RAPPORT DE PROJET DE FIN D'ANNÉE

Spécialité : Communications et Réseaux

Application mobile : Forssa

Par AMINE OUADRANI

Réalisé dans le cadre d'un mini Projet

Encadré par : Monsieur Ben Mahmoud Chaker et Monsieur Moussa Abdelhak

Année Universitaire : 2020 - 2021

Table des matières

Table des figures

General Introduction

The technology has completely changed the way of our life. It has opened up a world of possibilities, from shopping, ordering your favourite food, travel tickets and much more – anytime, anywhere, without any constraints. There are many ways to realize how the technology has made our lives easier. The world has made a big progress thanks to the technology, it has opened new opportunities and made many things easier, such as shopping, travel tickets and much more... as a student at ENIG and since i find myself interested in application development I find myself fascinated by e commerce application .

Chapter 1

Project context

0.1 Project overview

In this chapter, i will describe the general context of the project. I will start with the the problematic, and the proposed solutions, and the method that i used.

0.2 Problematic

FIGURE 1 – Application logo

We all have witnessed the growth of the e commerce websites and the online purchase. Nowadays people do everything with their phones, like buying and selling products.

0.3 Study of The Existing

There is Tayara in Tunisia who dominate this field.So we aim to make an application more comfortable for users with map feature.

0.4 Proposed Solution

In our project we will need front end and back end for database management. For the front end, we are going to use Ionic with Angular . For the back end, we will use Firebase.

0.5   Conclusion

In this chapter we have described the project,we also mentionned the problematic in which we decided to start from our work based on proposed solutions. In the next chapter, we will explain the application requirements.

Chapter 2

Requirements Analysis

2.1 Introduction

In this chapter we will analyse our project and demonstrate functional and non-functional requirements.

2.2 Requirements Analysis

2.2.1 Functional requirements

Functional requirements are features that accomplish the following needs : -Display all in Sell products . -Display the map.

2.2.2 Non functional requirements

Internal requirements that improve the system, we state : -User interface : make the customer comfortable in using the website with well structured interfaces. -Scalability : ensuring that the system can scale to meet expected traffic and order volume at normal and peak times.

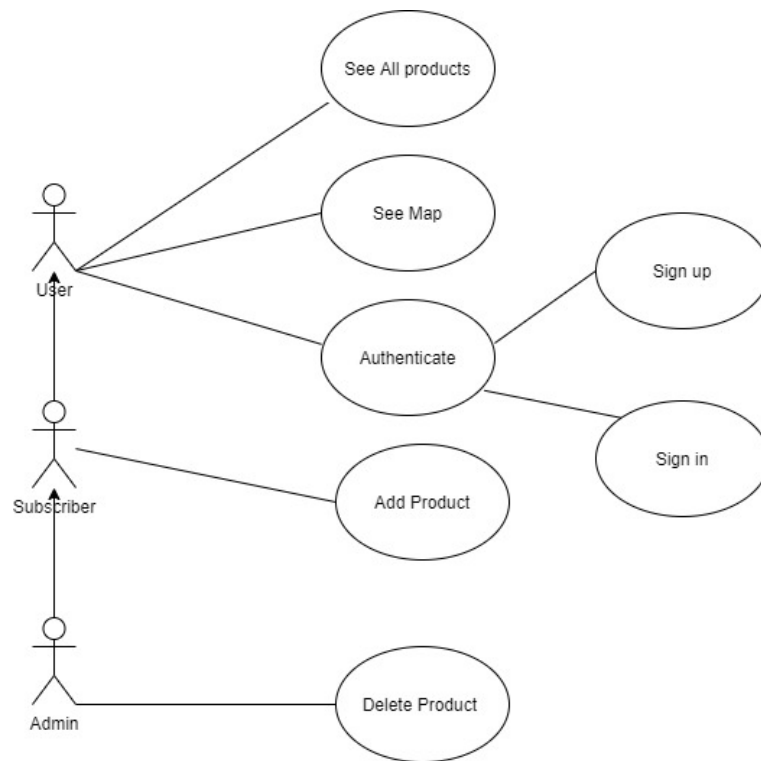## 2.3 Architecture

2.3.1 Use Case Diagrams

FIGURE 2.2 – Use Case Diagrams

2.4   Conclusion

In this chapter we have specified functional and non functional requirements. And we have presented general diagram . In the next chapter, we will present system modelling with diagrams using UML.

