



Faculty of Engineering & Information Technology
Computer Engineering Department
Graduation Project – I (10636581)

Student Space

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Why were we able to do this project.

Disclaimer

Students Laith Atari and Mohammad hara from the Department of Computer Engineering in the College of Engineering at An-Najah National University wrote the attached report, It is important to point out that the students alone own the ideas contained in the report, and it is worth noting that An-Najah National University disclaims responsibility for any word contained in this report.

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Abstract

Since we are students at the end of their academic studies as a result of the accumulation of experiences and expertise, and we are about to finish our academic career at the university, we noticed the difficulties that students face related to teaching subjects and laboratories, so we tried to find those difficulties.

Sometimes, one of the students has books, references, and study summaries that he does not need, and it may be electronic parts, etc., and on the other side there is a student who needs the same things, but they often may exhaust him financially if he tries to buy them. Therefore, we tried to bridge the distances between the two parties, in addition to that in light of what We are exposed to the war of genocide against the Palestinian people by global Zionism (the Israeli occupation in particular) and the fight against Palestinian content as a form of media misinformation. We have combined two important features. Each idea had previously been worked on in a separate project, but in our project we tried to combine both in our application. They are the exchange of supplies and experiences between students, in addition to a social platform that brings together people through which we can publish in order to allow us (as Palestinians) to communicate the image. As it is, without deletion, evasion or deception

in addition This project will be developed by adding additional features and modifying the existing features in the project, based on the evaluation and opinions of students while they use this project, as there will be a feature of adding comments from students and based on them, the application will be modified continuously, The financial return for the application will be through a link for those who want to donate after benefiting from the application's services and making it easier for them in many matters

Chapter One: Introduction

In the recent period, we have begun to notice that after completing graduation projects, engineering drawing tools, textbooks, etc., we have begun to notice that we need a place to organize the publications that students publish on the pages in order to display these things, or other students who want to obtain these things. In addition to the need to have a website on which we can publish what we want without restriction or racism.

1.1 Objectives

This project aims to create an environment that helps university students exchange things among themselves, which saves them time searching for things, such as electronic parts, and also saves them money because they can obtain them either for free, or at a cost lower than their original cost, in addition to a social platform that brings together People through it to allow us (as Palestinians) to convey the image. As it is without omission, evasion or deception

1.2 Significance

The importance of this project lies in saving time and effort for the university student, in providing the things he needs with the best quality and lowest prices than those available in the market, or instead of getting rid of the things he does not need, he can display them on the site and have another student take advantage of them and By publishing this on a platform that does not fight Palestinian content and is not racist, also after benefiting from the application there is a link through which a person can support the application

1.3 Organization of the Report

Chapter 1: Introduction: General description of the project

Chapter 2: An overview of student space and the history of its development

Chapter 3: Give sufficient details about the and methods you used and the challenges you faced

Chapter 4: After building the project, we achieved several results and goals

Chapter 5: Explains what solutions and benefits the student space has contributed to

Chapter 6: Summary of the project and what we offer suggestions based on experience and future improvements

Chapter 7: References

Chapter Two: Theoretical Background and Previous Work

Applications for exchanging goods between people and social networking applications have developed significantly over the past decade due to people's preference and reliance on technology as a way of life because it makes their lives easier. There are many exchange applications such as Depop, Facebook Marketplace, OfferUp, and Letgo.

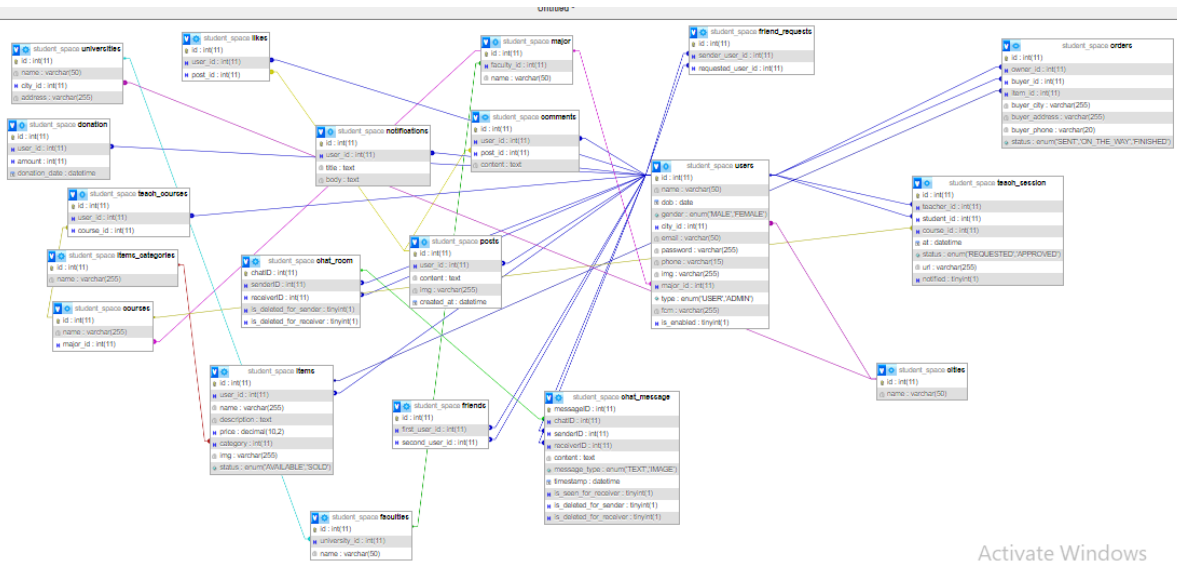
Therefore, we tried to exploit this idea in a way that is relevant and appropriate for university students because of the difficulties they face in exchanging objects, books, and even teaching, and they do not find a platform that provides them with that. We have combined two ideas, the first and basic of which is to provide them with a place where they can display the study supplies they need and others can take them, so that The second idea is to provide an alternative social media platform to Facebook and others because of their suppression of freedoms and falsification of facts

Chapter Three: Methodology

3.1 Used Technologies

- **Visual Studio Code:** Served as the primary Integrated Development Environment (IDE) for coding, editing, and debugging purposes .
- **Android Studio:** Utilized as an emulator to simulate and test the mobile application across various virtual environments .
- **Firebase:** Chosen for its robust and scalable 'NoSQL' real-time database, Firebase supported real-time chatting and notifications. Additionally, Firebase storage was used to securely manage and store images in the cloud, ensuring efficient accessibility of image data across the platform.
- **Postman:** Employed for API testing to ensure application reliability, enabling the execution of various HTTP requests and responses .
- **PayPal Developer:** Used for secure and efficient payment transactions, offering a comprehensive suite of development tools such as APIs, SDKs, and Sandbox testing environments, which were crucial for integrating reliable payment solutions into the application.
- **Flutter(dart):** We have used it in front-end development of mobile and web applications
- **Spring boot:** We use it in the backend of the application because it is good for small applications
- **React js:** we used this technology to develop a simple web page that displays to the admin what is happening in the application in addition to statistics, and through which he can control the application

3.1.1 database implementation(ER)



Activate Windows
Go to Settings to activate Windows.

Figure 1 : database implementation(ER)

3.2 Constraints

1. We encountered some difficulties in designing the website in terms of UI design , since we do not have sufficient background in it.
2. We faced some difficulties with the chat feature due to some complexities and details

3.3 system Features and Implementation

3.3.1 Signup

Through this application, registration for university students, specifically Palestinian universities

The figure displays two mobile application screens for user registration. The left screen, titled 'Signup', features a form with the following fields: 'Phone', 'Password', 'City' (dropdown menu with 'Nablus' selected), 'University' (dropdown menu with 'An-Najah University' selected), 'Faculty' (dropdown menu with 'Engineering and Information Technology' selected), and 'Majors' (dropdown menu with 'Computer Engineering' selected). Below these fields is a 'Profile picture: No image' placeholder and a 'Sign up' button. At the bottom, there is a link: 'Already have an account? [Sign in](#)'. The right screen, titled 'Get Started', features a form with the following fields: 'Full Name', 'Date Of Birth', 'Gender' (radio buttons for 'Male' and 'Female', with 'Male' selected), 'Email', 'Phone', 'Password', and 'City' (dropdown menu with 'Nablus' selected). Both screens have a blue header with the time (10:25 and 10:24 respectively) and standard mobile status icons.

Figure 2 : sign up

3.3.2 sign in

A student who has previously registered in the application can log into his account, in addition to changing the password if he forgets it

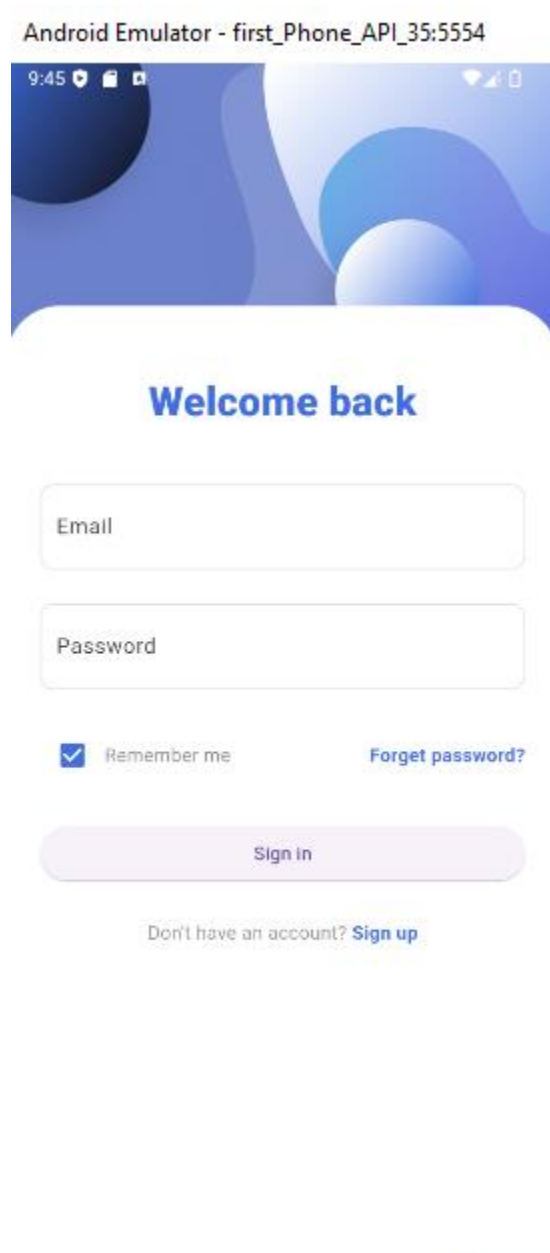


Figure 3 : sign in

3.3.3 home page

On the home page, posts are displayed for friends and the person's posts are displayed and people in the same specialty. We worked on this in order to provide a platform for students to express their opinions freely



Figure 4: home page

3.3.4 side bar

The Side Bar is the control interface for Leos. It displays his affairs, trade, studying appointments, and friends. In addition, he can donate to the application as a form of thanks, and he can also change the password through it.

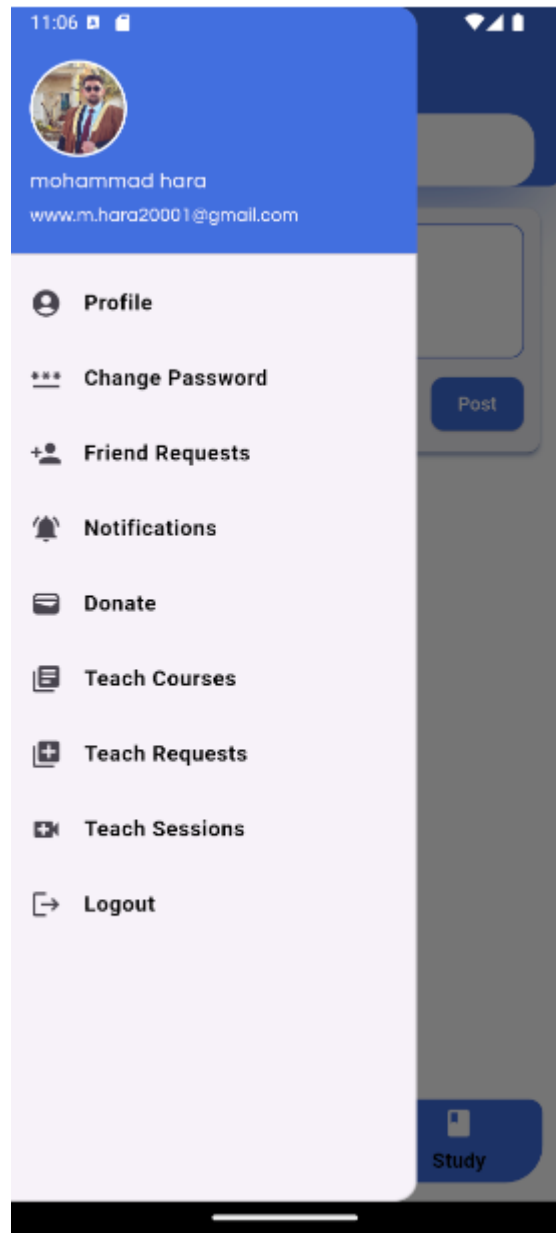


Figure 5 : side bar

3.3.5 profile

On the profile page, the user's information is displayed, in addition to that he can modify his personal information and view his posts

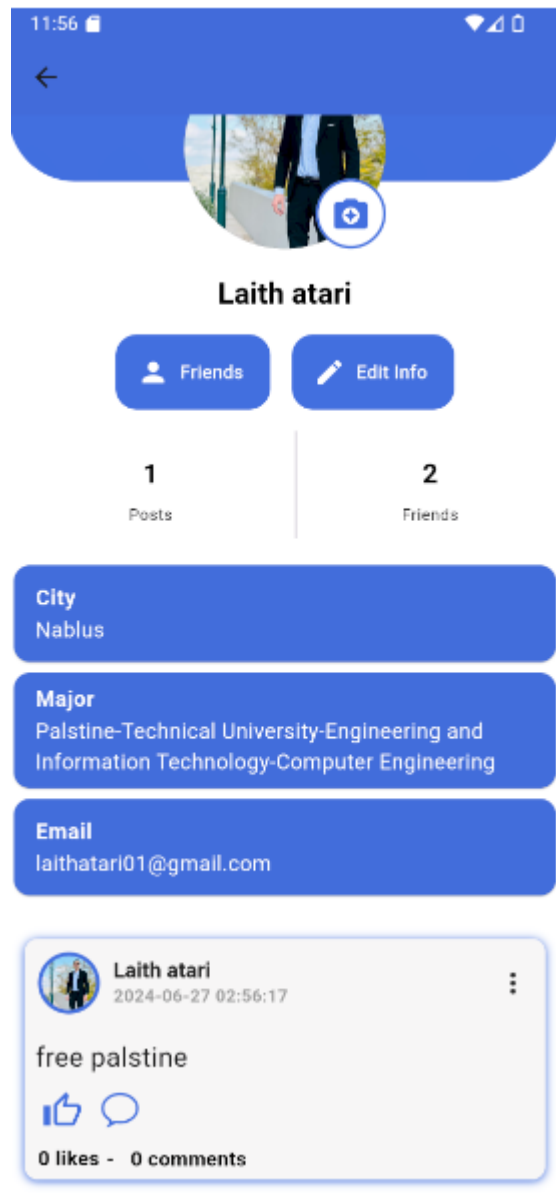


Figure 6 : profile

3.3.6 .1 send a friend request

The user can add friends through the application to exchange knowledge with them and meet new people. When a friend is added, a notification appears and he has the choice to accept or cancel.

