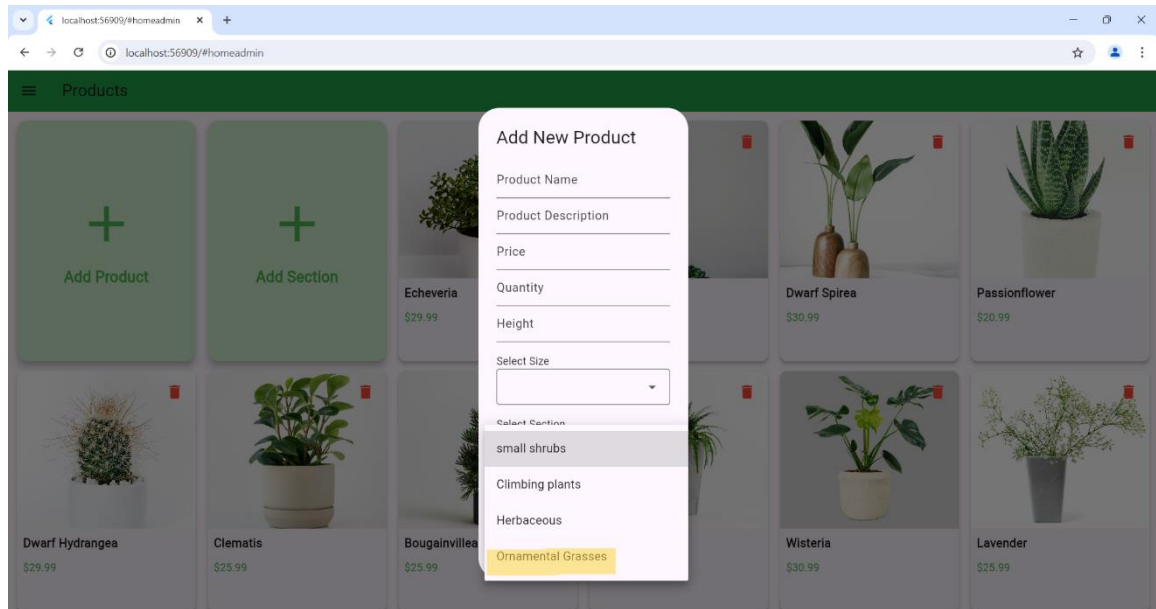


Figure 121:successfully add section

Figure 122 shows section appear to users successfully in user side.

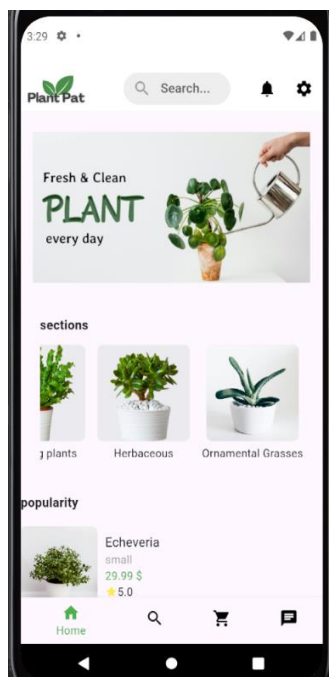


Figure 122:section appear to users successfully

❖ Product details screen:

admin can see Product details when he press on the product that exist on 'products screen' then 'Product details screen' will appear as shown in Figure 123.

Also he can edit any field when press on pencil icon , Figure 124 shows example for edit the quantity of plant.

