The World Islamic Science and Education University

جامعة العلوم الاسلامية العالمية

Faculty of Information Technology

كلية تكنولوجيا المعلومات

GRADUATION PROJECT

Title:

StudentHousing

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We would like to express our gratitude to everyone who helped us during the graduation project starting with our endless thanks to our supervisor Dr. Issa Atoum who put effort into encouraging us to do a great job, providing our group with valuable information and advice to be better every time. Thank you for the continuous support and the kind communication that has made a huge impact in terms of feeling cared about what we are working on, and special thanks to our family, friends, and teachers for their endless support this semester.

Abstract

Student Housing is a Website aims to help students who are looking for residences near their universities by offering the available residences.

In addition to present cooperation between students and owners.

Project scope:

•To build up a platform for owners to offer their available residences, giving the chance for Students to find the appropriate Residence.

•The system depends on classifying Available Residences based on universities. This system can facilitate communication with students and owners.

Finally, we will save all of these information in a private database.

•This system reducing time and effort in Searching, managing, and sorting data for both Users and Residences.

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List of abbreviations

FR	**Functional Requirements**
NFR	**Non-Functional Requirements**
DFD	**DATA FLOW DIAGRAM**

Chapter 1
“Introduction”

1. Overview

This chapter explains the problems that Faces students who are looking for housing, how this system will solve their problems, and the objectives of the system, and what is the methodology that will be used.

.

2. Problem Statement

There are many problems facing students who are looking for housing, such as high prices and a long time in searching, and problems related to real estate owners such as wasting time and not finding the appropriate way to promote the property or housing.

3. Project Objectives

This platform is used to provide services to both the students and the owners, it is about saving time and finding the best suitable price for the student and owners, it comes in the best way to save time and effort for both parties.

4. Research Strategy

This project uses the scrum which is an agile framework of iterative and incremental product delivery that uses frequent feedback, starting with product backlog creation which consists of prioritized user stories. Moving to sprint planning and sprint backlog creation, also working on the sprint and discusses it during the scrum meeting. Testing and product demonstration and after the retrospective and the next sprint planning.

The project was built using four sprints as shown in the figure below. The research strategy will be discussed further in chapter three.

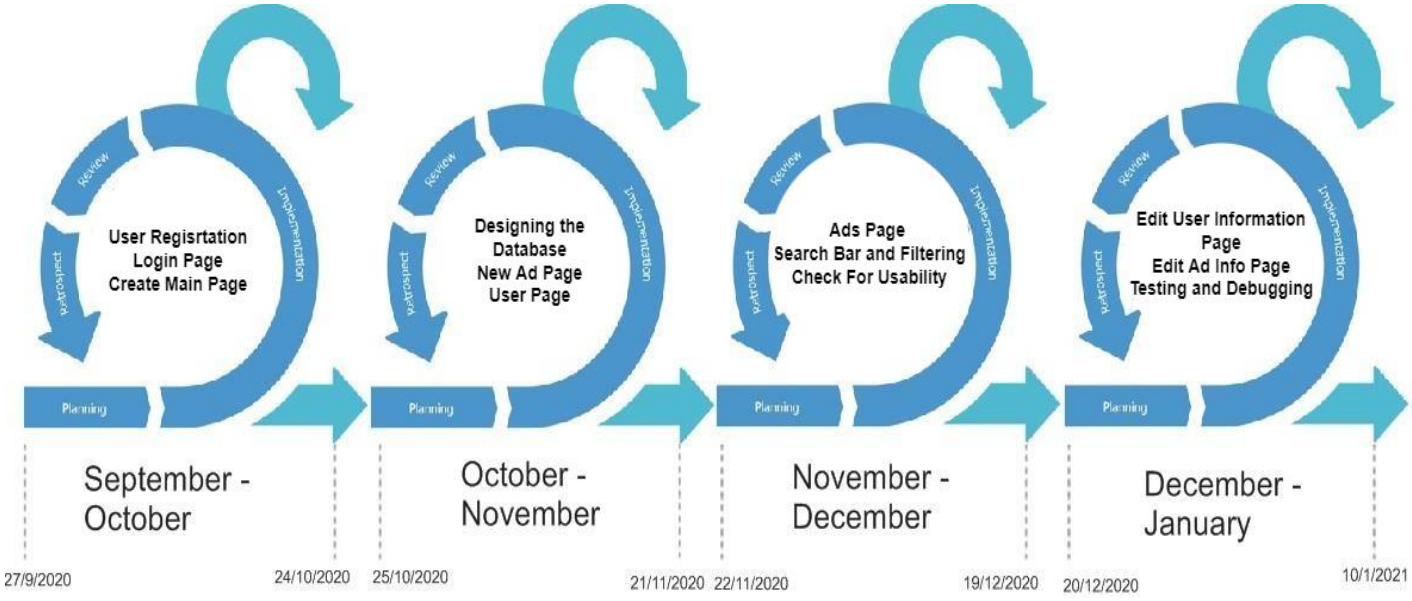


Figure 1: Scrum Framework

5. Gantt-Chart

	4th-Oct / 31st Oct	1st Nov / 30th Nov	1st Dec / 31st Dec	1st Jan / 25th Jan
Sprint 1 • User Registration. • Log In Page. • Main Page				
Sprint 2 • Designing the Database. • New Ad Page • User Page				
Sprint 3 • Ads Page • Search Bar And filtering • Check For Usability				
Sprint 4 • Edit user info Page • Edit Ad info Page • Testing & Debugging				

Table 1: Gantt-Chart

6. Project Outline

Chapter 1: A summary of the problem to be solved, the objectives of the project to be built and the action plan with a clarification of its steps.

Chapter 2: Comparing the system with other existing systems and reaching its conclusion accordingly the system was built in the best way.

Chapter 3: Feasibility study and methodology used in the project, functional and non-functional requirements.

Chapter 4: Show how the system works by a set of diagrams in the easiest and simplest way and show how to use the system.

Chapter 5: In this chapter, we will talk about implementation and evaluation. With an explanation of each implementation and how it was implemented.

Chapter 6: A summary of the project and its future work.

Chapter2
“Literature view”

1. Overview

This chapter discusses our website system with other similar websites in other countries.

2. Describe other similar websites.

1. AmberStudent [11]

AmberStudent houses over 150K+ rooms all around the UK, and numerous properties nearby major academic hubs of the world, like the USA, Ireland, and Germany, just to name a few! Their catalogue has a vast range of private studios, shared en-suites, and other single and dual occupancy rooms located right next to the major universities of the UK, Ireland, Australia, and more.

2. Spotahome [9]

Spotahome is a 100% online booking platform, offering an exhaustive list of apartments, rooms, studios, and student residences in 100 cities around Europe. There are real, authentic photos and high-quality videos of the home and neighborhood, as well as floor plans and detailed descriptions about the home and local area.

3. Homelike [7]

Homelike is an online booking platform for monthly rentals of furnished apartments. With 100,000+ apartments in 500+ cities, they cover both the European market and New York City! Homelike is suitable for students and other people on the move who are in need of accommodation from one month onward, with flexible move in and move out dates.

4. Housing Anywhere [10]

Starting out as a subleasing platform on which exchange students could let out their own rooms while going to study abroad, Housing Anywhere has soon grown to be one of the biggest names of study abroad housing options. Its large user base and extensive coverage (in over 400 cities across the globe) means that there is plenty of current traffic to wade through- for once, a good thing! It collaborates with over 130 universities, so they’re pretty legit, and there are plenty of different accommodation options (rooms, studio apartments, etc.).

2. Comparison between system. [12]

The following table describes the comparison between Student-Housing and the other .

	Homelike Platform for Business-Apartments	Housing Anywhere	amber	SPOTAHOME	Student housing
online payment	NO	YES	NO	YES	NO
filter	YES	YES	YES	YES	YES
Easy user interface	YES	YES	YES	YES	YES
Cancellation Policy	YES	YES	YES	YES	YES
live chat	YES	NO	YES	NO	NO
Service fee	YES	YES	YES	YES	NO

Table 2: Comparison between system

* (no):Not Supports
* (yes): Supports

Chapter 3
“Methodology”

1. Overview

- This chapter includes the tools we work with, our feasibility study, Requirement (functional and non-functional), and the methodology process that how our project is done.

2. Feasibility Study

Item	Estimated cost
Server	100
Training	250
Other expenses	50
Total cost	400

Table 3: Feasibility study

3. Requirements

that which is required; a thing demanded or obligatory: One of the requirements of the job is accuracy. an act or instance of requiring. a need or necessity: to meet the requirements of daily life.

3.1 Functional Requirements

A Functional Requirement (FR) is a description of the service that the software must offer. It describes a software system or its component. ... It can be a calculation, data manipulation, business process, user interaction, or any other specific functionality which defines what function a system is likely to perform.

3.1.1 User can create a account include name, phone number, email and password.

3.1.2 User can Create ads.

3.1.3 User can edit account details.

3.1.4 User can edit ads information.

3.1.5 User can delete ads

3.2 Non-Functional Requirements

Nonfunctional Requirements (NFRs) define system attributes such as security, reliability, performance, maintainability, scalability, and usability. They serve as constraints or restrictions on the design of the system across the different backlogs. ... They ensure the usability and effectiveness of the entire system.

