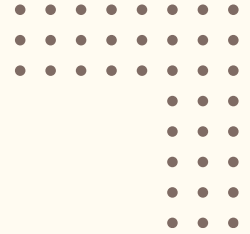




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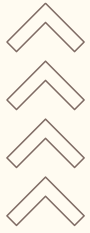


# RENTTECH

UMM AL-QURA UNIVERSITY  
SOFTWARE ENGINEERING I  
DR. ENAS MUHAMMAD TAHER BAQAS

## TEAM MEMBERS

Haneen Almalki (Leader)	443016595
Sarah Saud Alosaimi	438011226
Shatha Mohammed Babtain	443008672
Rafah Khalid Madani	442009415



# TABLE OF CONTENTS

## **Chapter 1**

### 1.Introduction

#### 1.1 What is the software idea?

#### 1.2 What type of problem will this software solve?

#### 1.3 How are you going to gather the Information about your project?

## **Chapter 2**

### 2.System Analysis

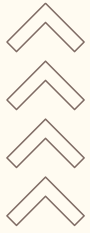
#### 2.1 Functional Requirements

##### 2.1.1 User Requirements

##### 2.1.2 System Requirements

#### 2.2 Non-functional Requirements

##### 2.2.1 Product requirement



# TABLE OF CONTENTS

## **Chapter 3**

3.System Modeling

3.1 Use Case Diagram

3.2 Scenarios

3.3 Class Diagram

## **Chapter 4**

4.System Design

4.1 Prototype

TASK TABLE	Haneen	Sarah	Shatha	Rafah
Introduction + type of problem + Software solution.	✓			
Functional Requirements (User & Seller & system Requirements)	1	2	5,6,7,8	3,4,9
non- Functional Requirements (Product Requirement)		Reliability	SECURITY	USABILITY
Use Case	✓		✓	
Scenarios	✓	Confirm Order + Communicate with Seller	✓	Choose Rental Period + Make Payment
Class Diagram	✓	✓	✓	
Context Diagram (level 0)	✓		✓	
DFD level 1 and 2	✓		✓	
Sequence diagram			✓	✓
Prototype	✓	✓	✓	✓

# Chapter 1

## 1 .Introduction

The main problem that made us think about this project is that there are many people who cannot buy electronic devices because of their high prices, and there are also people who have electronic devices that they do not want and do not know how to get rid of. Therefore, we decided to create a program that serves students, teachers, or those interested in electronic devices, so that the appropriate device is rented to them, whether it is (laptop, office equipment, or projector) at a nominal price and for a specific period.

# Chapter 1

## 1.1 What is the software idea?

Our idea is to develop a platform for that

E-renting is easy

Affordable devices for

specified period. In addition, we aim

To provide individuals with a solution

Get rid of their unwanted devices by

Allow them to send their devices to

Rent on the platform, subject to approval

From the owner of the application.

The site offers Payment services that suit everyone. with

Mutual agreement on the method of delivery of the

device between our applicant in

The program and the device owner.

## 1.2 What type of problem? Software solution?

There are many people who cannot buy an electronic device because of its high prices. This program helps students, teachers, and those interested in electronic devices who are looking for a device at a reasonable price and want to rent a device for a certain period.

## 1.3 How will you collect?

Information about your project?

To obtain information, we will search for people who are unable to purchase a new device, so our application will be available to them at nominal prices.

# Chapter 2

## System Analysis



### Functional requirement

#### User and System requirement :

1. The user, seller shall be able to create a new account.

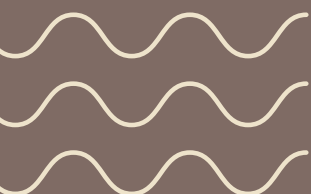
1.1 system shall take their information from the registering forum (Full name, email, phone number).

1.2 The system shall ask the user to specific their location.

1.3 The system shall verify the user's and seller email and phone number if valid or not.

1.4 the system shall save the user and seller information in the database.

1.5 the system shall redirect the user and seller to homepage.



## Chapter 2

# System Analysis

**2. The user, seller shall be able to login by email and password or phone number and password .**

**2.1 The system shall verify the phone number or email exists within the database or not.**

**2.2 The system shall log in the user, seller and direct them to homepage .**

**3. The user, seller shall view his profile.**

**3.1 The system shall display the user and seller information from the database.**

**3.2 The user and seller shall update and edit his profile information.**



## Chapter 2

# System Analysis



### 4. The user shall choose a location.

4.1 The user must choose the region he is in (Saudi Arabia).

### 5. The user shall choose the device.

5.1 When choosing a location, the devices are shown to the user.

5.2 the user must click on the device he wants.

### 6. The user shall choose the rental period.

6.1 After choosing the device, the user must choose how long he will rent the device.

## Chapter 2

# System Analysis

7. the user shall be able to pay the bill.

**7.1 After the user completes the order process, the system automatically allows the payment button.**

**7.2 The system provides a payment service with PayPal.**

**7.3 He can bay with cash after he communicating with the device seller.**



## Chapter 2

# System Analysis



### **8. The user shall be able to confirm their order.**

- 8.1 After completing the payment, the user should have an option to confirm their order.
- 8.2 The user expects the system to acknowledge their order confirmation and proceed with the rental process.

### **9. The user shall be able to communicate with the device seller.**

- 9.1 The system shall provide an icon or button to facilitate communication with the seller.
- 9.2 Upon clicking the communication icon/button, the user expects to be redirected to a chat page or interface dedicated to the conversation with the seller.
- 9.3 The user should be able to send and receive messages in real-time through the chat interface.
- 9.4 The user anticipates the ability to discuss details, negotiate terms, and seek clarifications directly with the seller using the chat.

## Chapter 2

# System Analysis

10. The seller shall be able to add a device for rental.

10.1 The system shall provide a form for the seller to enter device details such as device Name , type, and rental price.

10.2 The system shall validate the entered information and store the device details in the database.

11. The seller shall be able to delete a device from their rental listings.

11.1 The system shall provide an option for the seller to delete a device from their rental listings.

11.2 The system shall remove the device from the database

## Chapter 2

# System Analysis



12. The seller shall be able to modify device data.

12.1 The system shall allow the seller to edit device details.

12.2 The system shall validate the modified information and update the device data in the database.

# Chapter 2

## System Analysis

### 2.2 Non-functional requirements

#### 2.2.1 Product requirements

**1- SECURITY :** The system must have security and also there must be protection of customer information because the system will have a database containing sensitive information about customer numbers and addresses.

**2- USABILITY :** The system must be easy to use and training on it is fast and may take a few minutes so that the user can get acquainted with all the components of the program and all the components of the program are clear to the user and easy to use because the users of the application are of different age groups in the usability element very important element.