Chapter 3

System Modeling

3.1 Introduction

In this chapter, we will present the the system modeling which allows us to formalize the preliminary stages of development. And the interaction between the client and our application.
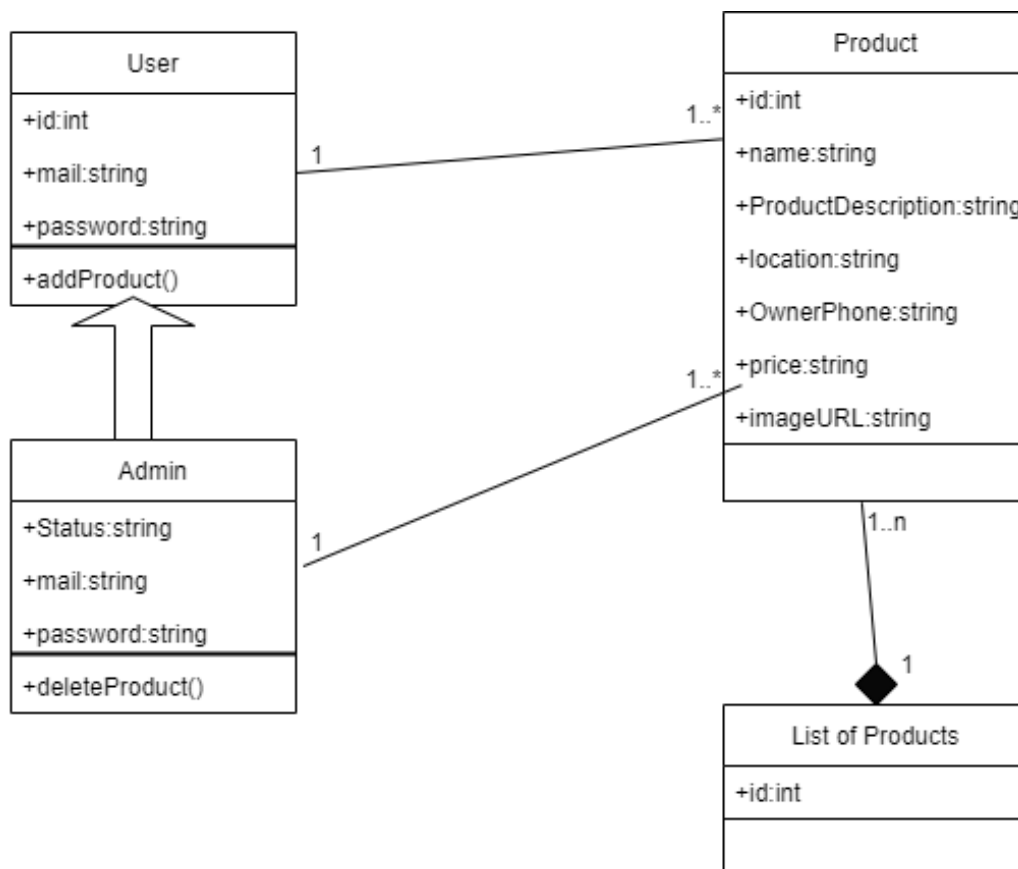
3.2 Class Diagram