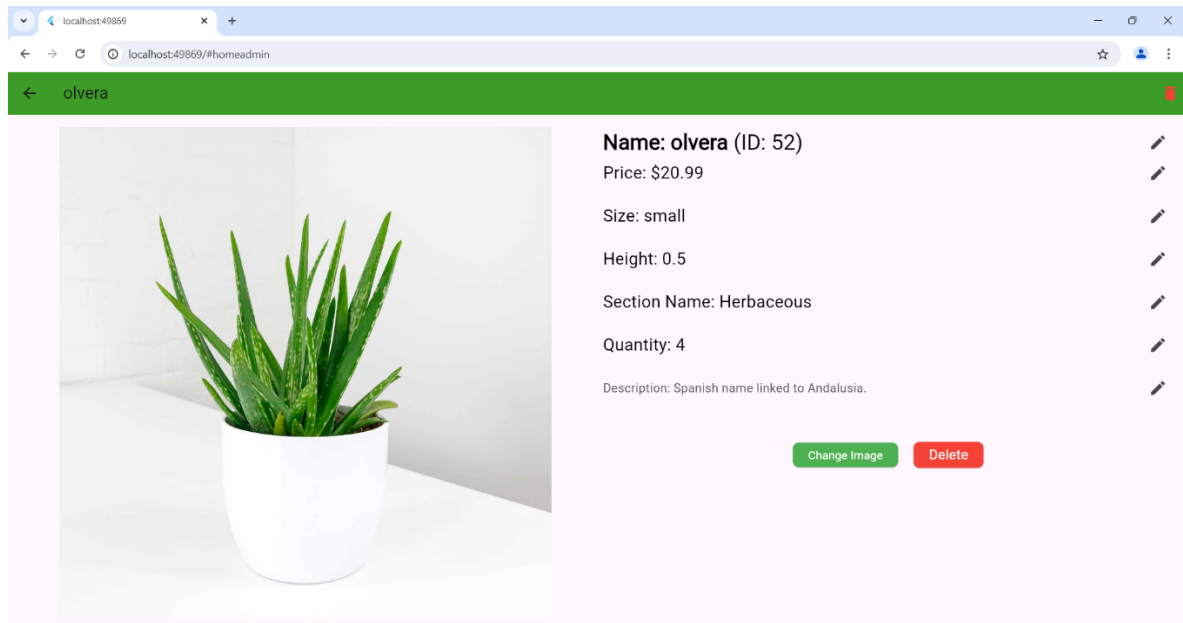


Figure 123:product details screen

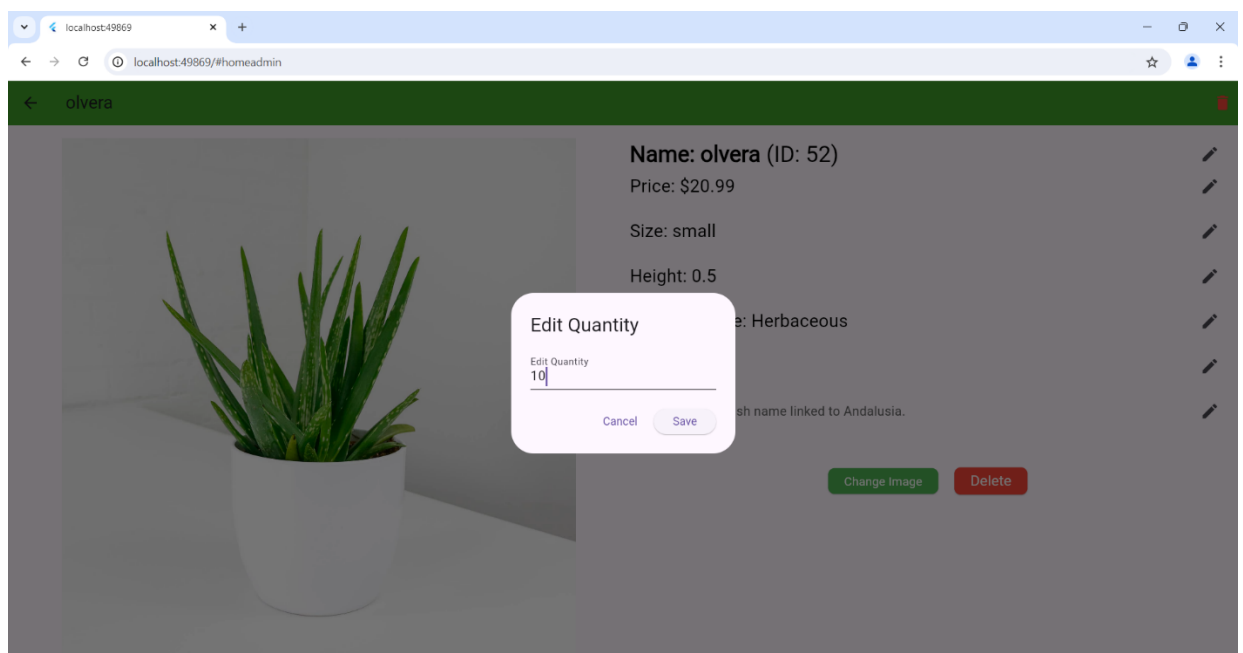


Figure 124:example edit quantity

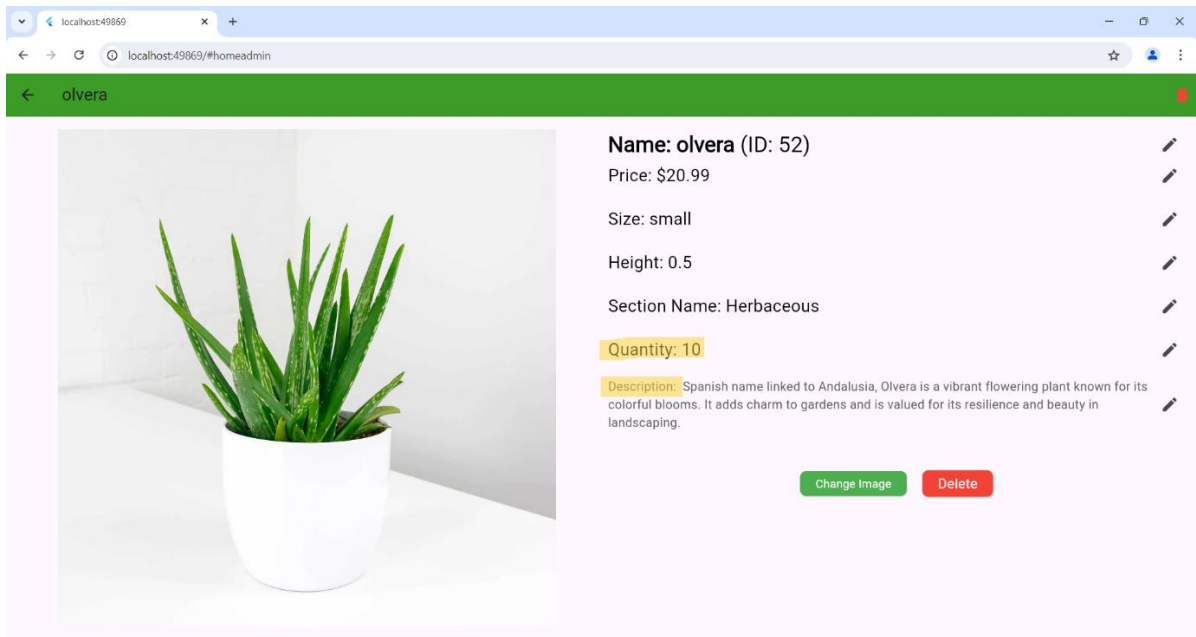


Figure 125:successfully update the quantity and description

Admin can also change image for plant , as shown in Figure 126 and Figure 127.

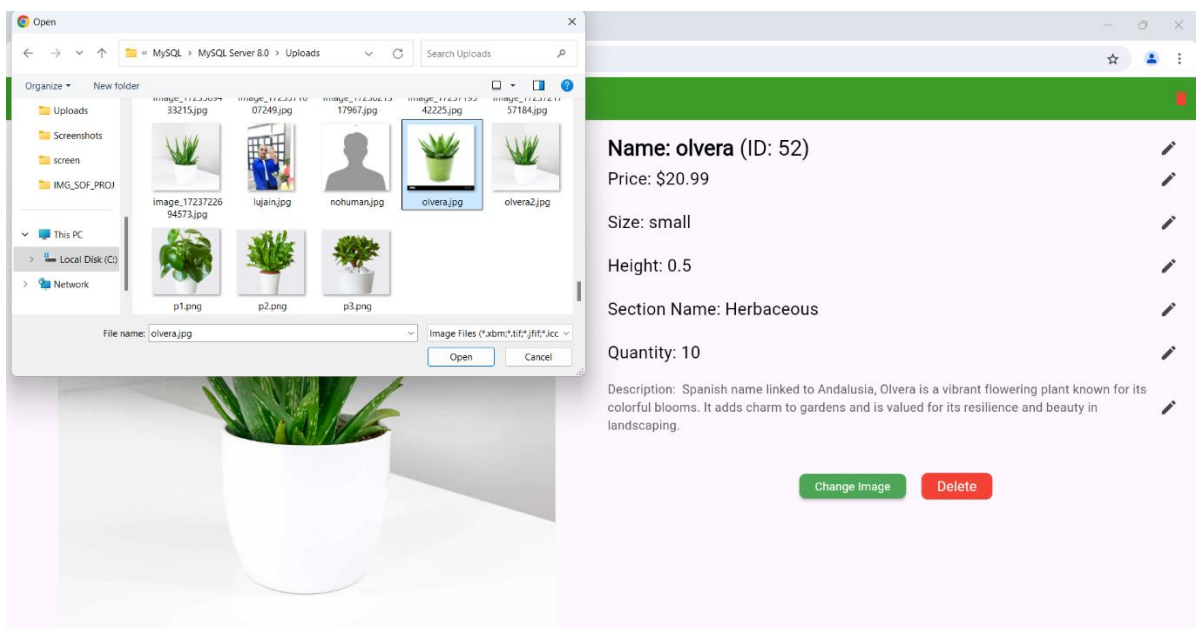


Figure 126:change image

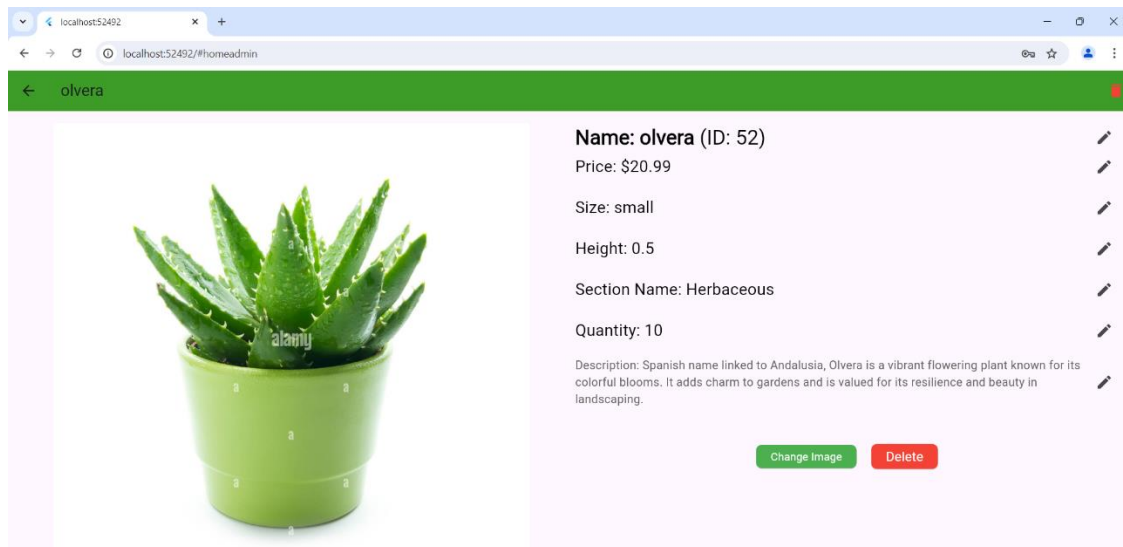


Figure 127:successfully change image

Admin can delete plant by click on 'Delete' button or by click on rubbish icon .