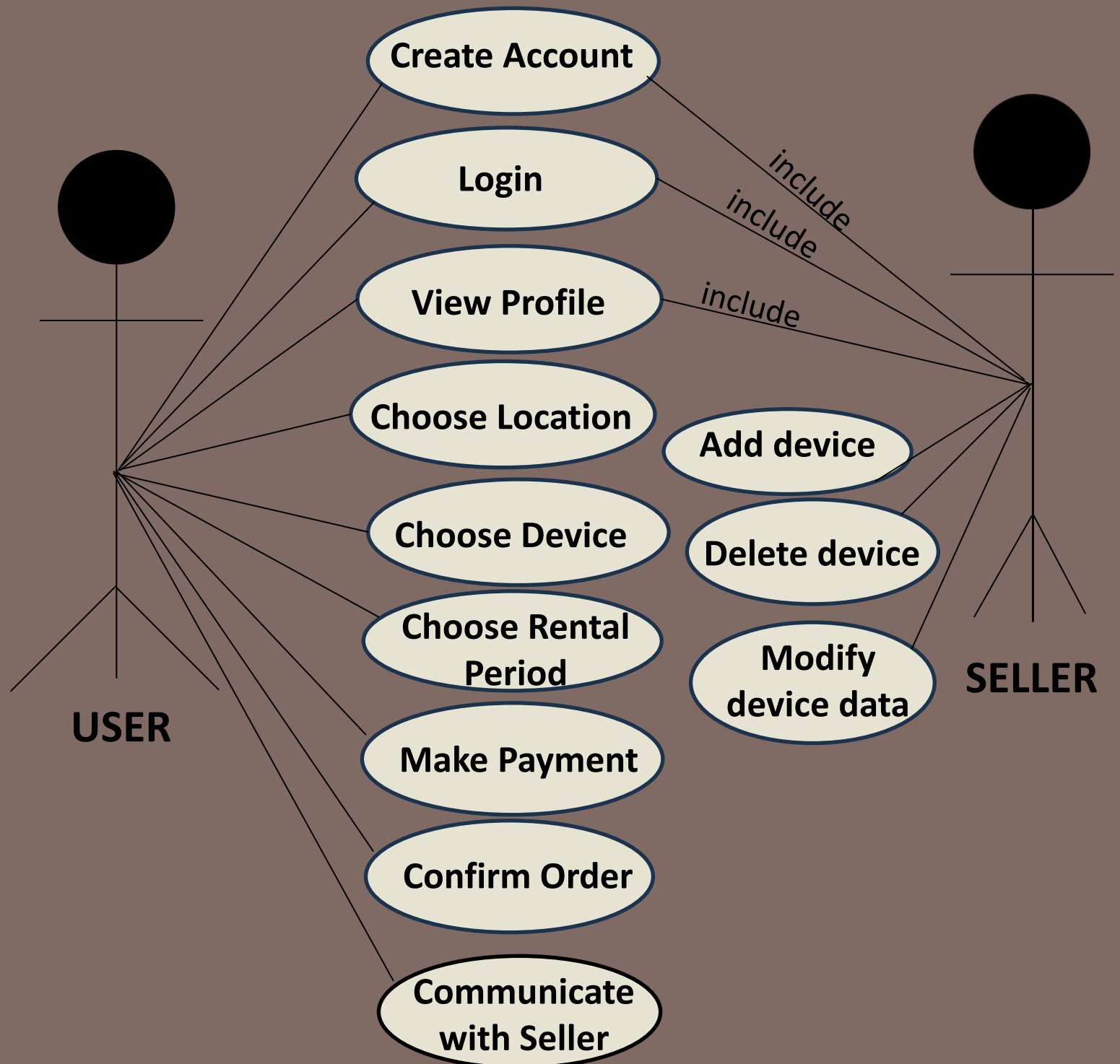
**3- Reliability :** The product must be authenticated by the application before being displayed.

# Chapter 3

## System Model



### Use Case Diagram



# Chapter 3

## System Design

### 3.2 Scenarios: Create Account.

<b>actor</b>	User .
<b>Description</b>	The user can create a new account by entering an email and an available username . Then he must enter the password and confirm the password , and then the account is created.
<b>Data</b>	Email addresses and usernames registered in the system and password.
<b>Pre-Condition</b>	has an email.
<b>Output</b>	Create an account for the user.
<b>Comment</b>	Username must start with a letter and consist of 3-16 characters -Password must consist of 8-16 characters.



# Chapter 3

## System Design



### 3.2 Scenarios : Log In.

<b>actor</b>	User.
<b>Description</b>	When logging in, the user enters his email and password and then the account is matched and logged in, the home page will appear, which contains some services such as : ( Search for a device, add a device for rent ) .
<b>Data</b>	User informations ( email and password ) .
<b>Pre-Condition</b>	The user must have already created account .
<b>Output</b>	Sign in to the account .
<b>Comment</b>	Non .

# Chapter 3

## System Design

### 3.2 Scenarios : View Profile.

<b>actor</b>	User .
<b>Description</b>	The users views their profile information stored in the database.
<b>Data</b>	User info.
<b>Pre-Condition</b>	User is logged in.
<b>Output</b>	User profile information displayed.
<b>Comment</b>	The system retrieves the user's information from the database and presents it to the user for viewing.

# Chapter 3

## System Design



### 3.2 Scenarios : Choose Location.

<b>actor</b>	User.
<b>Description</b>	The user selects a location from the available options.
<b>Data</b>	Address info.
<b>Pre-Condition</b>	User is logged in.
<b>Output</b>	Location Selected.
<b>Comment</b>	The user selects a specific region within Saudi Arabia as their location.

# Chapter 3

## System Design

### 3.2 Scenarios : Choose Device.

<b>actor</b>	User .
<b>Description</b>	The user selects a device from the available options.
<b>Data</b>	Device information.
<b>Pre-Condition</b>	User has chosen a location.
<b>Output</b>	Device chosen.
<b>Comment</b>	Non.

# Chapter 3

## System Design



### 3.2 Scenarios : Choose Rental Period.

<b>actor</b>	<b>User.</b>
<b>Description</b>	<b>the user chooses the rental period for the device.</b>
<b>Data</b>	<b>None.</b>
<b>Pre-Condition</b>	<b>The user has selected the date.</b>
<b>Output</b>	<b>Selected Date.</b>
<b>Comment</b>	<b>The person chooses the rental period he needs for the device.</b>

# Chapter 3

## System Design

### 3.2 Scenarios : Make Payment.

<b>actor</b>	User .
<b>Description</b>	The user chooses the payment method.
<b>Data</b>	Payment method.
<b>Pre-Condition</b>	The user has chosen the payment method he prefers.
<b>Output</b>	Selected payment method.
<b>Comment</b>	The person chooses one payment method from more than one.

# Chapter 3

## System Design



### 3.2 Scenarios : Confirm Order.

<b>actor</b>	User.
<b>Description</b>	the user confirm the order for the device.
<b>Data</b>	None.
<b>Pre-Condition</b>	The user has selected the date.
<b>Output</b>	Selected Date.
<b>Comment</b>	The person confirm the order he needs for rent.

# Chapter 3

## System Design

### 3.2 Scenarios : Communicate with Seller.

<b>actor</b>	User .
<b>Description</b>	The user should be able to communicate with the seller .
<b>Data</b>	None.
<b>Pre-Condition</b>	The user has chosen the seller that want to communicate with .
<b>Output</b>	Messages .
<b>Comment</b>	The person chooses one seller to communicate with and select the method that he wants to communicate with .