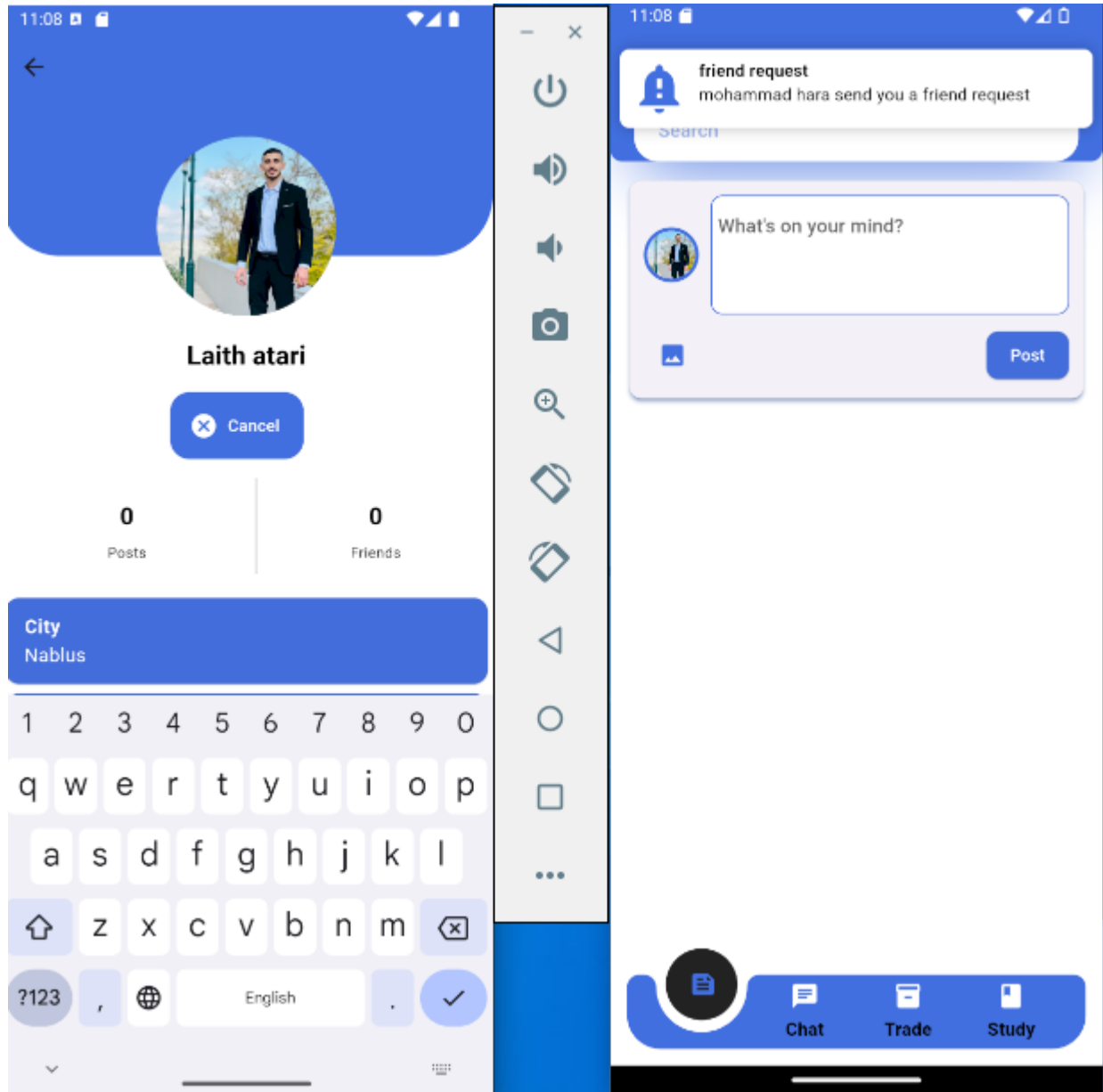


Figure 7 : send a friend request

3.3.6.2 accept or decline friend

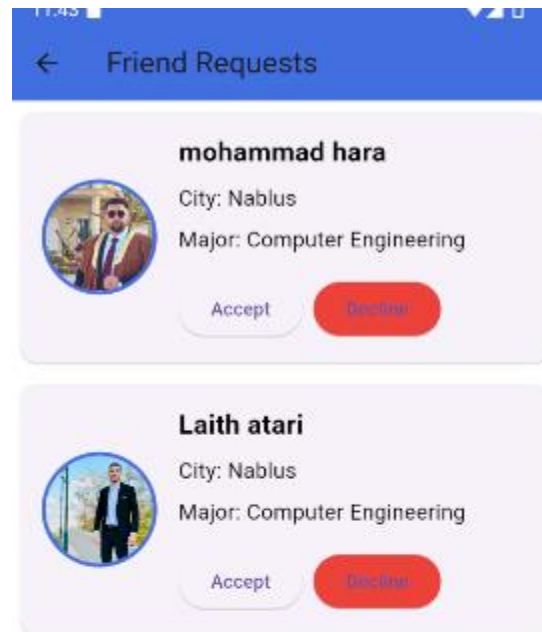


Figure 8 : accept or decline friend

3.3.8 show friend list

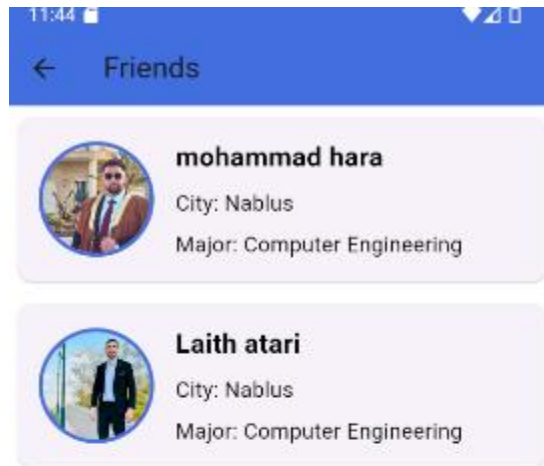


Figure 9: show friend list

3.3.9 change password

On this page, the password is reset by the user in the event that it is leaked or his device has been hacked.

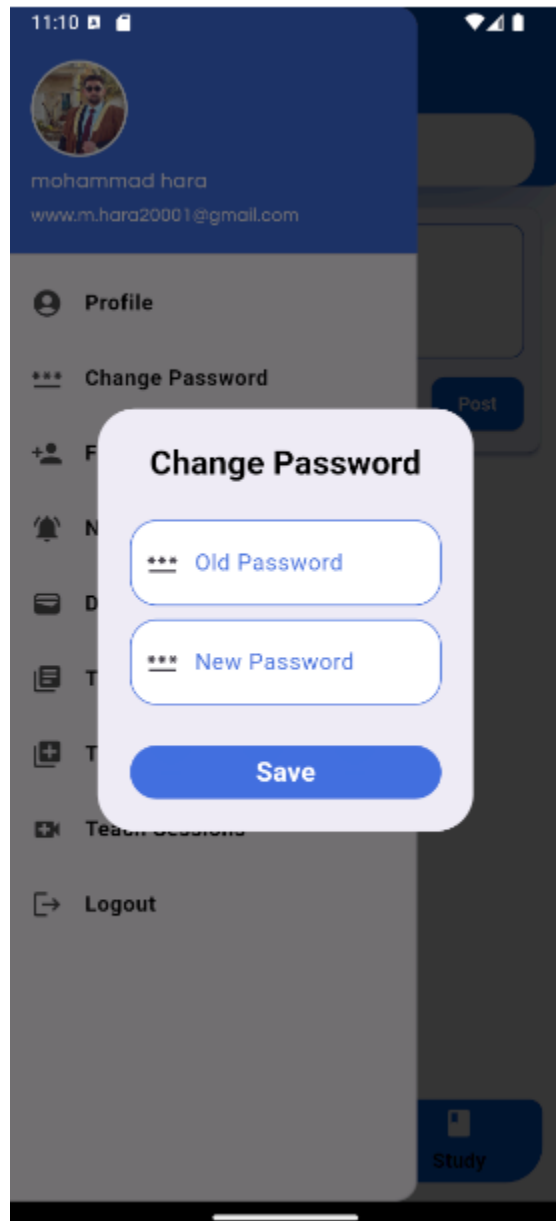


Figure 10: change password

3.3.10 notification list

The notifications page shows message notifications, friend request notifications, and trade and study notifications. In short, it shows all the notifications for all the features in the application.

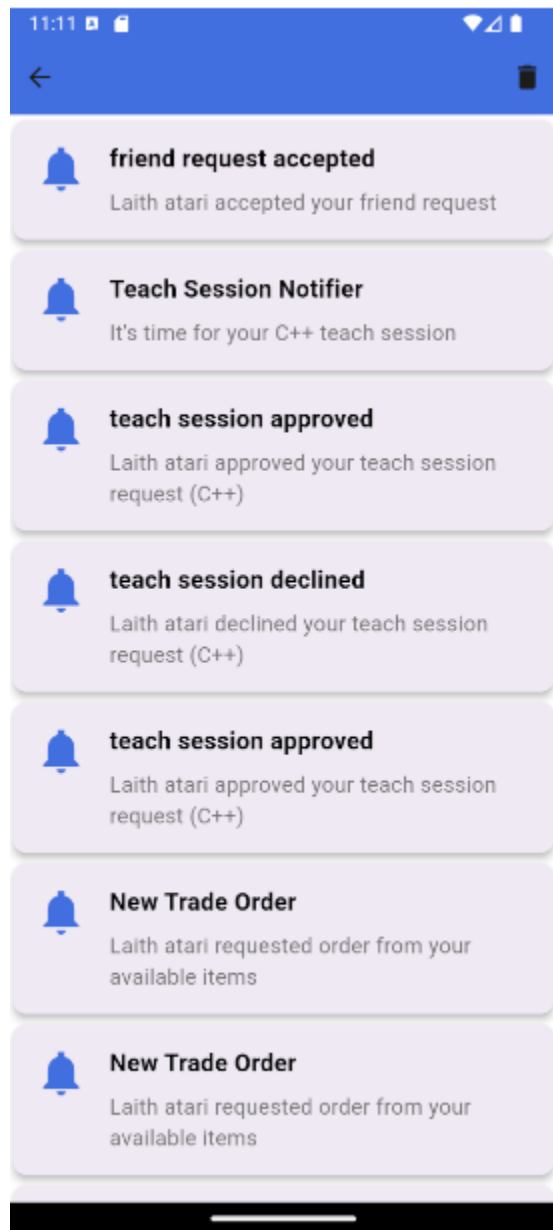


Figure 11: notification list

3.3.11 donation

Donate This section is the profit margin for the application because there is no source of income for the application. We used the PayPal Developer Tool to create a simulation for that.

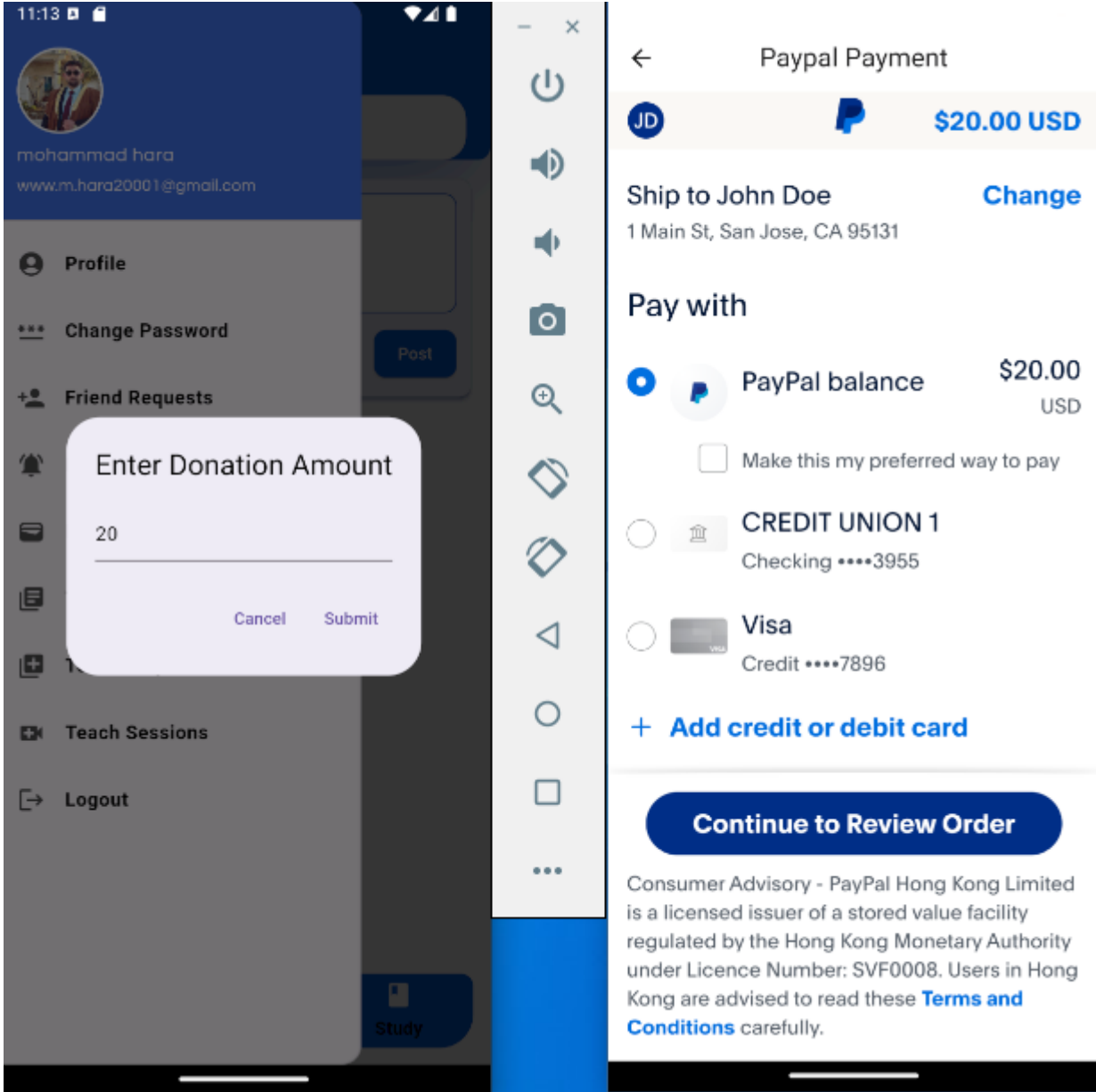


Figure 12: donation

3.3.12 chatting

Chat through the application is a very important feature, as it helps users communicate better, as we have provided written conversation and the “Seen” feature, which makes the second party aware that the first party has read the message and can reach him through calls