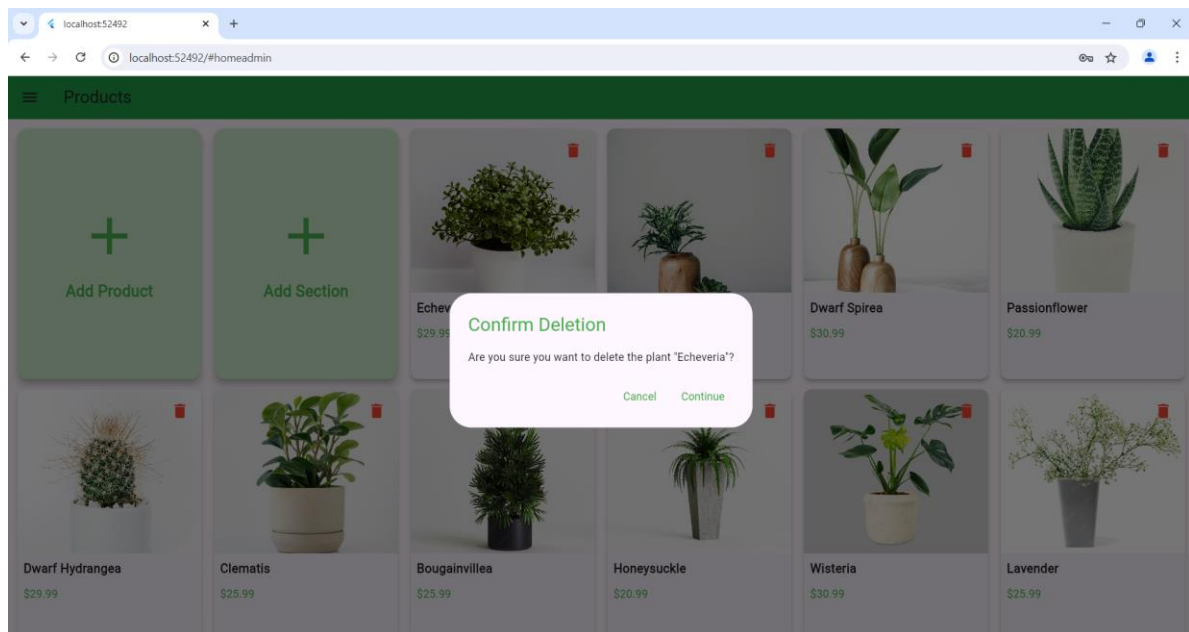



Figure 128:delete plant

❖ user web:

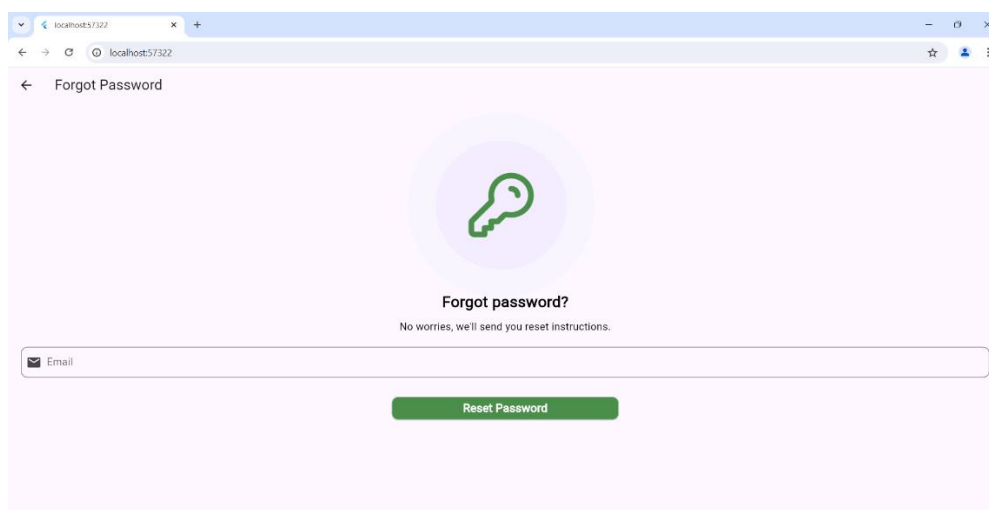
our application also support user web here are some images for user login in web instead of mobile...



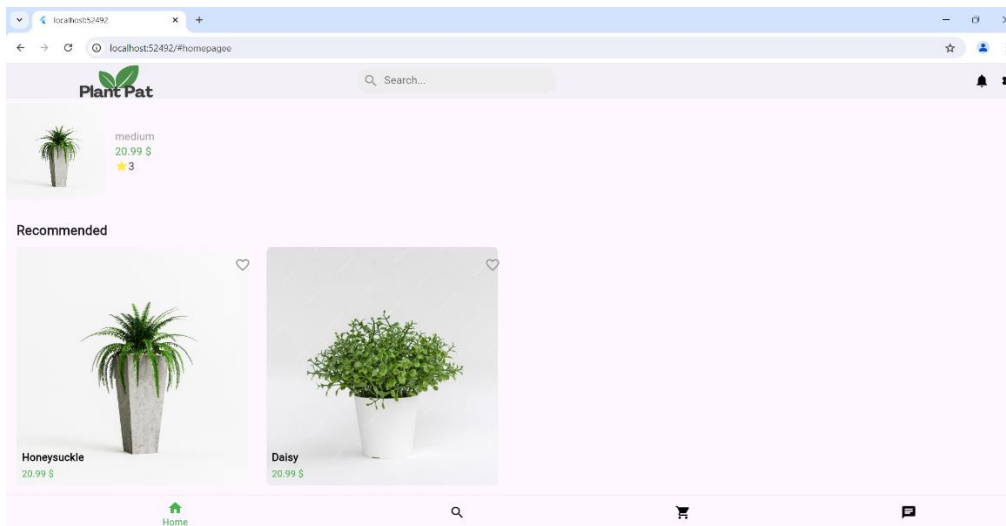
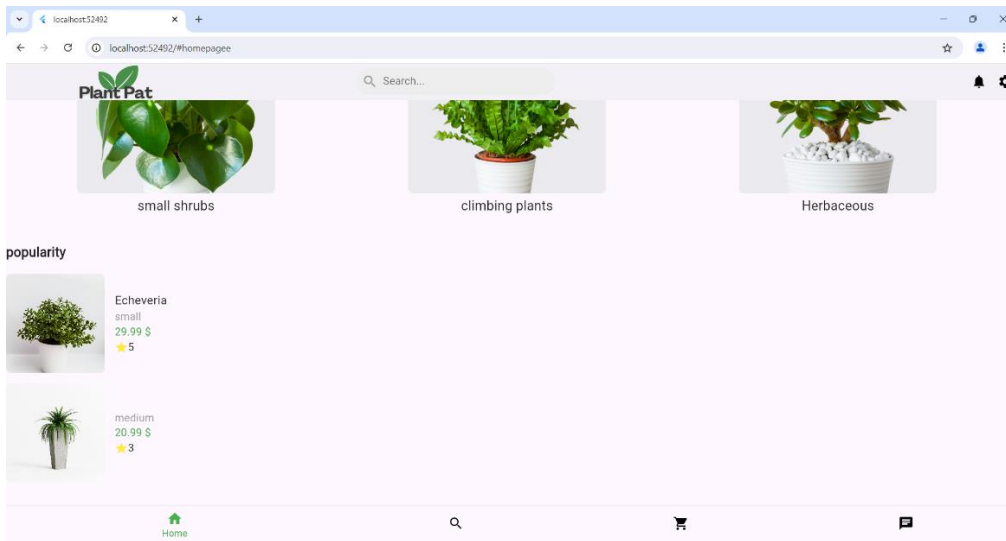
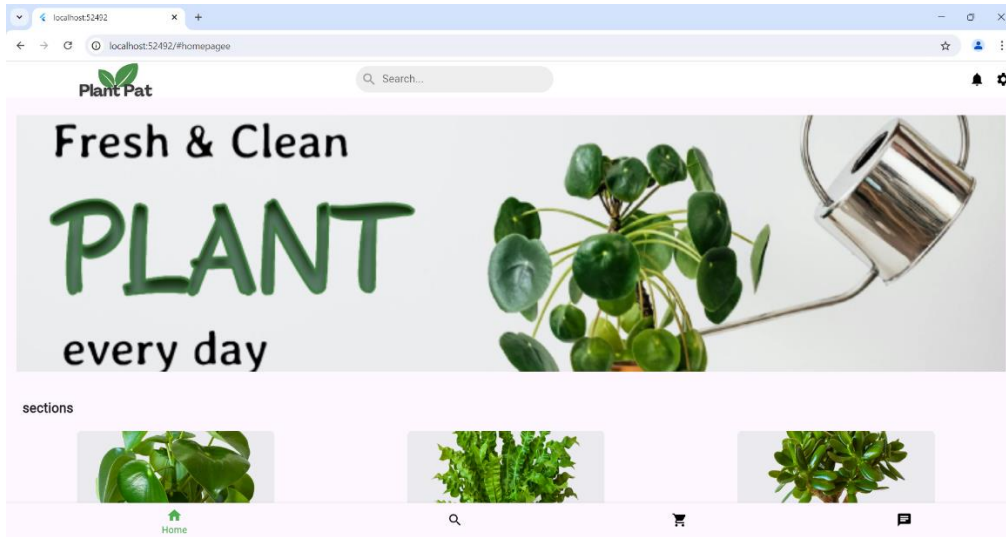
A screenshot of a web browser showing the login page for 'PLANTPAT'. The page has a green header with the logo. Below the header, there are two input fields: 'Email' and 'Password'. A green 'Log In' button is centered below the fields. Below the button, there is a link for 'Forgot your password?' and a link for 'Don't have an account? Sign up'.