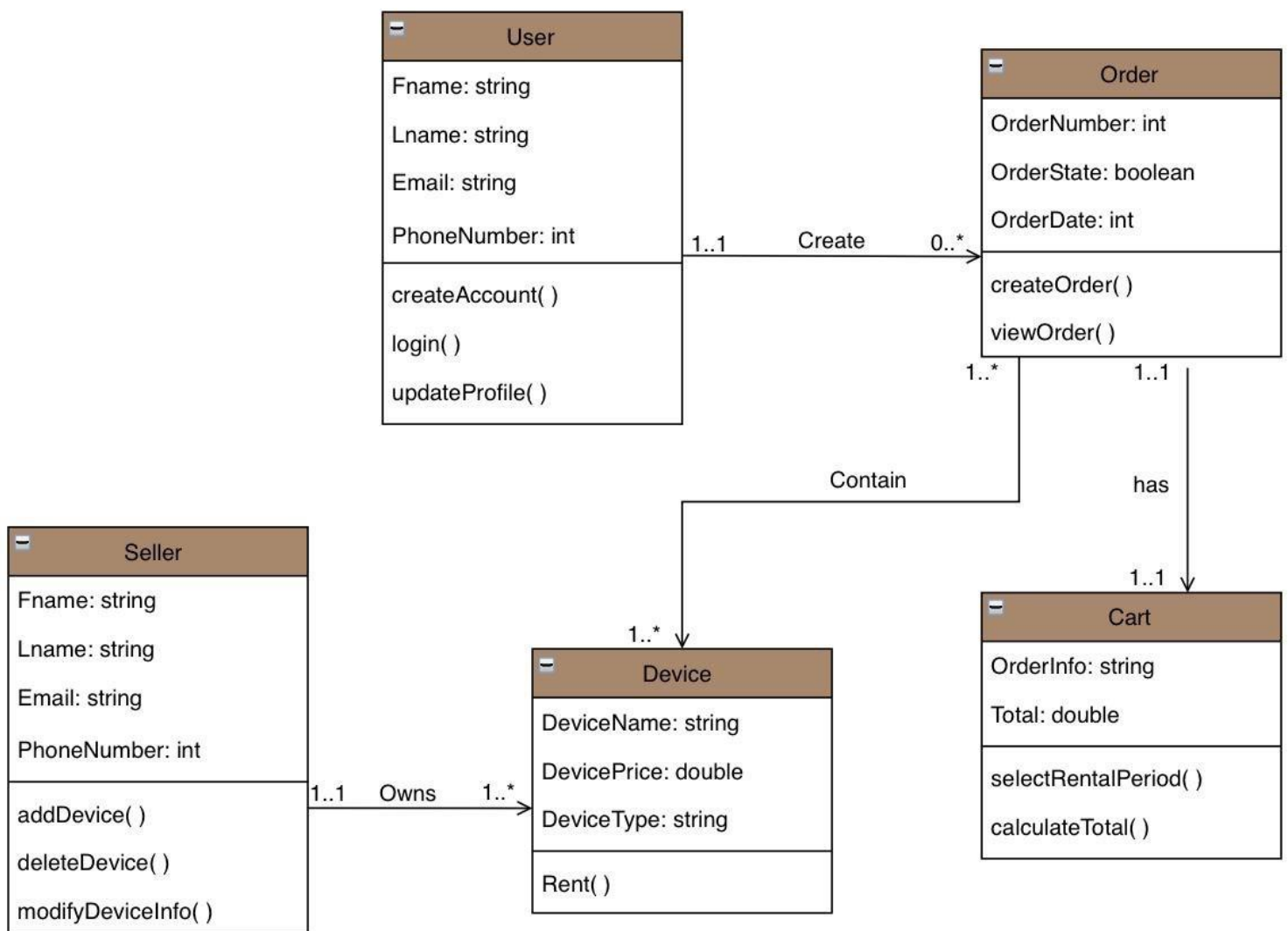


# Chapter 3

## System Design



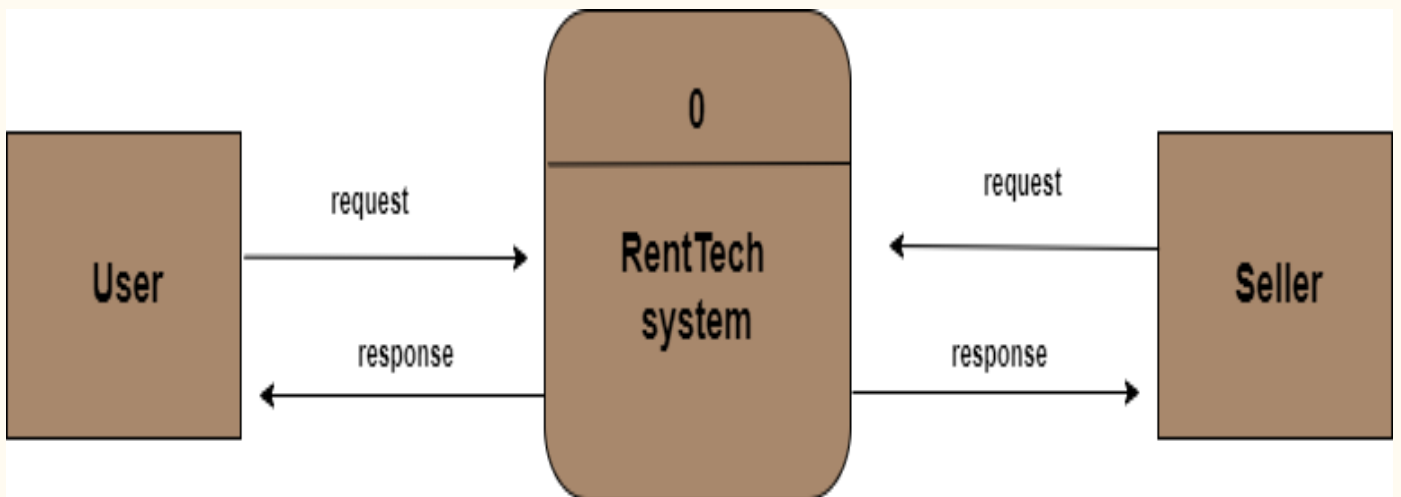
### 3.3 Class Diagram



# Chapter 3

## System Design

### Context Diagram (level 0)



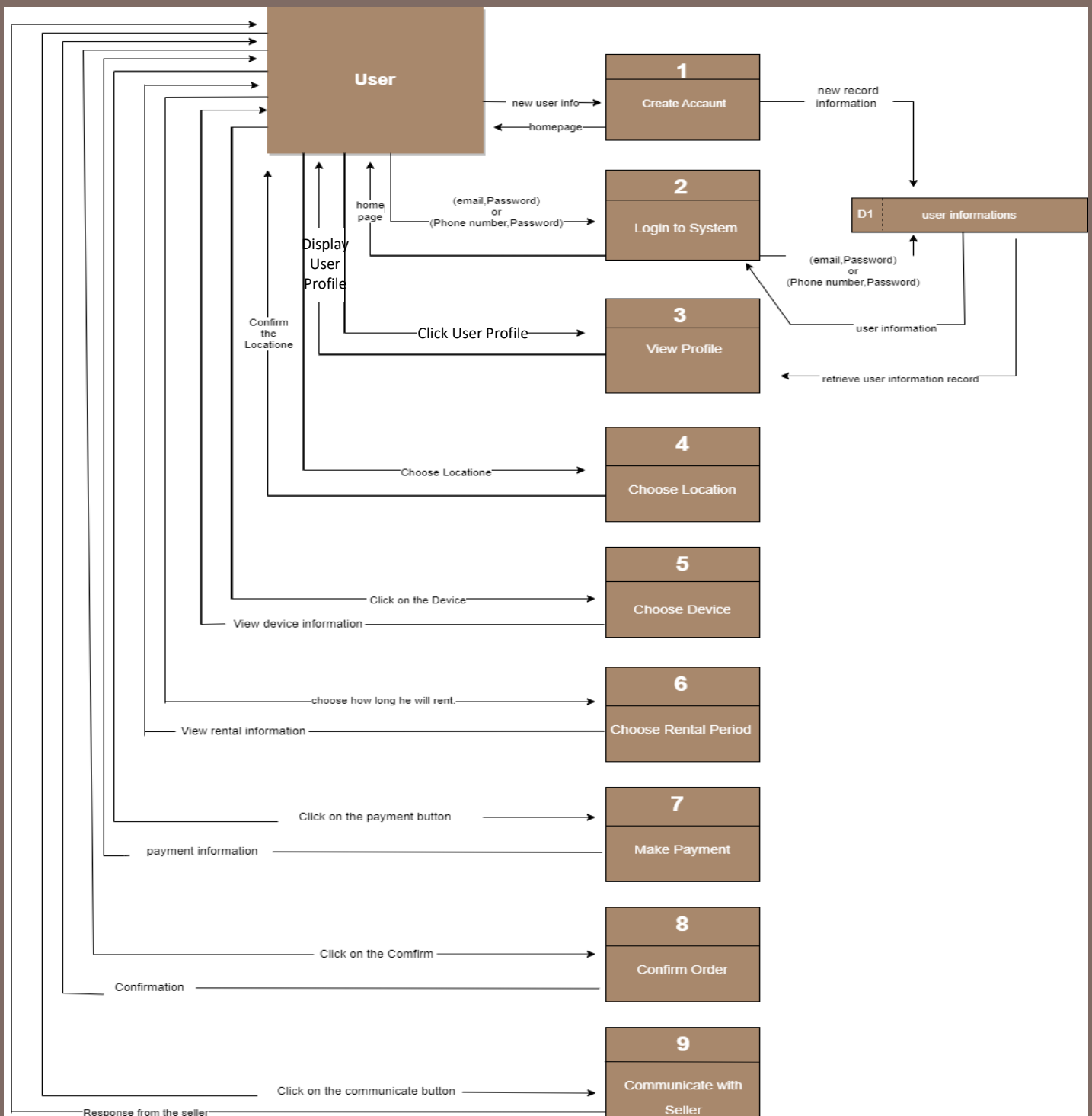