3.2.1 Simplicity: Our project is concerned with ease of navigation, you can move from page to page easily.

3.2.2 Clarity: Our project was concerned that its content is clear and brief.

3.3 Tools

3.3.1 Office 365 (word, PowerPoint)

3.3.2 MYSQL

3.3.3 Microsoft Teams

3.3.4 Visual studio code

3.3.5 HTML and CSS

3.3.6 JSP

3.3.7 sqlyog

3.3.8 draw.io

4. Methodology process

Number of sprints	Sprint 1	Sprint 2	Sprint 3	Sprint 4
	Review / Analyze / Design / Code / Test / Release / Plan	Review / Analyze / Design / Code / Test / Release / Plan	Review / Analyze / Design / Code / Test / Release / Plan	Review / Analyze / Design / Code / Test / Release / Plan
Time of sprint	4 Weeks	4 Weeks	4 Weeks	4 Weeks
Requirement item	FR (1) User Registration FR (2) Login,register page FR (3) Create main page	FR (4) Designing the Database FR (5) New Ad Page. FR (6) User Page .	FR (7) Ads Page. FR (8) Search Bar and Filtering. NFR (1) Check for usability.	FR (9) Edit User Information Page. FR(10) Edit Ad Information Page. NFR(2) Testing and Debugging.
Output	Figure (12,12)	Figure(16,11)	Figure(14,15, 9)	Figure(16,18)

Table 4: Methodology process

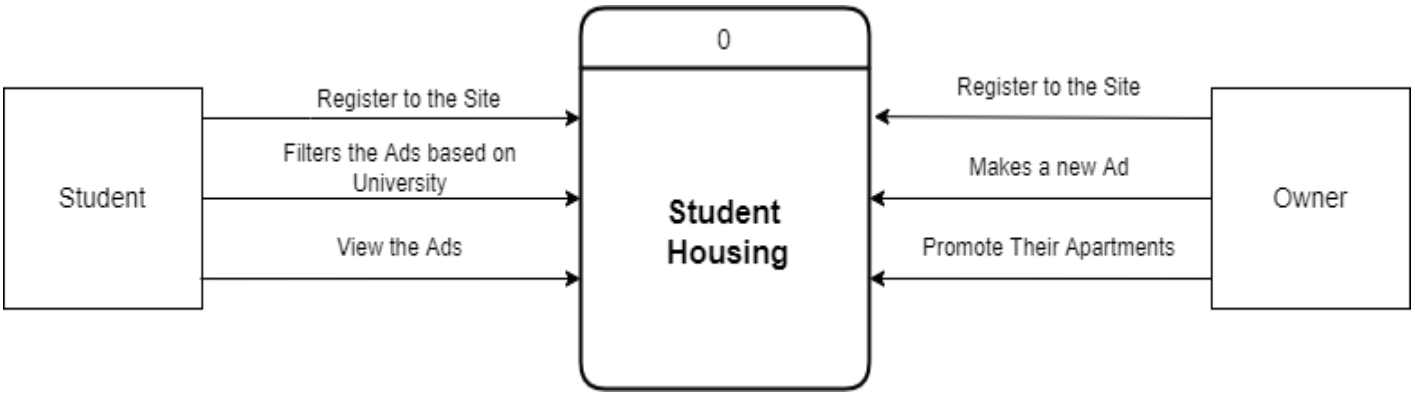
Chapter 4

“Design Models”

1. Overview

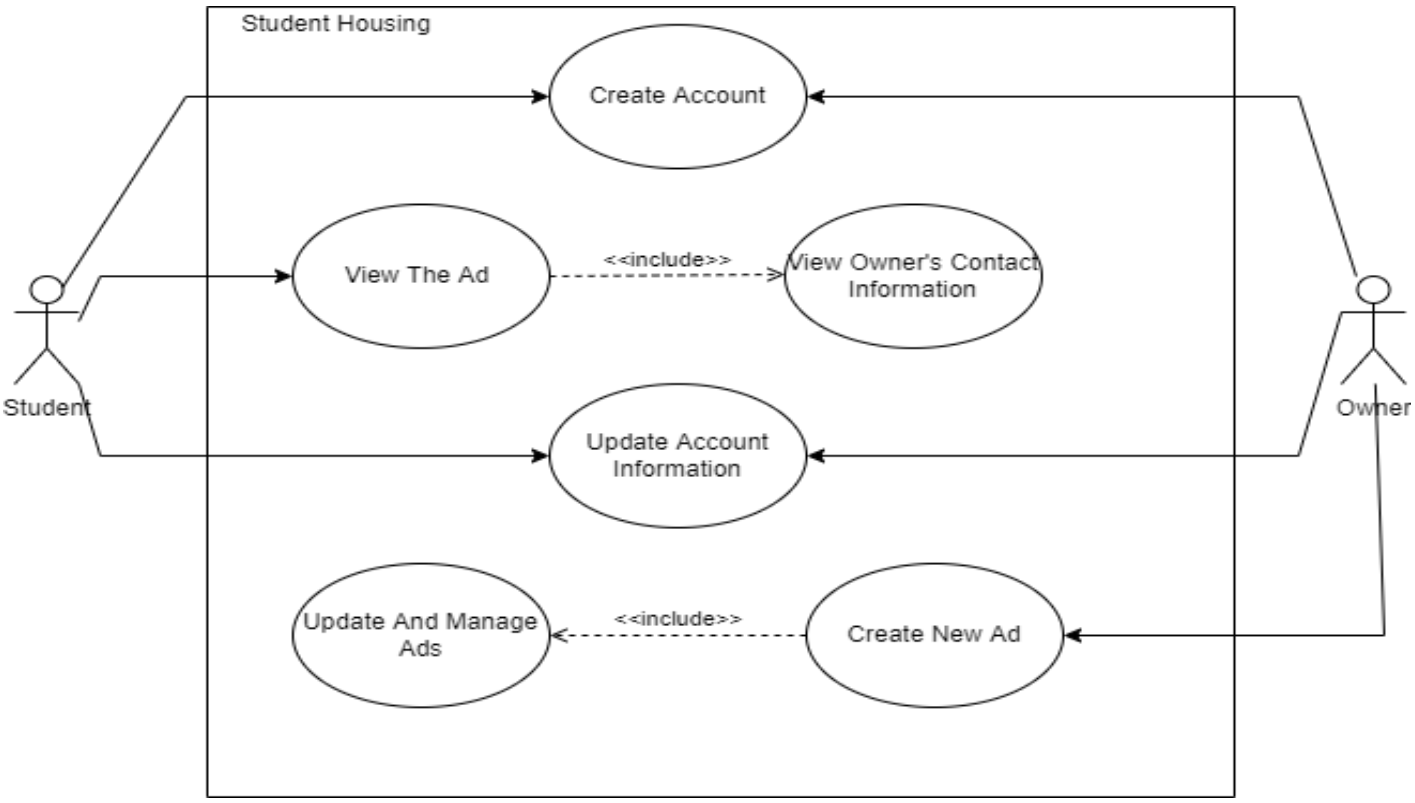
In this chapter, we are talking about how to design and build relationships between system components by using some diagrams such as the context diagram, the use case diagram, the data flow diagram, ER diagram.