FIGURE 3.3 – Class Diagraml

3.3 Diagramme de séquences du système

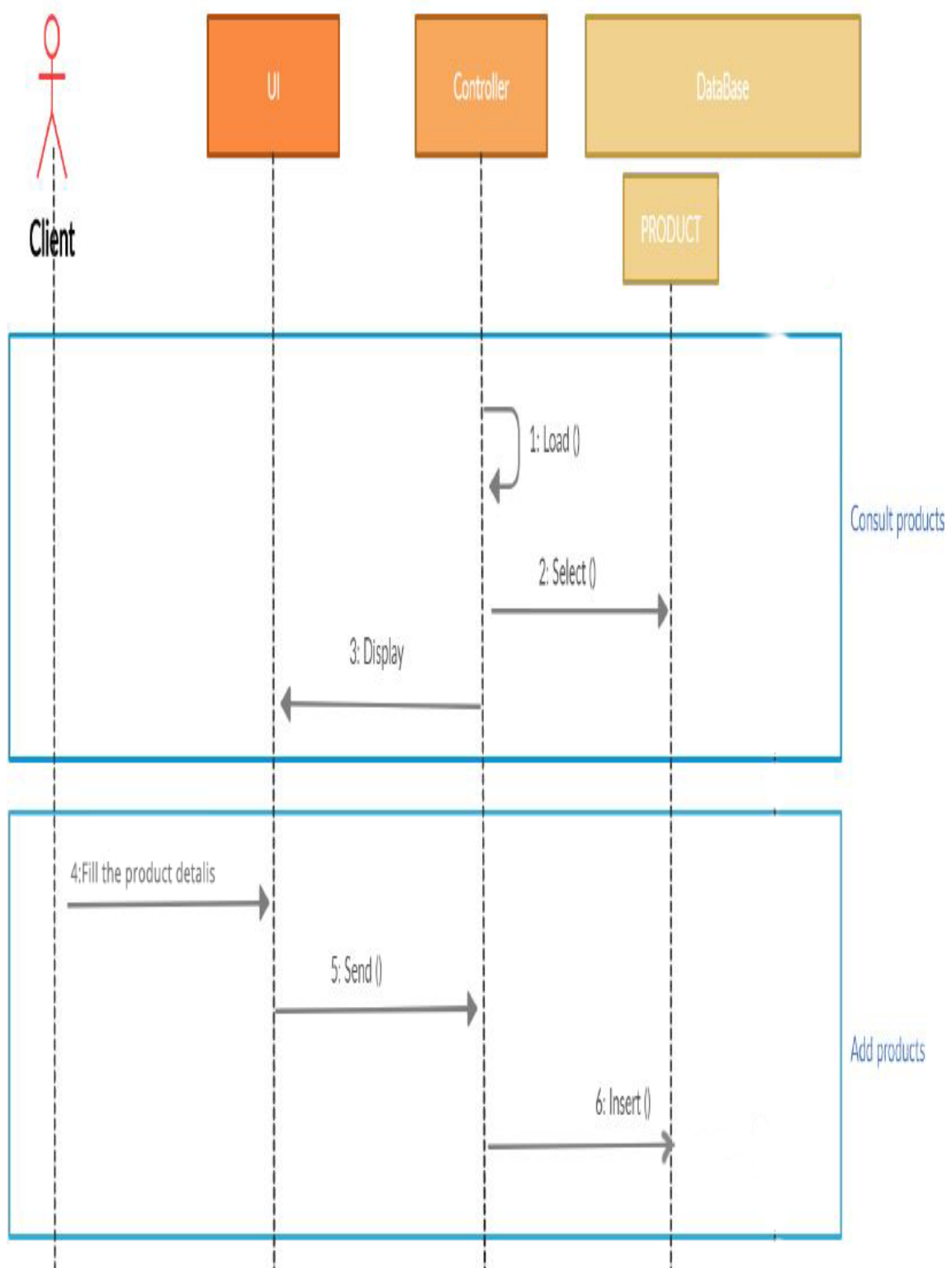### 3.3.1 Diagramme de séquence du client :