# Chapter 3

## System Design



### DFD level 1

### Parent diagram : user table.



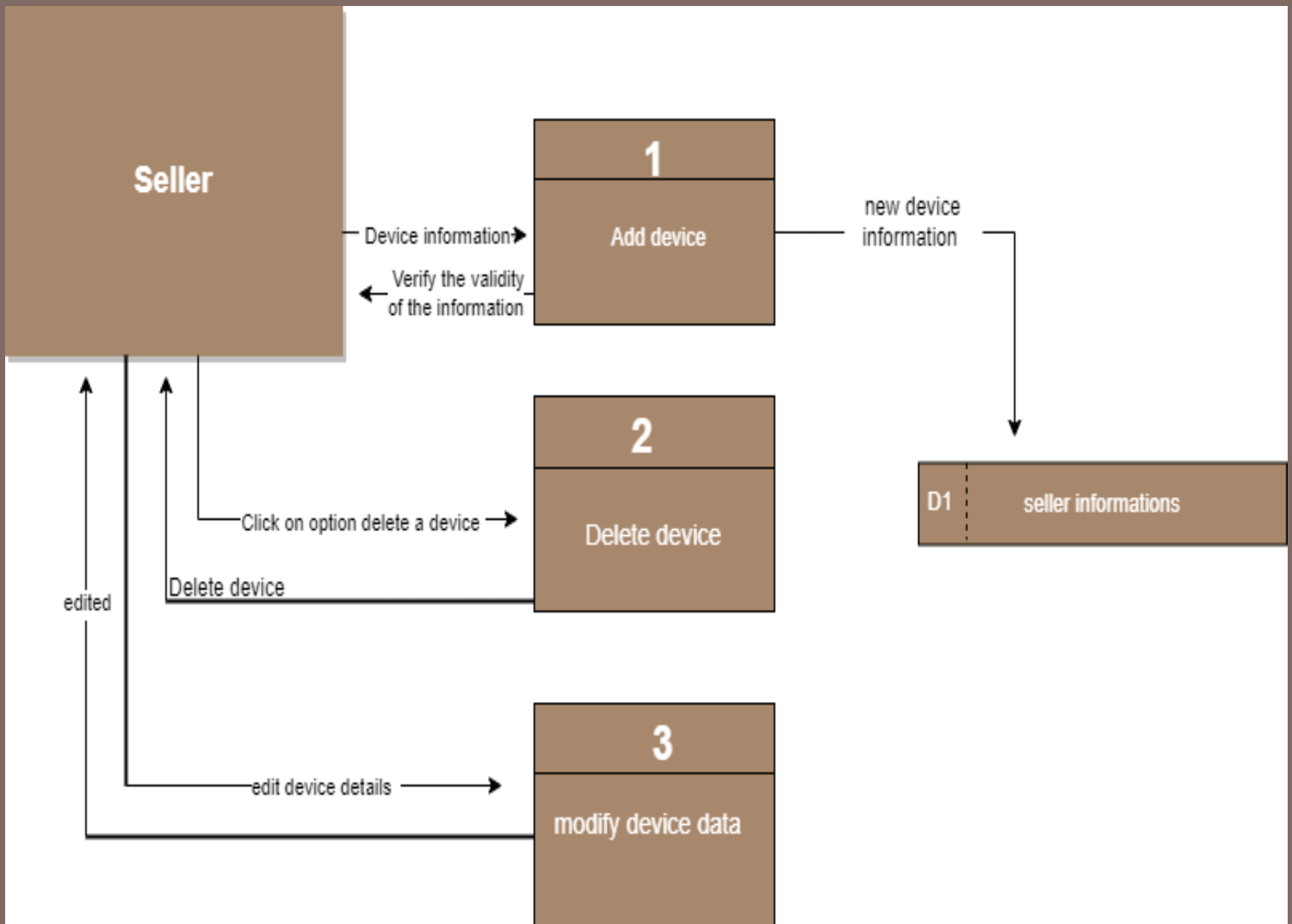
# Chapter 3

## System Design



### DFD level 1

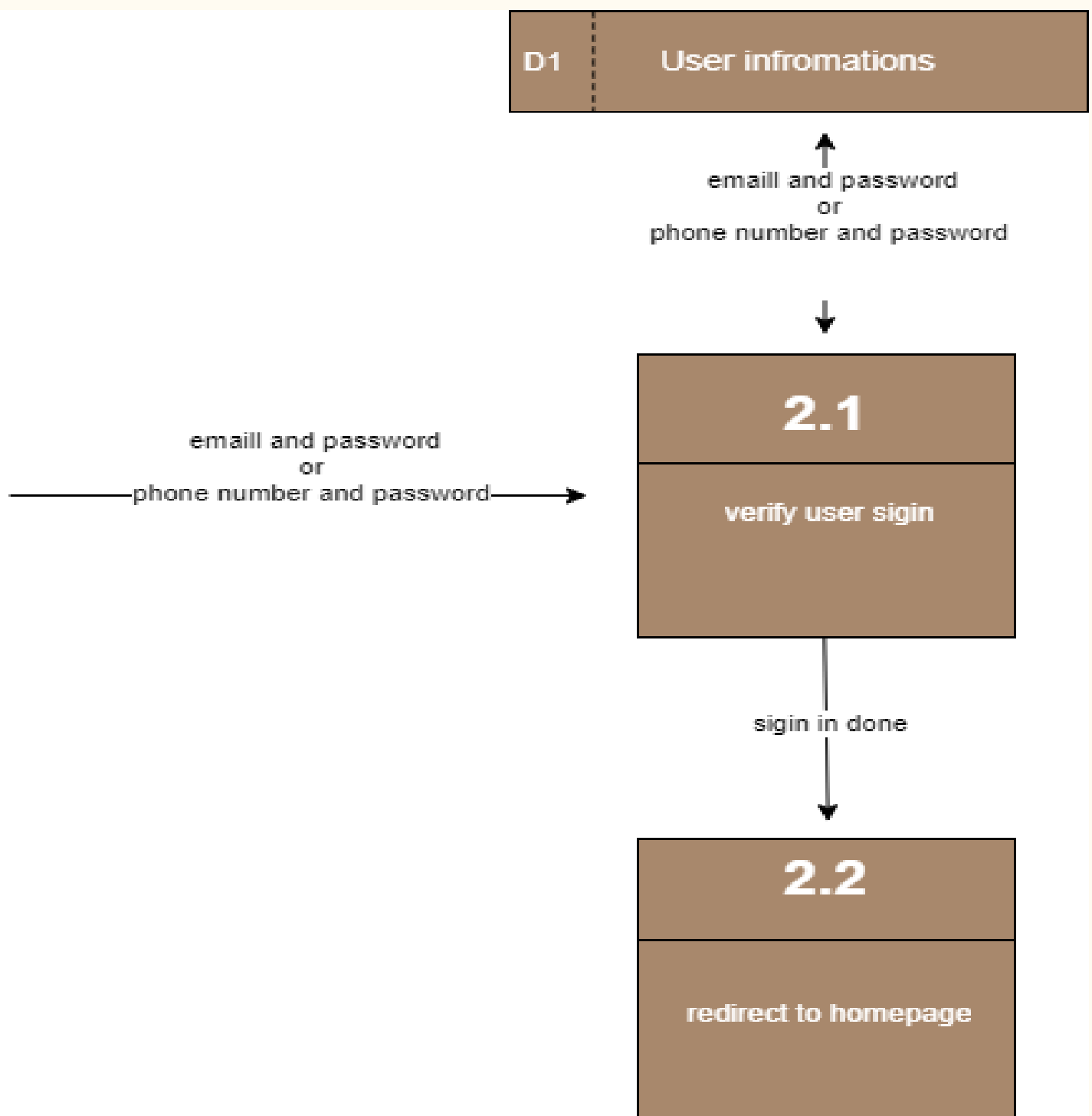
### Parent diagram : seller table.