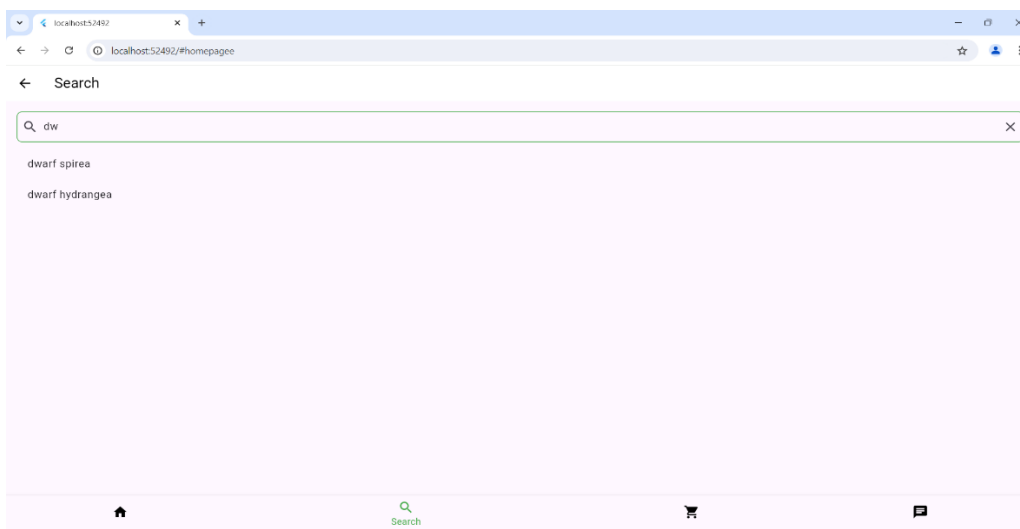
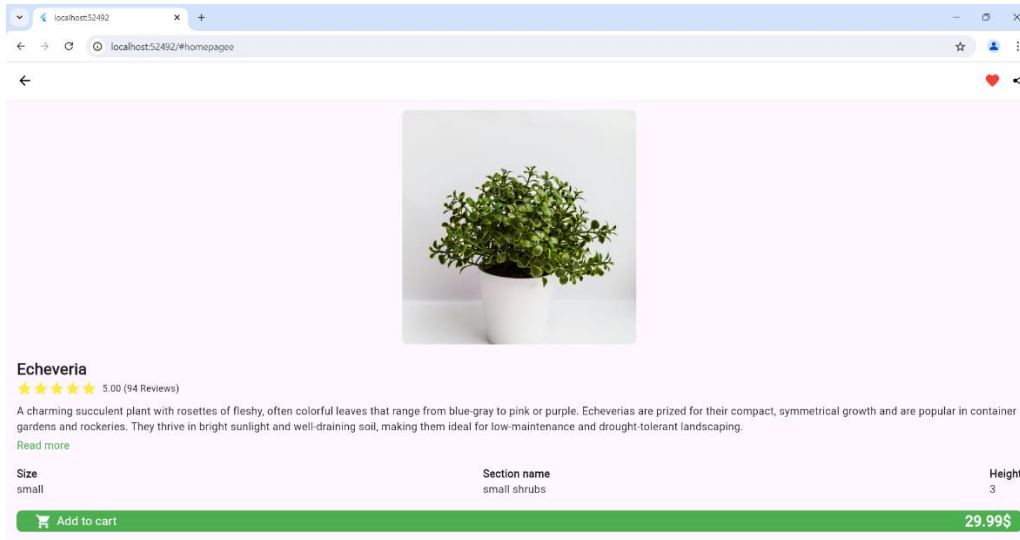
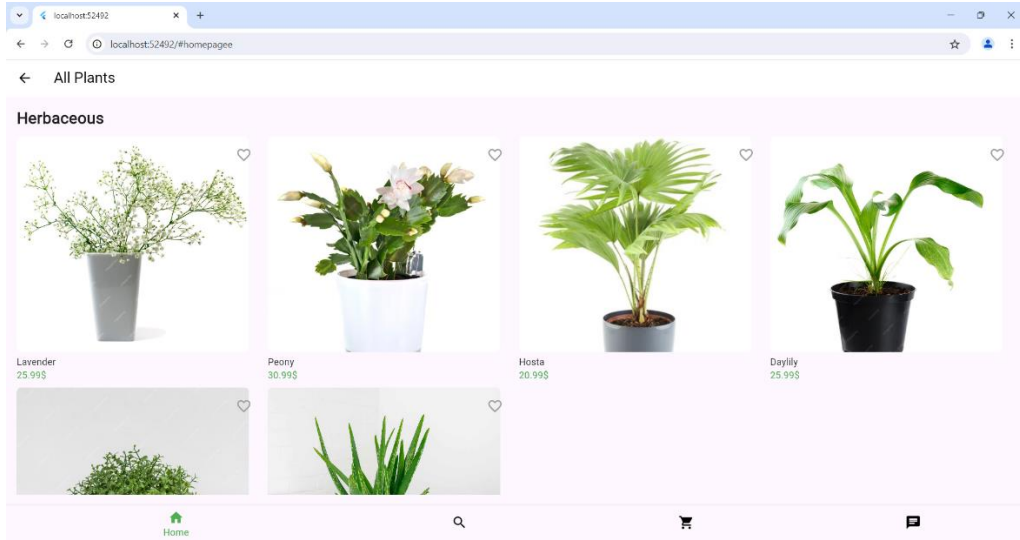


A screenshot of a web browser showing the sign up page for 'PlantPat'. The page has a green header with the text 'Sign up' in a white, cursive font. Below the header, there are several input fields: 'First Name', 'Last Name', 'Email', 'Password', 'Address', and 'Phone Number'. A green 'Sign up' button is centered below the fields. Below the button, there is a link for 'Already have an account? Login'.