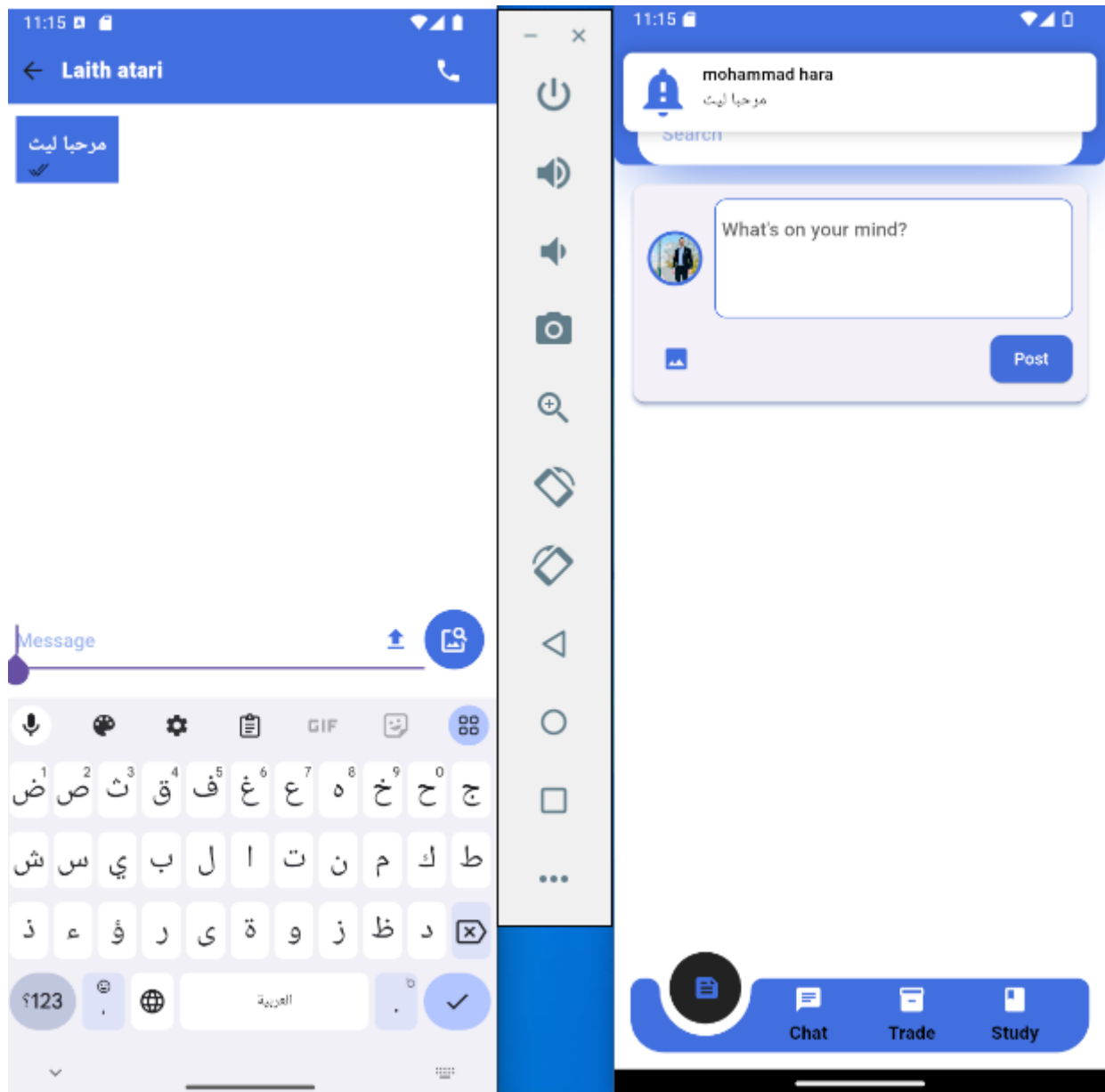


Figure 13: chatting

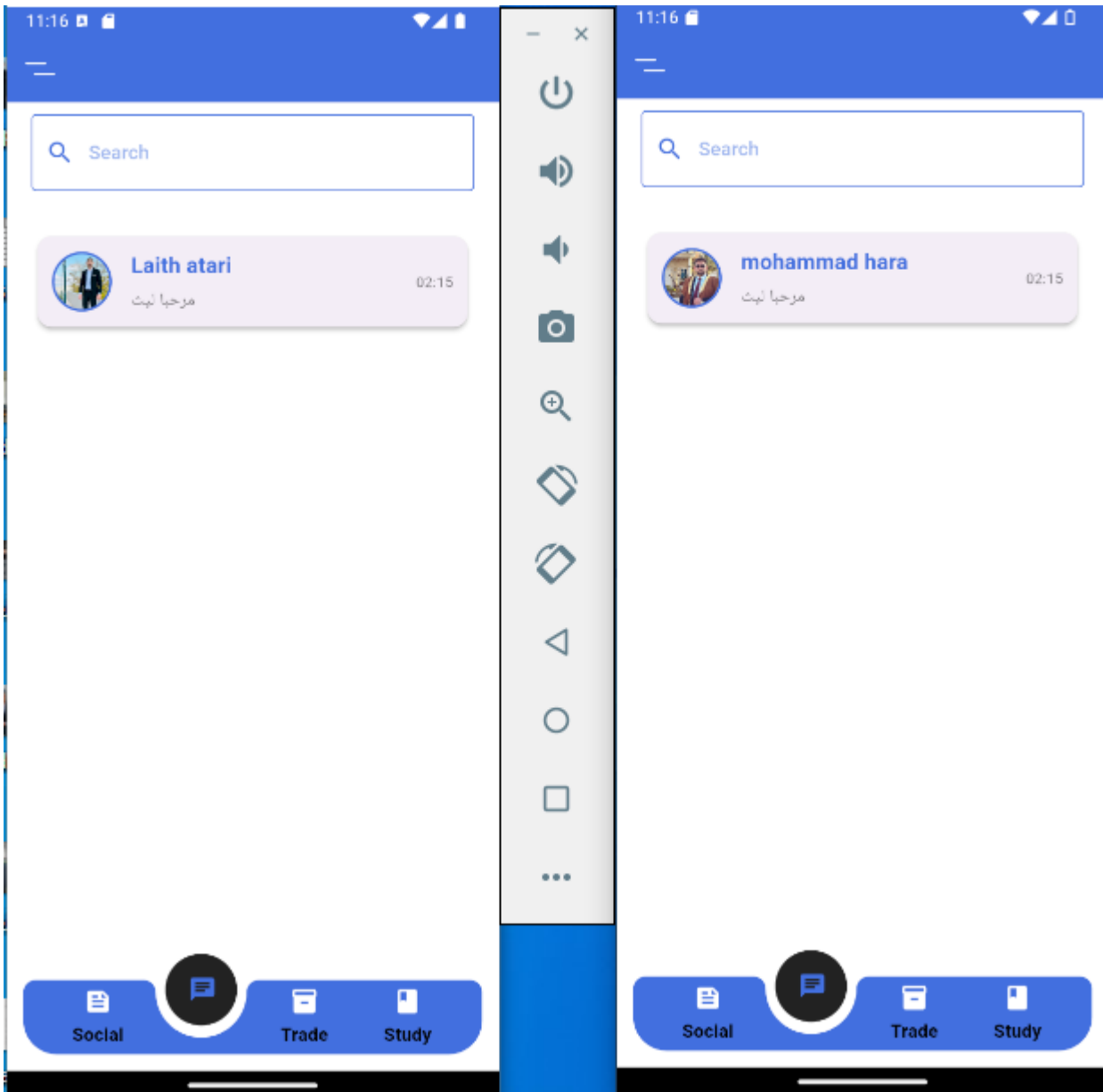


Figure 14: chatting

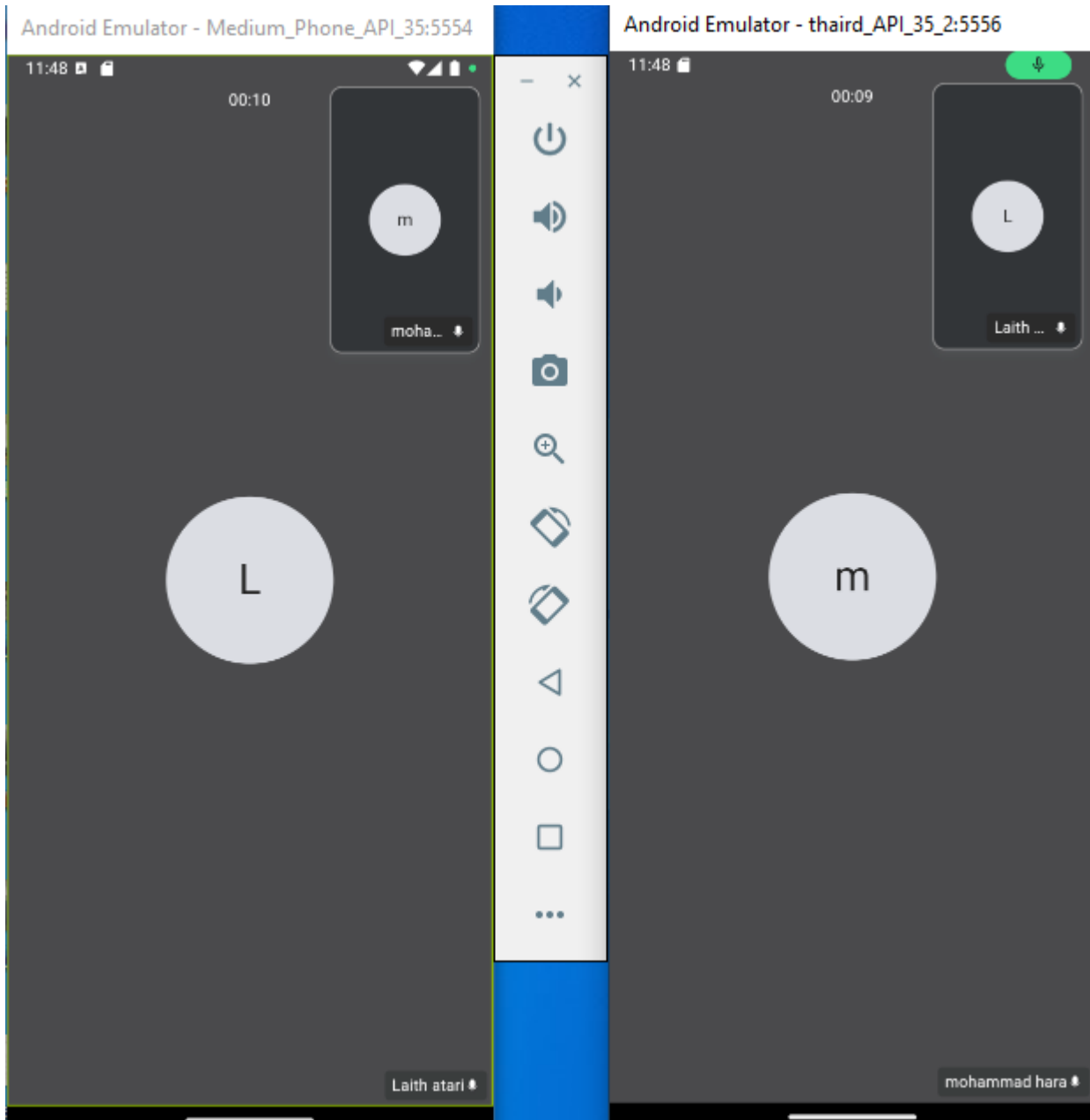


Figure 15: calling

3.3.13 trade

Trade is the feature that the application revolves around, as it takes place in several stages, as we will explain in the following images

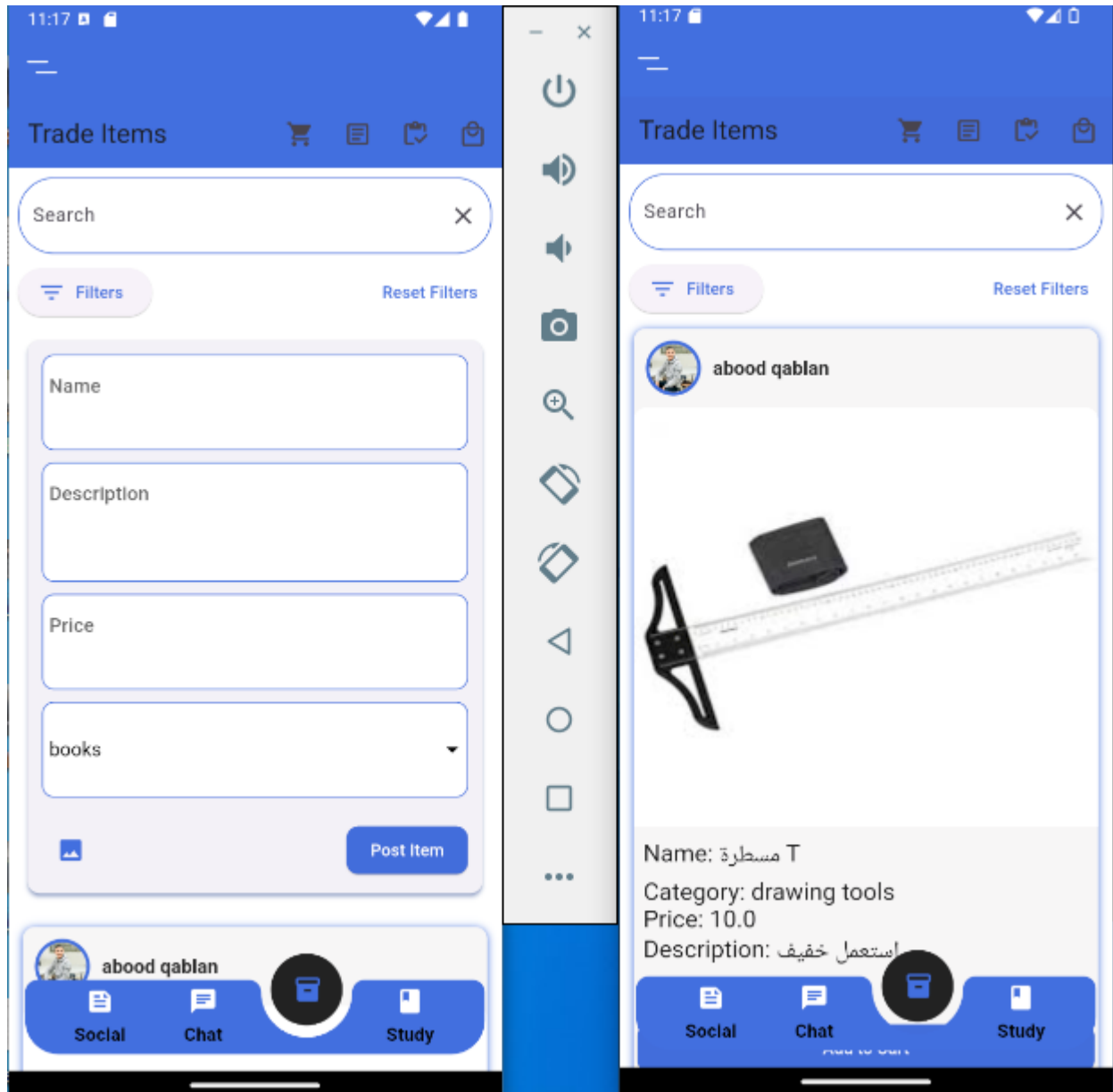


Figure 16: trade

3.3.14 add item to cart

In the first stage, the student who wants to buy enters the Trade section, where there is a filter on the search and limits on the price he wants to pay. If he finds what he wants, he adds it to the cart.



Figure 17: add item to cart

3.3.15 checkout information

Then, in the cart stage, if the customer wants to confirm the purchase order, he clicks on Checkout and enters his information so that the delivery company can deliver it to him, and then a notification reaches the product owner of the order.