# Chapter 3

## System Design

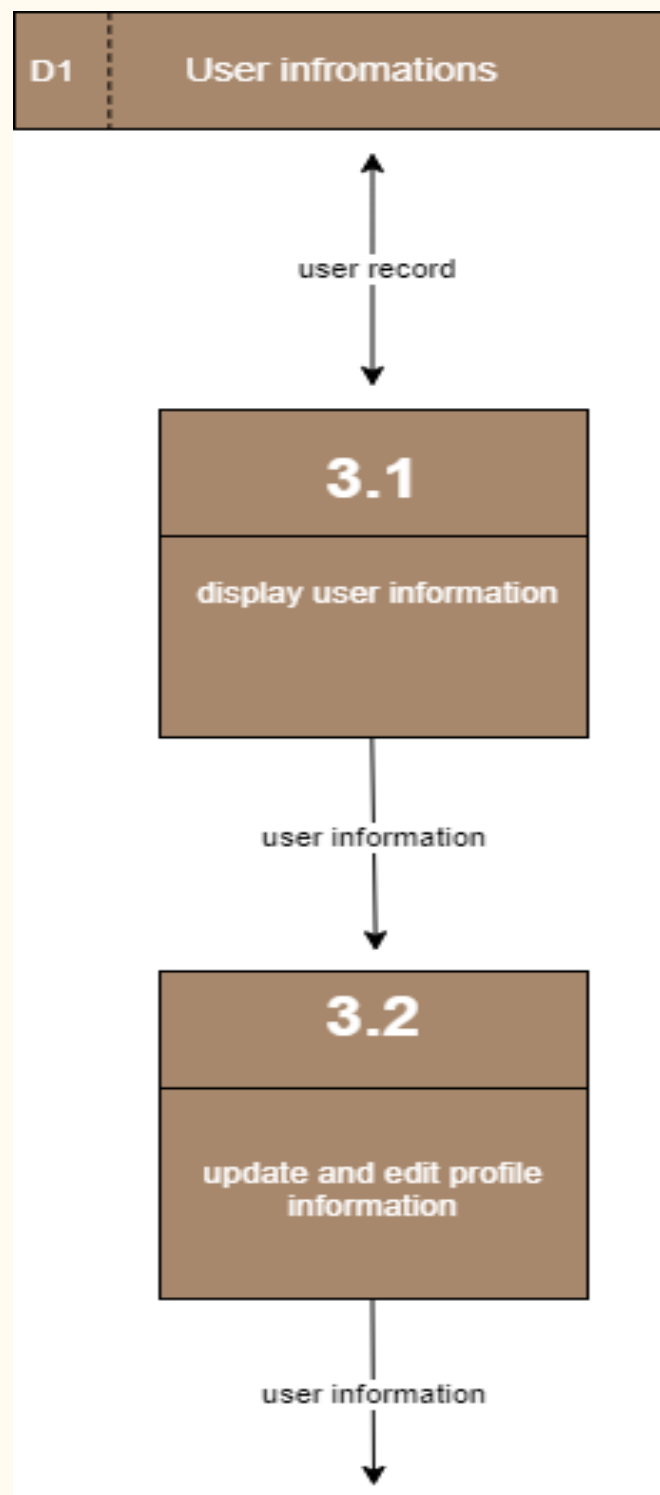
### DFD level 2 Child diagram for login



# Chapter 3

## System Design

### Child diagram for view profile



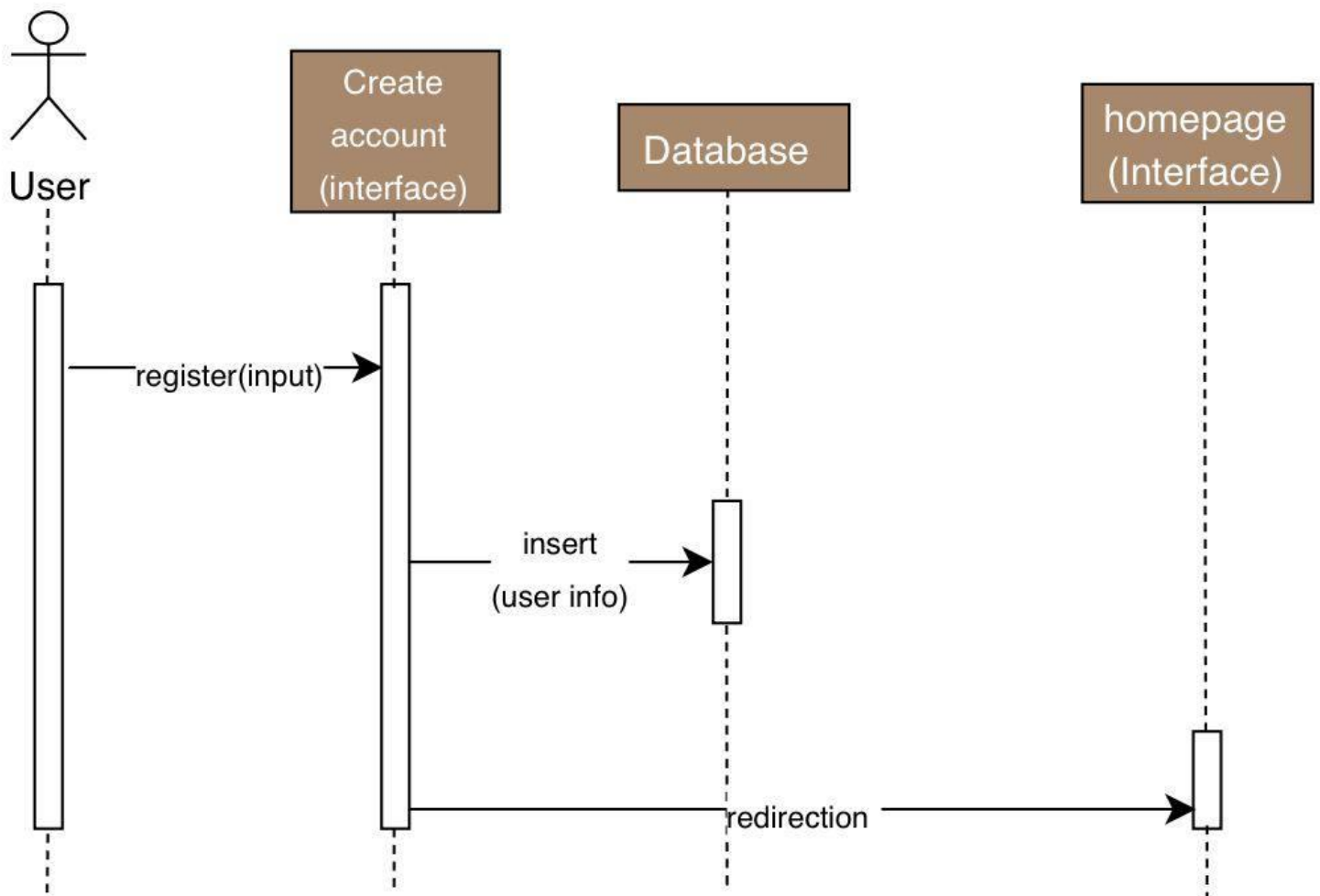
# Chapter 3

## System Design



### Sequence diagram

#### Sequence diagram for Create new account

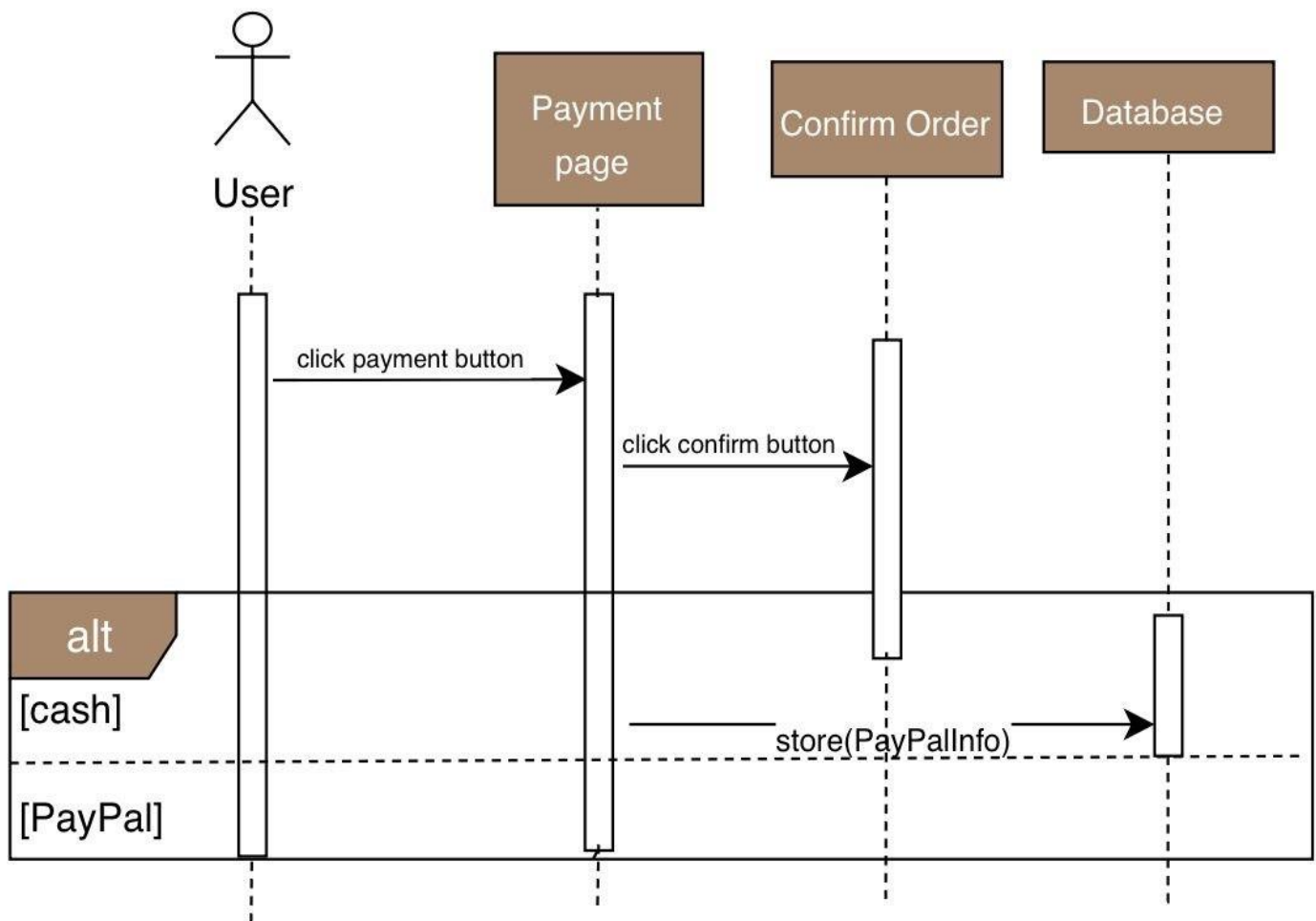