2. Context diagram



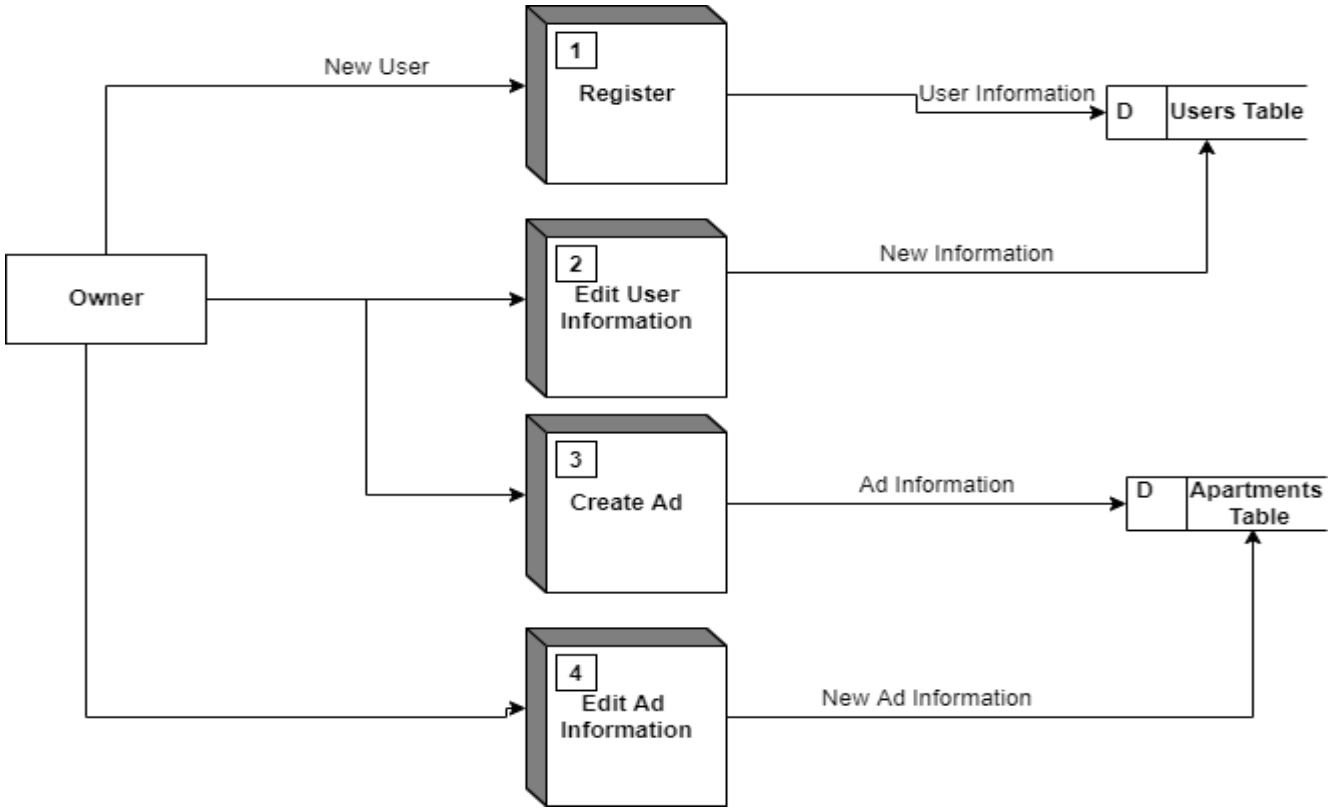
Figures 2: Context diagram

3. Use case diagram

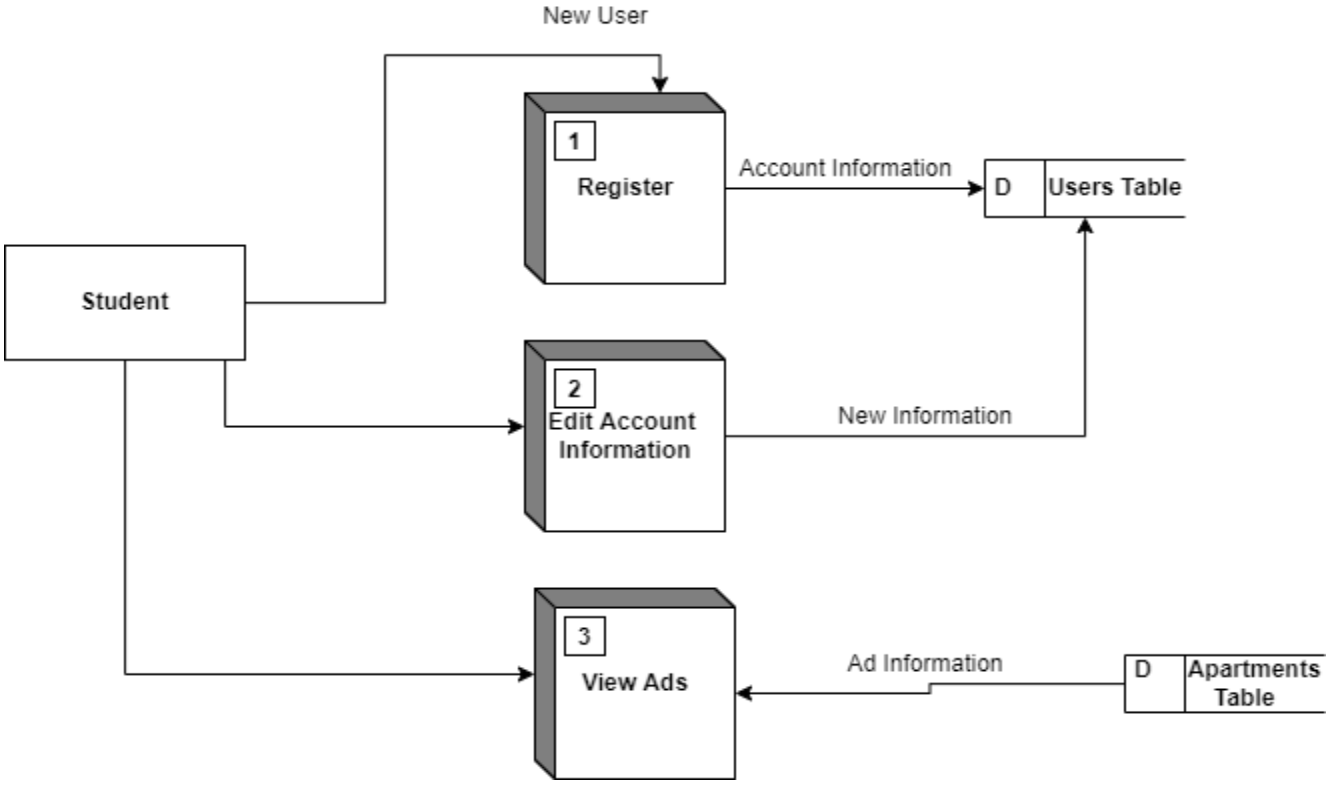


Figures 3: Use Case diagram

4. Data Flow diagram

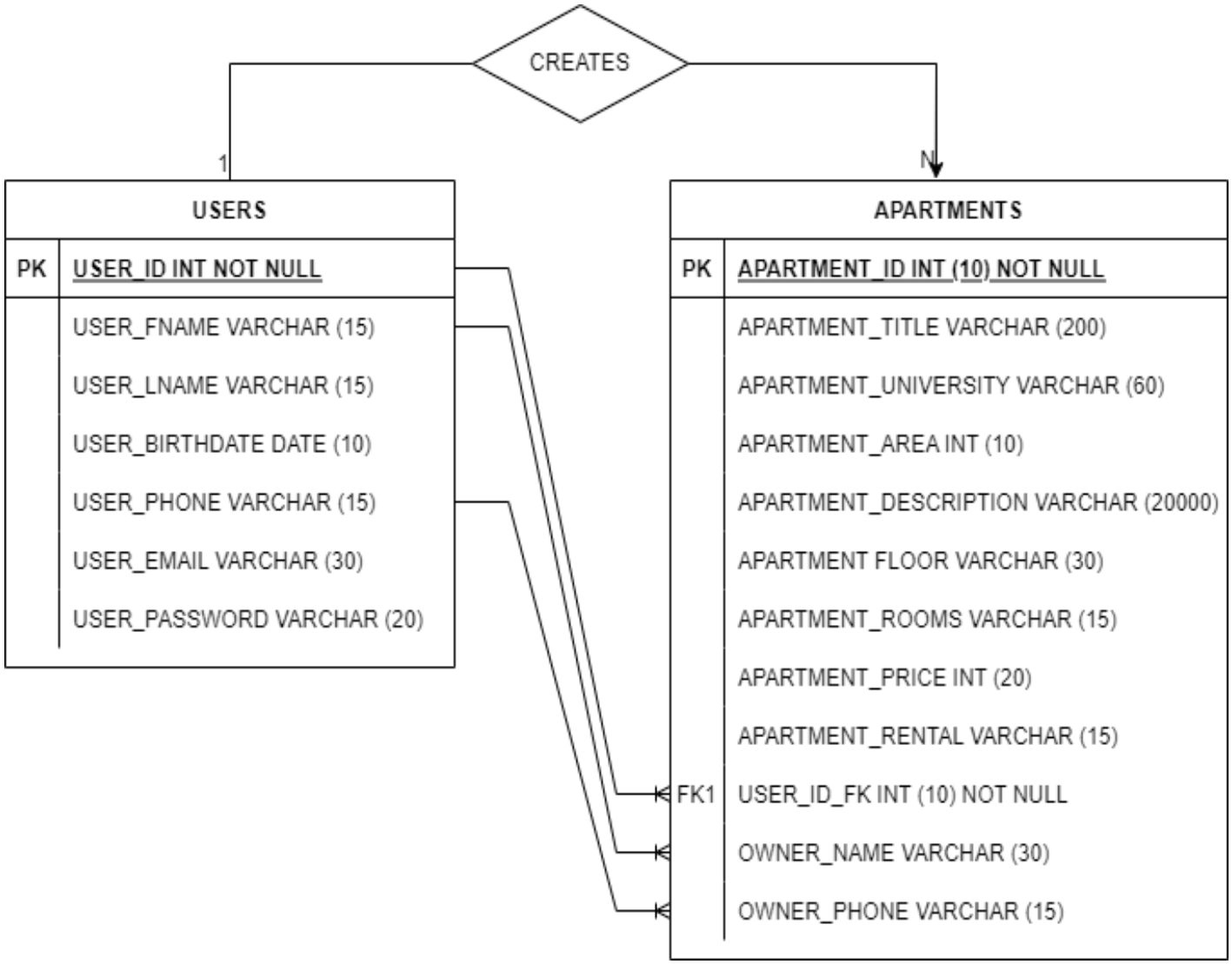


Figures 4: Owner Data Flow diagram



Figures 5: Student Data Flow diagram

5. ER diagram



Figures 6: ER diagram

Chapter5

“Experiments and result”

1. Overview

In this chapter, we will talk about how we test the system with the intent to find whether it satisfies the specified requirement or not.

2. Testing methodology

2. 1 Login Page

In the login process, users should write in fields, E-mail, and password, field empty, or entered incorrectly an alert message will be shown and the system will not be entered to the main page.