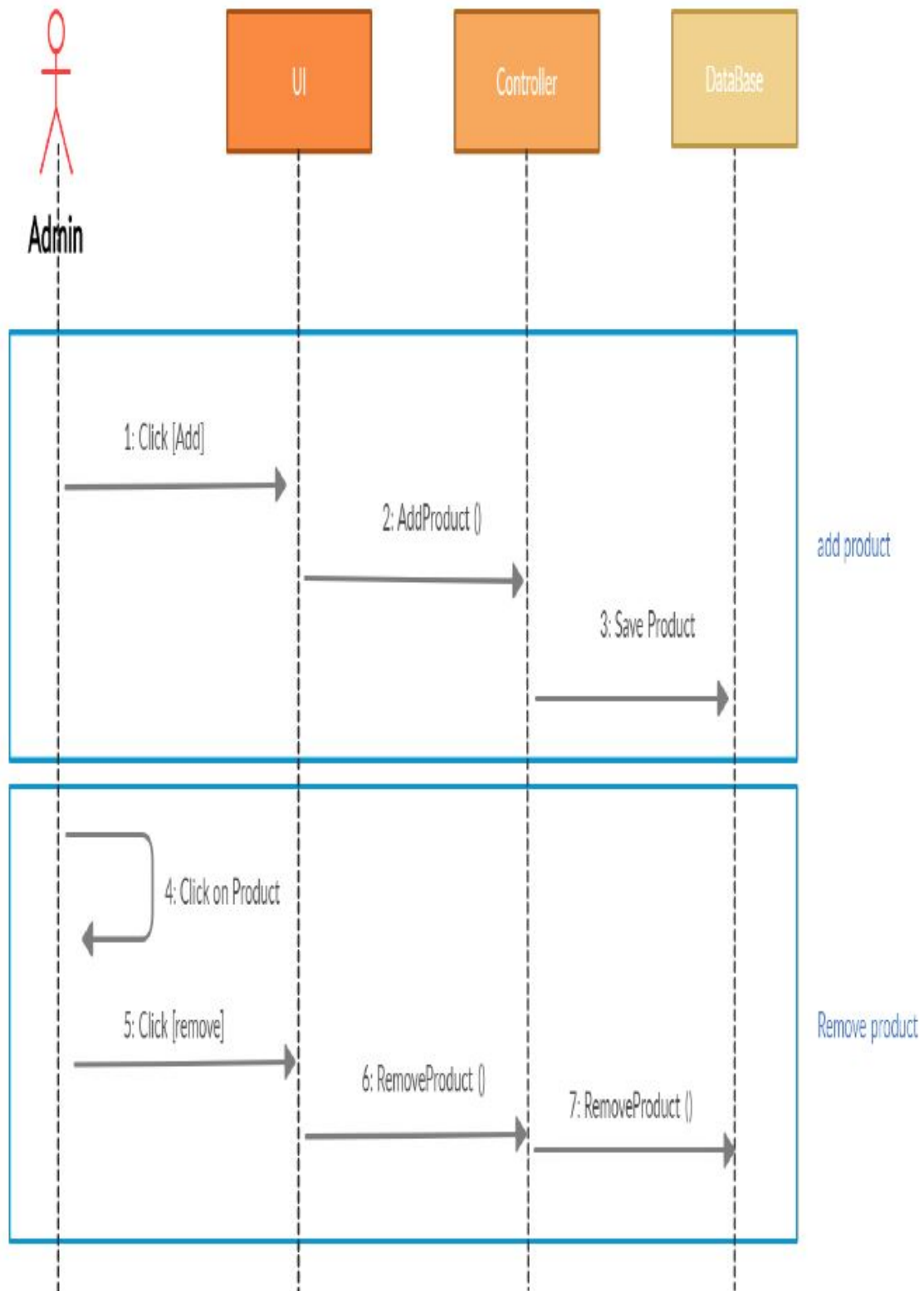FIGURE 3.4 – Client general sequence diagram