# Chapter 3

## System Design



### Sequence diagram for Payment



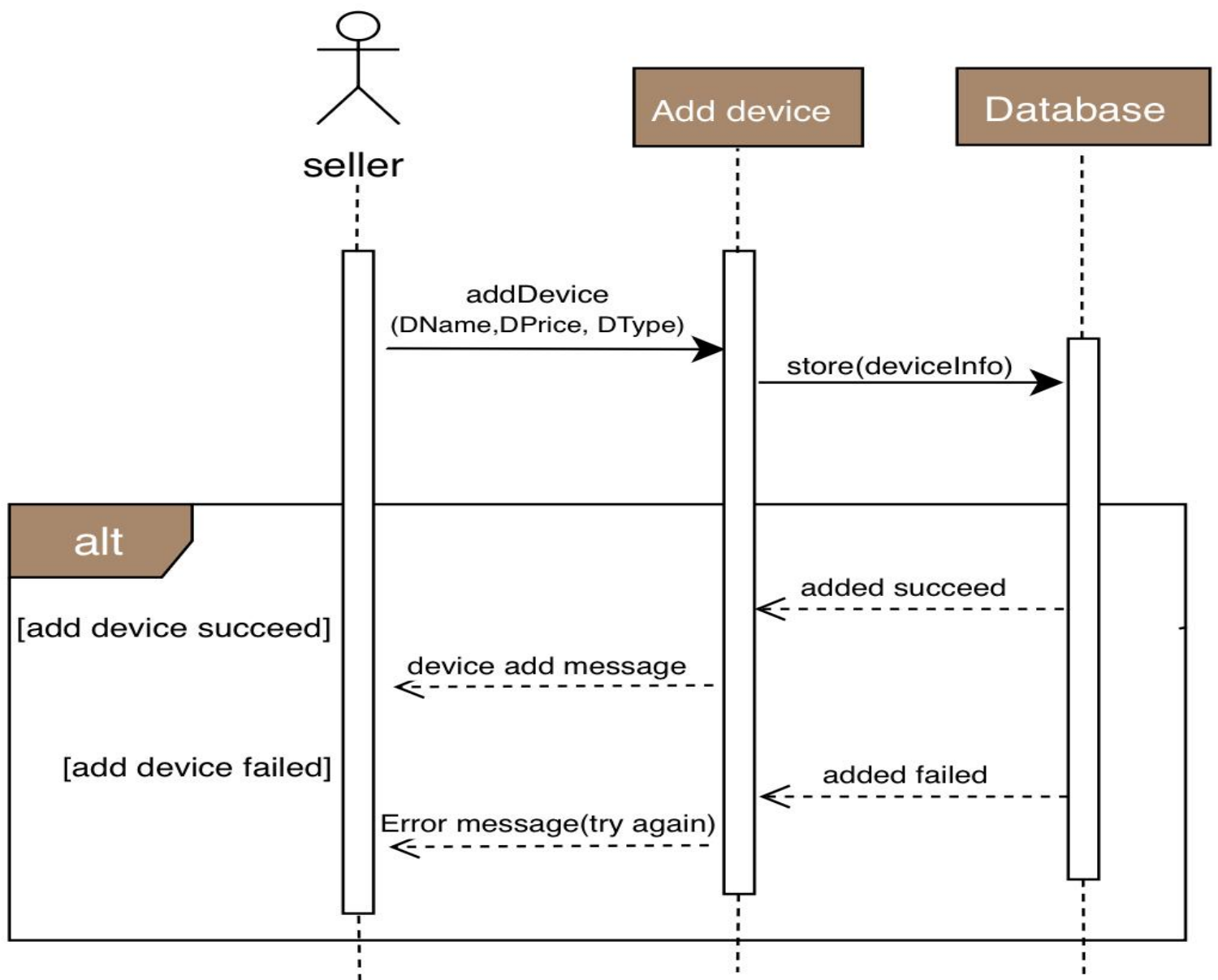


# Chapter 3

## System Design

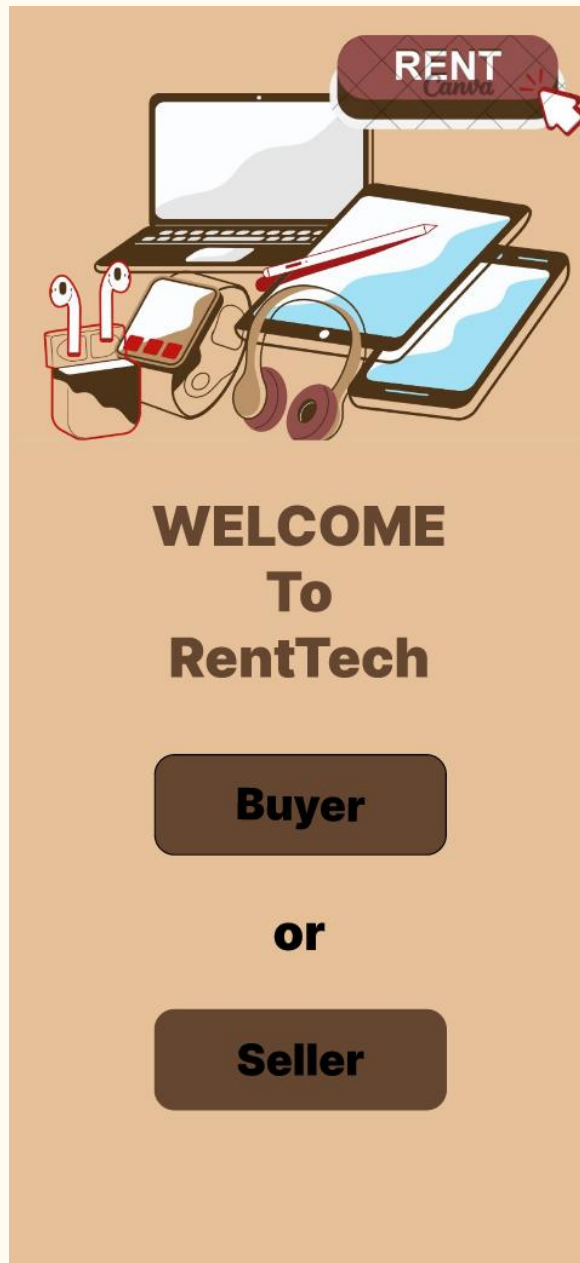


### Sequence diagram for Add device



# Chapter 4

## Software Prototype




# Chapter 4

## Software Prototype



### For Seller




**WELCOME  
To  