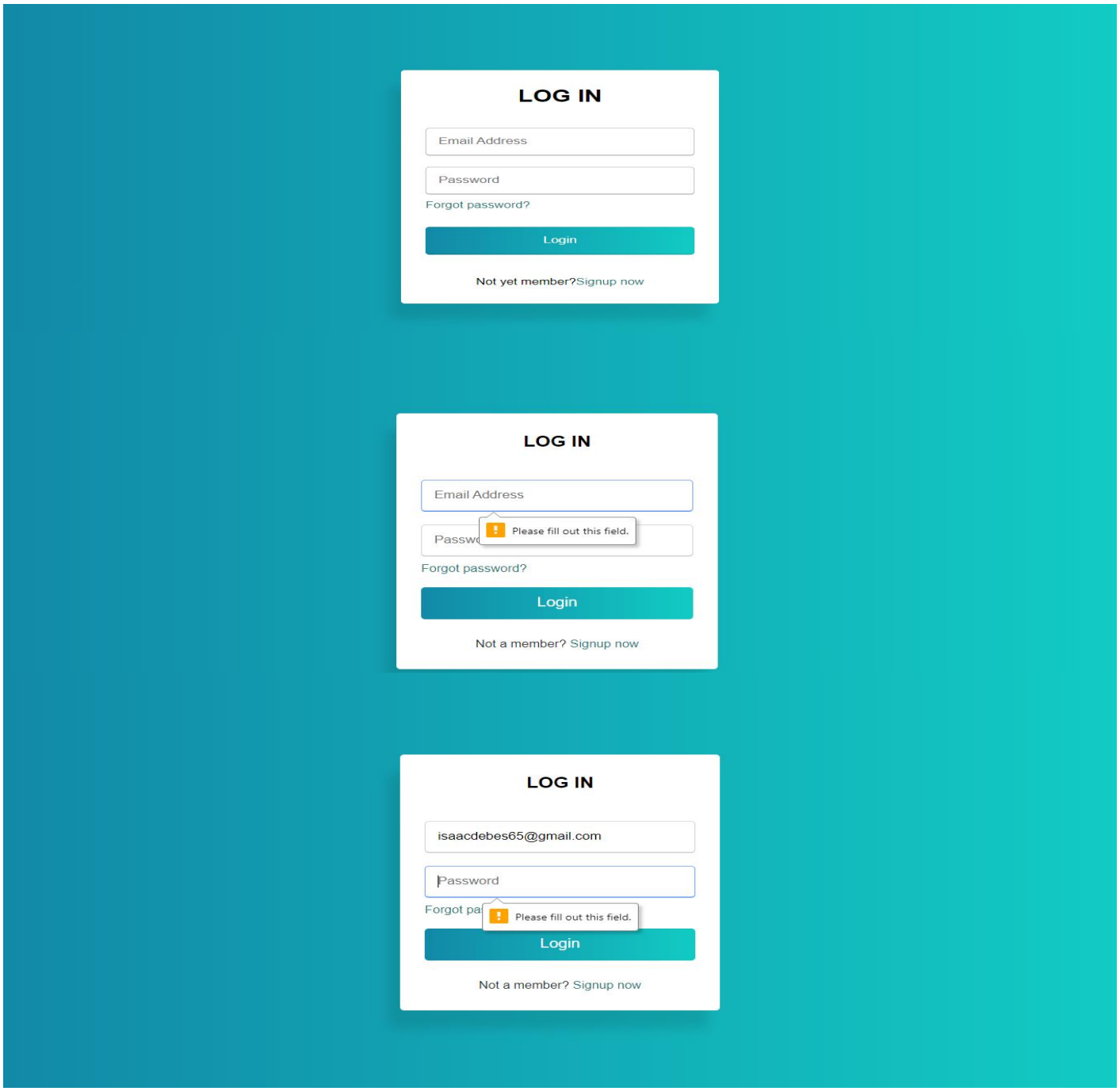


Figure 7: Test Login Page

2.2 Sign Up Page

In the registration process user must fill in all the required fields, otherwise, a warning message with the type of error will appear.

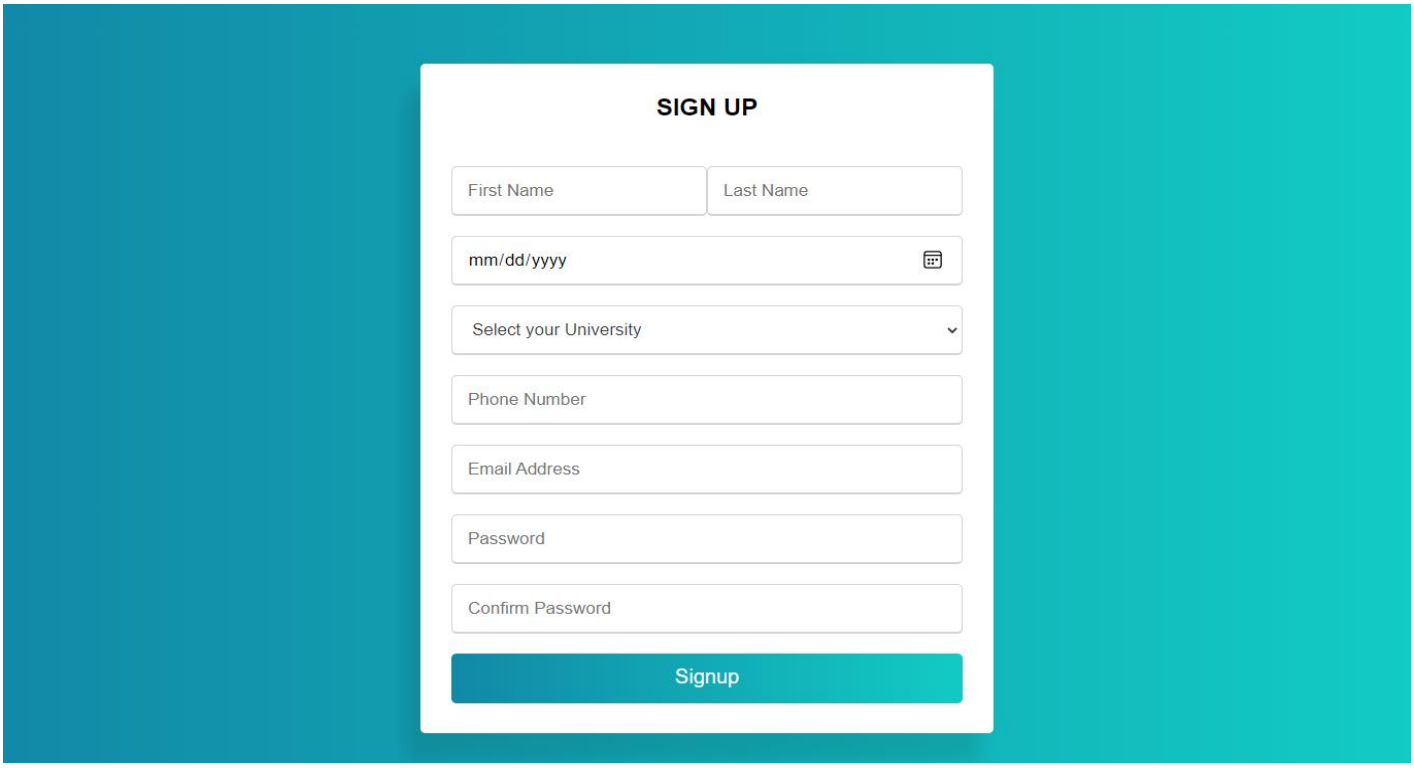


Figure 8: Sign Up Page

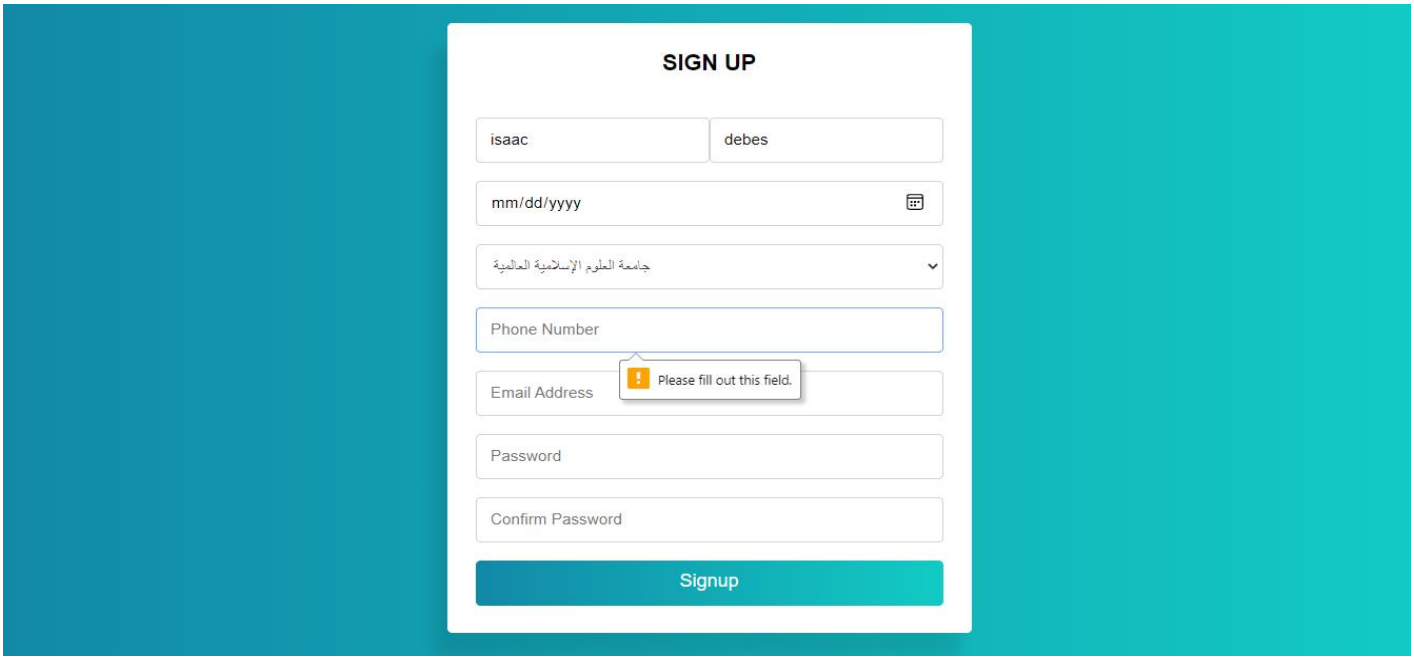


Figure 9: Test Sign Up Page

2.3 Integration Testing

	Sprint 1	Sprint 2
Error	We had one device at first. In light of covid-19 and social distancing we couldn't meet because of that our progress was slow	We had problems connecting to databases using MYSQL
Fixed	We had another device. We worked remotely using Microsoft Teams to meet and GitHub to transfer our code	We used JSP alongside MYSQL

Table 5: Integration Testing

3. System results

After creating the account and entering all the necessary information, the system provides a set of tasks such as displaying ads or searching for ads and adding ads.