3.3.2 Admin general sequence diagram :

FIGURE 3.5 – Admin general sequence diagram
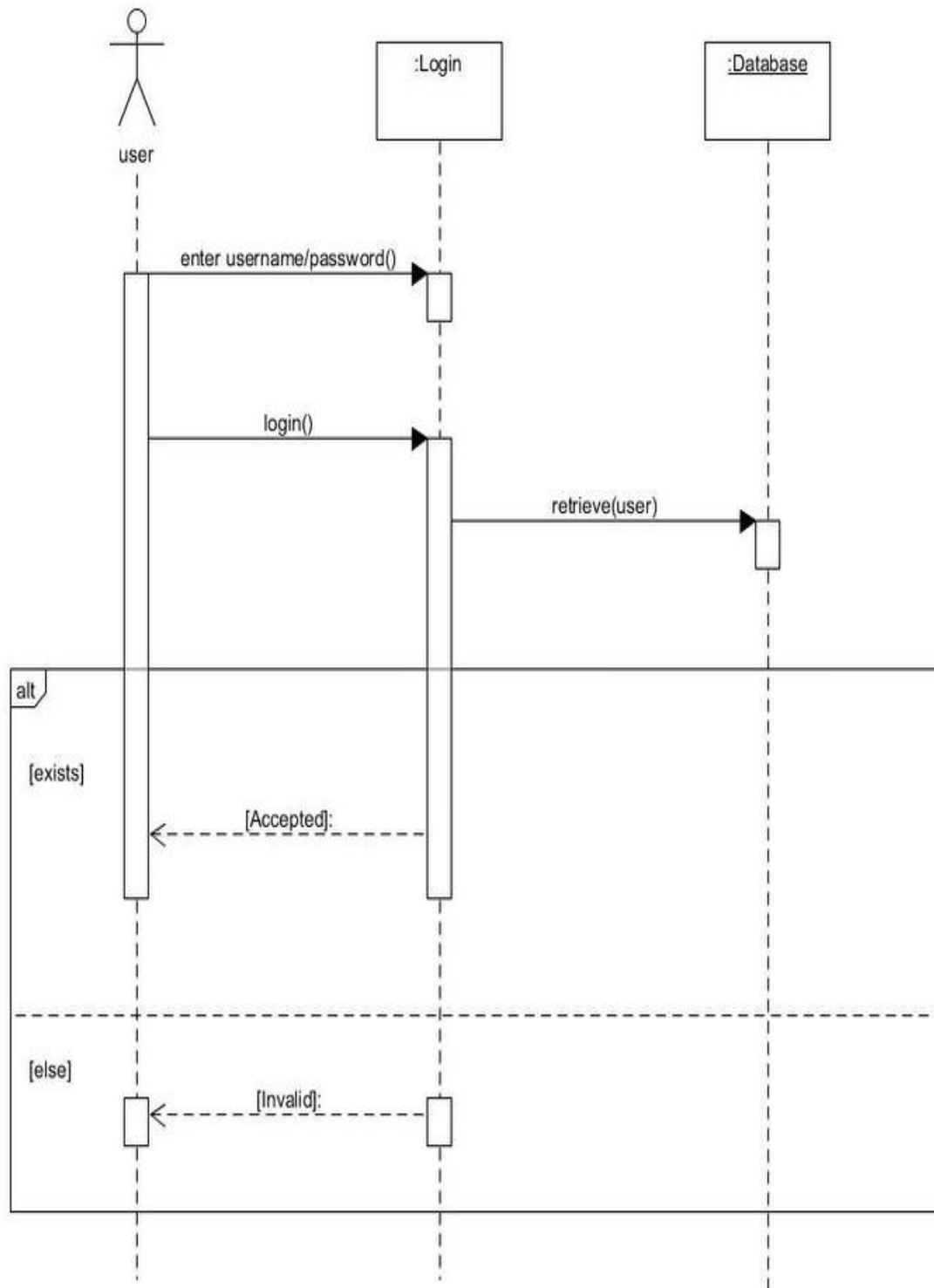
3.3.3 Authentication sequence diagram :

FIGURE 3.6 – Authentication sequence diagram

3.4   Conclusion

An this chapter we have presented UML diagrams which help us present the project's conception and allow us to present the implementation in the next chapter.

Chapter 4

Implementation

4.1 Introduction

In this chapter we reveal the different technologies used to develop our e-commerce website.

4.2 Work Environment

4.2.1 Hardware Environmentl

The hardware we are using in this project is Accer laptop with Intel Core i5-6200U CPU @ 2.50GHz, 16Go RAM and 1TB hard drive.

4.2.2 Software Environment
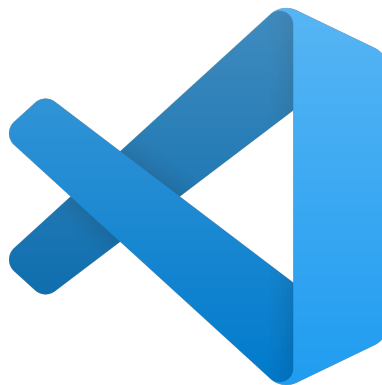
Visual Studio Code :

FIGURE 4.7 – Visual Studio Code logo

Visual Studio Code [2] is a lightweight but powerful source code editor which runs on your desktop and is available for Windows, macOS and Linux. It comes with built-in support for JavaScript, TypeScript and Node.js and has a rich ecosystem of extensions for other languages (such as C++, C, Java, Python, PHP, Go) and runtimes (such as .NET and Unity).

4.3   Technologies used

4.3.1   Ionic

With Ionic, comes the flexibility of building cross platform apps without any problem. It's far more easier to build high-end user interfaces with added functionalities and reuse the same code to build apps for different platforms. As the rewriting of code is not required, it saves a lot of time and effort.