A screenshot of a web browser showing the forgot password page for 'PlantPat'. The page has a green header with the text 'Forgot Password'. Below the header, there is a large green key icon inside a circular frame. Below the icon, there is the text 'Forgot password?' and 'No worries, we'll send you reset instructions.' Below this text, there is an input field for 'Email'. A green 'Reset Password' button is centered below the input field.






localhost:52492


localhost:52492/#homepage

← Results

Results



Dwarf Spirea
30.99\$



Dwarf Spirea
20.99\$


Home Search Cart

localhost:52492

localhost:52492/#flushbarRoute


← Wishlist

Your Wishlist




Boxwood
25.99\$

Find Similar




Clematis
25.99\$

Find Similar



Echeveria
29.99\$

Find Similar



Passionflower
20.99\$

Find Similar


Home Search Cart

localhost:52492


localhost:52492/#flushbarRoute

← All Similar Plants


Similar Plants




Echeveria
29.99\$




Dwarf Hydrangea
29.99\$



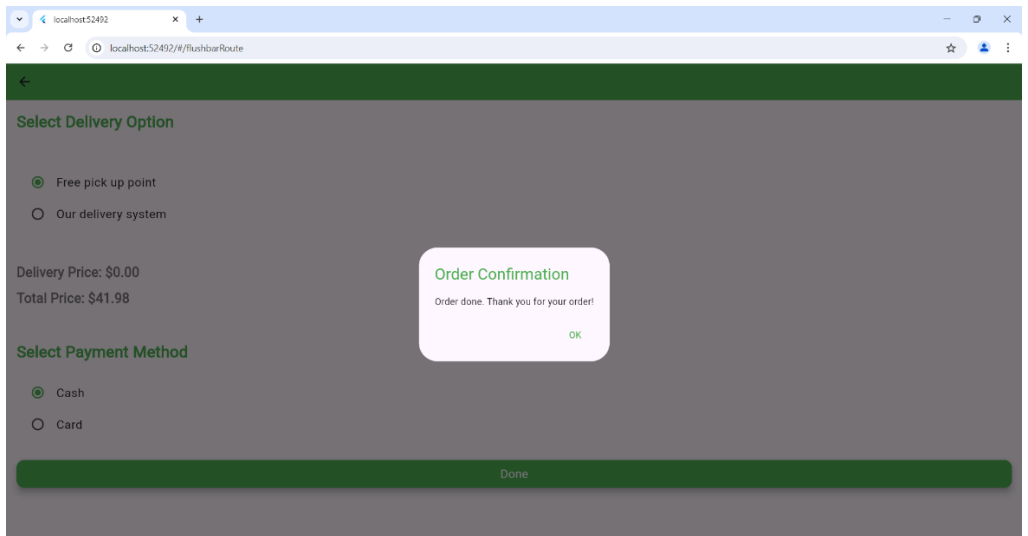
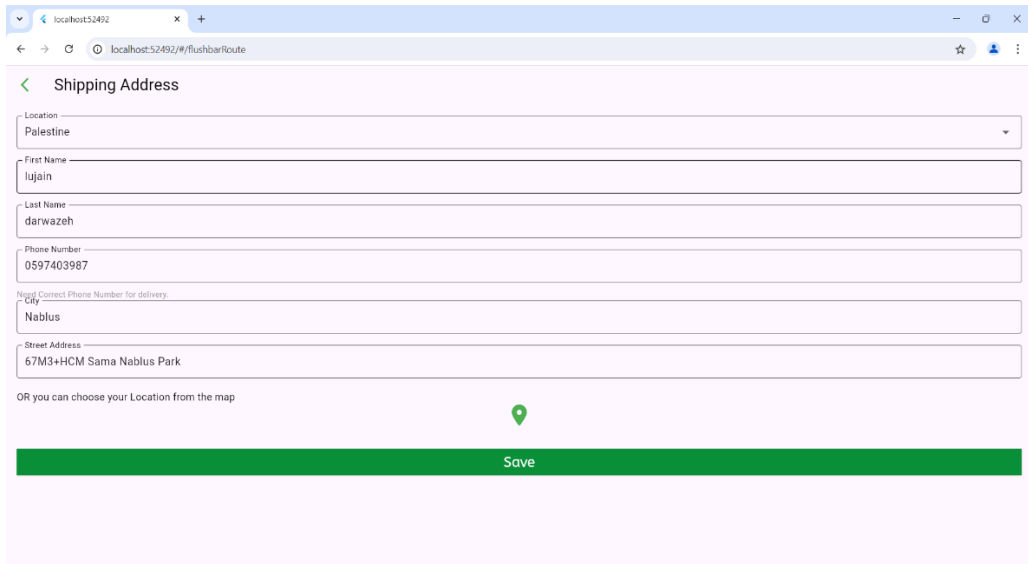
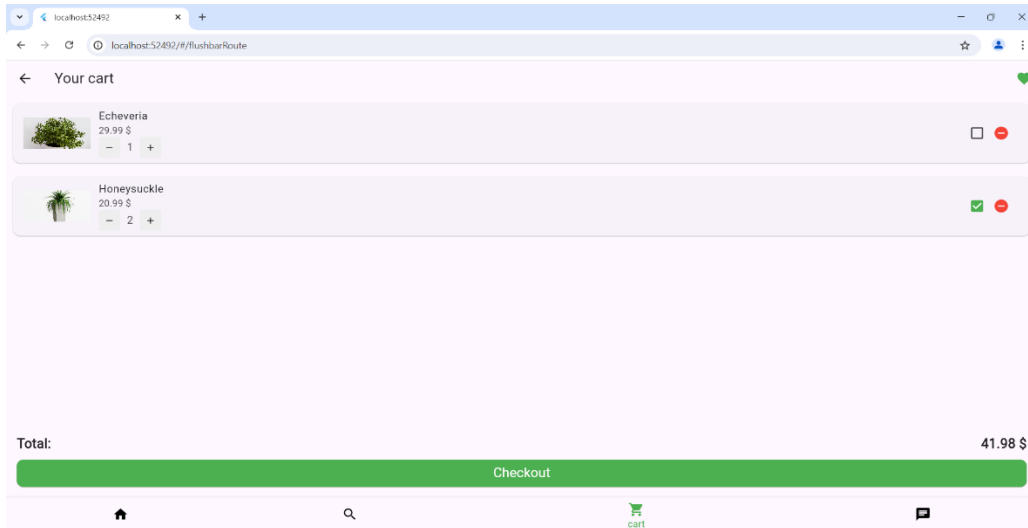
Forsythia
25.99\$