Chapter 6
“Conclusion”

1. Conclusion

The goal of the project is to provide international students from all over the world with a more convenient, safer and simpler way to find their home away from home.

2. Future work

2.1 live chat

2.2 online payment

2.3 upload video

2.4 upload multiple files

References

1. https://github.com/
2. https://www.w3schools.com/
3. https://developer.mozilla.org/
4. https://www.mysql.com/
5. https://projects.eclipse.org/projects/ee4j.jsp
6. https://www.office.com/
7. https://www.thehomelike.com/
8. https://www.uniplaces.com/
9. https://www.spotahome.com/
10. https://housinganywhere.com/
11. https://amberstudent.com/
12. https://www.goabroad.com/

Appendix

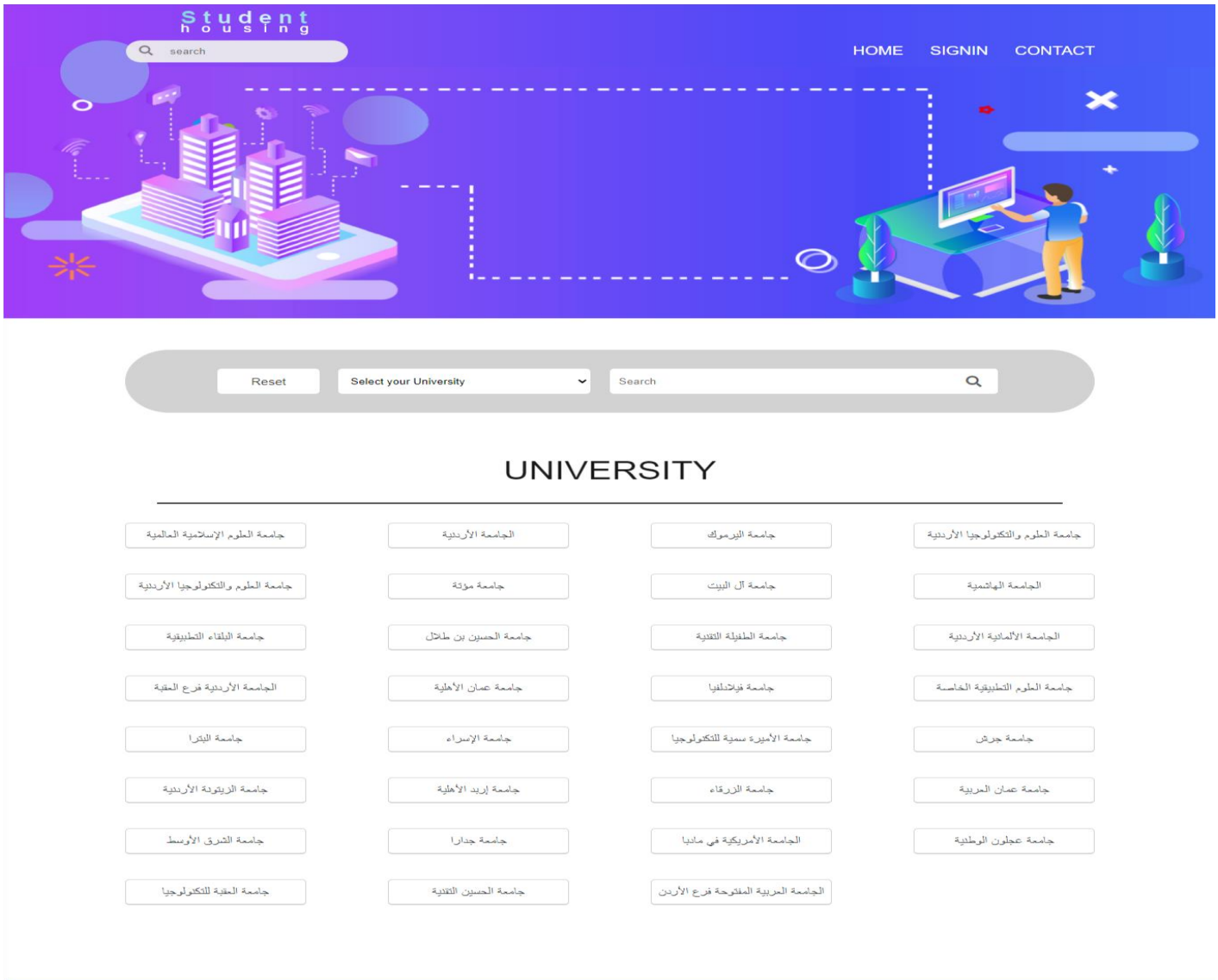


Figure 10: Home Page

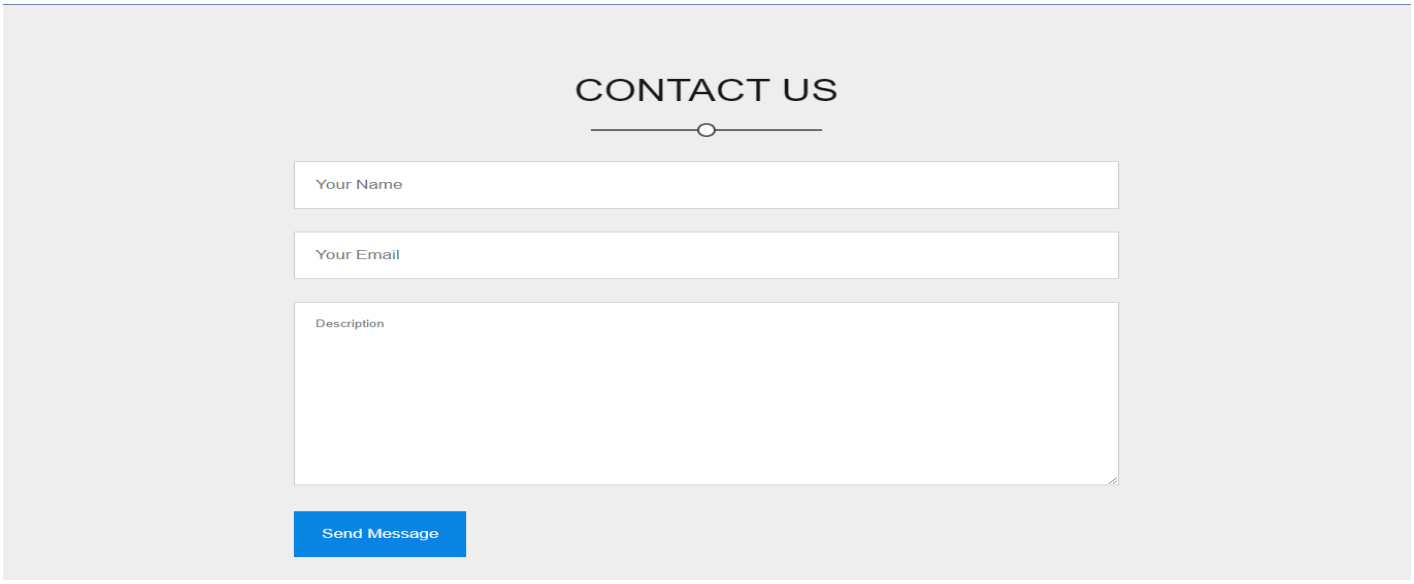


Figure 11: Contact

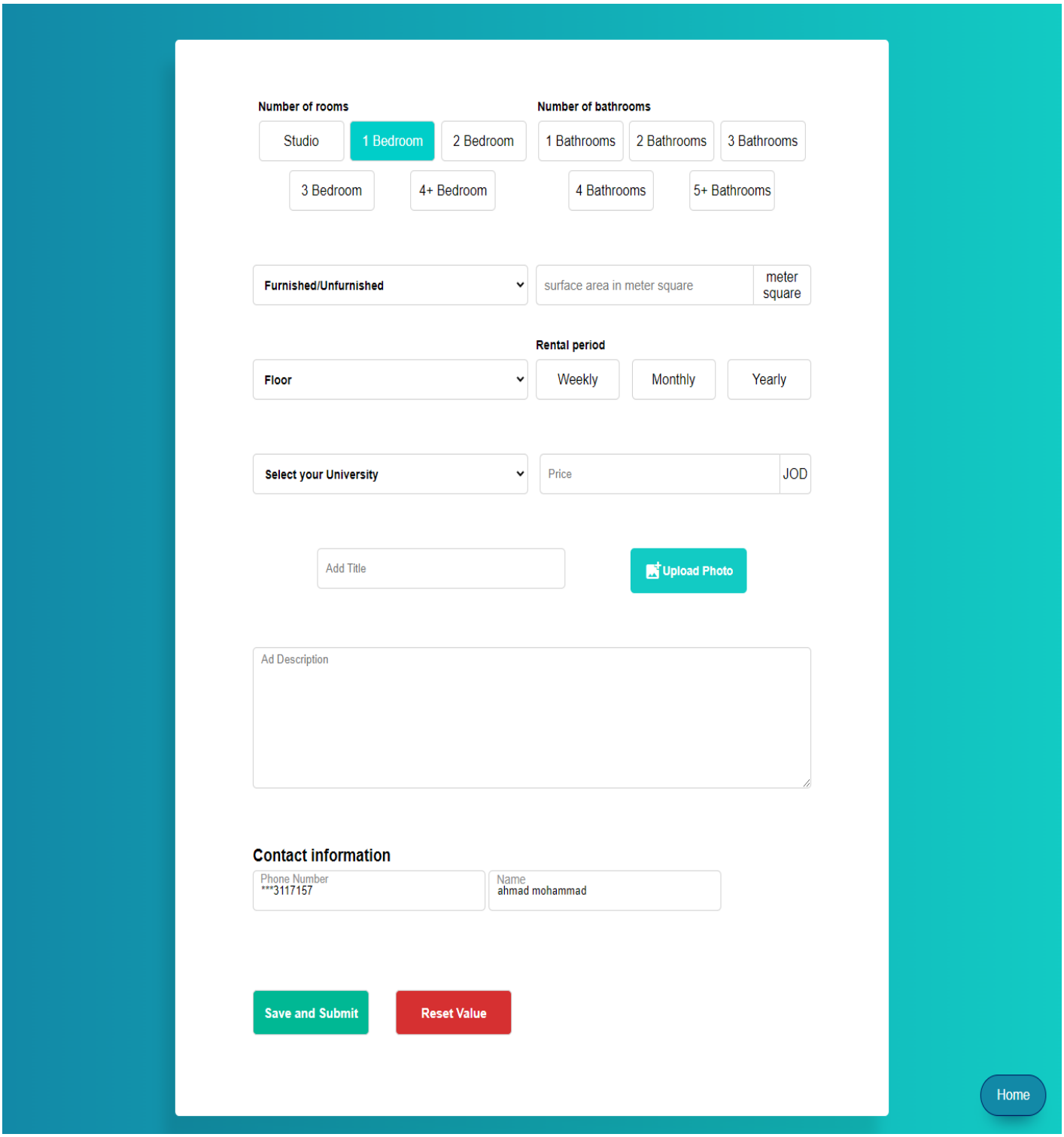


Figure 12: Post adds page

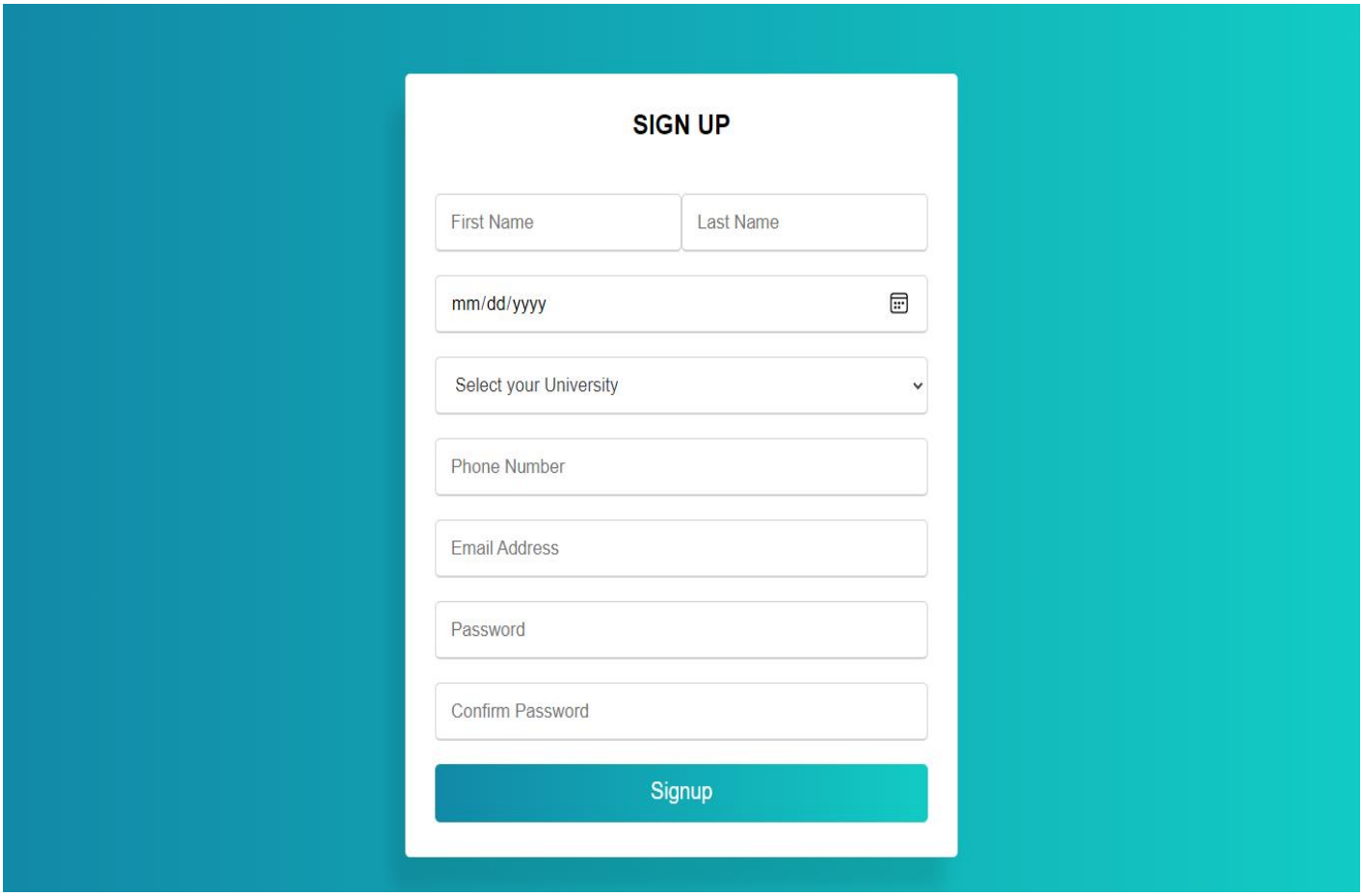


Figure 13: Sign Up Page

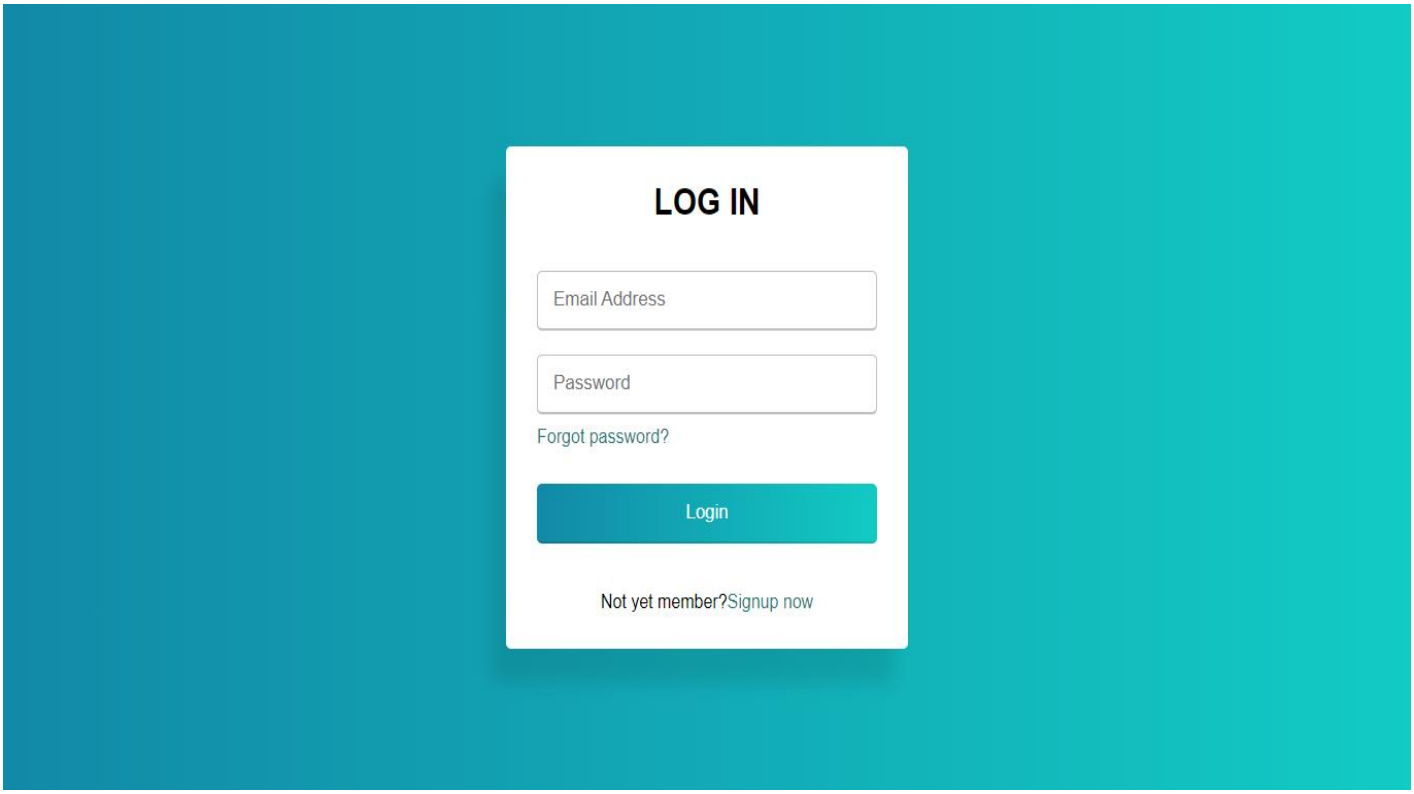


Figure 14: Log in page

