

An-Najah National University



Faculty of Engineering and Information Technology

Computer Engineering Department

Graduation Project I

“Purple”

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**Presented in partial fulfillment of the requirements for
bachelor's degree in computer engineering.**

Acknowledgment:

First and foremost, we give thanks to God for blessing us and for using us to carry out this endeavor. We also pray that the knowledge we gain will be useful to the rest of the world, especially in Palestine.

We would like to thank our families for the continuous support and encouragement they provided us from the beginning until the last moment.

We thank Dr. Suleiman Abu Kharmeh for his constant help and for providing us with a lot to complete this project.

We thank our dear Drs in the Department of Computer Engineering, who had the credit for us by reaching this stage with all that they have given us throughout these years, we will forever be grateful.

To all those and many more, who supported us through thick and thin, we give a big “Thank You” straight from our hearts, and we present you this report and project.

Disclaimer

This report was written by Aya Abu Ali and Yana Beshar at the Computer Engineering Department, Faculty of Engineering, An-Najah National University.

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Abstract

It's not a secret that we all have been annoyed by the tiring long queues and delays at the salons. From here came the idea of creating an application where a user can view and book appointments at their nearby locations.

Our application includes a number of Palestinian salons in several cities, there are a lot of services in all of the salons, and the client can see all of them and book in advance through the application. the client can see the appointments in each salon, The user can use the maps through the application to see the salon located on the map, also he can use the chat to contact the salon's Admin in all of the salons to book and Inquire about services. and it provides the user with offers and discounts from his favorite salon.

To use these things, the client must register with a new account and log in if he has an account.

We did preliminary research about this project and some problems customers face, such as:

- Customers cannot find or may not be aware of nearby salons.
- The services each salon provides may be different. There is no way to know them.
- The pricing of each service may vary according to the salon. The customer cannot find or know them before reaching the salon.
- The customer has to wait in line for their turn, which may lead to a waste of time.

Addressing all the problems, solutions were found for them like

- Based on the location selected, the customer can find the list of salons near them. This solves the issue where the user is unaware of their nearby salons.

- Each salon lists the service they provide, along with details of the service, This allows users to choose their preferred service.
- The pricing is also displayed along with each service, which solves the problem. This avoids any unnecessary surprises at the last minute.
- Booking a slot for the desired salon will solve the problem where customers having to wait in line. Overcrowding can be avoided, and also the customer can save a lot of time.

We designed this application to make it as easy for the client as possible and save them time so that they do not have to wait a long time. The salons would also get a chance to get their salon name known.

1 Introduction

1.1 Statement The problem:

The project focused on three important problems:

- Customers cannot find or may not be aware of nearby salons.
- The services each salon provides may be different. There is no way to know them.
- The pricing of each service may vary according to the salon. The customer cannot find or know them before reaching the salon.
- The customer has to wait in line for their turn, which may lead to a waste of time.

1.2 Objectives and Scope:

This project is intended to help people who have problems booking appointments in salons, by creating an application that allows users to book and make appointments with different salons, Users will also be able to chat with different salon's admin on the application in order to get more information about the services and get the answer for various questions.

1.3 Significance:

The main objective of the project is to build a mobile booking application that helps customers to book appropriate appointments and provide customers with Appointment Details

Report Organization

- Second chapter: In this chapter, we covered the important subjects we learned previously, as well as the external courses and the primary constraints and obstacles we encounter while working on the project.
- Third chapter: The literature review chapter is a summary of previously published works that are similar to ours in concept. we discuss their qualities and weaknesses, as well as what sets us apart from them.
- Fourth chapter (Methodology): We talked about the mentality through which we built the application, in addition to the features that we offer, and the technology used.
- Fifth and final chapter: we talked about the results, as well as the lessons we learned from working on the project and future developments.

2. Constraints and Earlier Coursework

2.1 Constraints

2.1.1 Programming language Constraint

We have spent a long time choosing which programming language to use since this is the first time we are building a mobile application.

2.1.2 Lack of Time

Time is the most important factor in any project. Researching, communicating, testing, developing, understanding the requirements, planning, and the wasted time due to inexperience, all of these things require time which, no matter how tiny, quickly adds up.

2.1.3 Data Familiarity

Dealing with a matter of which we do not have sufficient knowledge is difficult, especially when we do not have a previous background about it, and this is what we faced with the application, so we made an effort to collect the correct data, to be accurate in the information we display.

2.2 Earlier coursework

2.2.1 Advanced Software Engineering

Building our application more efficiently and effectively was made easier by gaining experience with Node-JS and MVC architecture from our Advanced Software Engineering course.

2.2.2 Critical Thinking and Research Skills

The research and the writing of this report were all taught in this course, and it's one of the few non-technical courses which also is lifelong.

3. Literature Review

The initial stage of the process was to consider the various problems that customers might have when it comes to dealing with salons.

The problem was found after an initial proposal was gathered.

According to a study done by academicians in Coimbatore, India, the health and beauty salon business is expanding at a rapid pace.

Customers, however, suffer numerous issues as a result of the industry's rapid expansion, including:

Customers may be unable to locate or are unaware of neighboring salons.

The services provided by each salon may differ. There is no way to know who they are.

The cost of each service varies depending on the salon. The customer cannot locate or recognize them prior to arriving at the salon.

The consumer must wait in line for their turn, which may result in time wasted.

The targeted age group of customers for Salone is between 20 and 40. They can be defined as people who hate to waste time, loves technology, and the internet, and have the opportunity to explore and discover new things. Knowing the user can help in fine-tuning the product, while also making the product accessible to all.

The User's Value of This Project

The user can easily locate neighboring salons.

We occasionally wish to attempt some tweaks to our favorites. This will cut down on the time spent looking for anything new.

Eliminating the waiting period at a salon can improve the user's experience. Users can always locate the finest offers in their area.

4. Methodology

4.1 Tools, Methods, and Programming Languages:

4.1.1 Programming Languages

Our application was built using two different languages:

- Flutter for the front end.
- Node-JS for the backend.

4.1.2 Tools

- Visual Studio Code
- Android Studio emulator
- Flutter 3.3.4
- Node-JS 16.14.0
- Android Emulator
- Firebase System

4.1.3 Database:

We used Mongo database and the needed Collections are as follows:

allcategories

bookings

bookingservices

categories

employees

messages

offers

offerservices

ratings

salons

services

users

whoarewes

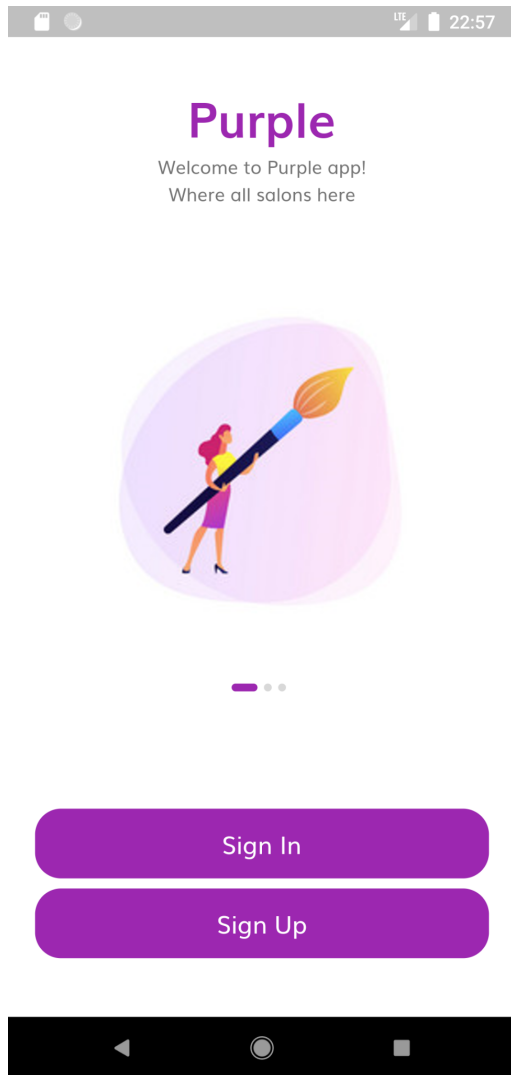
Figure 1: Database Collections

4.2 Implementation:

4.2.1 Mobile Application

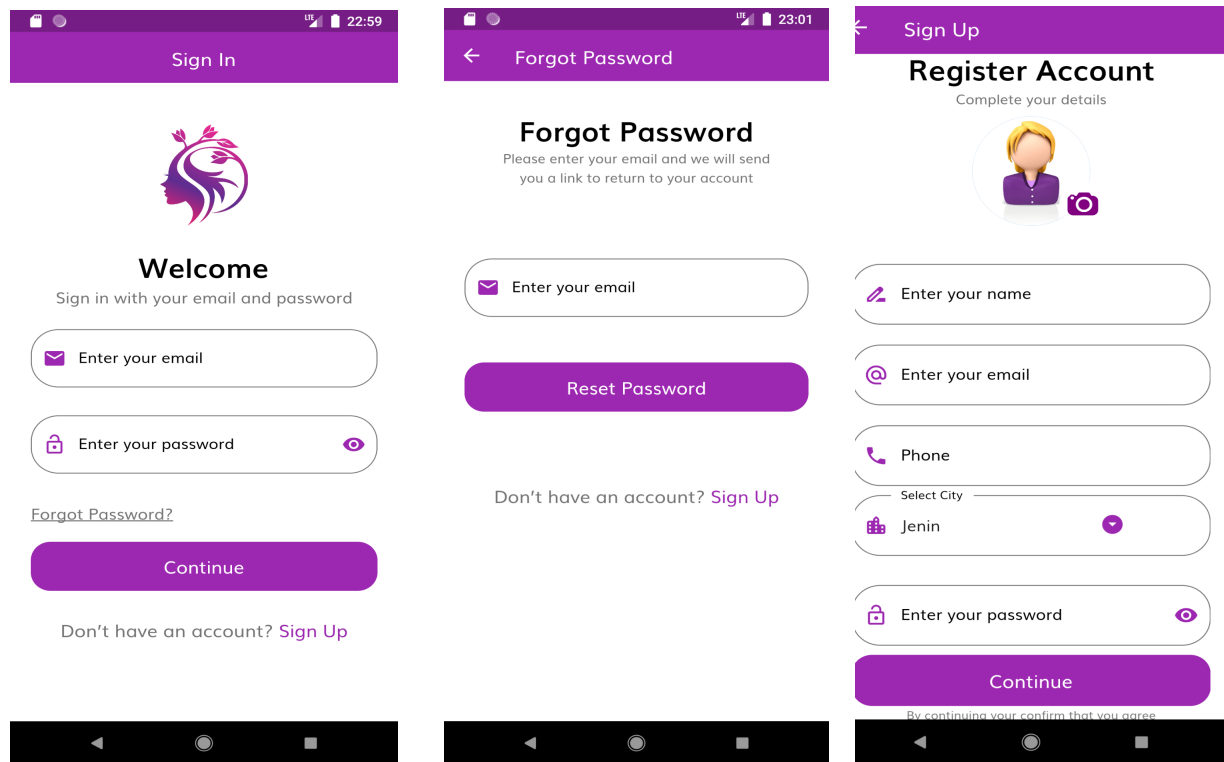
4.2.1.1 Start Screen:

This is the start screen to begin loading the application



4.2.1.2 Sign-in Screen:

This is the screen to enter user credentials about the account for the user. if the user has an account she can enter the email, and password and then presses in login button, if the user forgot the password can reassign it by entering the email address in forget password screen.



4.2.1.3 Sign-up Screen:

If the user doesn't have an account on the application he can press “sign up” and enter valid information such as email, password, city, and phone number.


4.2.1.4 Sign-up Salon Screen:


New salons can by this screen signup in the application and have profiles and services by passing valid info such as email, password, Salon name, phone number, opening hours, address, city, excluded day, and google map link to their location.