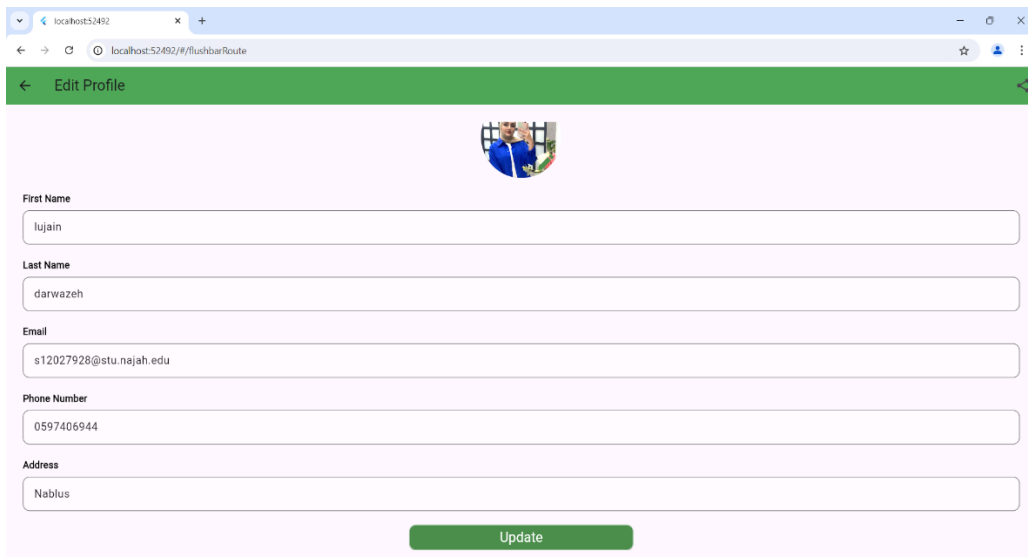
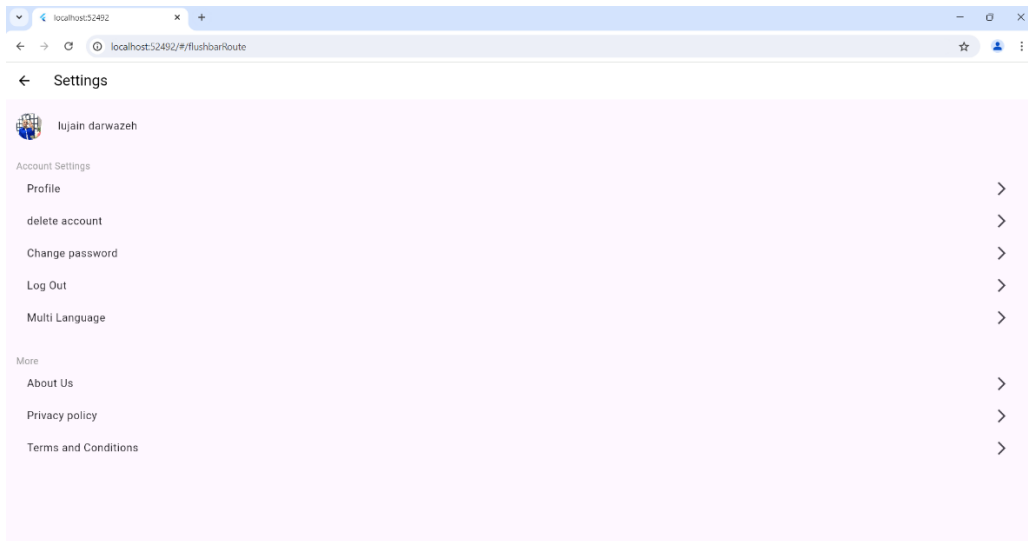
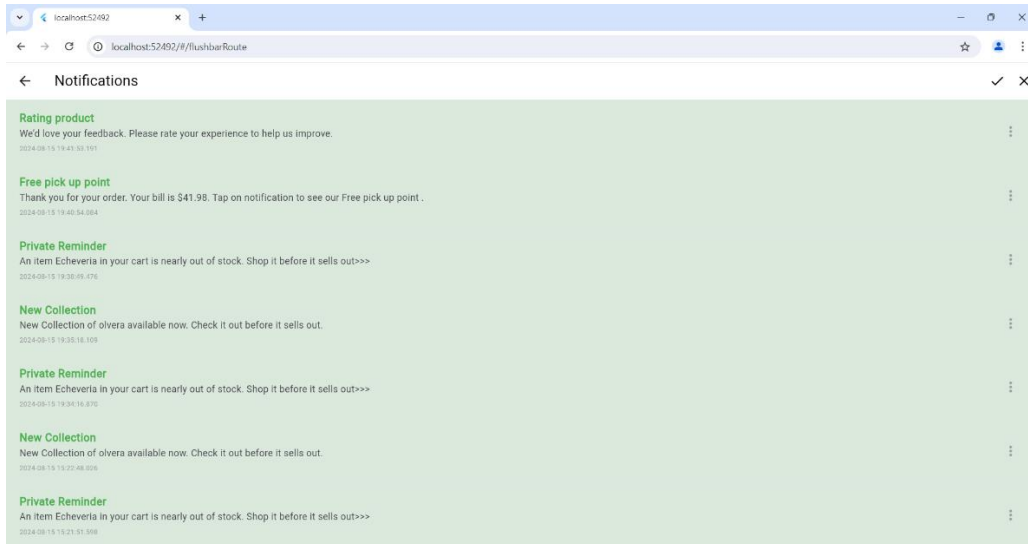


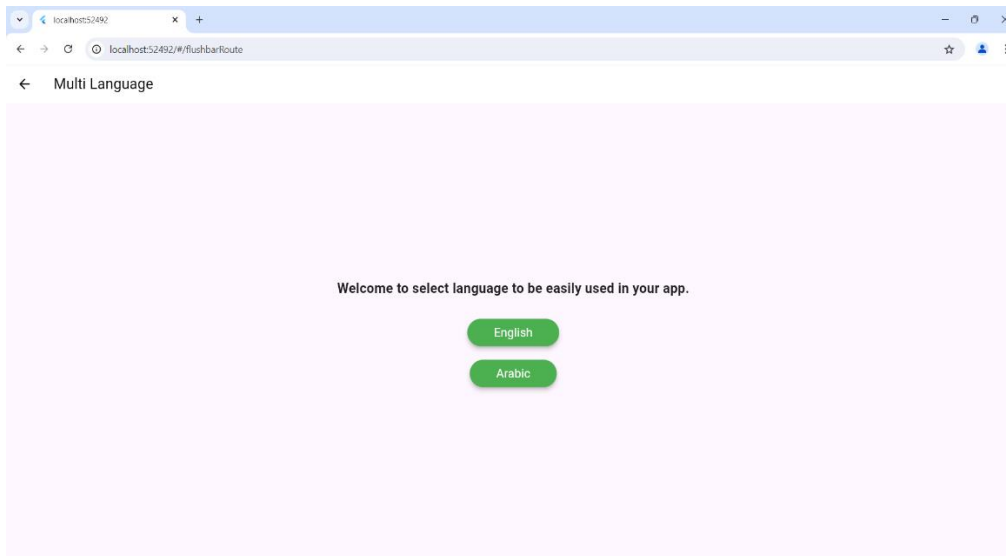
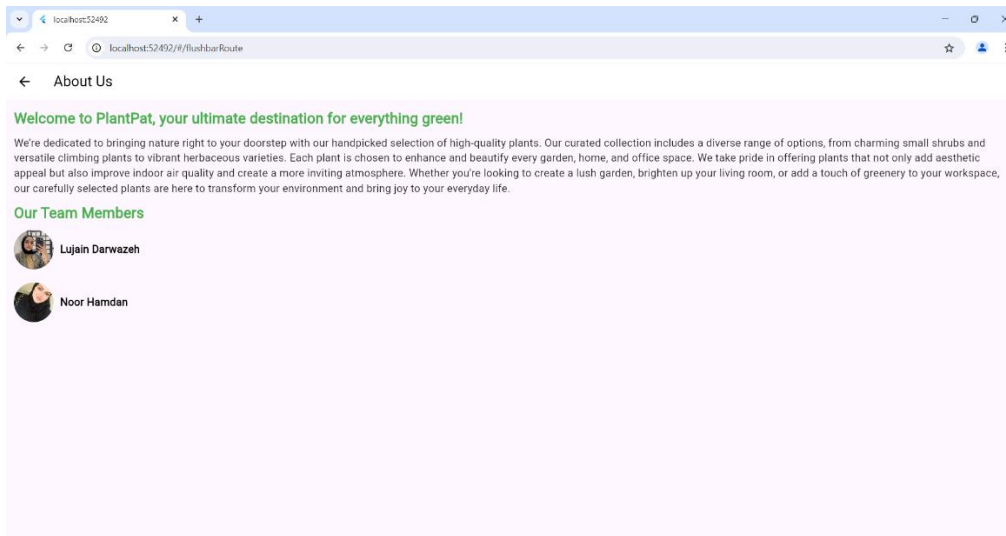
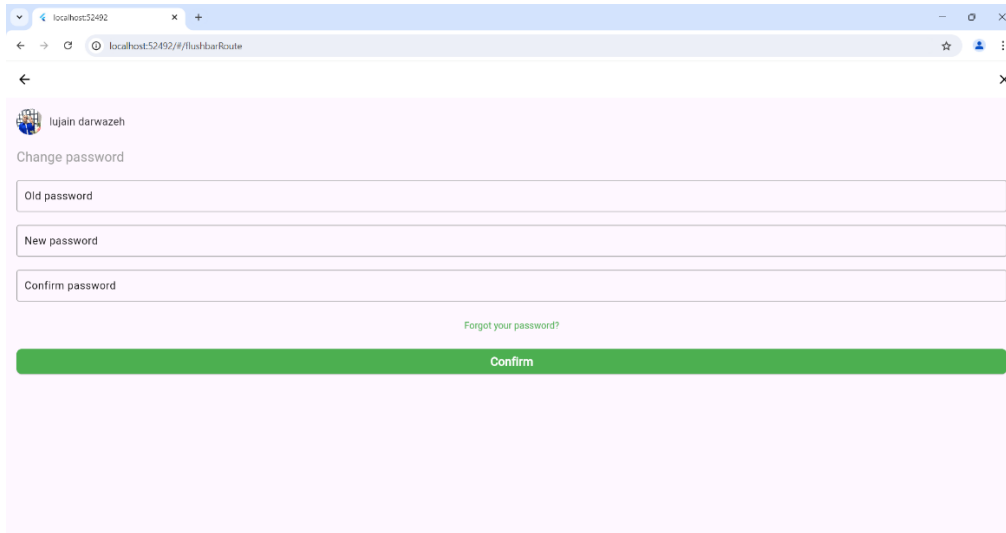
Prickly Pear
15.99\$