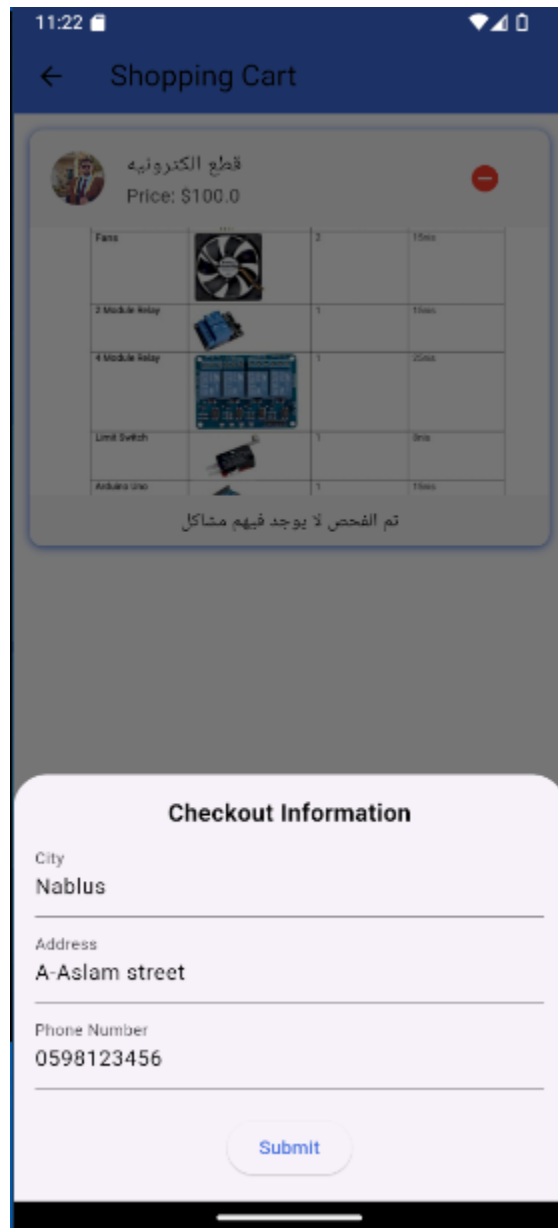


Figure 18: checkout information

3.3.16 checkout done

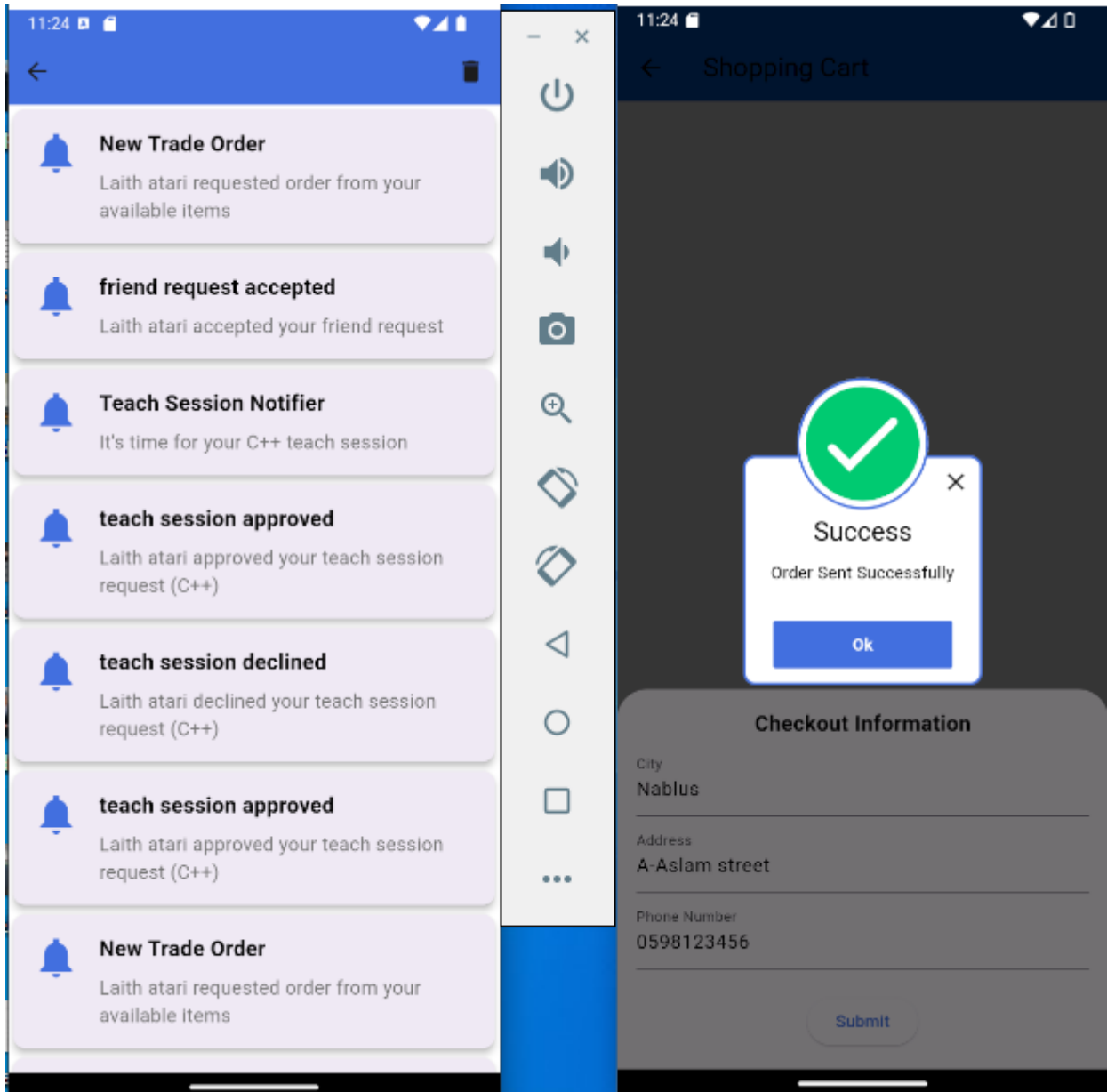


Figure 19: checkout done

3.3.17 my order



Figure 20: my order

3.3.18 on the way order

At this stage, the product owner delivers the product to the delivery company, which in turn delivers the product and places the product in an on-the-way state.

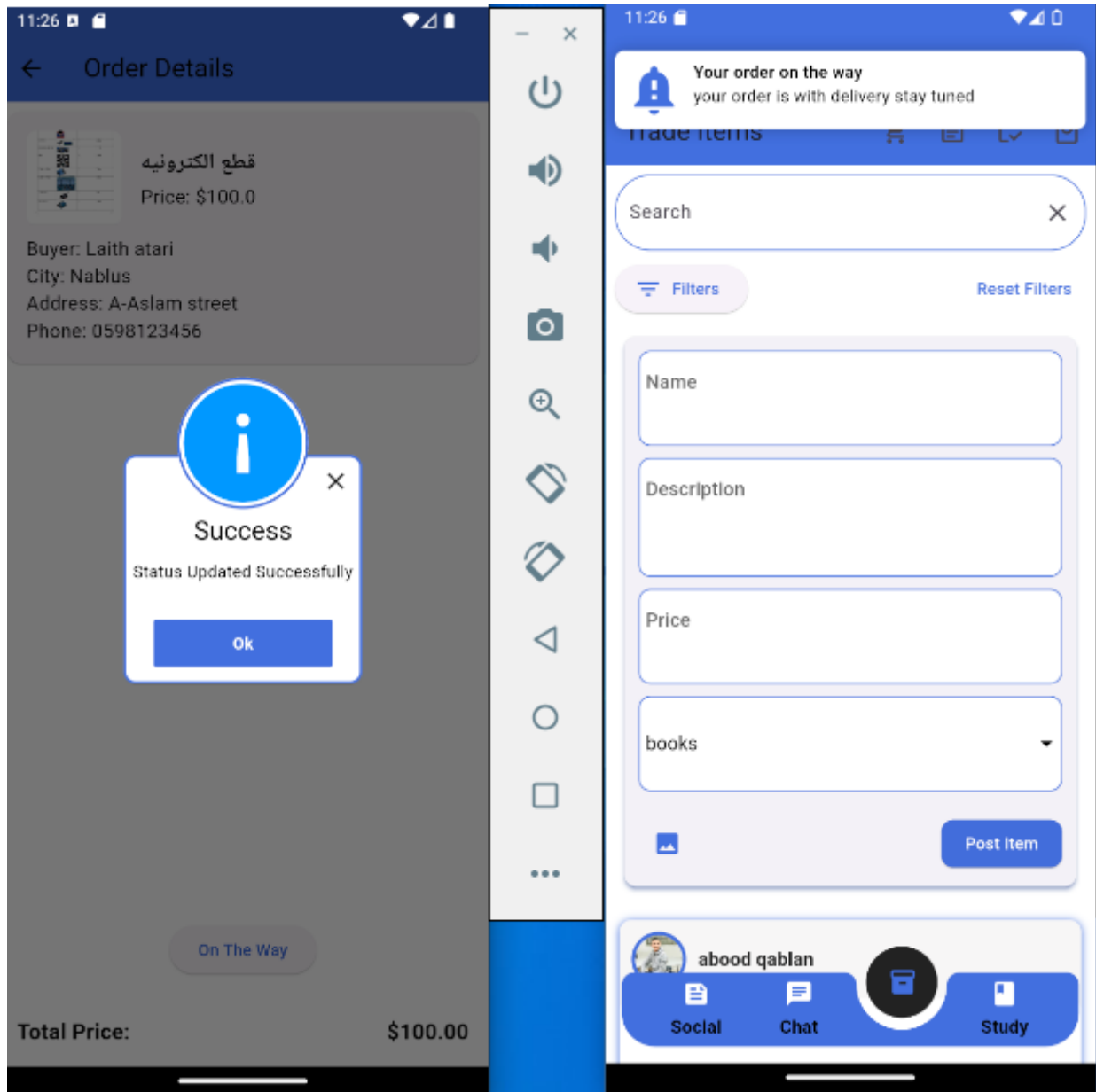


Figure 21: on the way order

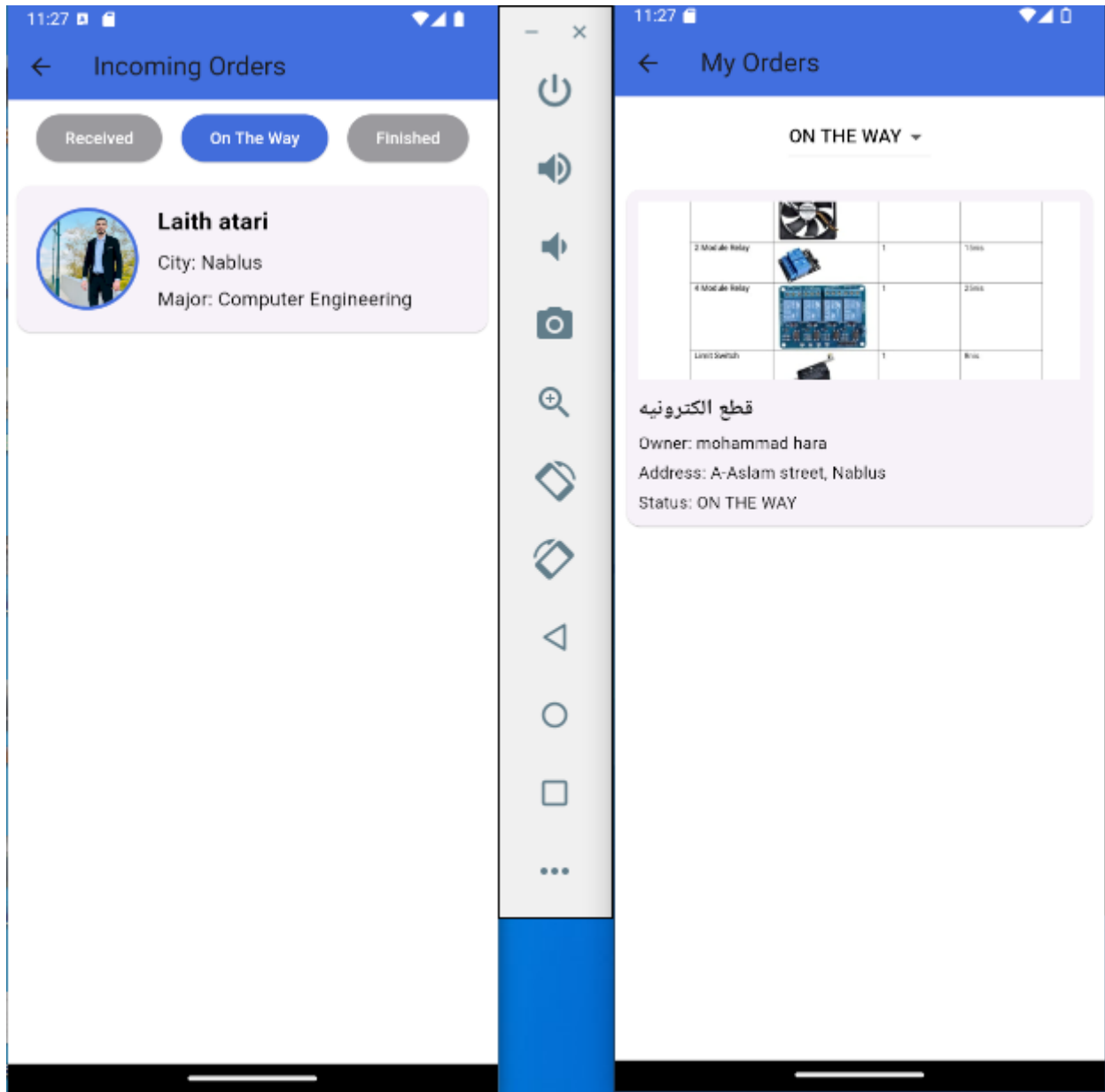


Figure 22: on the way order

3.3.19 finish order

In the last stage, when the owner receives the money from the delivery company after it has delivered the product to the customer and received its price, he puts it in the Finish stage.