Join Us


Register Salon Account


Complete salon details



 Enter your email

 Enter your password 

 Enter salon name

 Phone

Opening Hours:


09:00 AM 05:00 PM


Open Time Close Time

Join Us



Join Us

Complete salon details






 Address

Select City

 Jenin 

Excluded day

 Monday 

 Google maps link

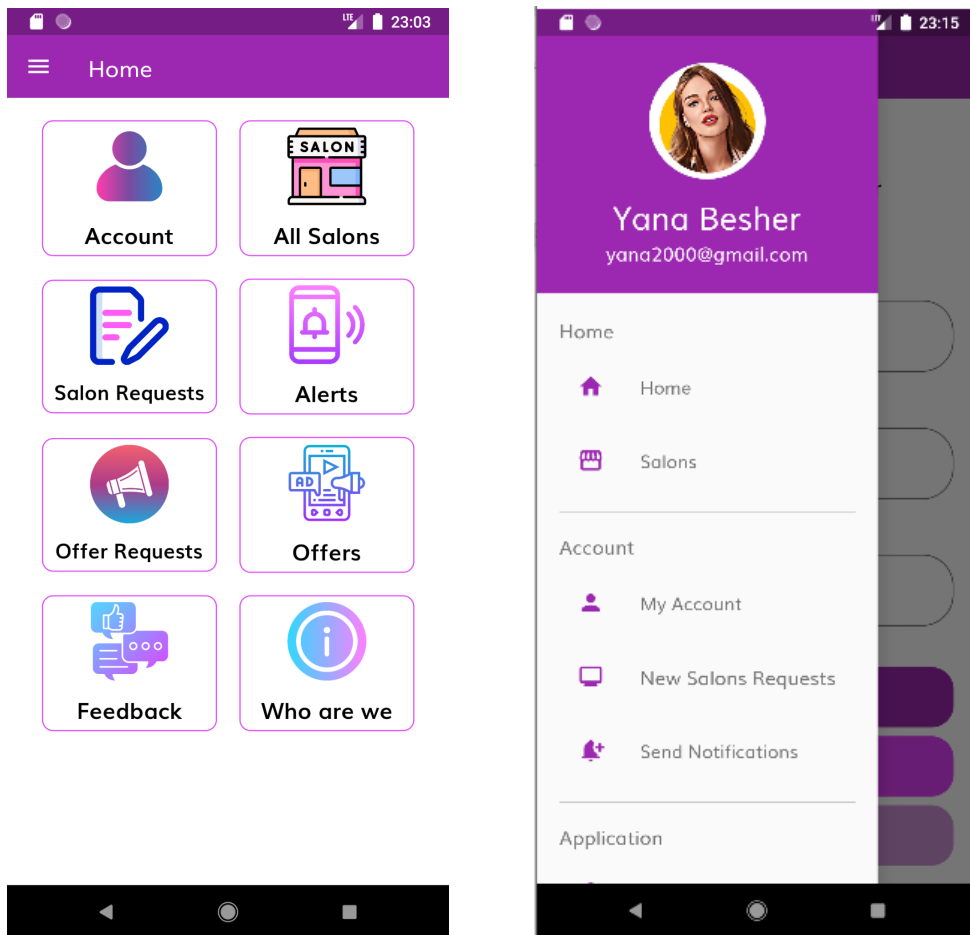
Get your current location

Continue

By continuing your confirm that you agree with our Term and Condition

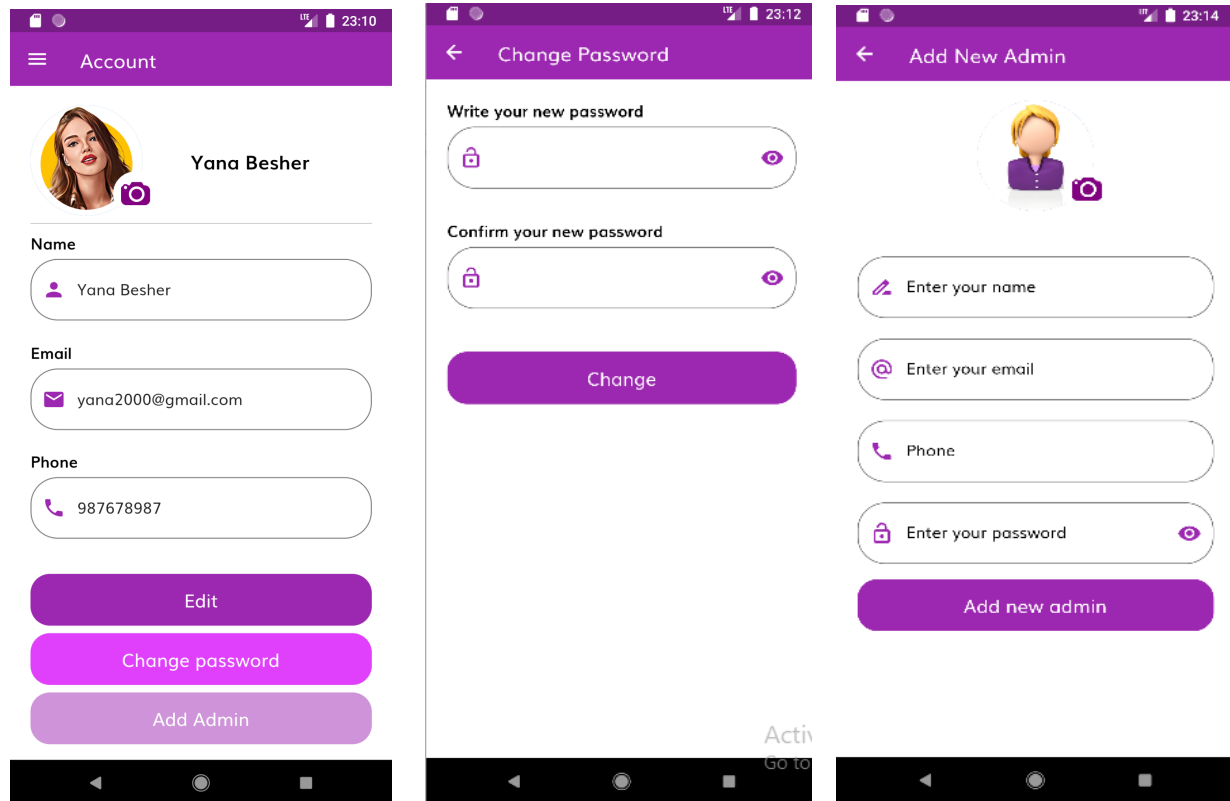
4.2.1.5 Admin Main Screen:

Admin Dashboard to control the application.



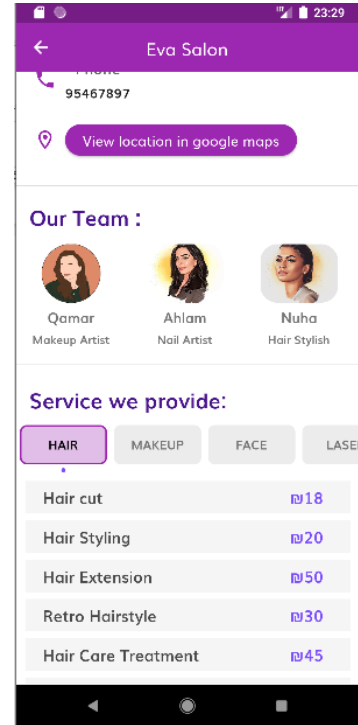
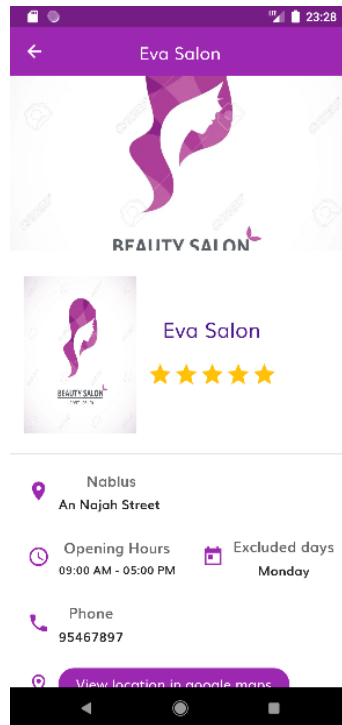
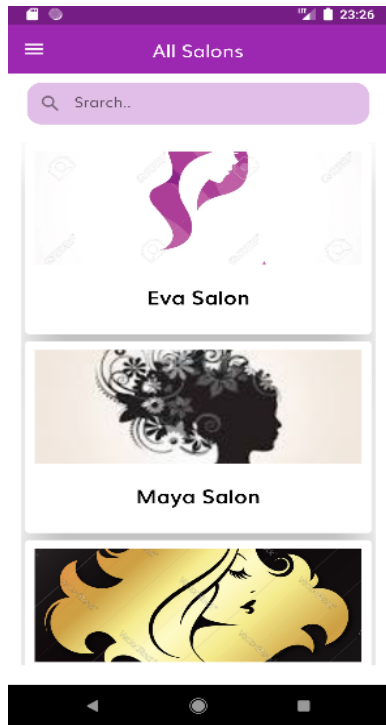
4.2.1.6 Edit profile & change password and Add admin Screens:

In these screens, Admin can edit his information and add a new admin to the application.



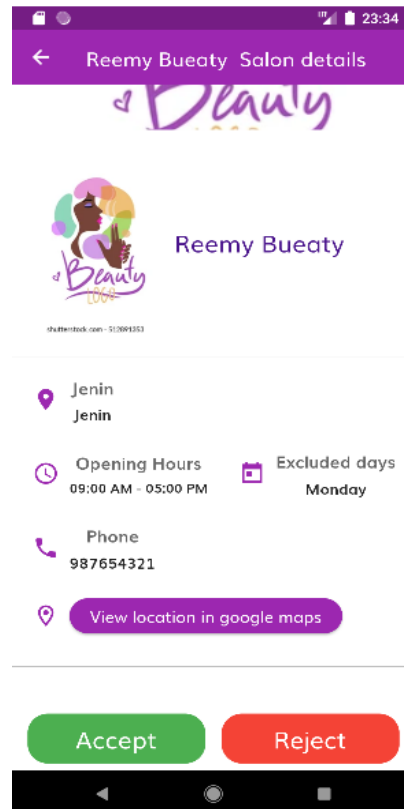
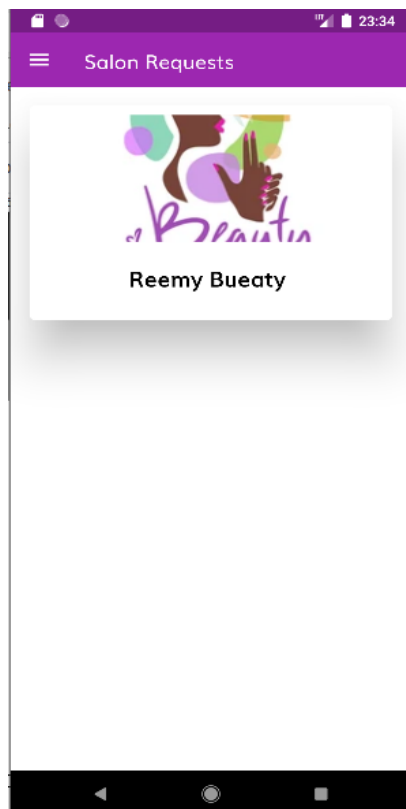
4.2.1.7 All salons & Salon profile Screens:

The admin can see the list of all salons, and search and view the salon page with all of its info, services, and employees:



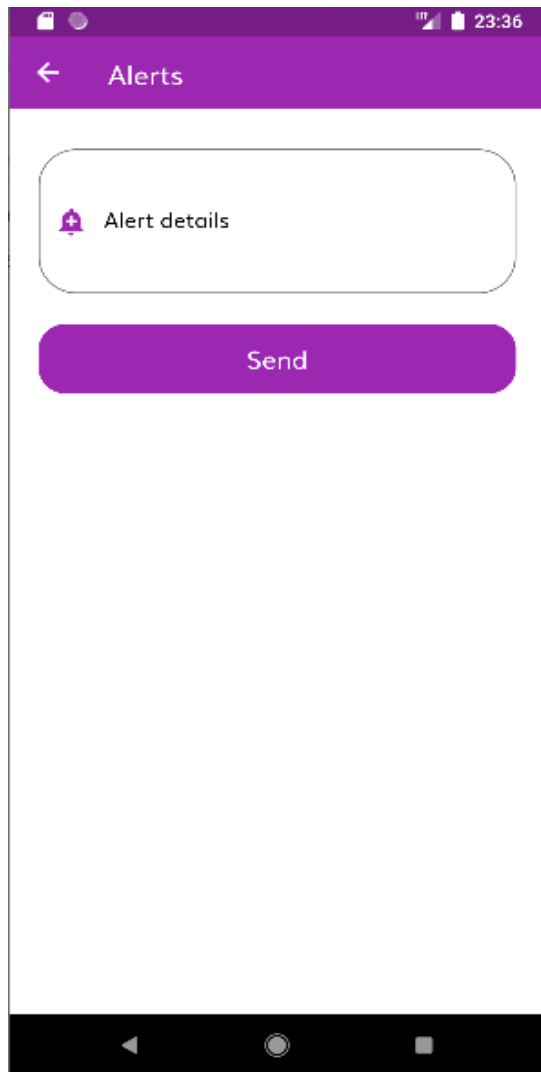
4.2.1.8 Salon Requests & Salon profile Screens:

See the salon Request, and he accepts or declines



4.2.1.9 Send alerts screen:

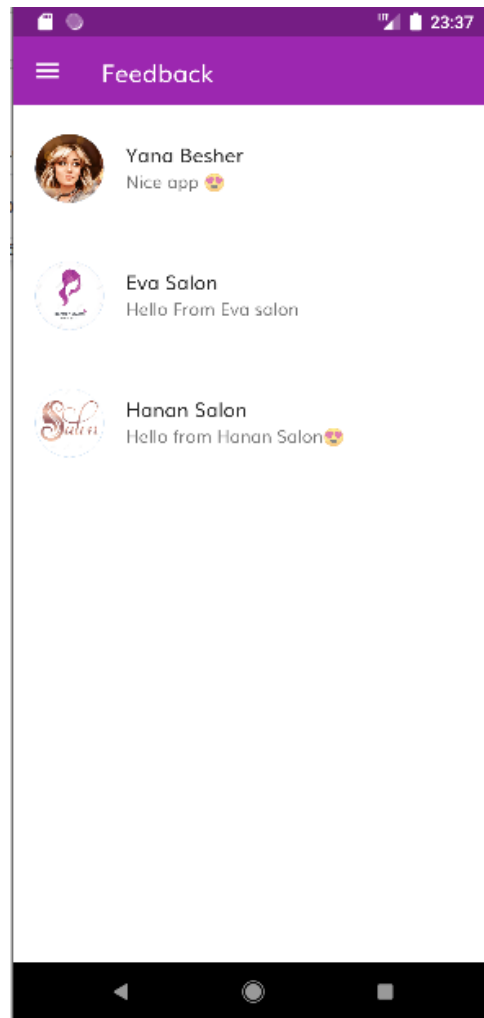
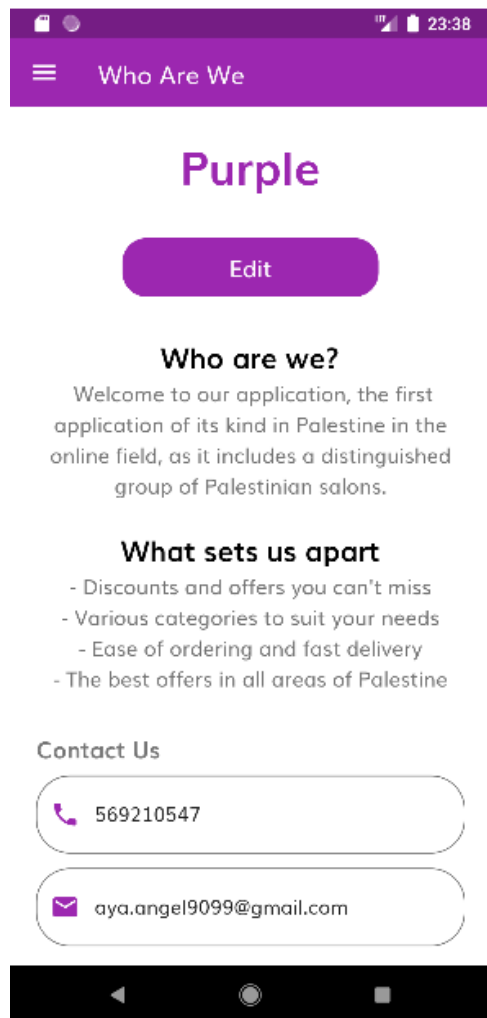
The Admin can send notifications to the users.



4.2.1.10 Who are we screen:

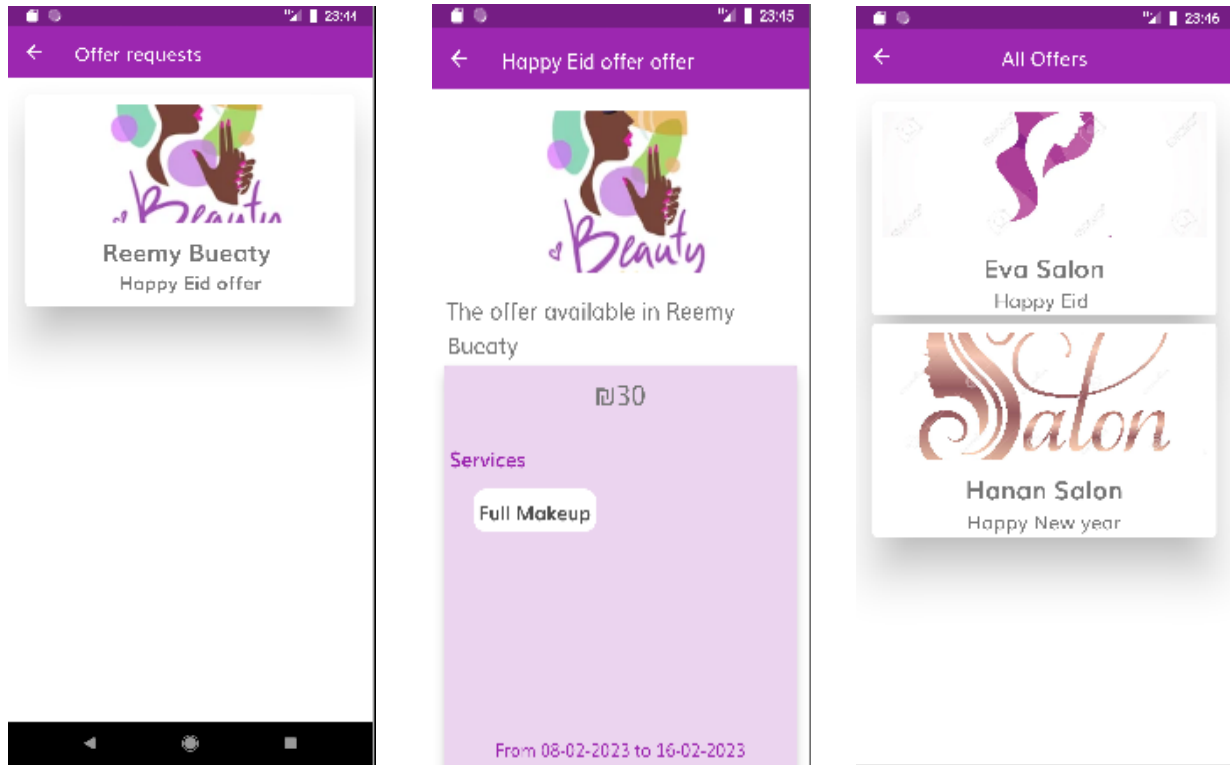
defined screen about the salon, Admin can edit it at any time.

4.2.1.11 see the feedback from users and salons:



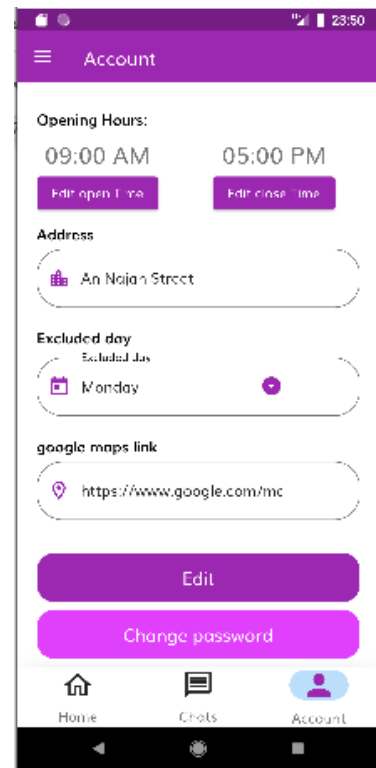
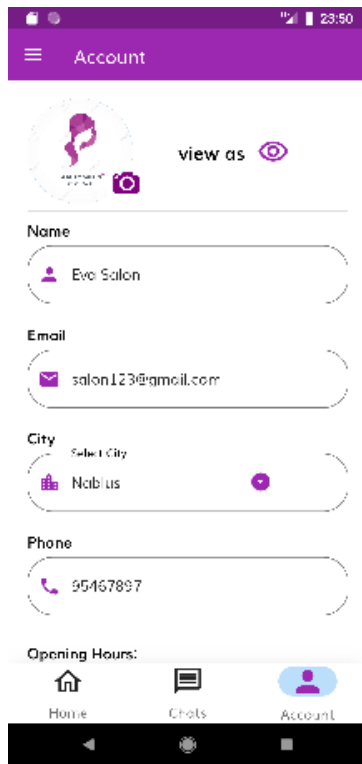
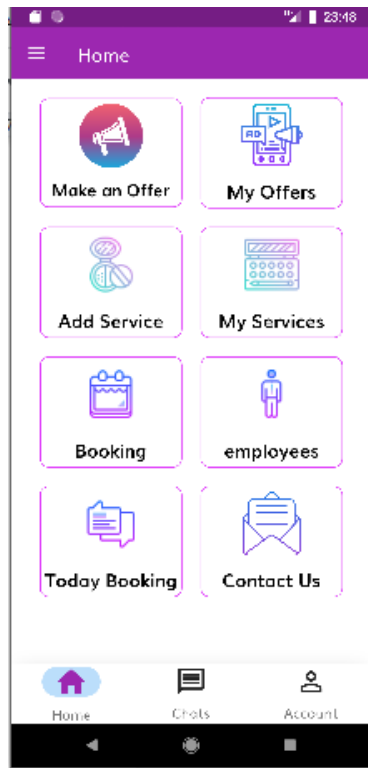
4.2.1.12 Offers:

The admin can see the request offers, and he accepts or reject them.