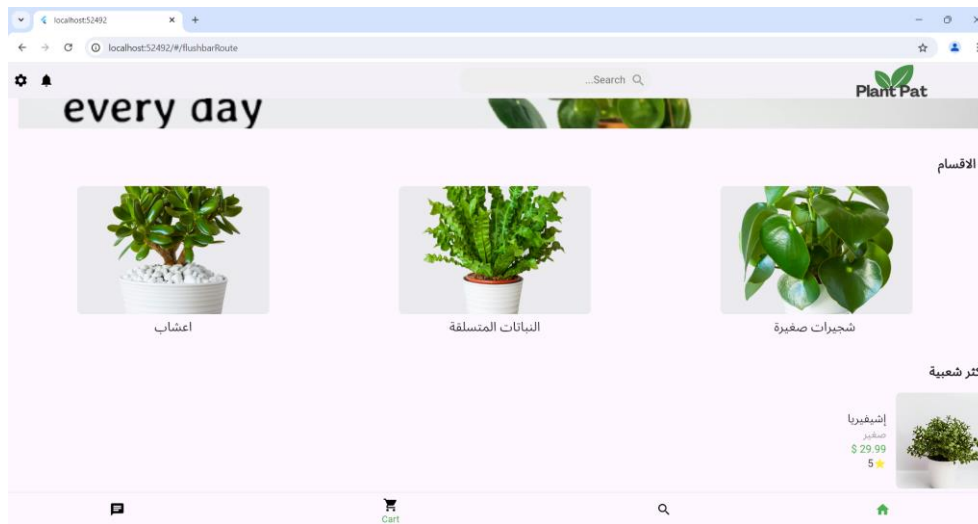
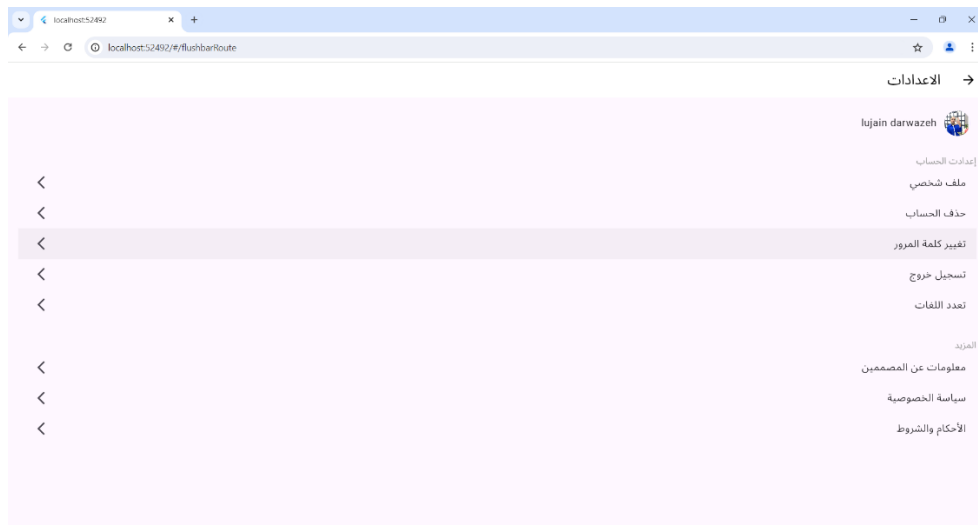
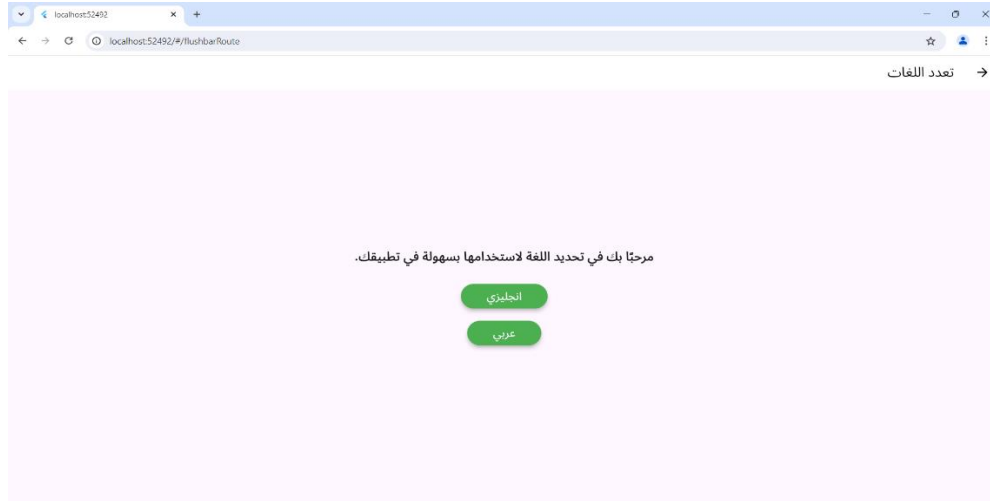