RentTech**

**Buyer**

**or**

**Seller**




**Create a new account**

Fname


Lname

E-mail


Phone number


Password 

**Create account**



**LOGIN**

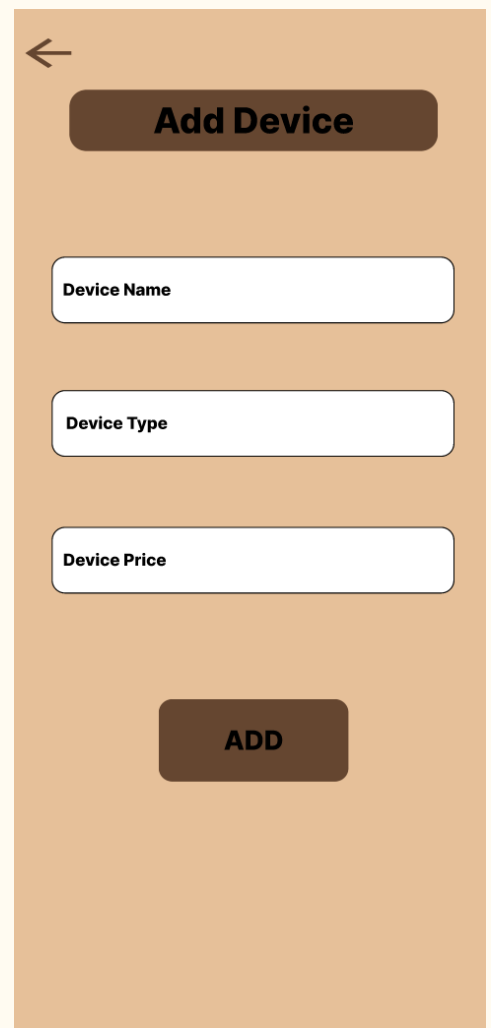
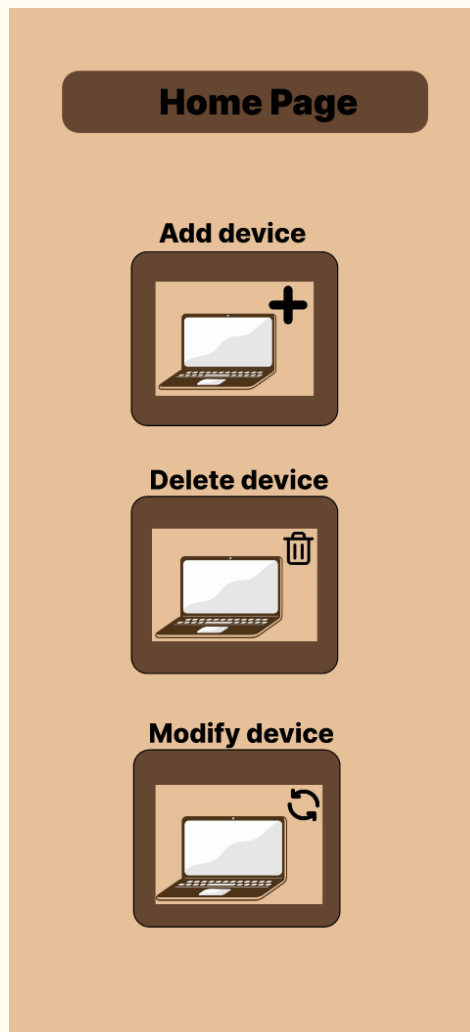
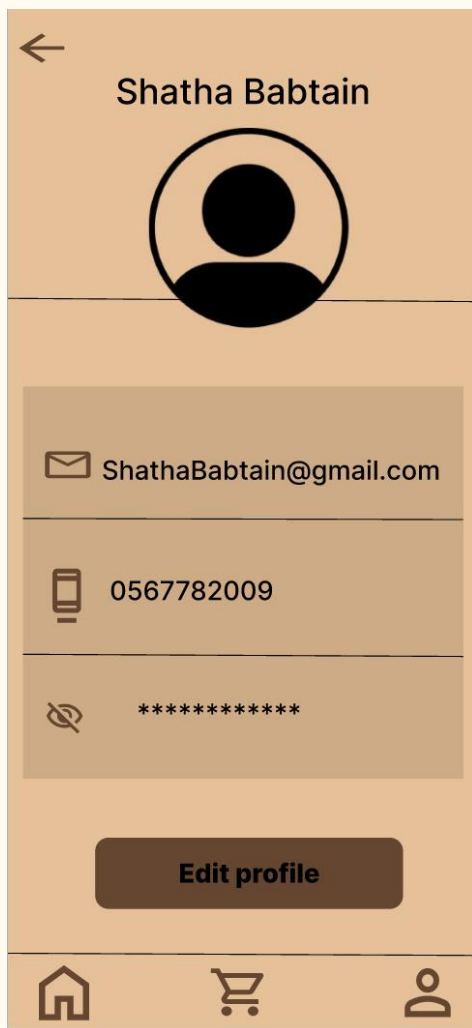
 Email or Phone number