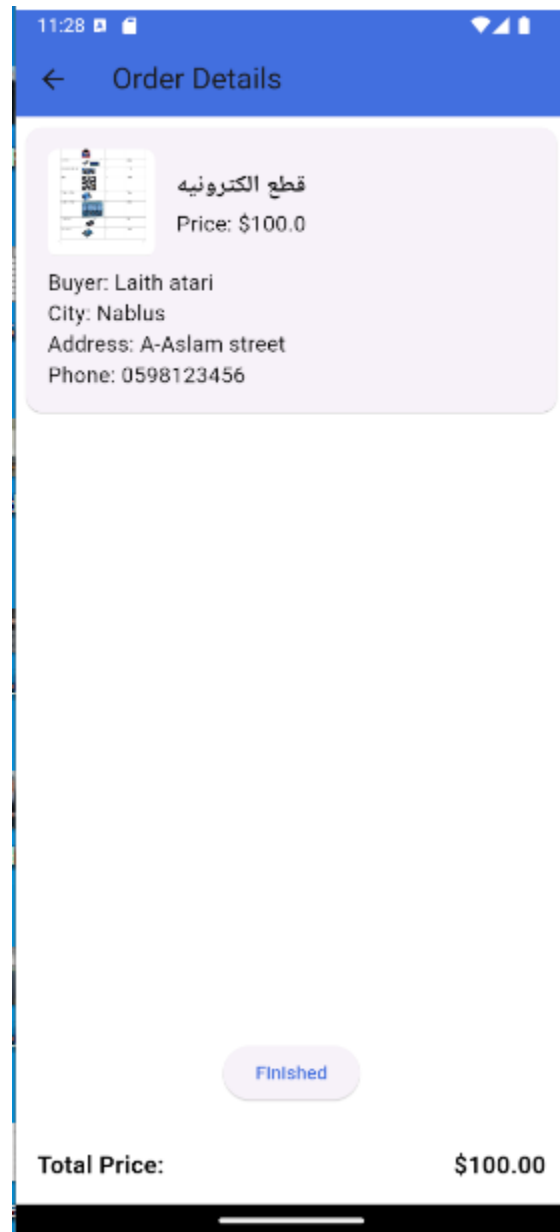


Figure 23: finish order

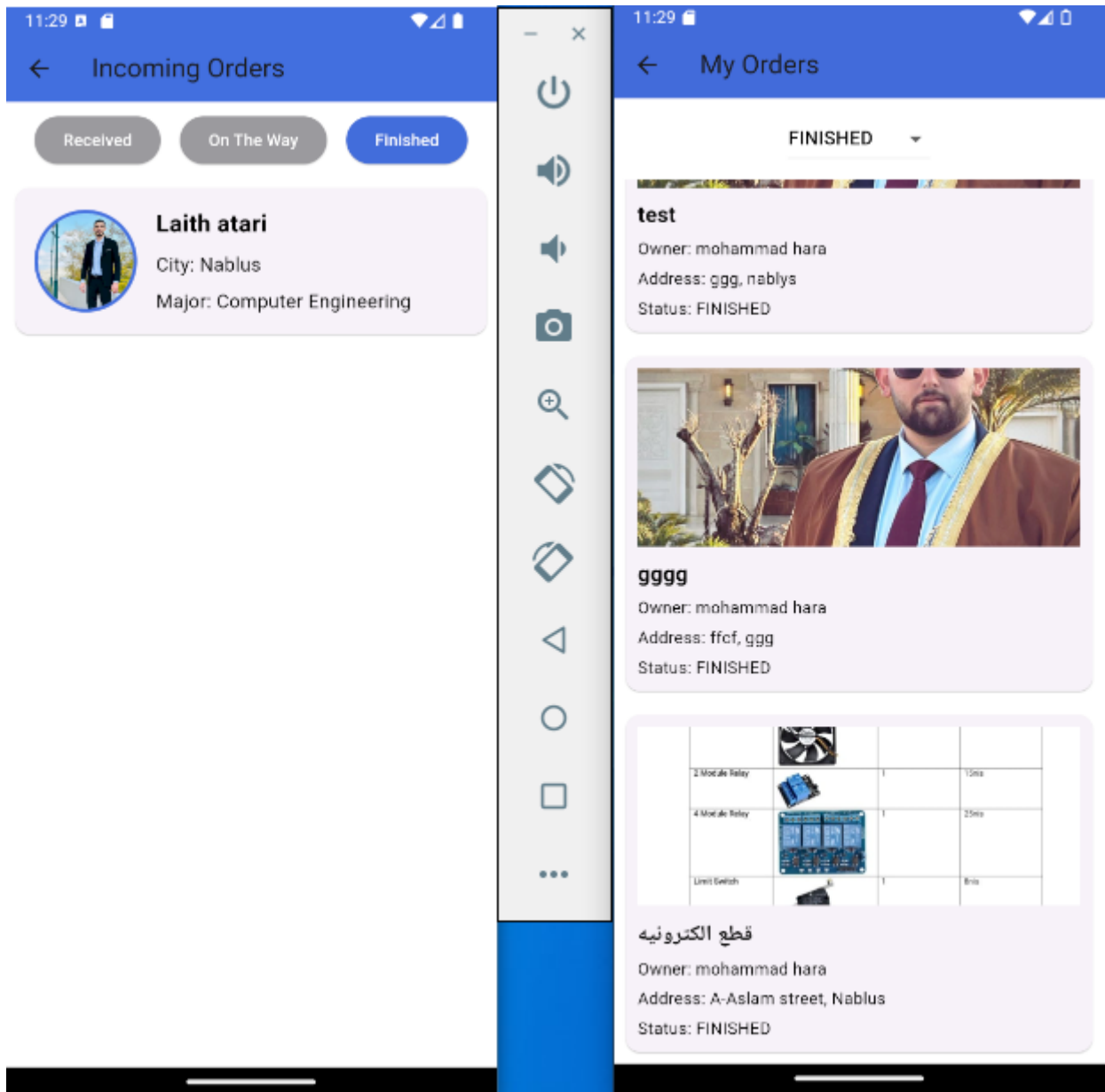


Figure 24: finish order

3.3.20 filter of trade

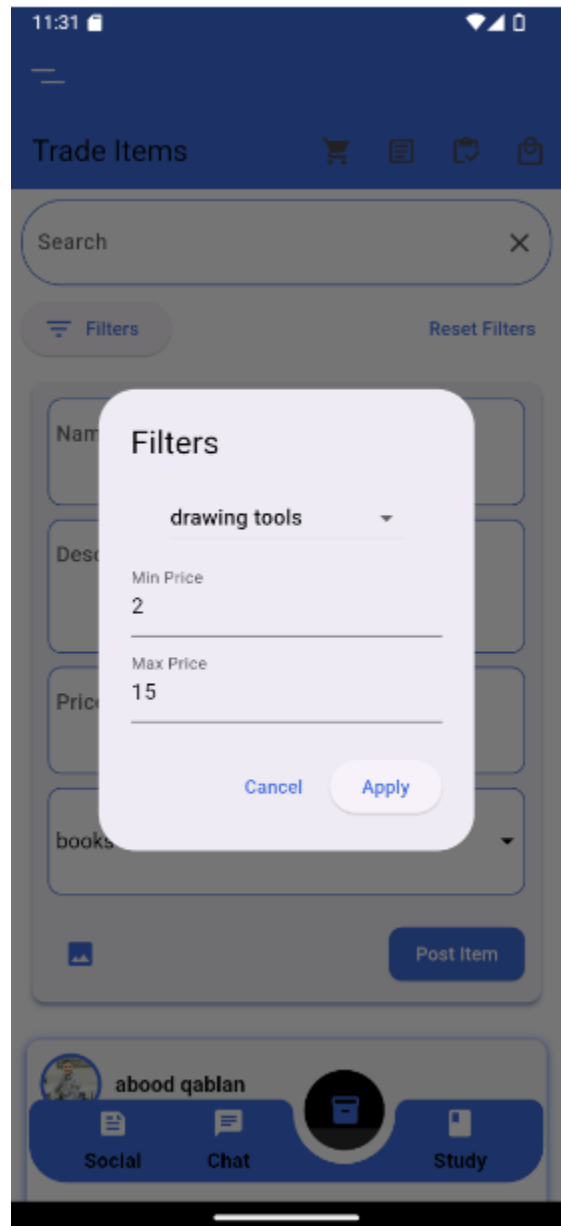


Figure 25: filter of trade

3.3.21 teach course

This feature is based on teaching, where the student searches for someone to teach him in a specific subject, through the user entering the courses he is studying through the Tech Courses section in the Side Bar, and the student who wants someone to teach him searches and finds him, then click request , and a notification about the student teacher appears. After he chooses the time

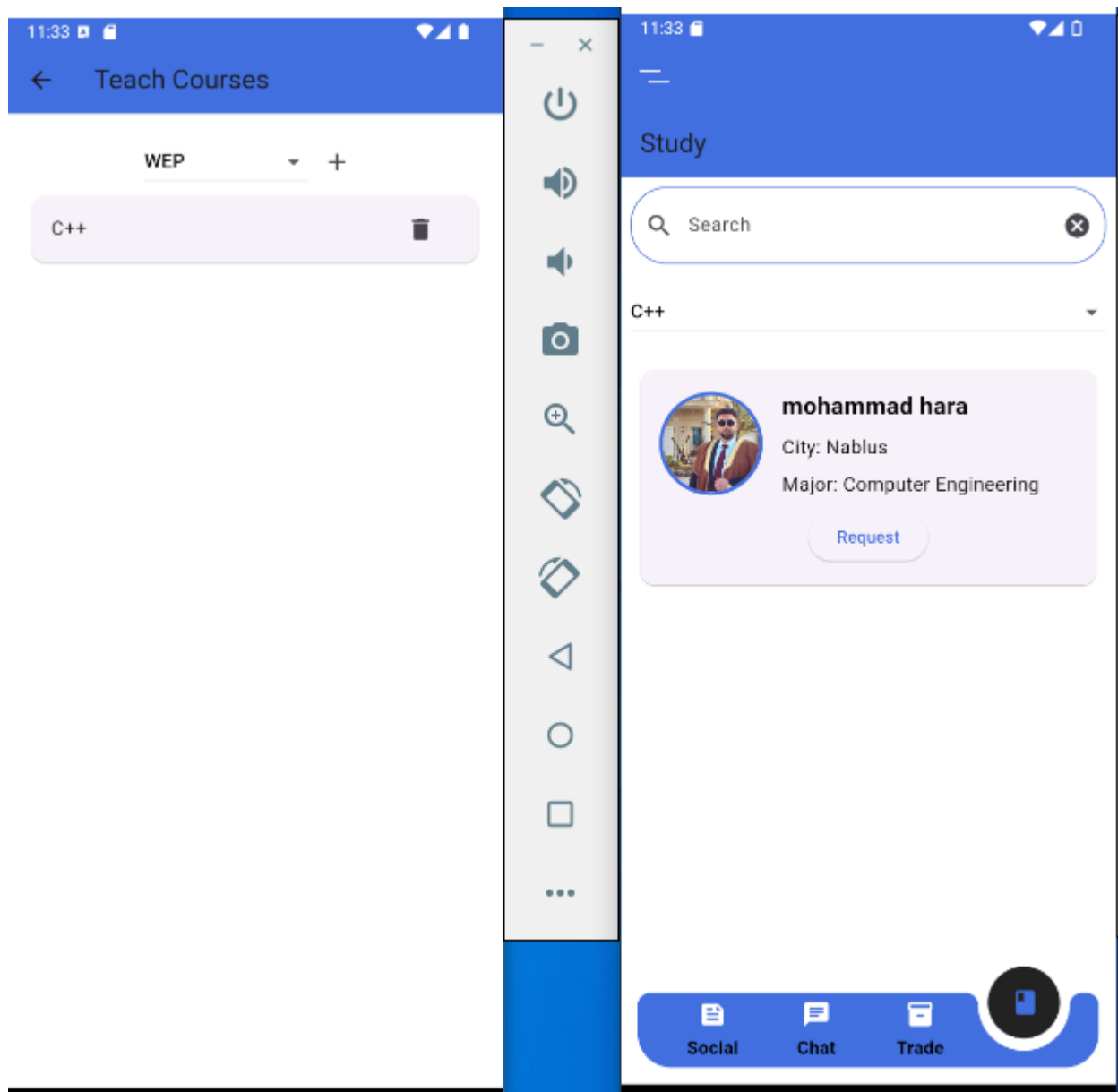


Figure 26: teach course

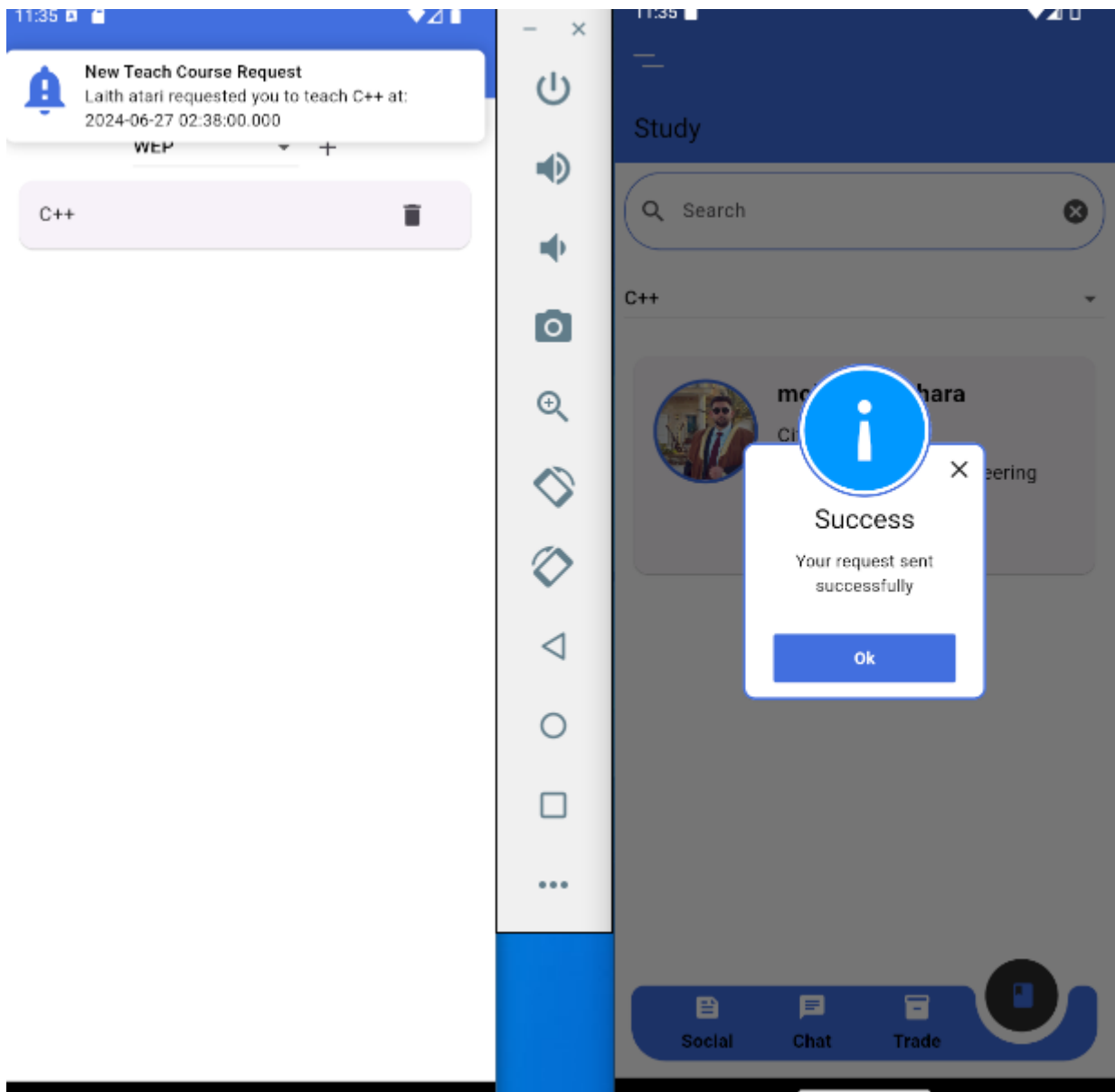


Figure 27: teach course

3.3.22 teach request

Teaching requests for the student who wants to teach appear under the TechRequest section in the Side Bar, then he accepts or rejects. If he accepts, he must enter his Zoom link or a similar platform like Times. We tried to find a meeting directly through the application, but this feature requires a paid subscription.