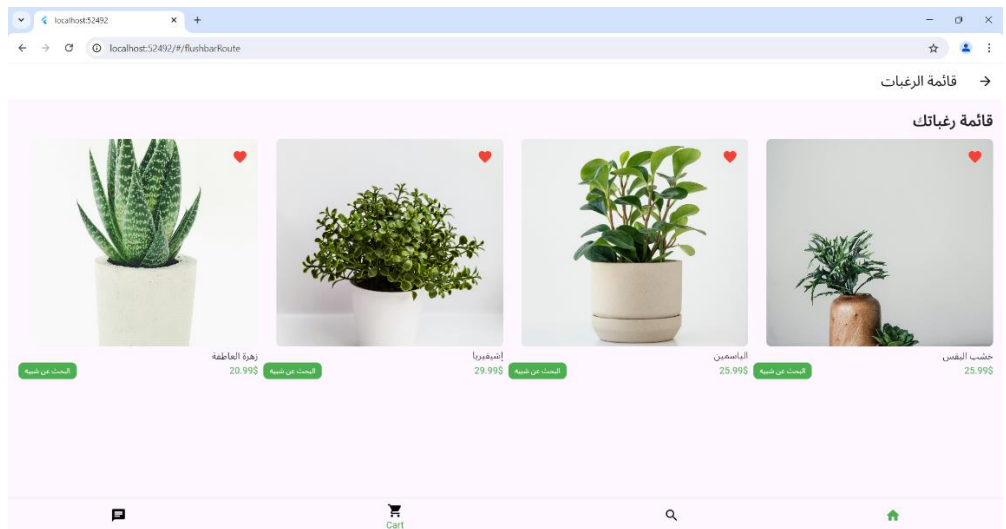
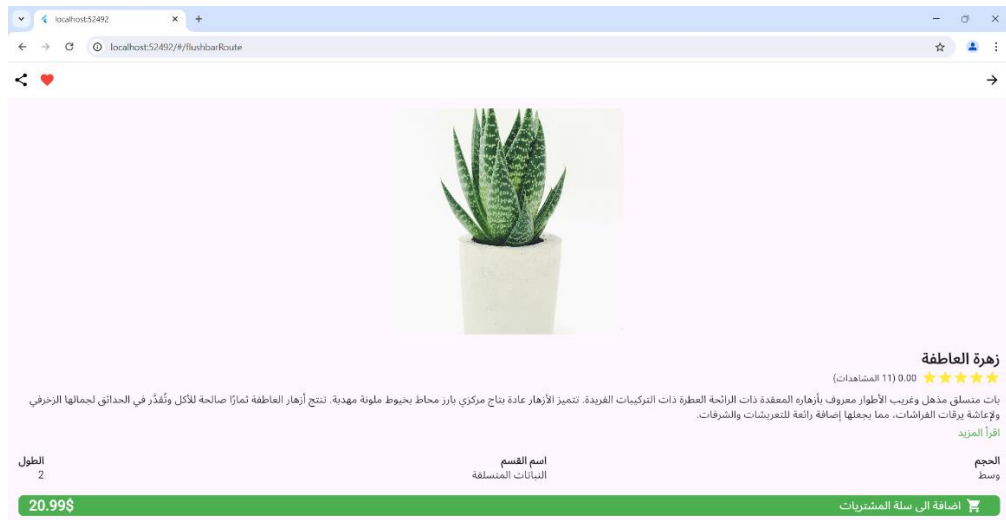
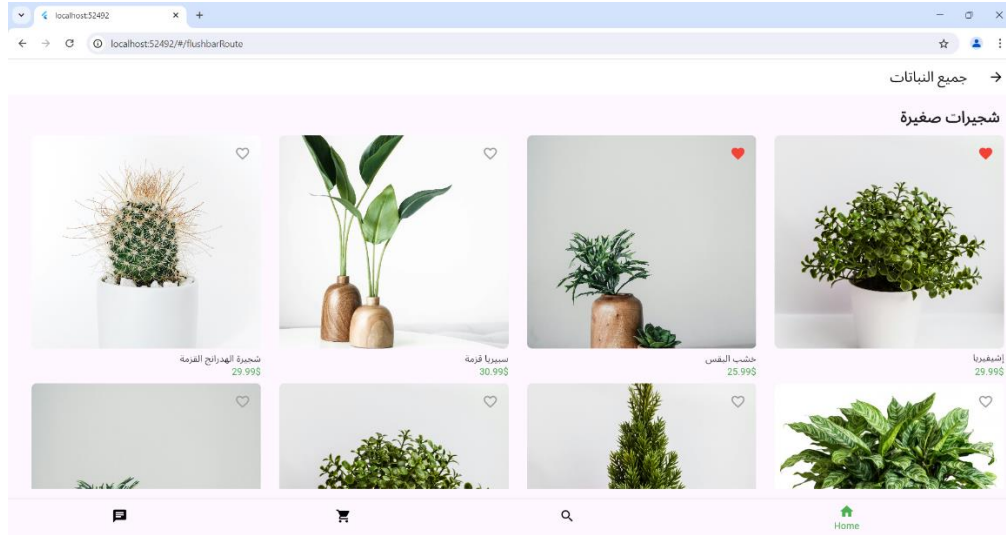
Home Search Cart

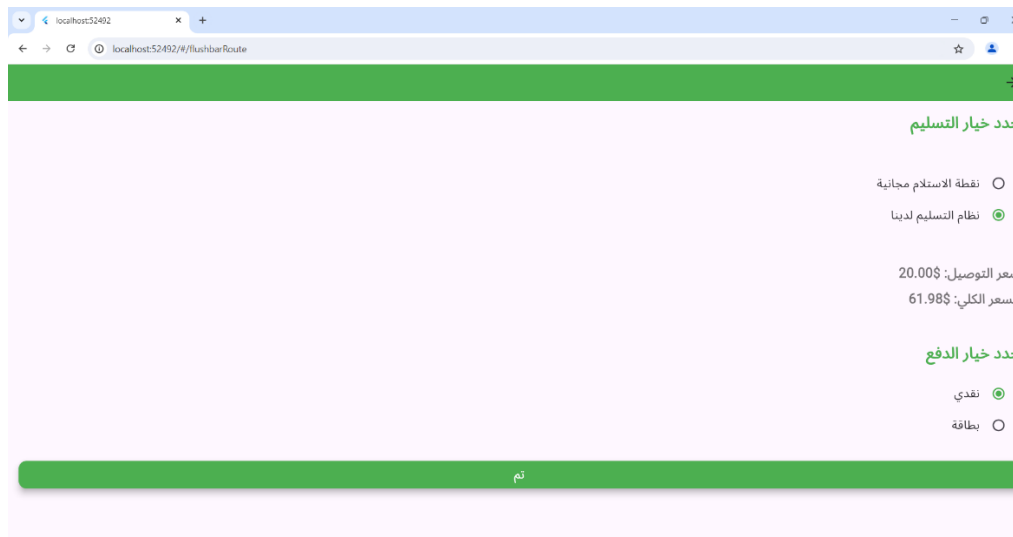
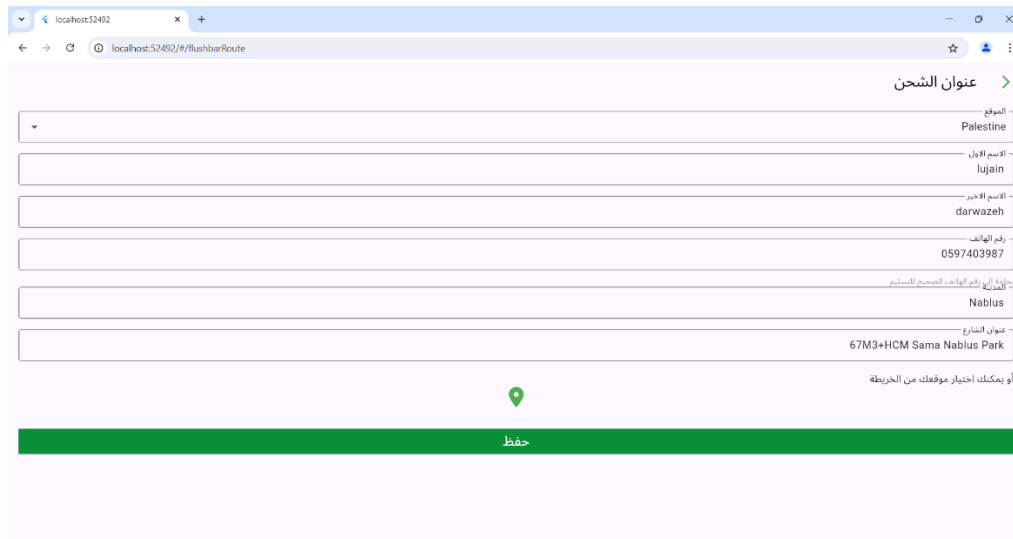












Chapter 5: Result and Conclusion

The software provides a platform where users can buy plant easily, where we have successfully offer simple operate and use program achieves comfort for users in browsing and purchase plants.

The project's objective was accomplished: develop an online shopping system designed specifically for the sale of plants with strong functionality .Users now have access to a safe payment option, which promotes security and trust, they also can track their order in easy way ,Users receive recommendations from artificial intelligence, which guarantees the application's success.

We learned a lot of new programming techniques from this project that we not know them before.

Chapter 6: Discussion

plantpat is a program that helps users to browsing and purchase plants easily without visiting nurseries and farms. It provide easy searching for the plants they want, and it provides a delivery service for the purchased plants. and it also provide chatting system to ask professional about the plants and take advise .

Without any problems with functionality, performance, or security, we successfully completed the project and enhanced our capacity for self-learning.

Chapter 7: Future Work

1. Cooperation with home and garden decor stores :Cooperation between online plant shopping platforms and home and garden decor stores presents significant opportunities for growth and enhanced customer experiences.

2. Augmented Reality (AR):users could use AR to imagine how plants will look in their homes or gardens before purchasing them. This involves simulating various lighting setups and conditions.

3. Blockchain technology : Blockchain technology can be integrated to our application it will make it much better. because its ensuring the security and transparency of transactions .its reduce the possibility of data breaches, fraud, and illegal access.

4. Smart Devices for Plant Care: Integrating smart devices that track health of plant (moisture, light, temperature) and provide users with information via a mobile app. These smart devices could be offered as part of the plant purchase.

5. Plant Care Communities: Online apps where users can join groups based on plant section or gardening interests, exchanging advise, and participating in group buys.

Chapter 8: References

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