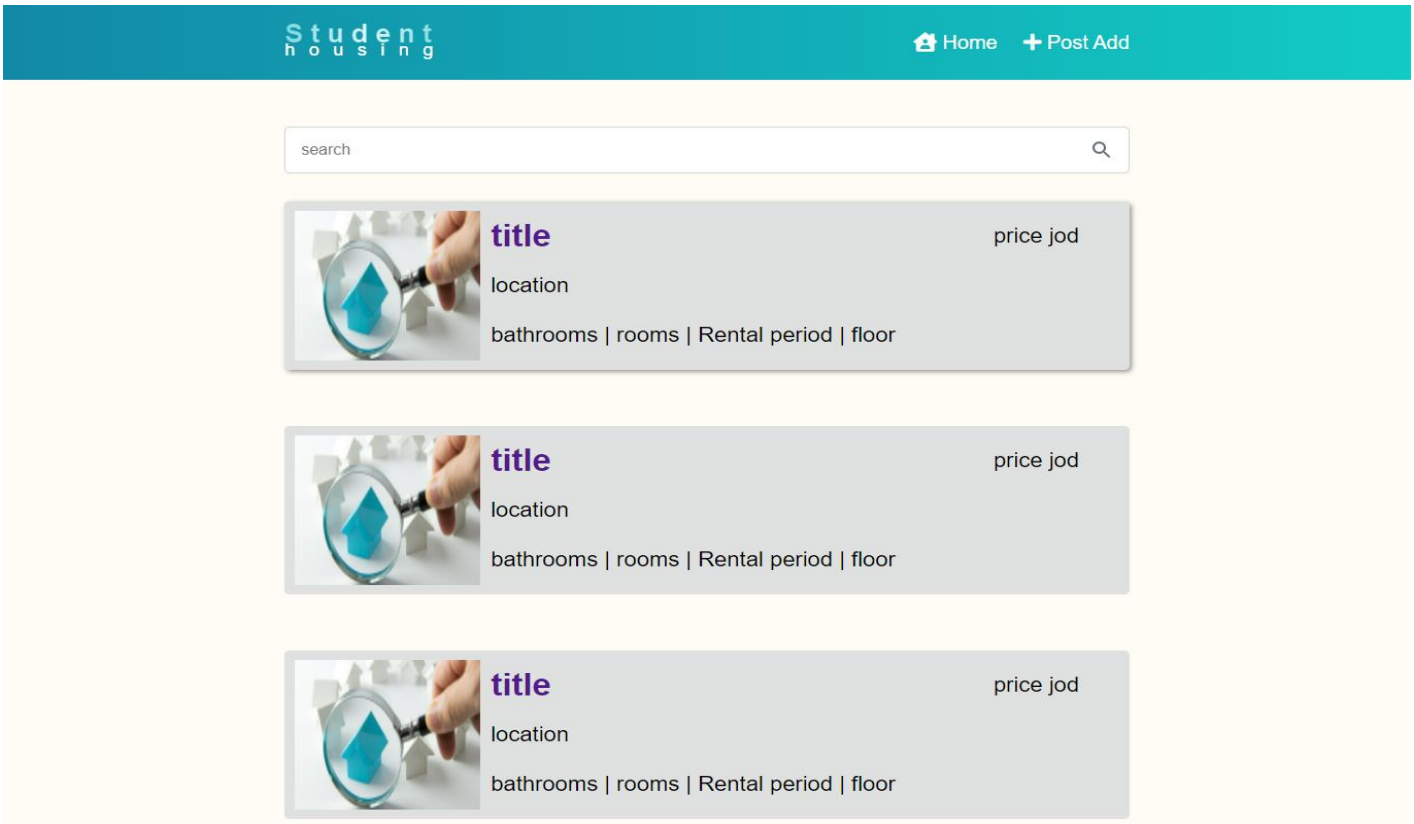


Figure 15: ads page

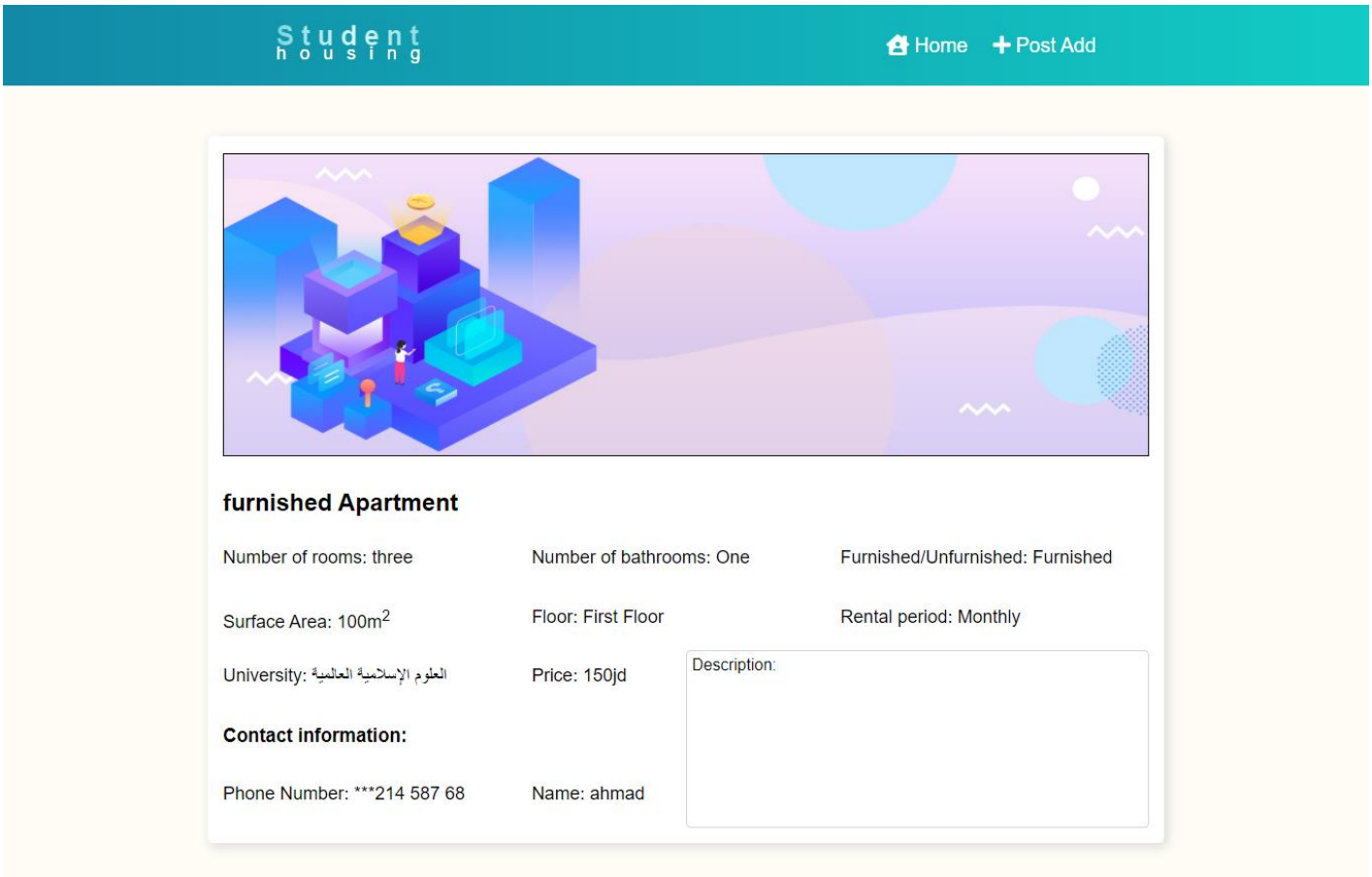


Figure 16: ads page2

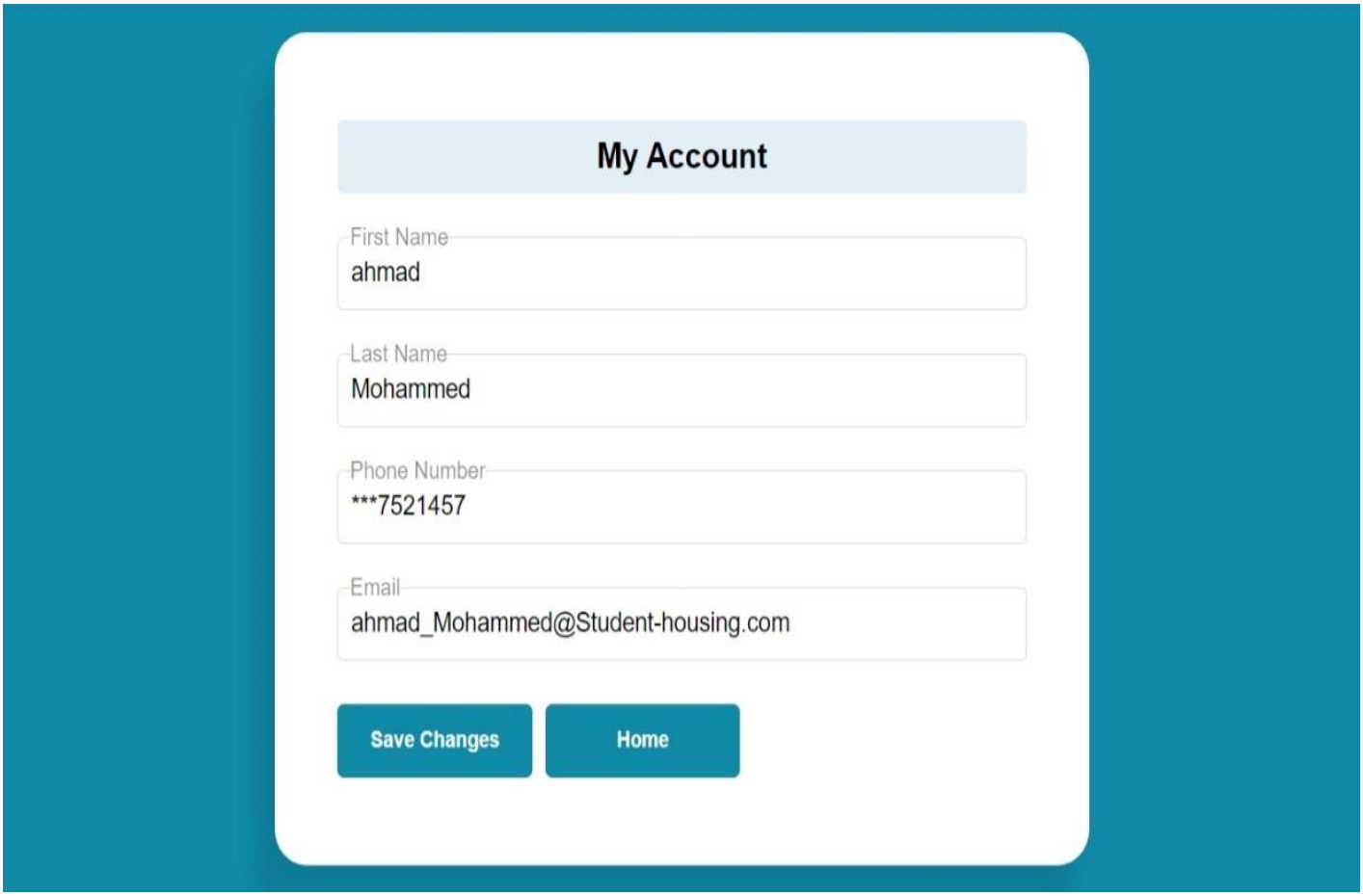


Figure 17: User Account page

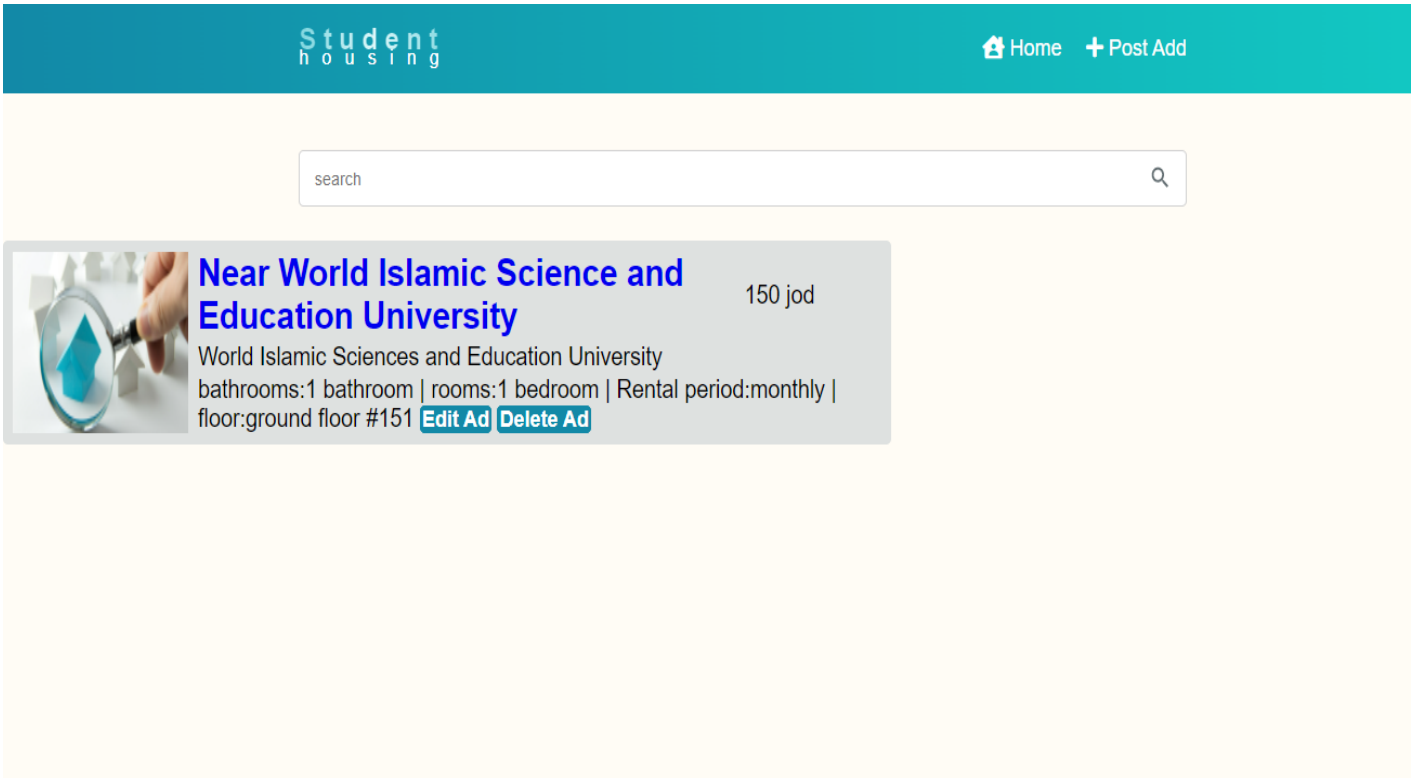


Figure 18: user Ads page

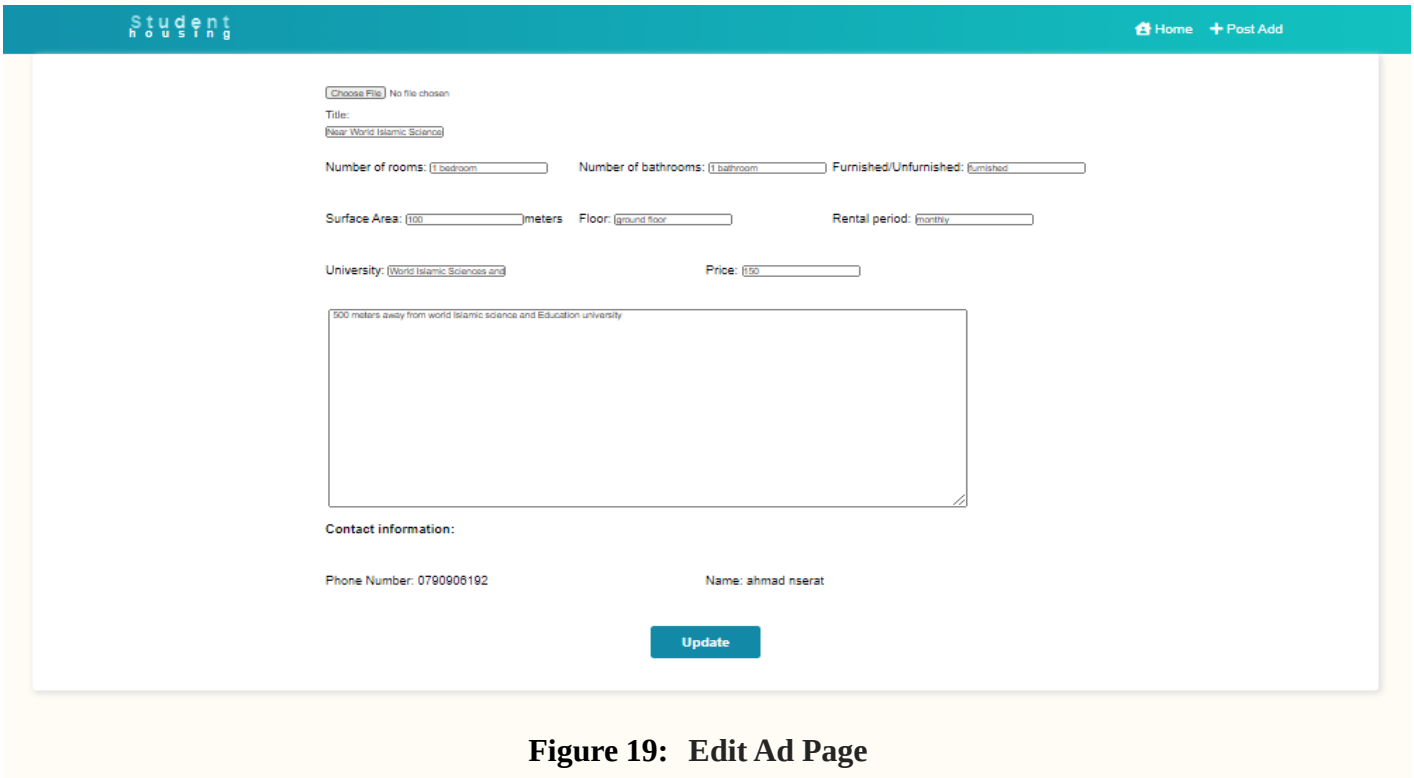


Figure 19: Edit Ad Page