 Password

**Sign in**

# Chapter 4

## Software Prototype



# Chapter 4

## Software Prototype



### Delete Device

Device Name

Device Type

Device Price

DELETE



### Modify Device

Device Name

Device Type

Device Price


MODIFY

# Chapter 4

## Software Prototype



### For User




**WELCOME  
To  
RentTech**

**Buyer**

**or**

**Seller**




**Create a new account**

fname

Lname


E-mail

Phone number


Password 


**Create account**

Already have an account ? [Log In](#)



**LOGIN**

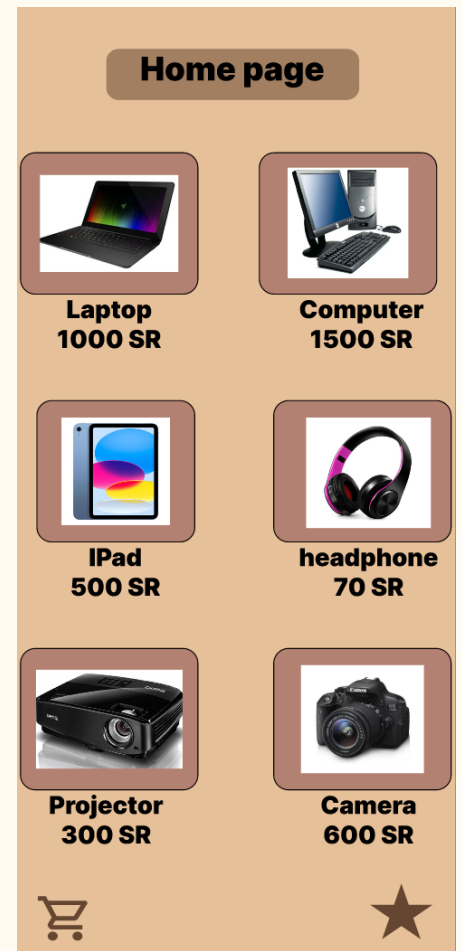
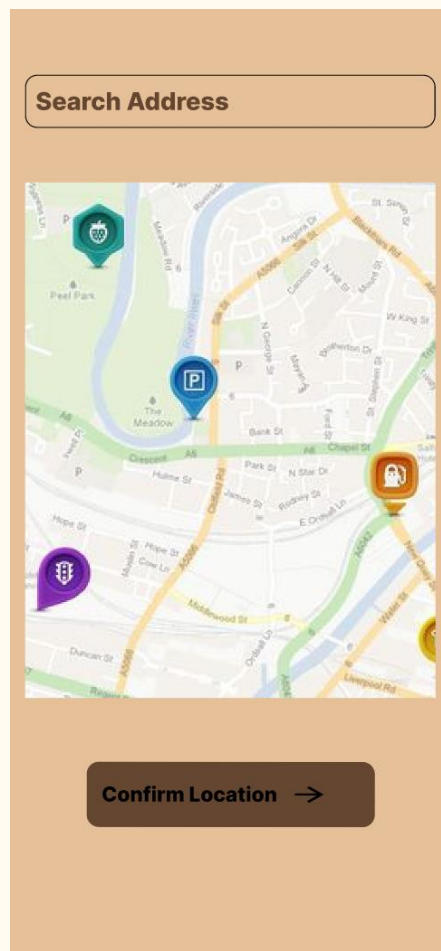
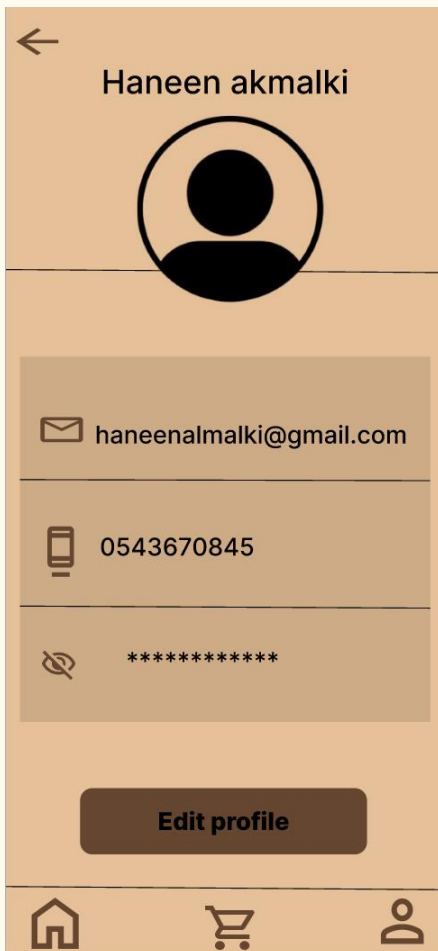
 Email or Phone number

 Password

**Sign in**

# Chapter 4

## Software Prototype




# Chapter 4


## Software Prototype



**Cart** ★ Wishlist



**IPad pro 256 GB**  
**500 SR**  
**X 1**




**Please select a rental period**  

1 Day ▼


<b>Total</b>	<b>500SR</b>
<b>Amount after discount:</b>	<b>500SR</b>

<b>Total</b>	<b>500SR</b>
--------------	--------------





**Dear buyer, Please contact the seller to agree on the delivery date**

**CheckOut**





**Please, choose a payment method:**






**Cancel**







**Verify**

**Cancel**



# Chapter 4

## Software Prototype



**The order has been confirmed**

**THANK YOU!**

**Chat With Seller**



PayPal account:

Password:

**Continue**



**Please, enter the confirmation code:**

**Verify**

**Cancel**



# Chapter 4

## Software Prototype



**The order has been  
confirmed**

**THANK YOU!**

**Chat With Seller**



Chat  
**Seller**

Write your message



**THANK YOU!**