4.2.2 The salon section

4.2.2.1 salon main screen and profile page:



4.2.2.2 Offers:

The salon can make offers by choosing the offer name, price, and the services he has already:

Make offer

Offer name

HAIR

Hair cut ☒

Hair Styling ☒

Hair Extension ☒

MAKEUP

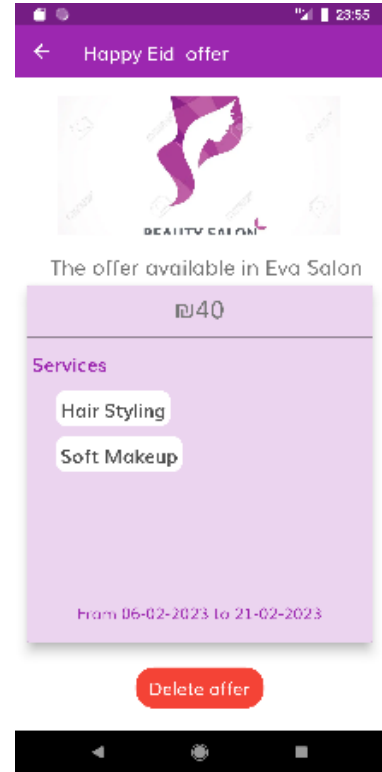
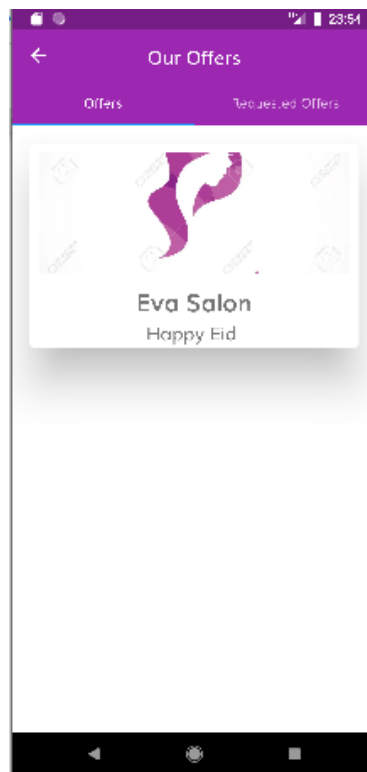
Full Makeup ☒

Soft Makeup ☒

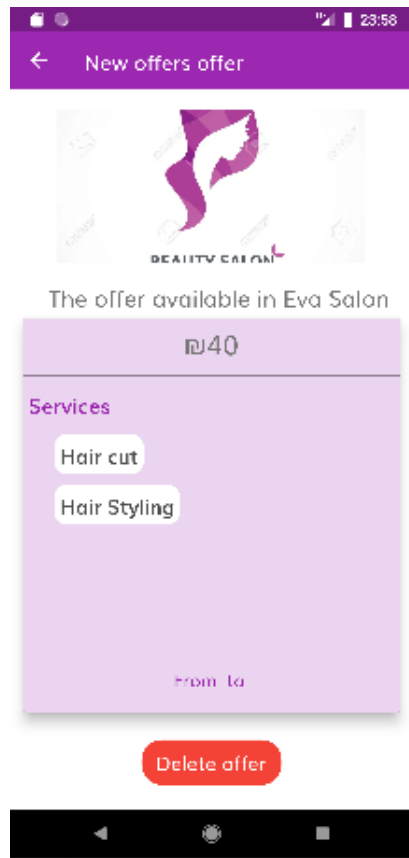
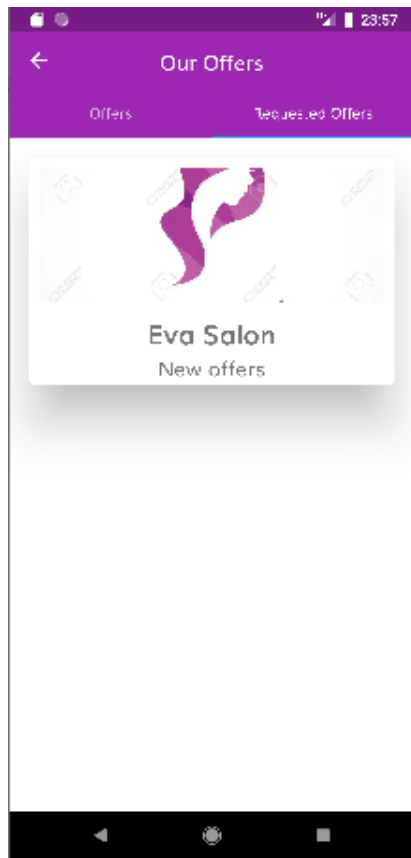
Eyes Only ☒

FACE

Offer price

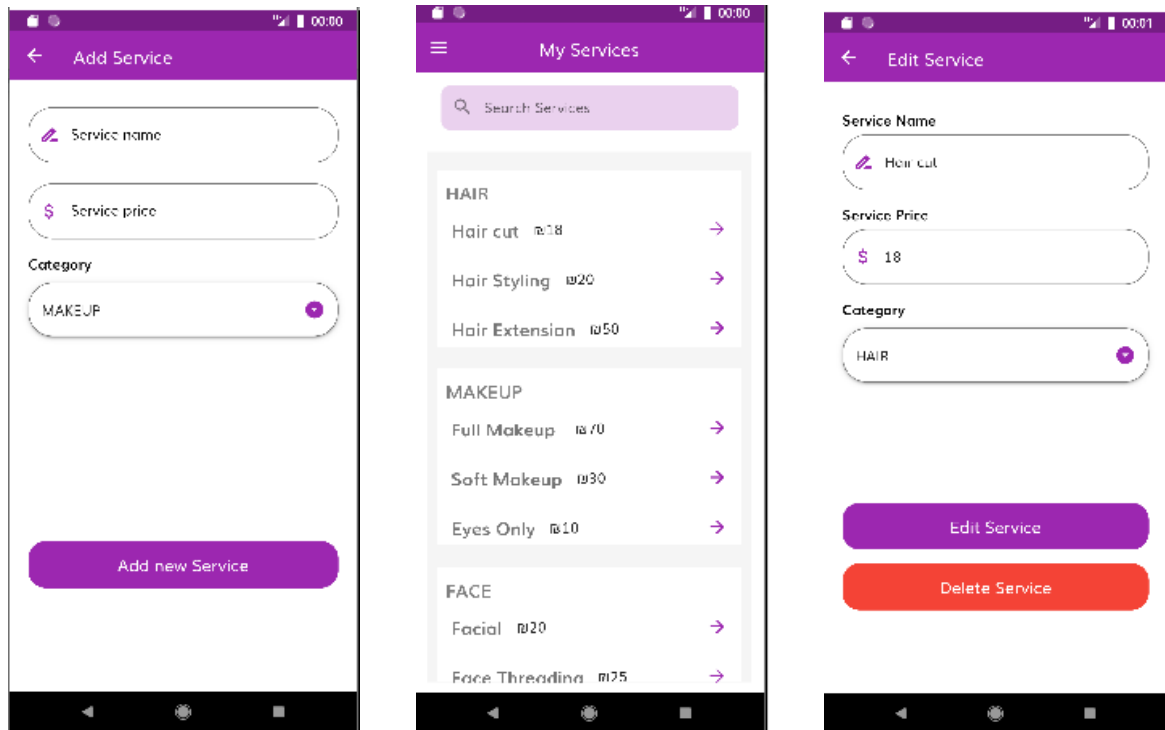


The new offers go to the request offers page until the admin accepts them, the salon has the ability to delete the offer:



4.2.2.3 Services:

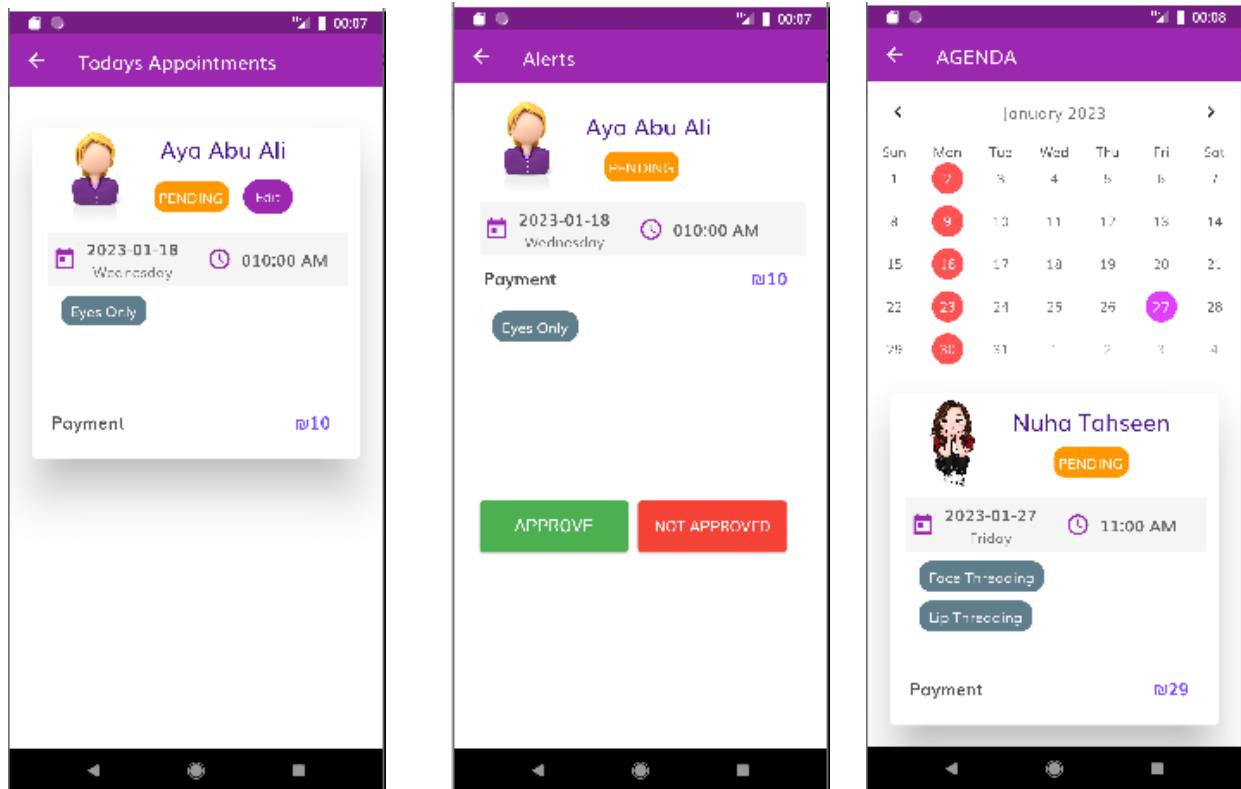
Can also add new services and see all his services, edit and delete services:



4.2.2.4 Booking:

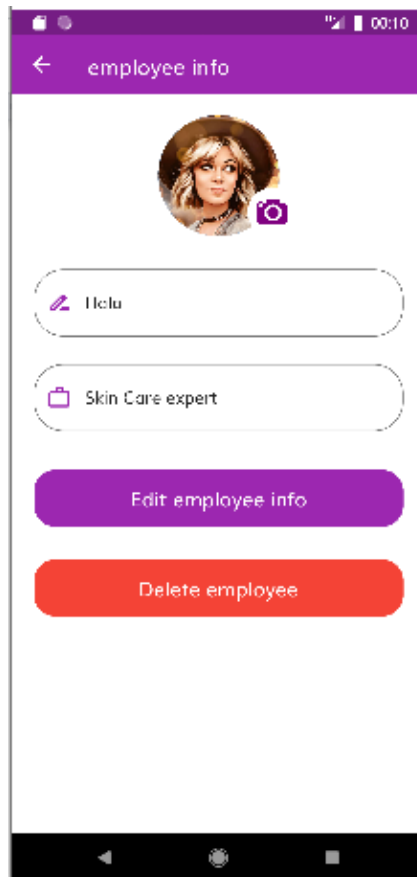
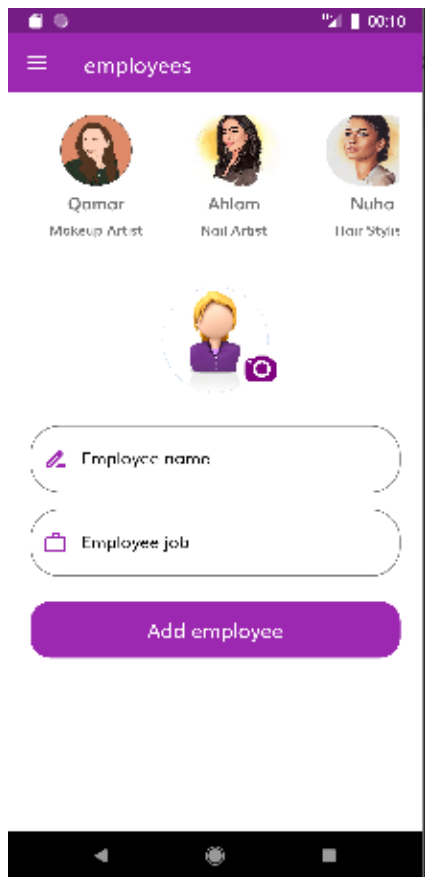
Salon Admin can see all today's bookings, and booking each day.

in today's booking, Admin can approve an appointment, if the customer does not come to the appointment Admin doesn't approve it.