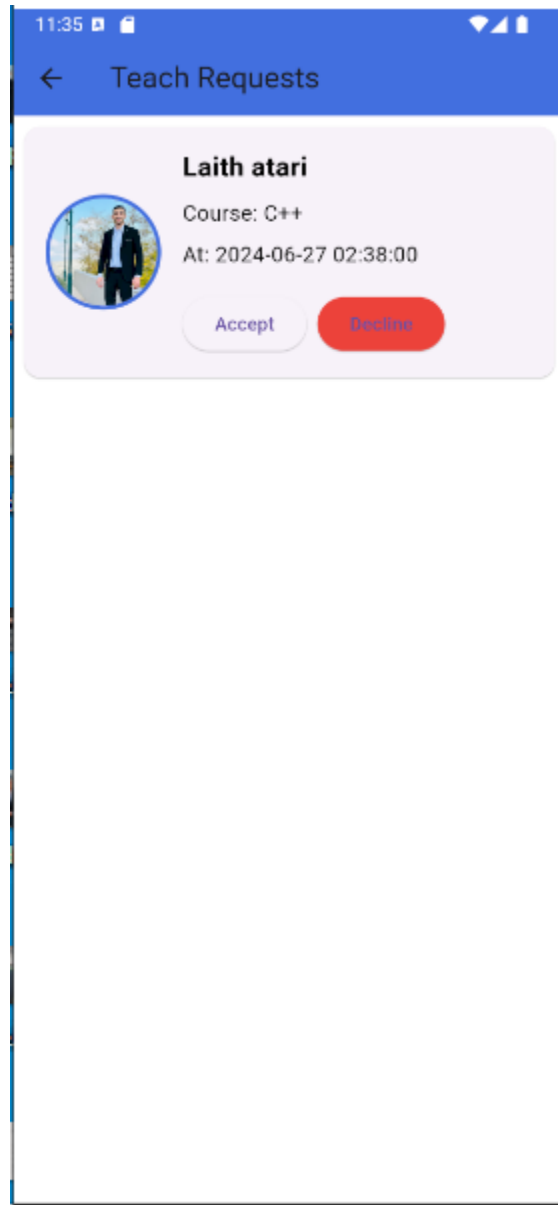


Figure 28: teach request

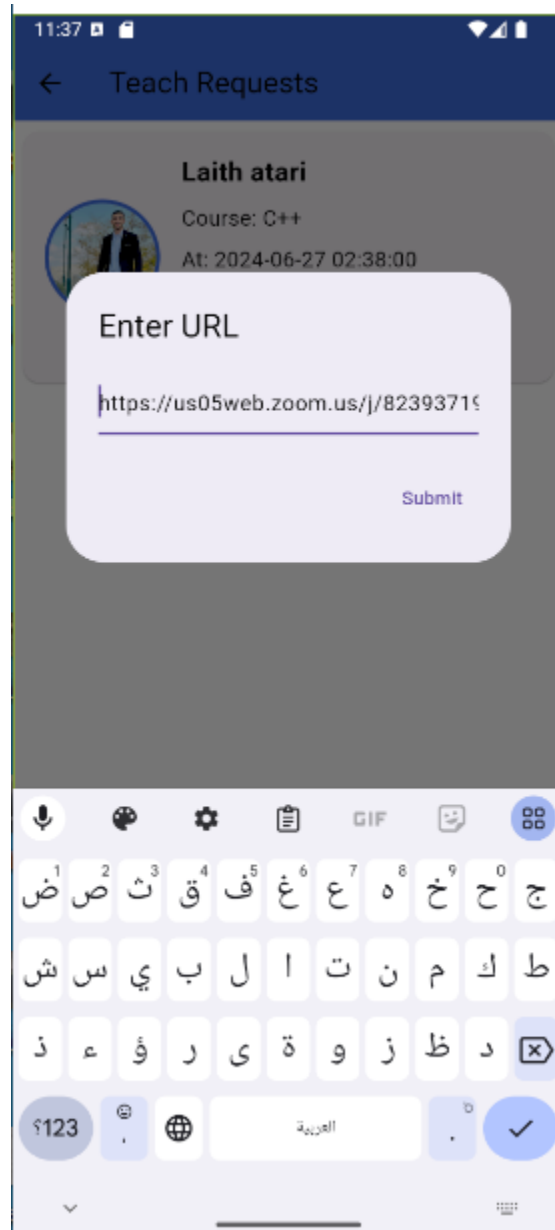


Figure 29: teach request

3.3.23 approved session

If the student-teacher accepts the request, it will appear immediately upon notification that the teacher has accepted the meeting

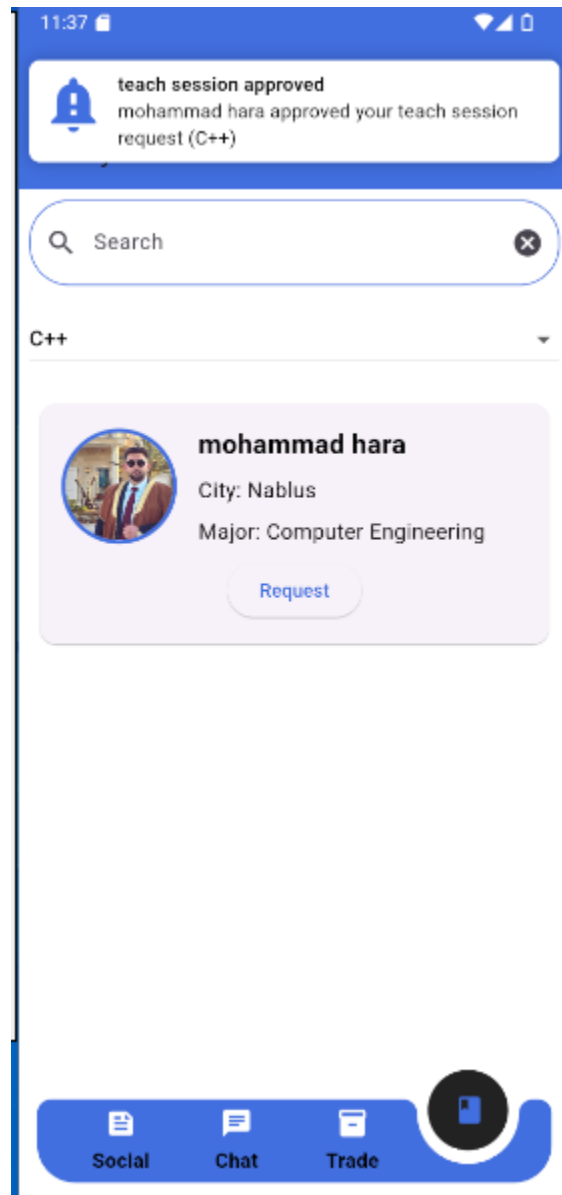


Figure 30: approved session

3.3.24 time of session

Here we have entered a date after two minutes so that our notifications will appear quickly. Therefore, when the meeting time comes, a notification will be sent as a reminder.

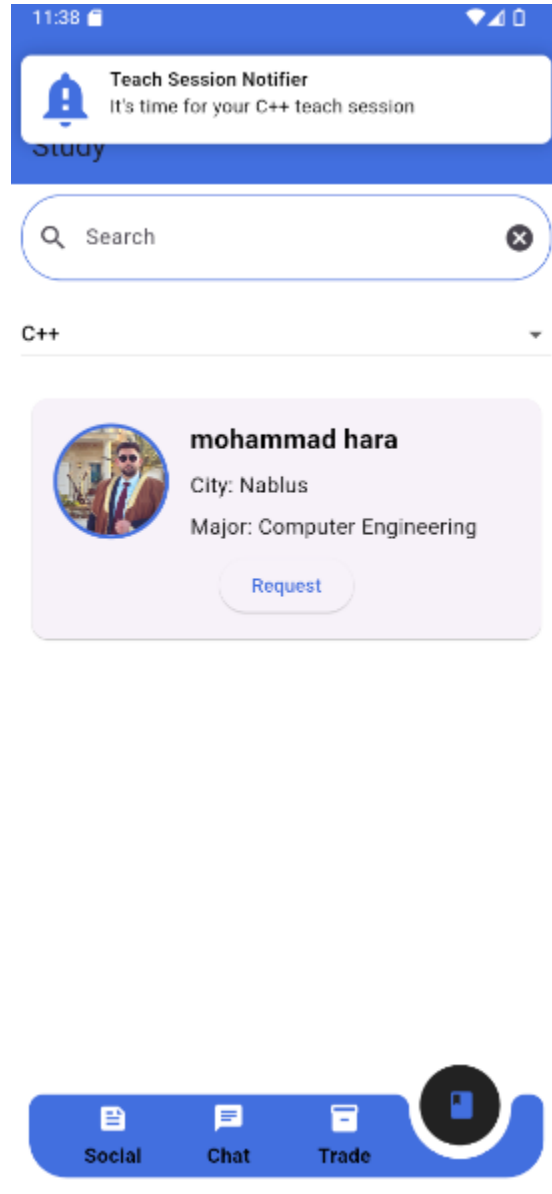


Figure 31: time of session

3.3.25 teach session

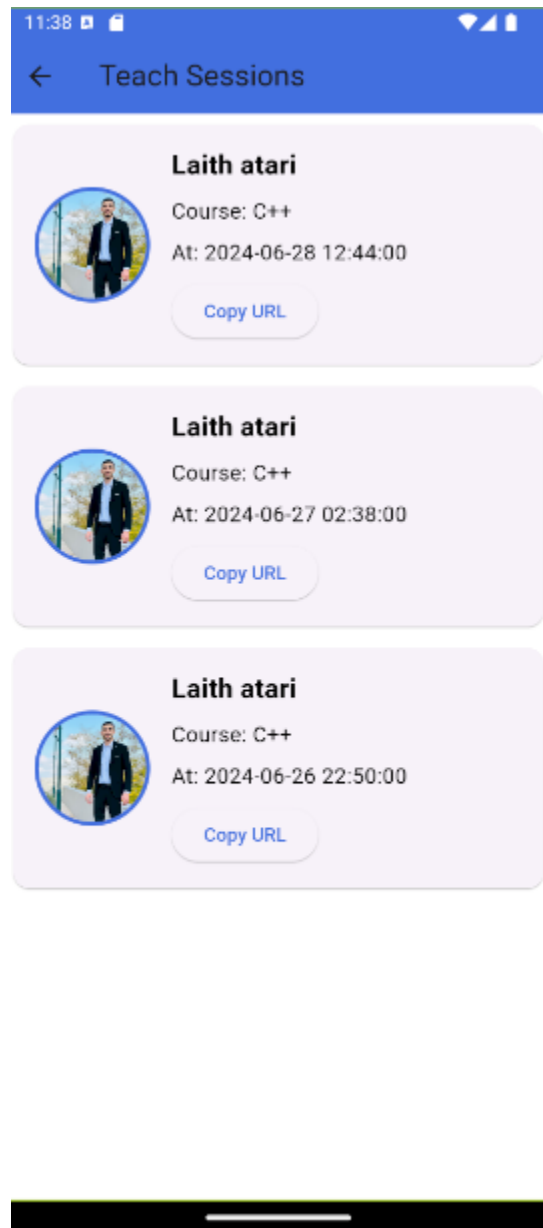


Figure 32: teach session

3.3.26 filter and search friends

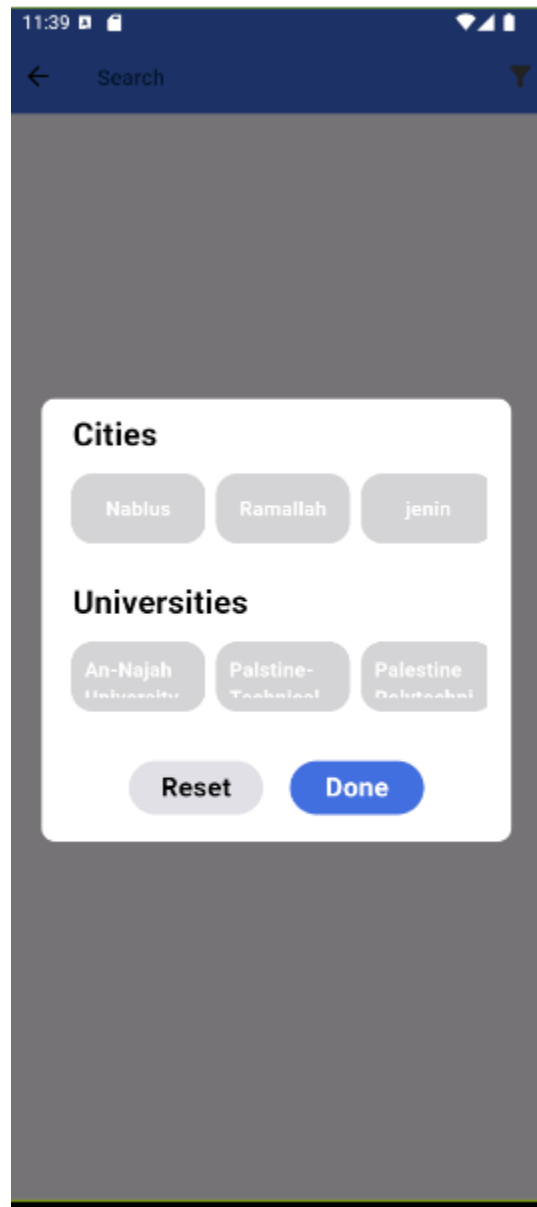


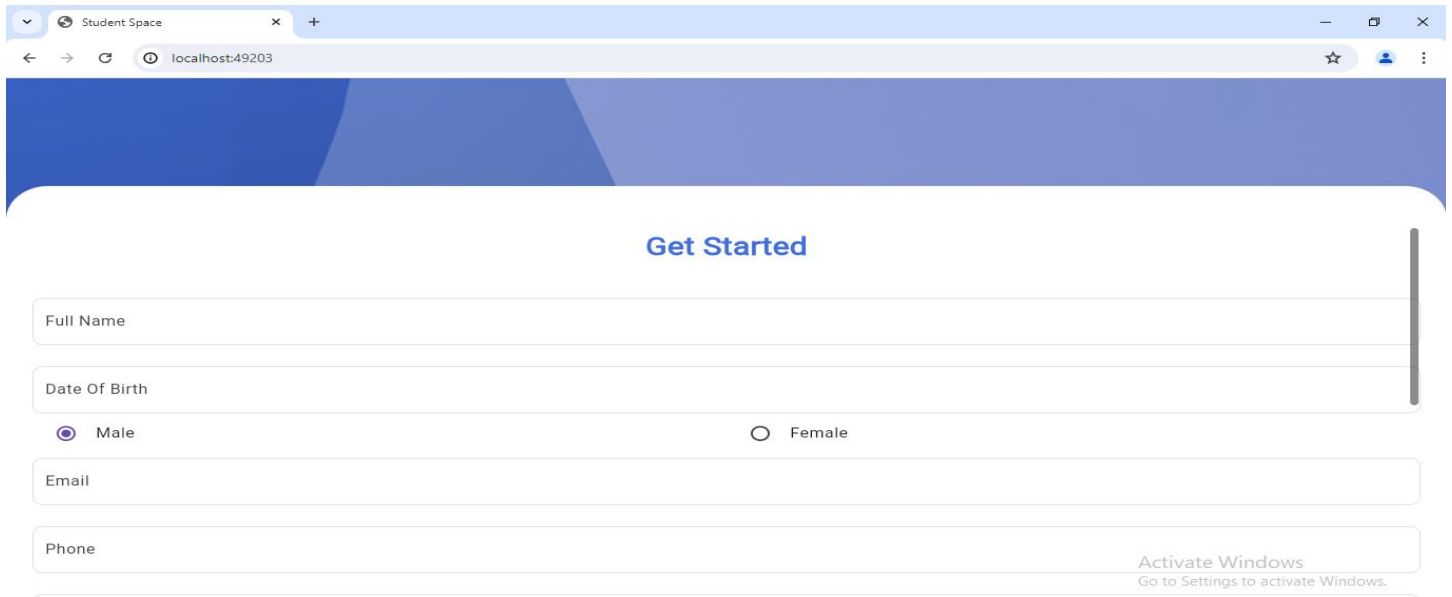
Figure 33: filter and search friends

3.3.26 web application

Here is a simple overview of the web application, as it has the same details and features as the mobile application

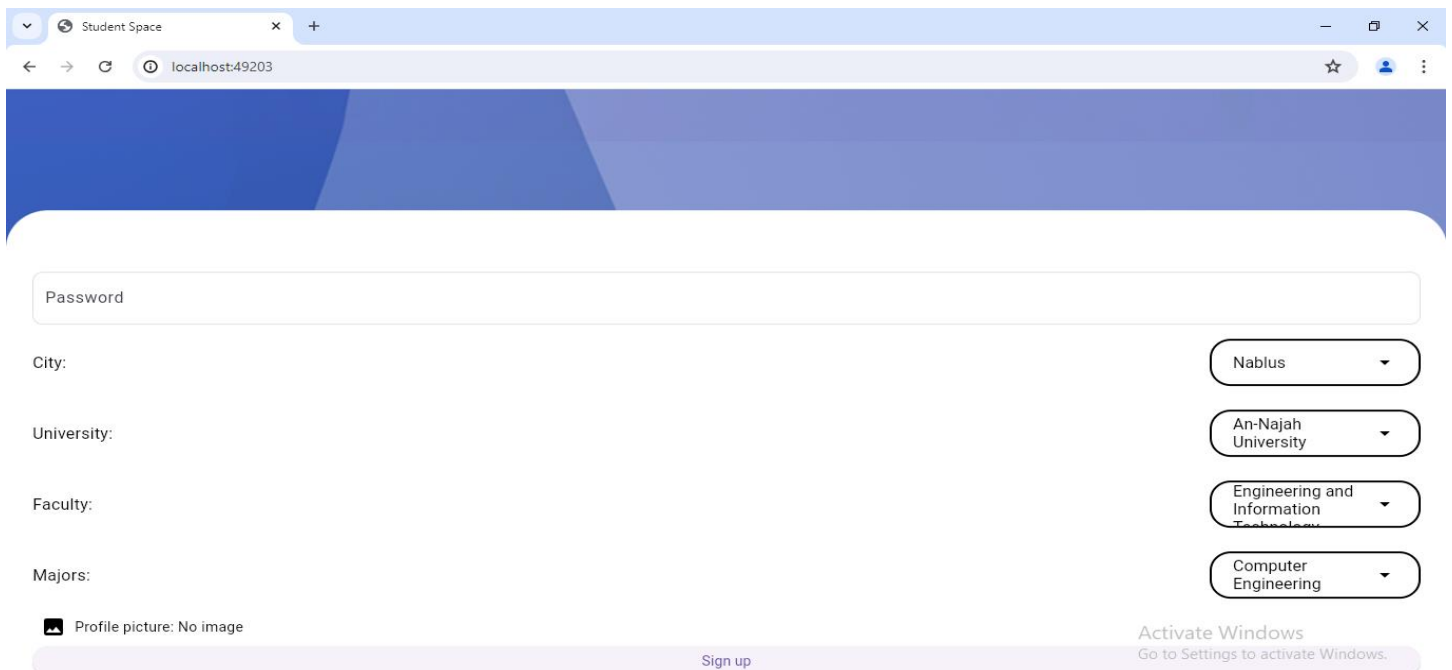
Sign up

From here, the user can enter his information to create his own account



The screenshot shows a web browser window with the title 'Student Space' and the URL 'localhost:49203'. The page features a blue header with the text 'Get Started' in white. Below the header is a form with the following fields: 'Full Name', 'Date Of Birth', 'Gender' (with radio buttons for 'Male' and 'Female'), 'Email', and 'Phone'. At the bottom right of the form, there is a small 'Activate Windows' watermark.

Figure 34: web Sign up



The screenshot shows the same web browser window as Figure 34. The form now includes a 'Password' field at the top. Below it are four dropdown menus for 'City' (selected: Nablus), 'University' (selected: An-Najah University), 'Faculty' (selected: Engineering and Information Technology), and 'Majors' (selected: Computer Engineering). At the bottom left, there is a profile picture placeholder with the text 'Profile picture: No image'. At the bottom center, there is a 'Sign up' button. At the bottom right, there is a small 'Activate Windows' watermark.

Figure 35: web Sign up

Sign in

After sign up , the user can log into his account from here, and he can also change the password if he forgets it.

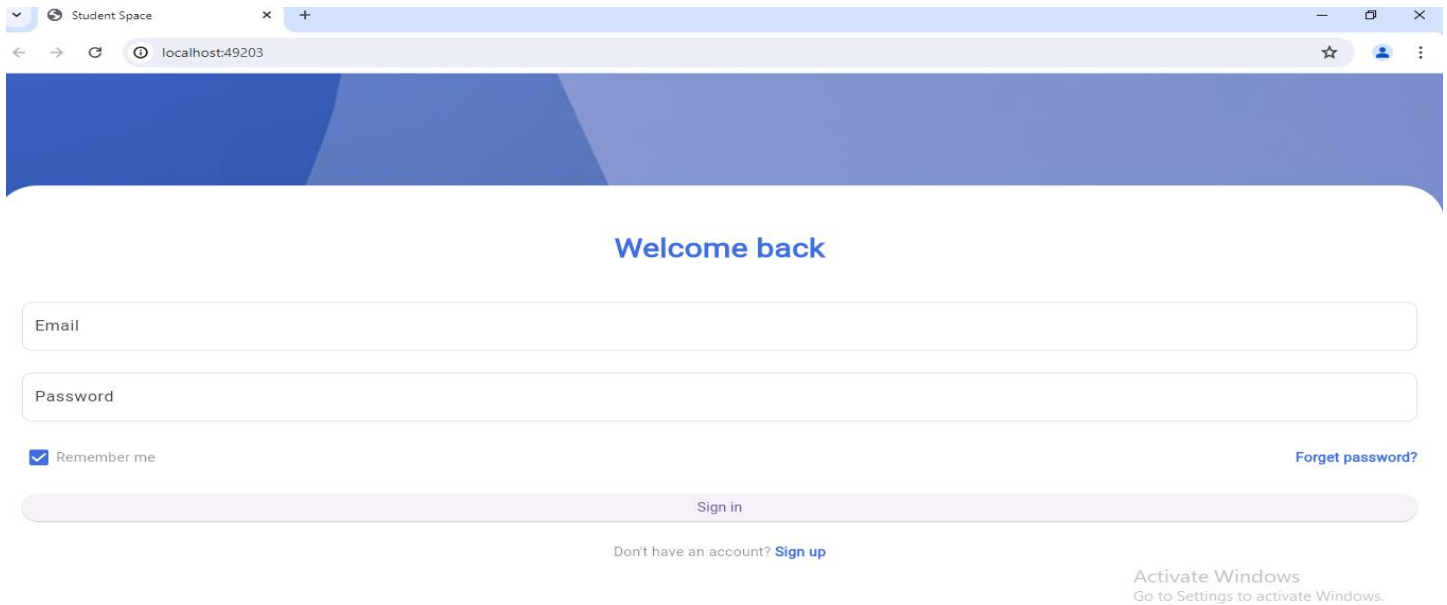


Figure 36: web Sign in

Home page

Here the main page of the application appears

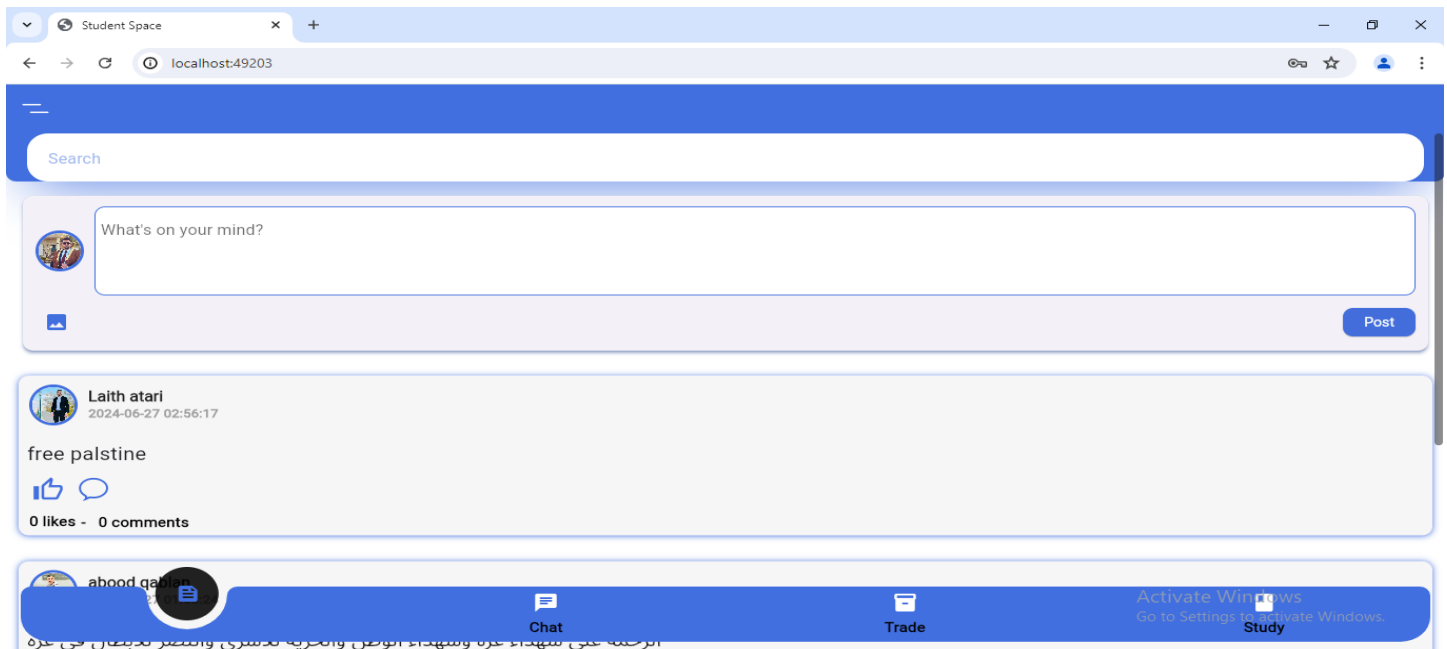
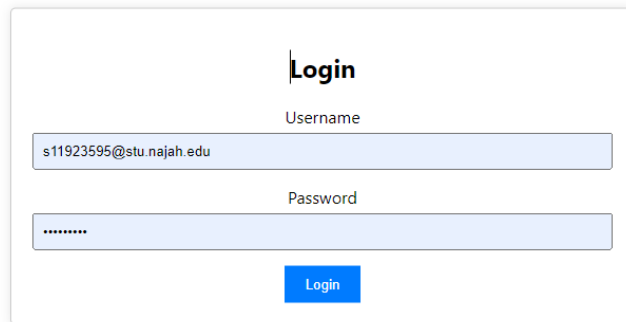


Figure 37: Home page

3.3.27 admin page

3.3.27.1 sign in



Login

Username

s11923595@stu.najah.edu

Password

.....

Login

Activate Windows
Go to Settings to activate Windows.

Figure 38: admin sign in

3.3.27.2 Statistics

Here the admin shows general statistics about the application

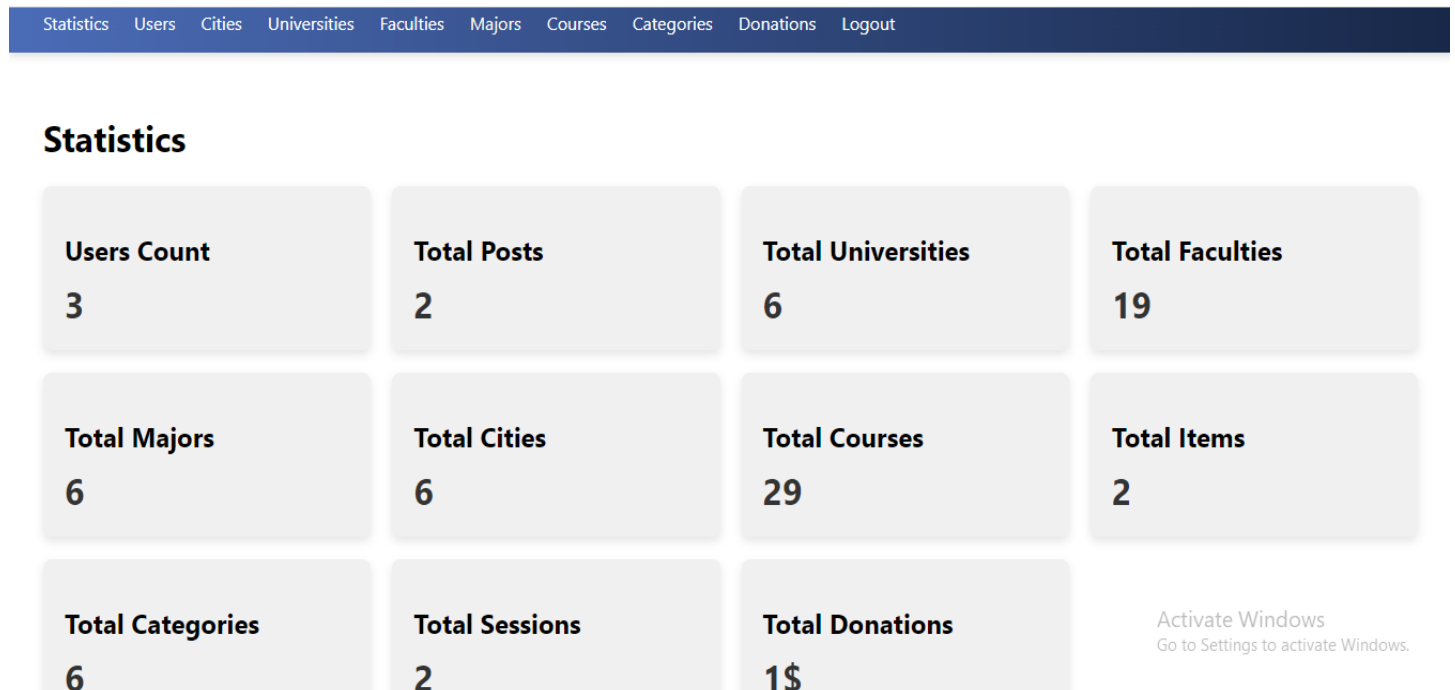


Figure 39: Statistics

3.3.27.3 users

Here the admin shows the users of the application and their information, and he can disable any account he chooses

Name	Date of Birth	Gender	City	University	Faculty	Major	Email	Phone	Enabled	Actions
mohammad nehad	2001-02-16	MALE	Nablus	An-Najah University	Engineering and Information Technology	Computer Engineering	mohammadnofal@gmail.com	058796532	true	Disable
mohammad marei	2001-05-02	MALE	Nablus	An-Najah University	Engineering and Information Technology	Computer Engineering	mohammadmarie@gmail.com	0589745236	true	Disable
abood qablan	2003-05-07	MALE	Nablus	An-Najah University	Engineering and Information Technology	Computer Engineering	aboodqablan@gmail.com	0598653214	true	Disable
localhost:3000/users	2001-05-02	MALE	Nablus	Palstine-Technical	Engineering and Information Technology	Computer Engineering	laithatari01@gmail.com	0592775385	true	Disable

Figure 40: users

3.3.27.4 Cities

Here the admin shows the cities and he can add any city he chooses

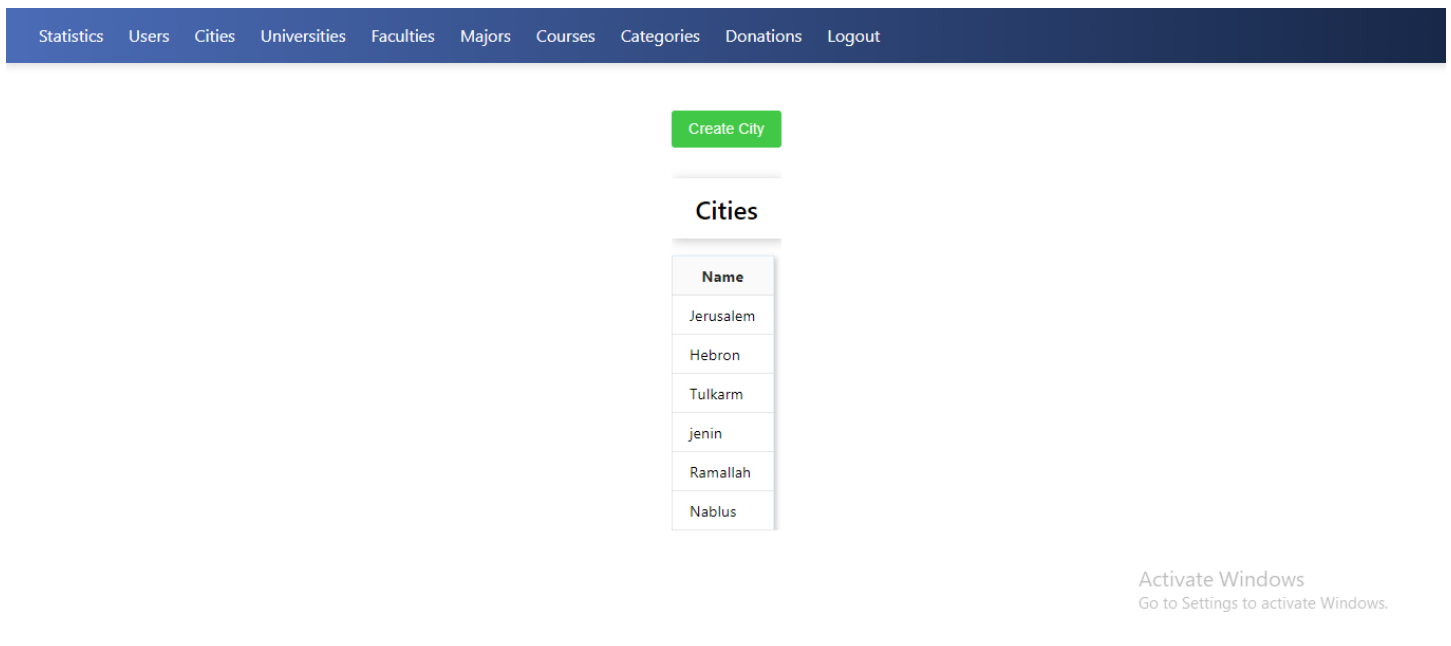


Figure 41: Cities

3.3.27.5 Universities

Here the admin shows the name of the university, in which city, and its location, and he can add any university he chooses.