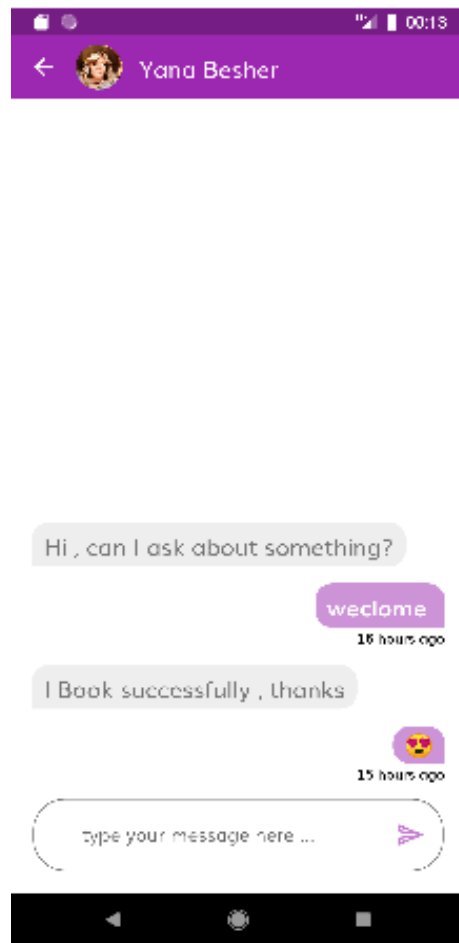
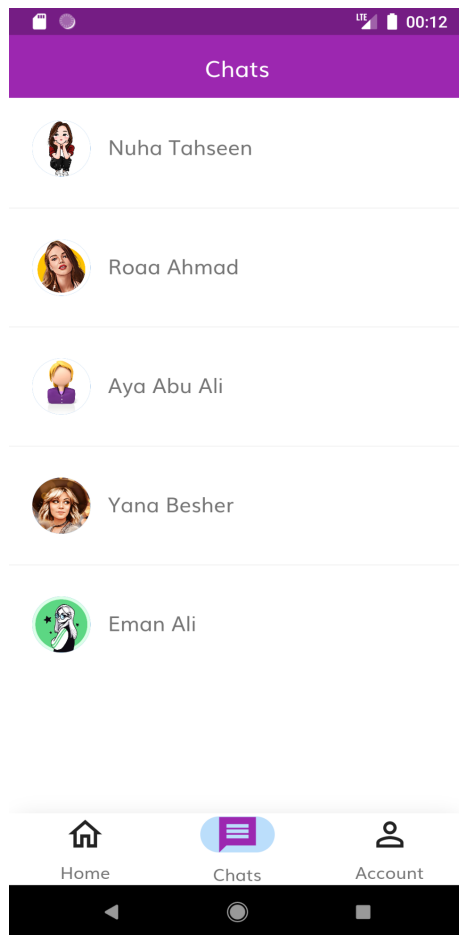
4.2.2.5 Employees:

Admin can add and remove employees to his salon:



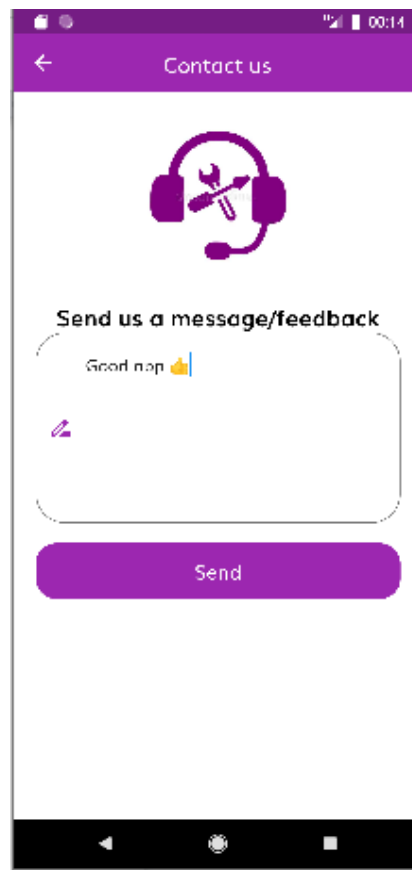
4.2.2.6 Chat:

The salon can do chatting and contact with all users:



4.2.2.5 Feedback, contact us:

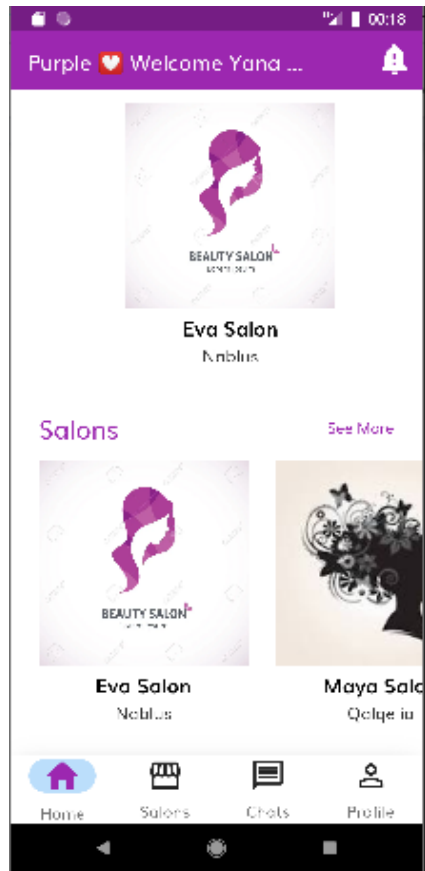
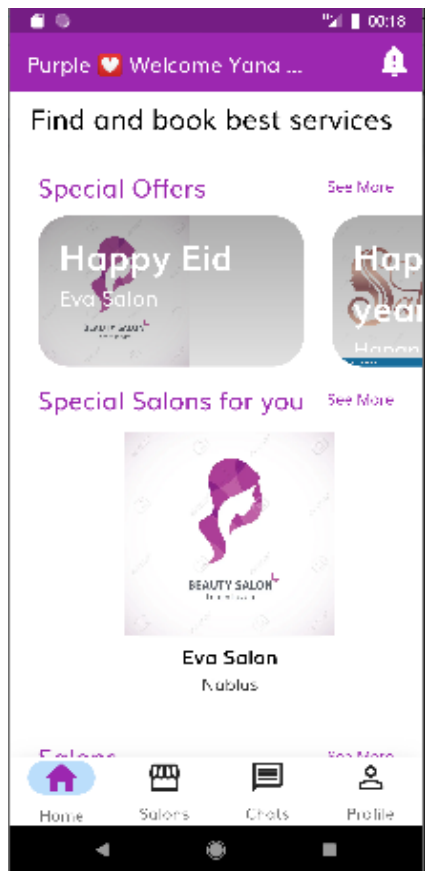
Finally he can send a message and feedback to the Application admin:



4.2.3 User section:

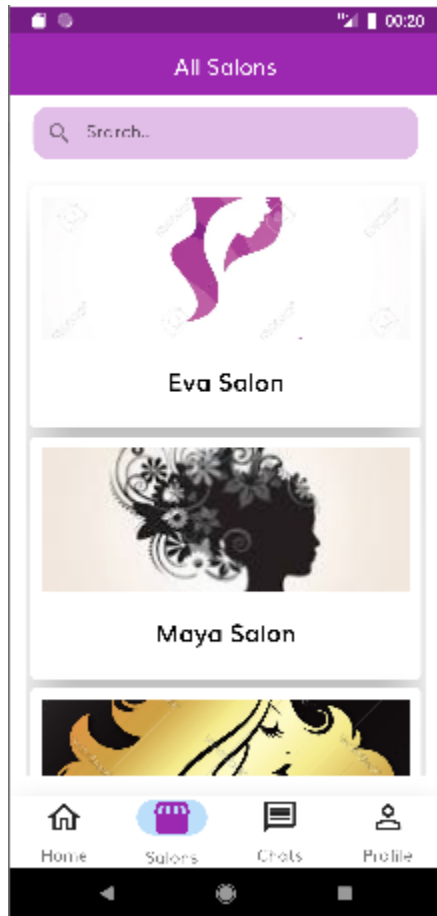
4.2.3.1 Main page:

The user can see on the home page all the offers, special salons in her area, and some salons.



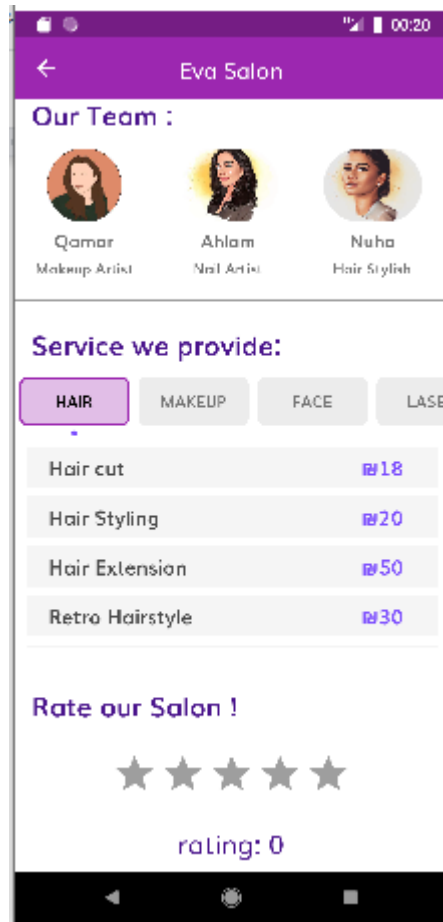
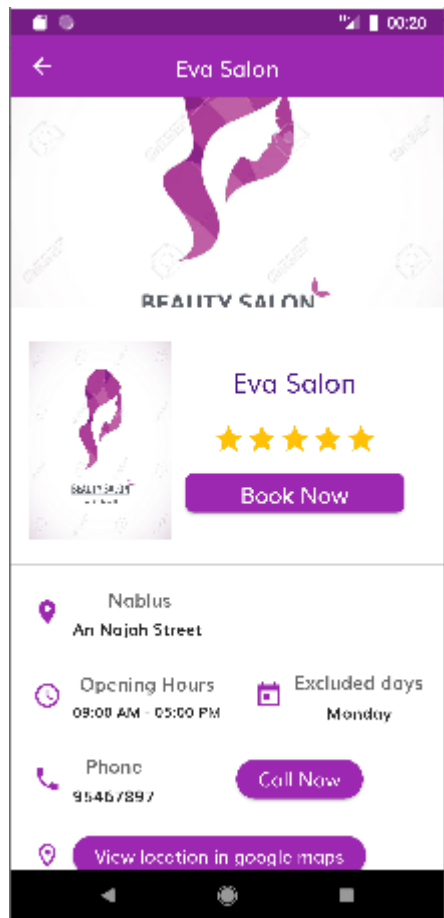
4.2.3.2 All salons:

List of all salons, the user can search for any salon if exists in the application:



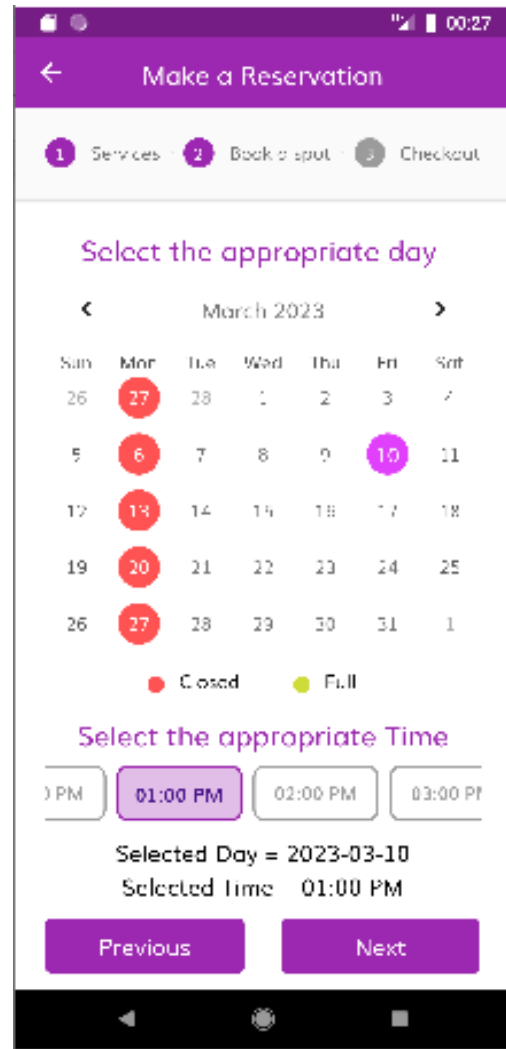
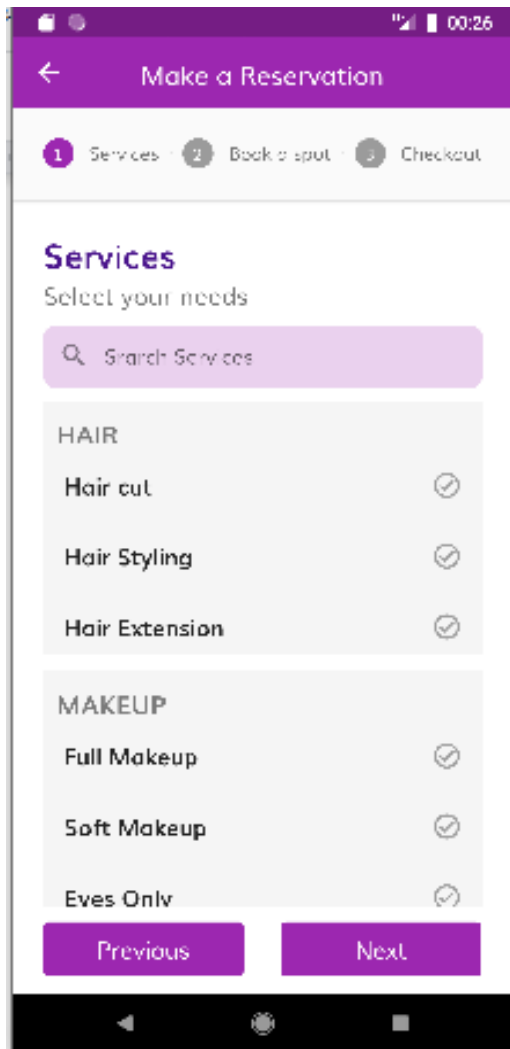
4.2.3.3 Salon Page profile:

The user can see the salon page and see the services offered with their price, and the user can rate the salon with stars system.

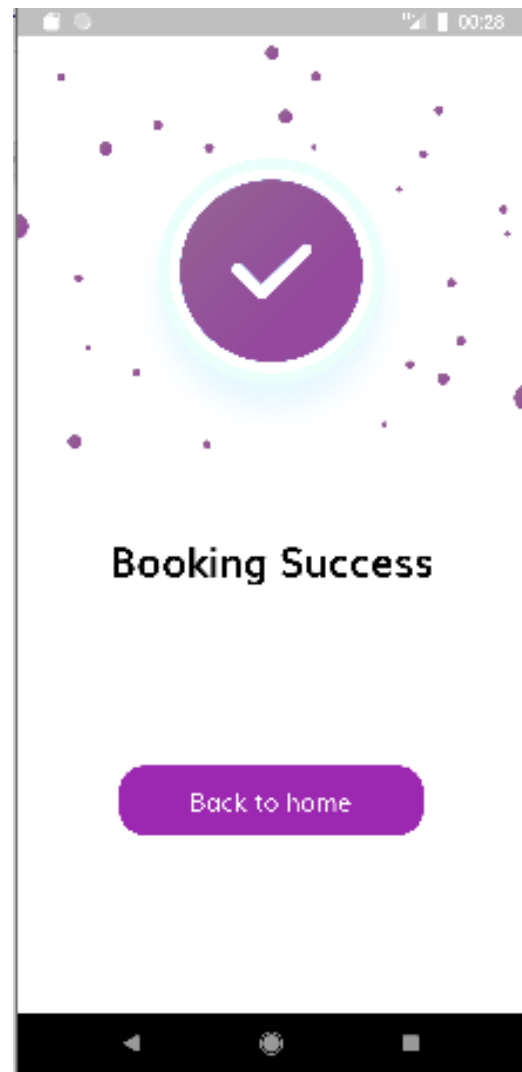
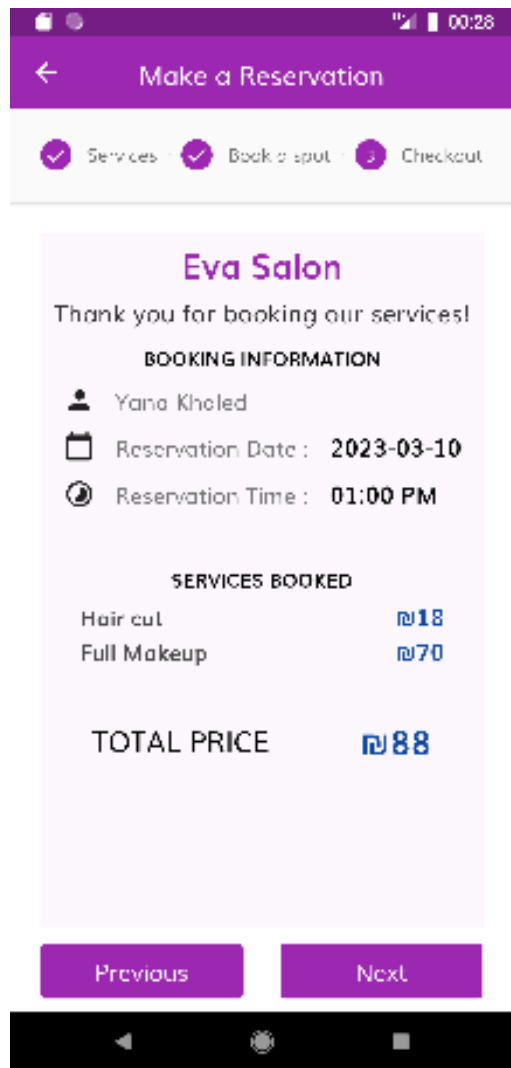


4.2.3.4 Make a reservation:

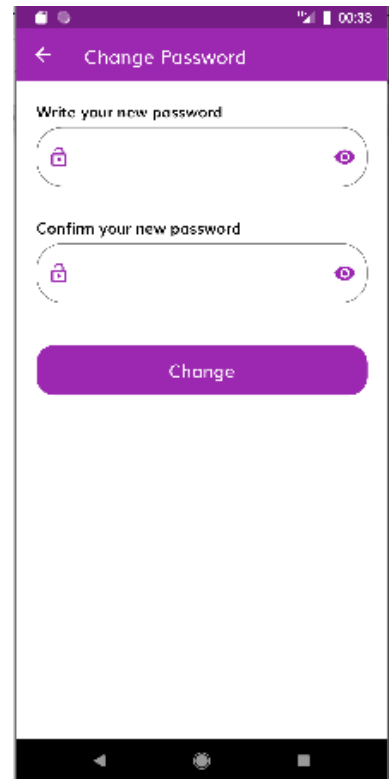
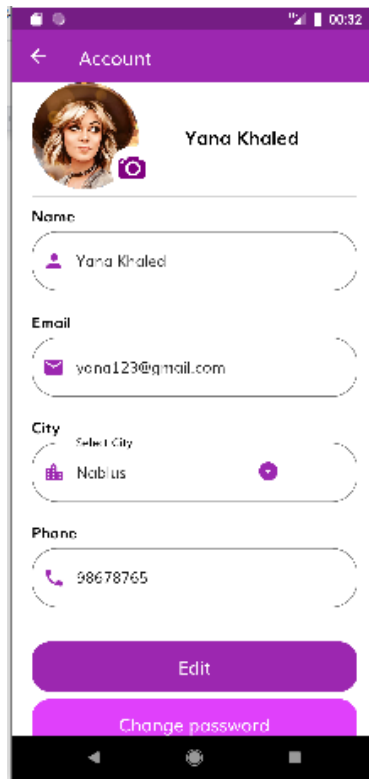
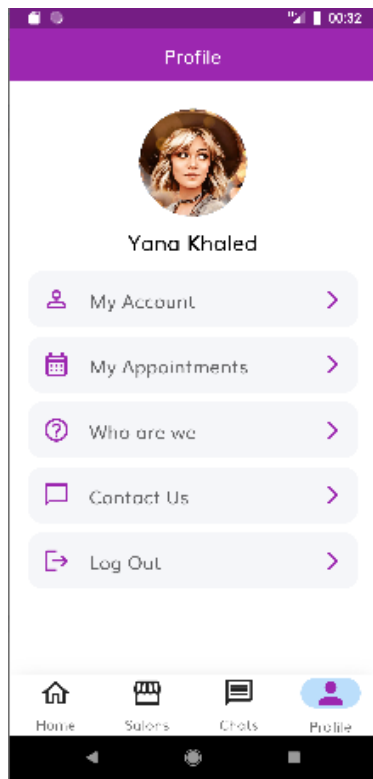
- First step: choose the services:
- Second step: choose the appropriate date and time:
- Last step: Confirm booking



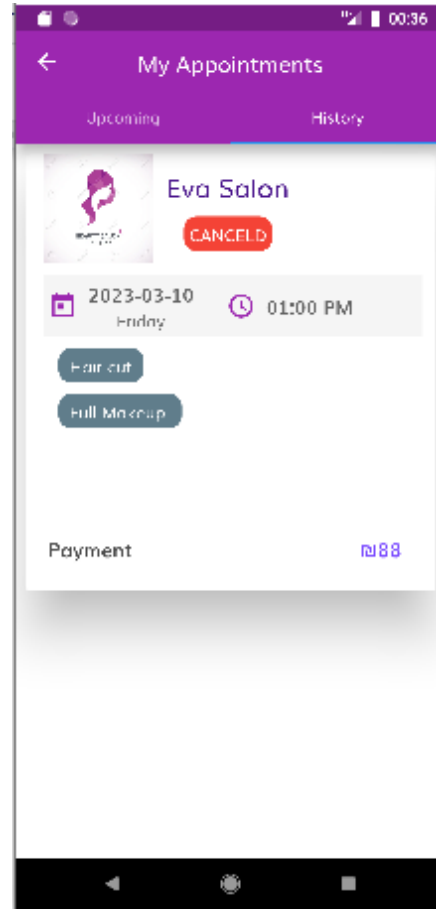
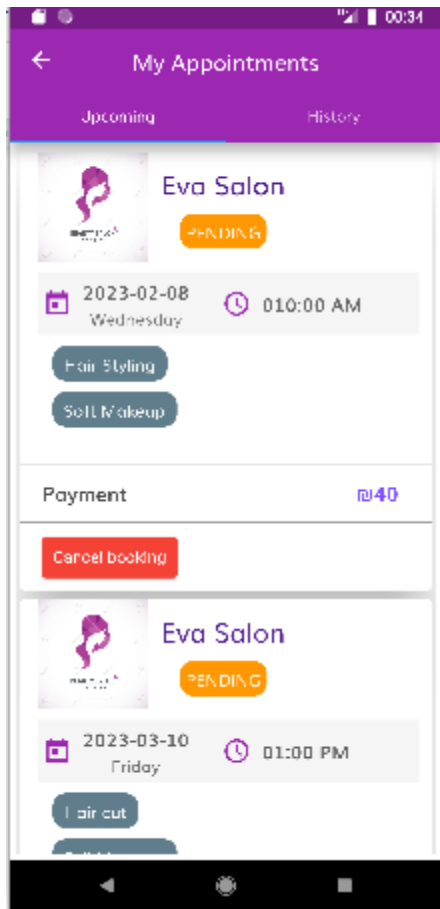
Last step:



4.2.3.5 User main profile page:

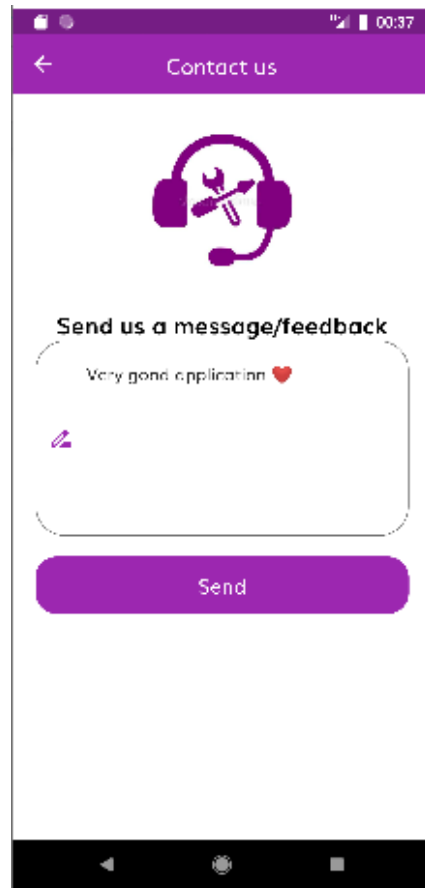


4.2.3.6 My Appointments and history appointments :



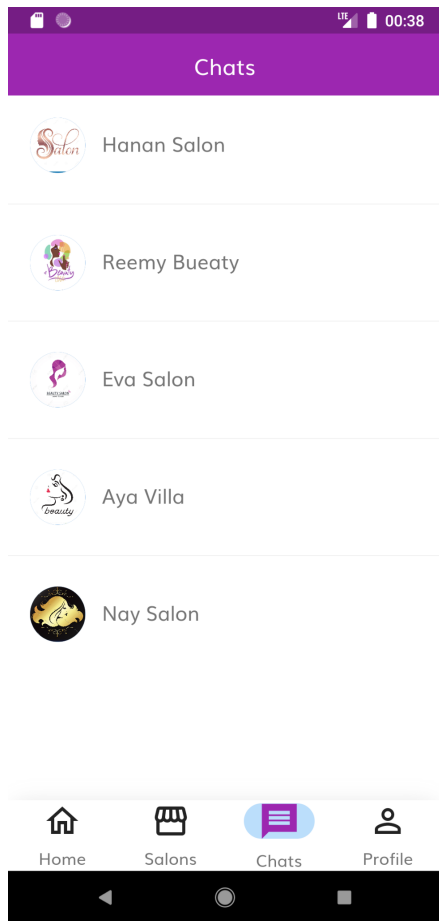
4.2.3.7 Feedback:

The user can send feedback to the application admin:

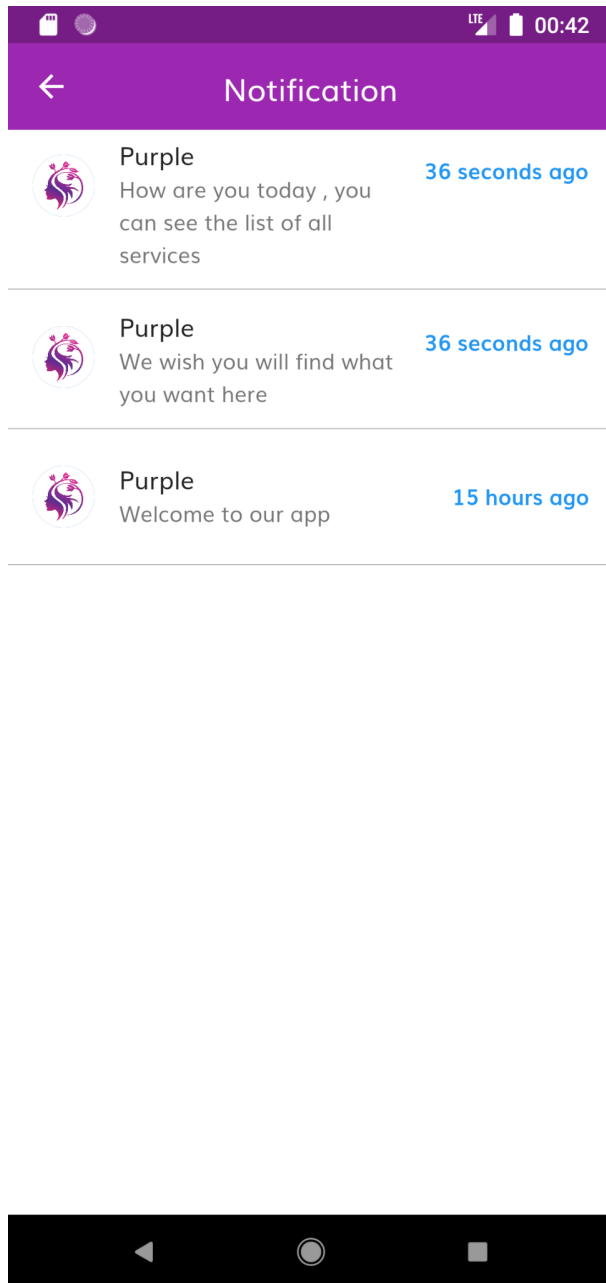


4.2.3.8 Chat:

Also he can send messages to all of the available salons on the app:

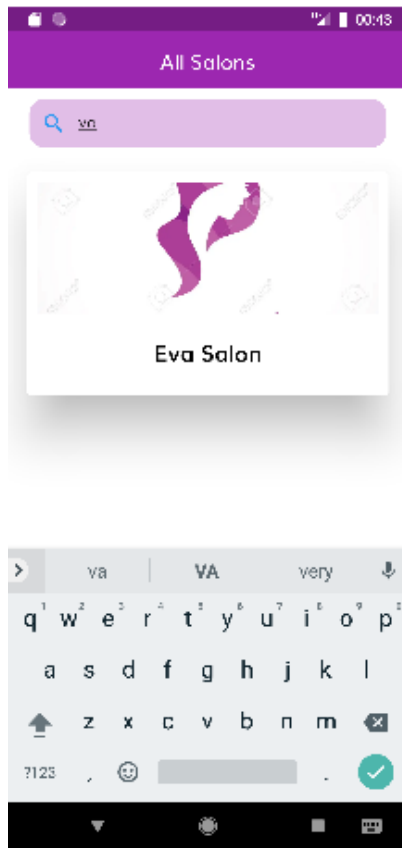


4.2.3.9 Notifications:



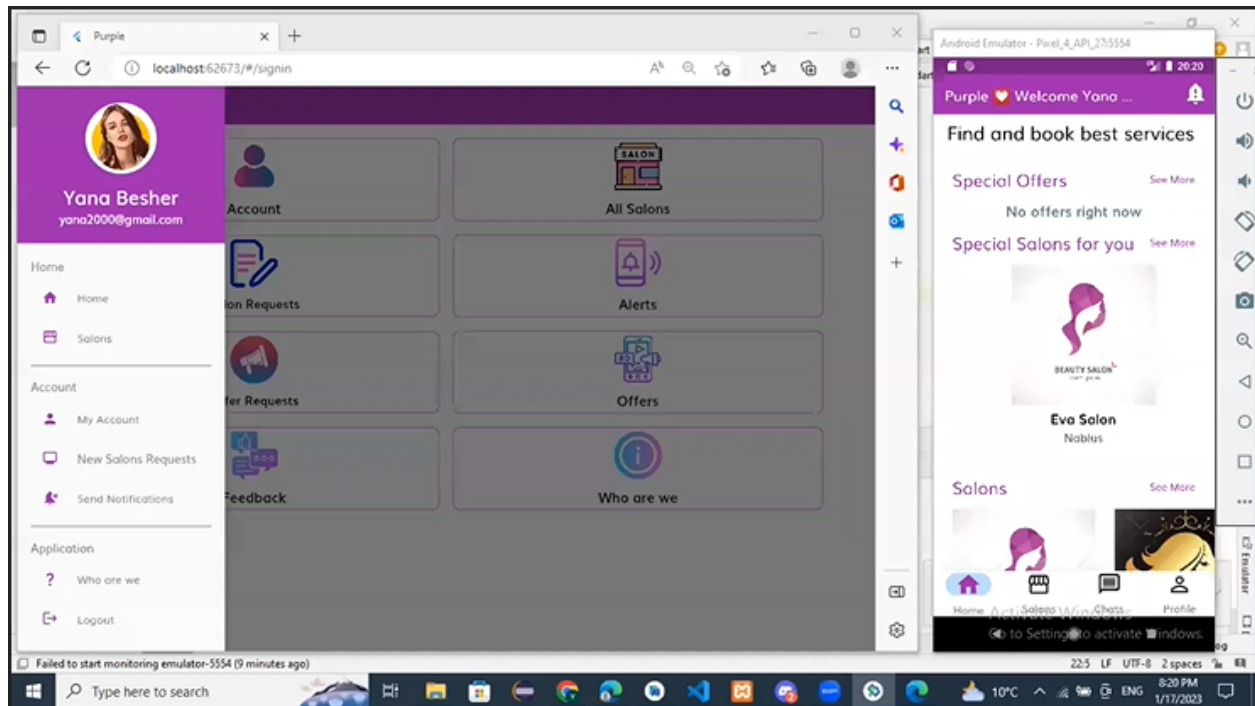
4.2.3.10 search:

The user can search with any keyword

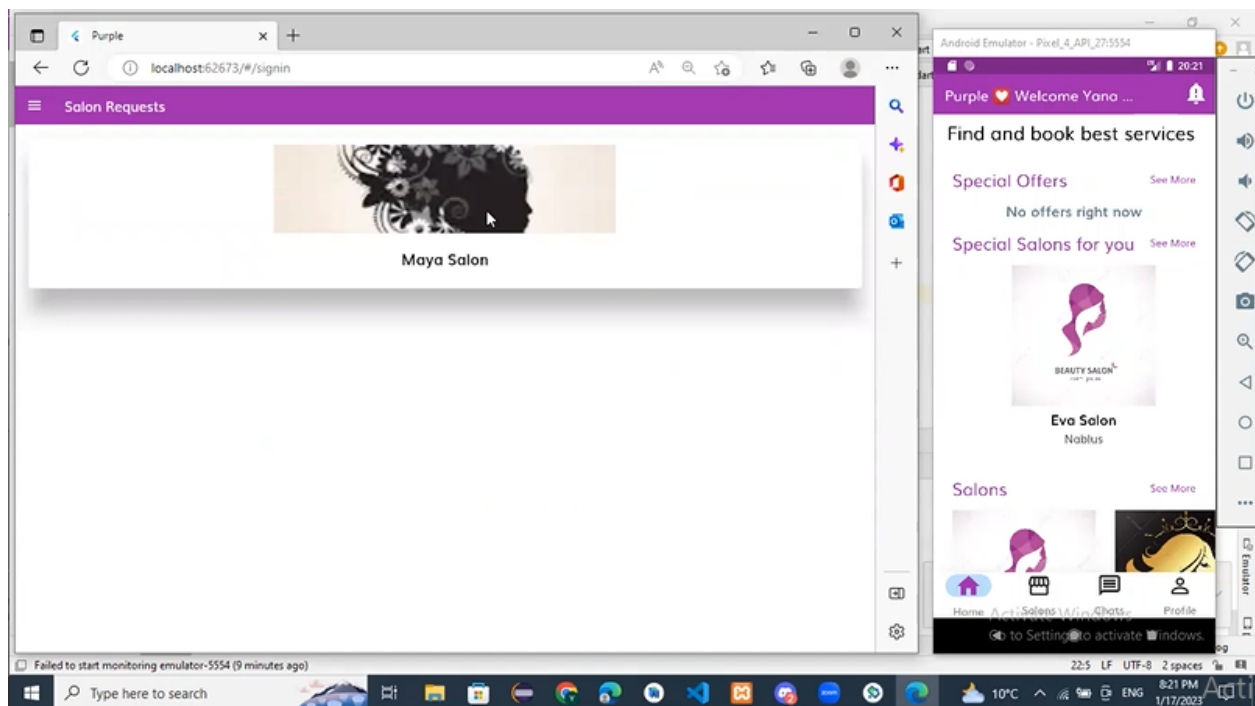


4.2.4 Web Part for admin:

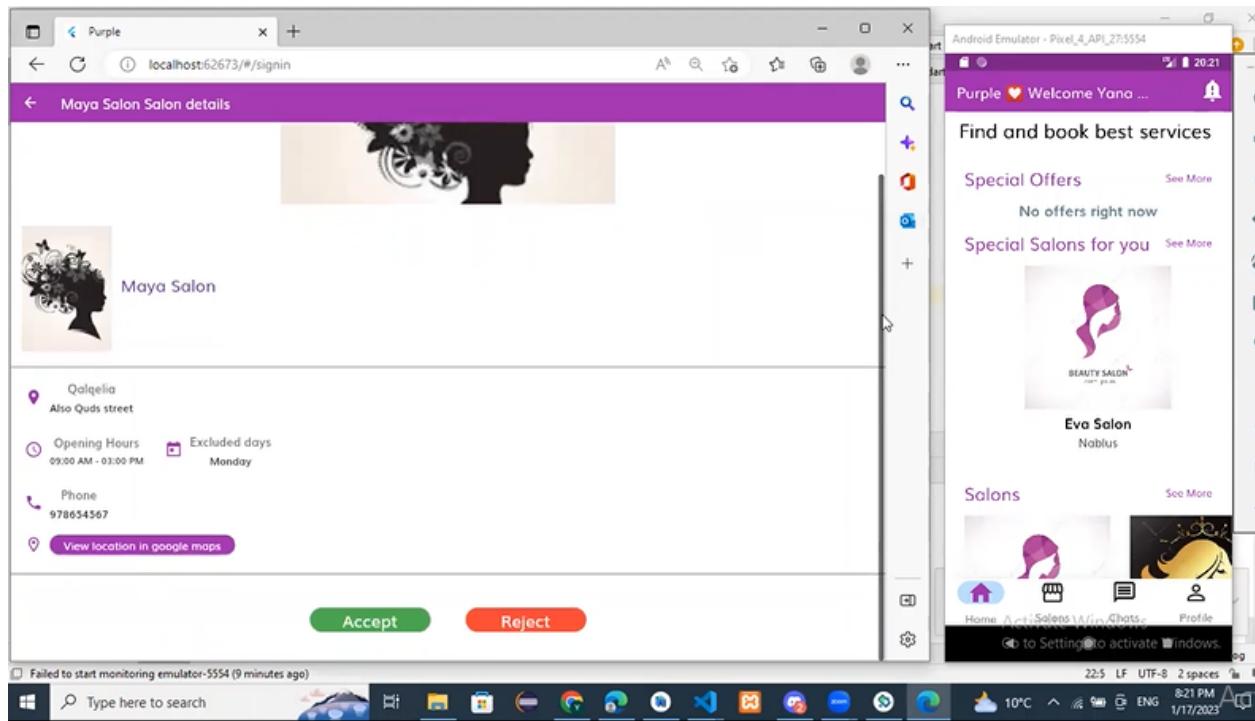
Admins main page:



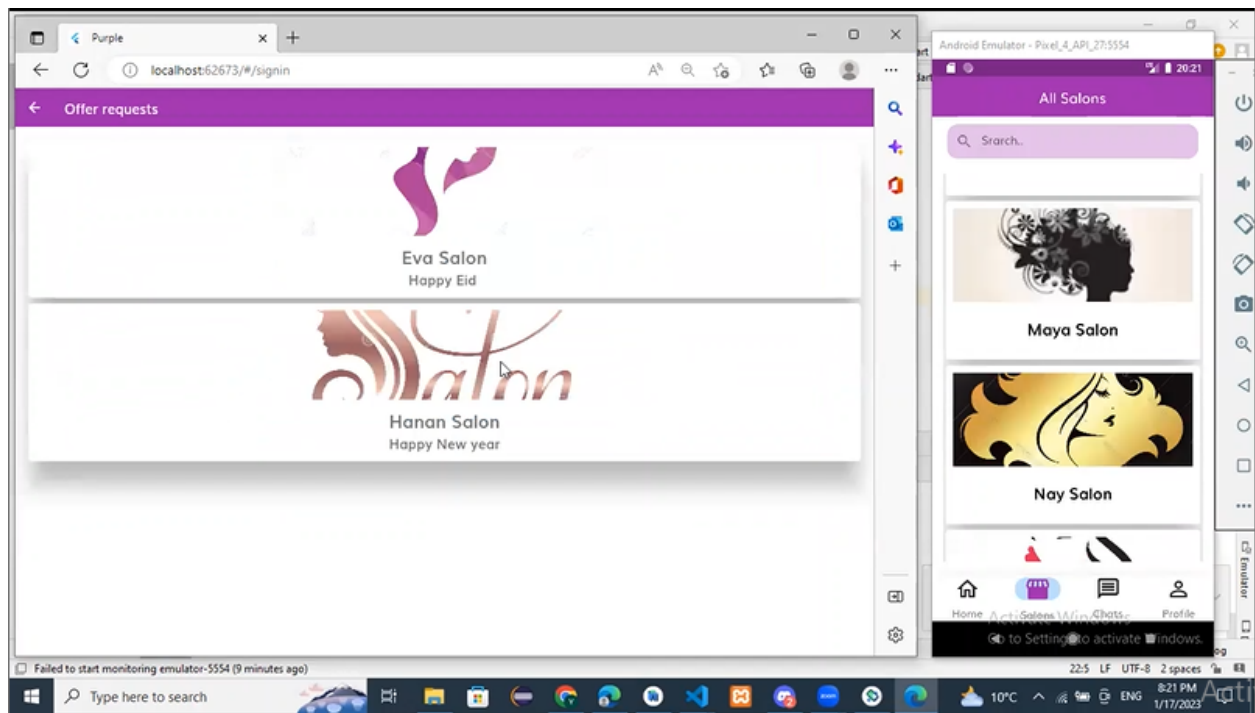
The admin can see all the salon requests to join the application:



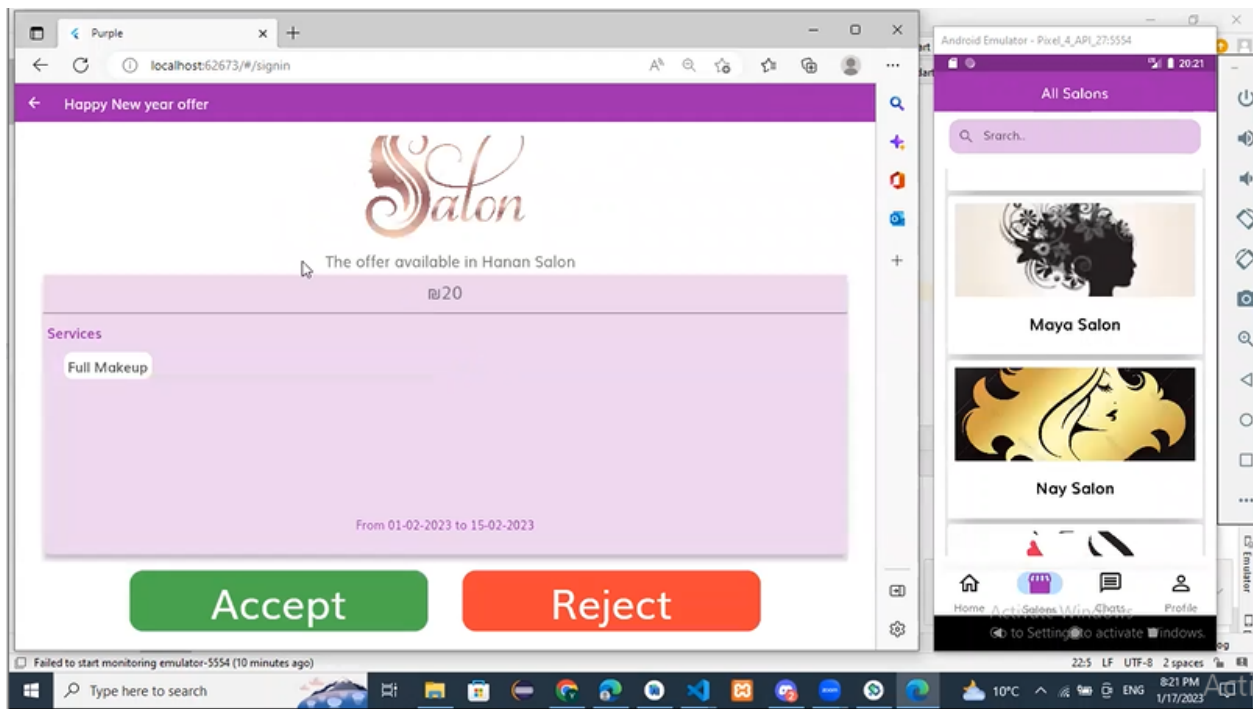
Accept or Reject Salon:



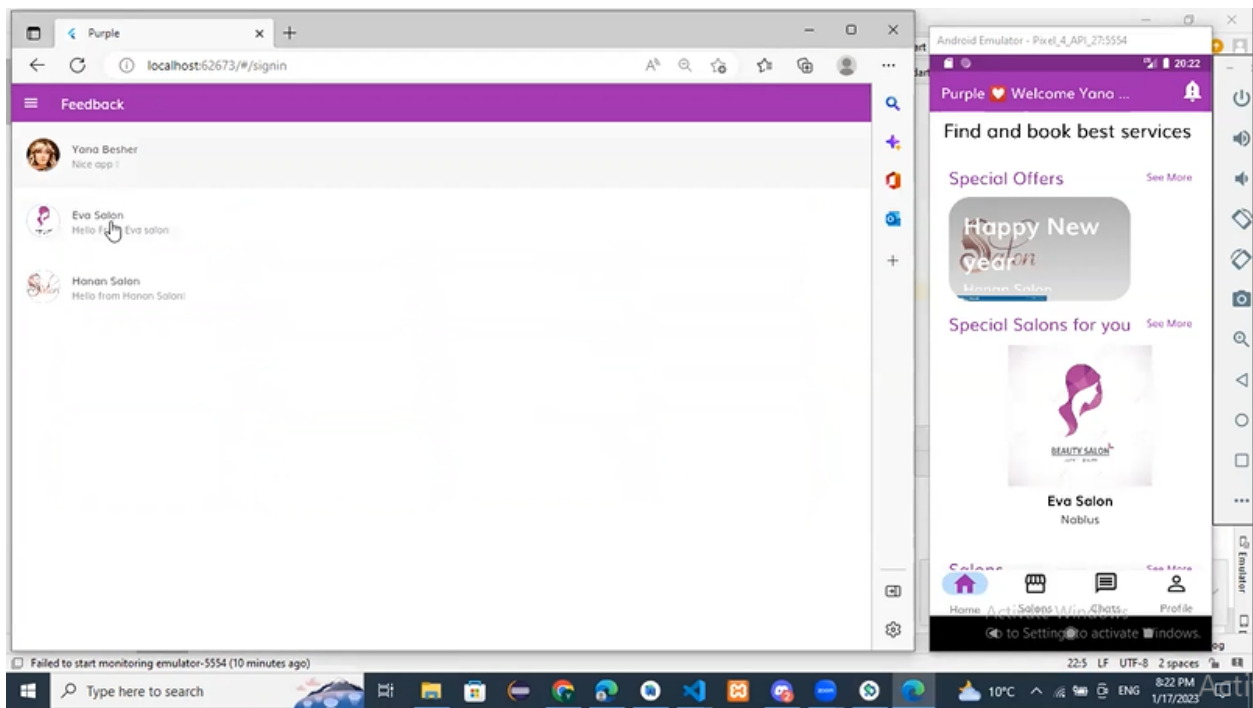
He also can see the offer requests:



Accept the offer or reject offer:



Finally, he can see the feedback:



5. CONCLUSION & RECOMMENDATION

5.1 CONCLUSION

The result is a great project that works well in helping users save their time and money, by going to an appropriate place they like to go, booking the best services they want, contacting easily with salons and getting the answer to their questions.

5.2 RECOMMENDATION

In order to improve the application, we can:

- Make the application support multiple languages, so anyone who visits Palestine can book appointments easily in any salon.
- Improve the application by making accounts for the salon employees so they can see the appointments in their field.
- Adding payment via the Internet in the form of a deposit, so that reservations are taken seriously.
- Add an extra feature where the user can call the salon.

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