The screenshot shows a web application interface with a dark blue navigation bar at the top containing the following menu items: Statistics, Users, Cities, Universities, Faculties, Majors, Courses, Categories, Donations, and Logout. Below the navigation bar is a green button labeled "Create University". The main content area features a table titled "Universities" with the following data:

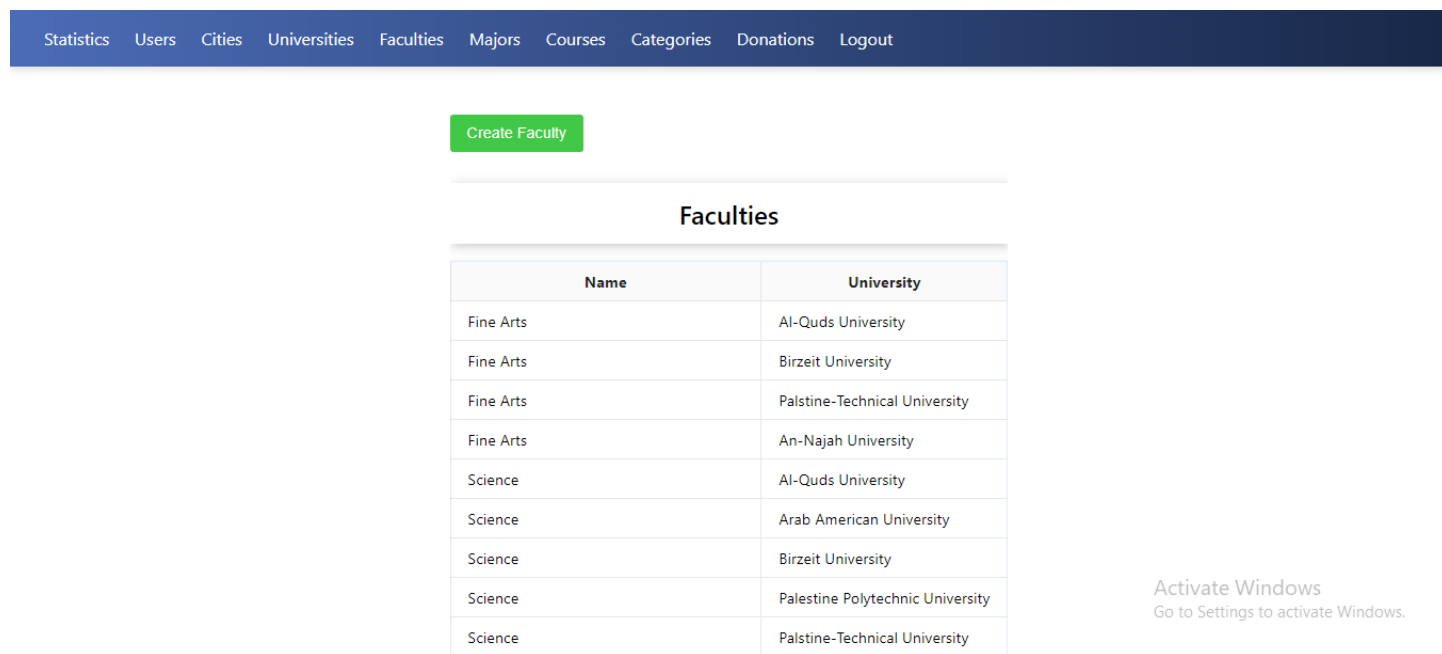
Name	City	Address
Al-Quds University	Jerusalem	Abu Deis
Arab American University	jenin	South of Jenin
Birzeit University	Ramallah	Birzeit
Palestine Polytechnic University	Hebron	Wad Alherya
Palstine-Technical University	Tulkarm	Yafa-Street
An-Najah University	Nablus	rafidya

At the bottom right of the page, there is a watermark that reads "Activate Windows Go to Settings to activate Windows." The browser address bar at the bottom left shows "localhost:3000/universities".

Figure 42: Universities

3.3.27.6 Faculties

Here the admin shows the Faculties and universities associated with it, and he can add any college he chooses



Statistics Users Cities Universities Faculties Majors Courses Categories Donations Logout

Create Faculty

Faculties

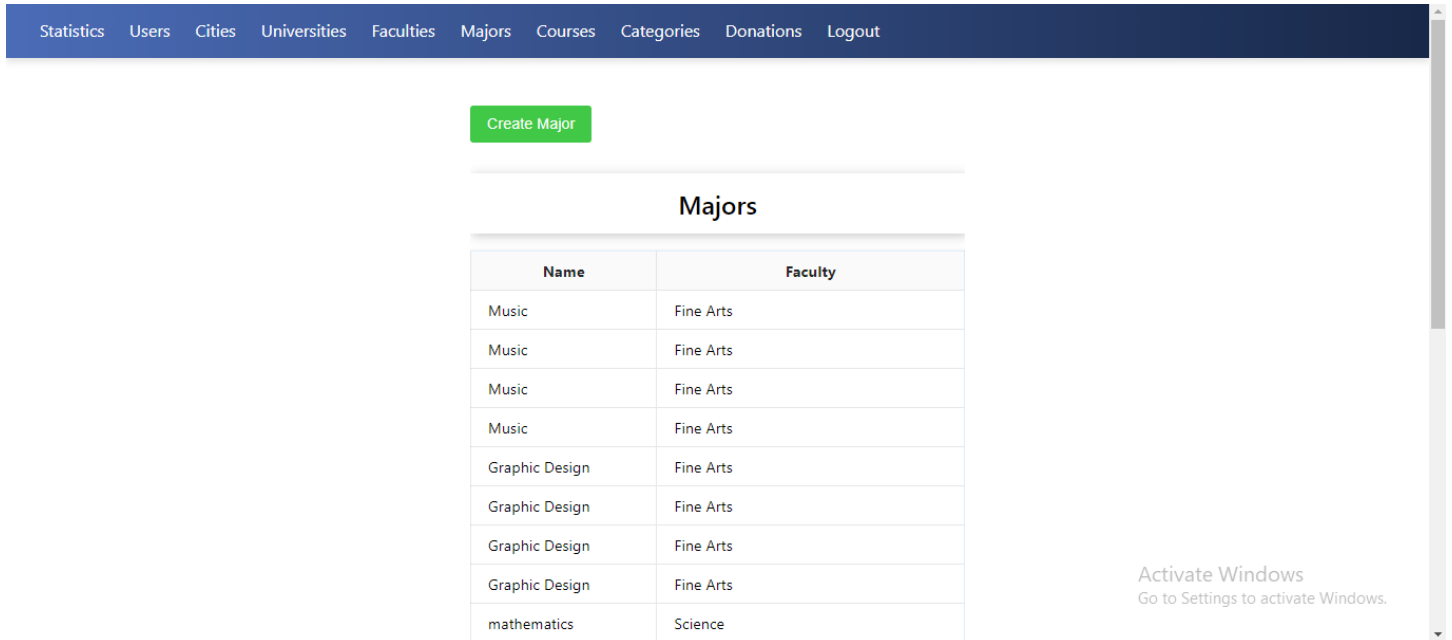
Name	University
Fine Arts	Al-Quds University
Fine Arts	Birzeit University
Fine Arts	Palstine-Technical University
Fine Arts	An-Najah University
Science	Al-Quds University
Science	Arab American University
Science	Birzeit University
Science	Palestine Polytechnic University
Science	Palstine-Technical University

Activate Windows
Go to Settings to activate Windows.

Figure 43: Faculties

3.3.27.7 Majors

Here the admin displays the details and the name of the Majors associated with it, and he can add any college he chooses



The screenshot shows a web application interface with a dark blue navigation bar at the top containing the following menu items: Statistics, Users, Cities, Universities, Faculties, Majors, Courses, Categories, Donations, and Logout. Below the navigation bar, there is a green button labeled 'Create Major'. The main content area features a table titled 'Majors' with two columns: 'Name' and 'Faculty'. The table contains the following data:

Name	Faculty
Music	Fine Arts
Music	Fine Arts
Music	Fine Arts
Music	Fine Arts
Graphic Design	Fine Arts
Graphic Design	Fine Arts
Graphic Design	Fine Arts
Graphic Design	Fine Arts
mathematics	Science

In the bottom right corner of the screenshot, there is a watermark that reads: 'Activate Windows Go to Settings to activate Windows.'

Figure 44: Majors

3.3.27.8 Courses

Here the admin displays the courses and Majors associated with them, and he can add any course he chooses

The screenshot shows a web application interface. At the top, there is a dark blue navigation bar with the following menu items: Statistics, Users, Cities, Universities, Faculties, Majors, Courses, Categories, Donations, and Logout. Below the navigation bar, there is a green button labeled 'Create Course'. Underneath the button, the title 'Courses' is centered. Below the title is a table with two columns: 'Name' and 'Major'. The table contains the following data:

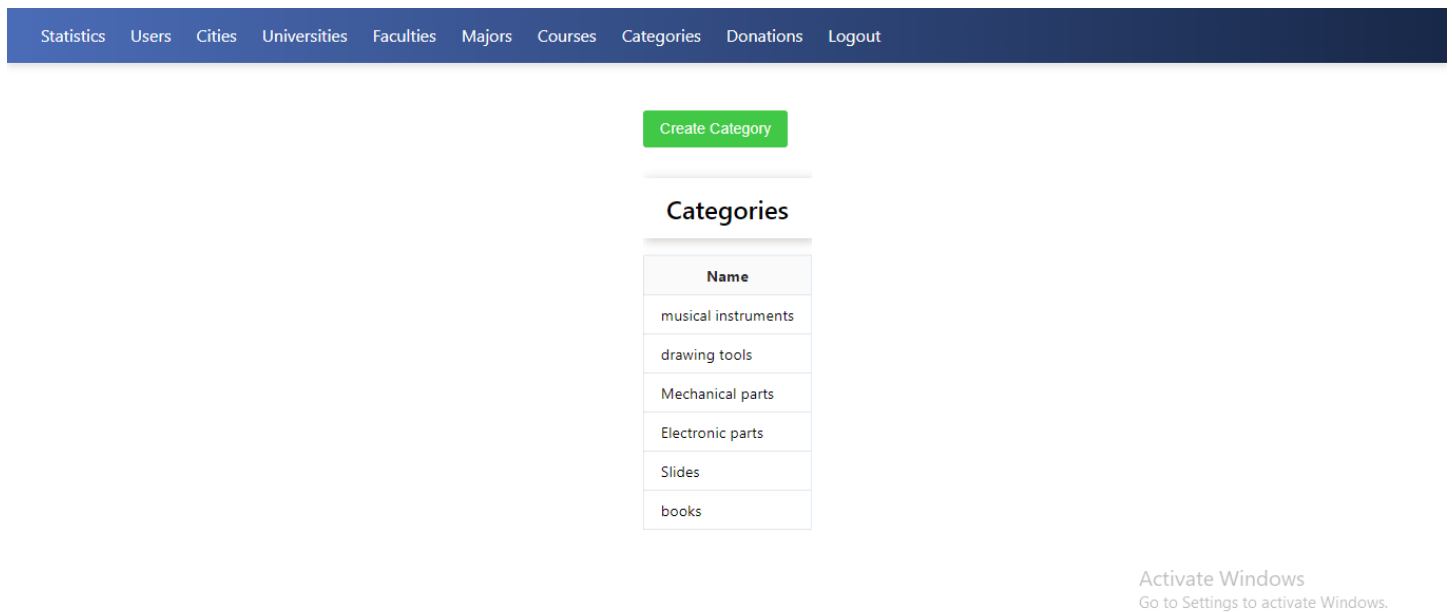
Name	Major
C++	Computer Engineering
WEP	Computer Engineering
graduation project	Computer Engineering
Medicine and Health Sciences	medicine
Calculus 1	mathematics
Graphic Design 1	Graphic Design
musical instruments	Music

At the bottom right of the screenshot, there is a watermark that says 'Activate Windows' and 'Go to Settings to activate Windows.'

Figure 45: Courses

3.3.27.9 Categories

Here the categories that students may need appear



The screenshot shows a web application interface. At the top, there is a dark blue navigation bar with the following links: Statistics, Users, Cities, Universities, Faculties, Majors, Courses, Categories, Donations, and Logout. Below the navigation bar, there is a green button labeled "Create Category". Underneath the button, the word "Categories" is displayed in a bold font. Below "Categories" is a table with a single column titled "Name". The table contains the following entries: musical instruments, drawing tools, Mechanical parts, Electronic parts, Slides, and books. In the bottom right corner of the screenshot, there is a watermark that reads "Activate Windows" and "Go to Settings to activate Windows."

Name
musical instruments
drawing tools
Mechanical parts
Electronic parts
Slides
books

Figure 46: Categories

3.3.27.10 Donations

Here the details appear when someone donates to the site

User	Email	Phone	Amount	Donation Date
Laith atari	laithatari01@gmail.com	0592775385	20	2024-06-27
Laith atari	laithatari01@gmail.com	0592775385	66	2024-06-26

Activate Windows
Go to Settings to activate Windows.

Figure 47: Donations

Chapter Four: Results

At the end of this project, we succeeded in achieving the goals that we set, as we created a website and a phone application, which university students will benefit from among themselves and save them time and effort in accessing what they need, all of this in an easy-to-use, clear and simple application that guarantees the user a useful and wonderful experience.

It allows students to browse the site to get what they need or view things they do not need, as students correspond with each other and accomplish the task, in addition to that the administrator supervises all aspects of the application.

Chapter Five: Discussion

In this project, we focused on making life easier for the student by providing services in which he faces difficulty in his university life. The idea of our application is that it is a non-profit idea so that we do not burden the student with additional fees. The profit is through donating to the application, and in the future, this method can be added or replaced with another method of profit. It displays advertisements for restaurants and others

Chapter Six: Conclusion and Recommendations

6.1 Conclusion

In conclusion, our project aims to facilitate the lives of students and help them through the project that we have undertaken, as it saves them time and effort, in obtaining what they need and communicating with each other, in an easy-to-use and simple application, and solves the problem of applications that restrict and control content, and under the supervision of the person in charge of Application

6.2 Recommendations

We recommend our colleagues to choose their project idea well, and to learn the necessary programming languages for the project, such as , during their university years so that they are proficient in them while undertaking the project, and to organize their ideas well before undertaking the graduation project, so that they are fully aware of what they are doing. While doing the project, choose the appropriate partner also a good time before doing the graduation project so that they can understand and agree with each other to complete the project in the best possible way.

6.3 Future Work

In the future, we may provide the ability to open a meeting through the application itself without using an external platform such as Zoom

In addition, a source of profit must be opened for the application, and this can be done by adding advertisements for restaurants, offices, and university housing, or by taking a small commission.

Keeping up with the developments taking place in the field of artificial intelligence, which can be employed in the application in order to provide the best nominations to users that suit them

Chapter seven :References

1. <https://dart.dev/guides>
2. <https://docs.spring.io/spring-boot/index.html>
3. <https://developer.paypal.com/api/rest/>
4. <https://docs.flutter.dev/> pdf