4.3.2   Firebase

Firebase developed by Google is one of the leading BaaS (Backend-as-a-Service) solutions on the market. It allows connecting and sharing data between Android, iOS, and web applications.

4.4   Implementation

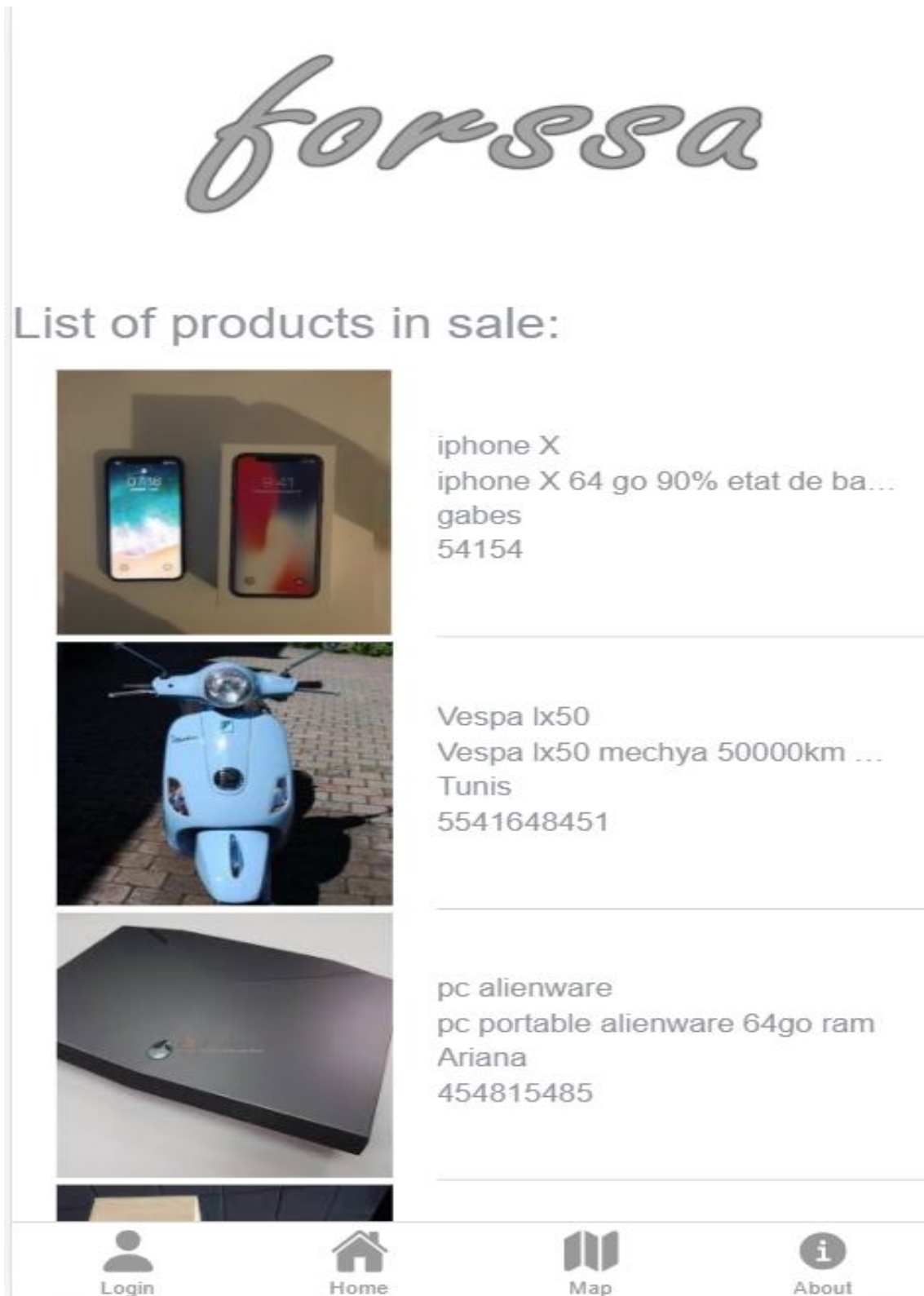In this part, we will present the implementation of our application using screenshots.
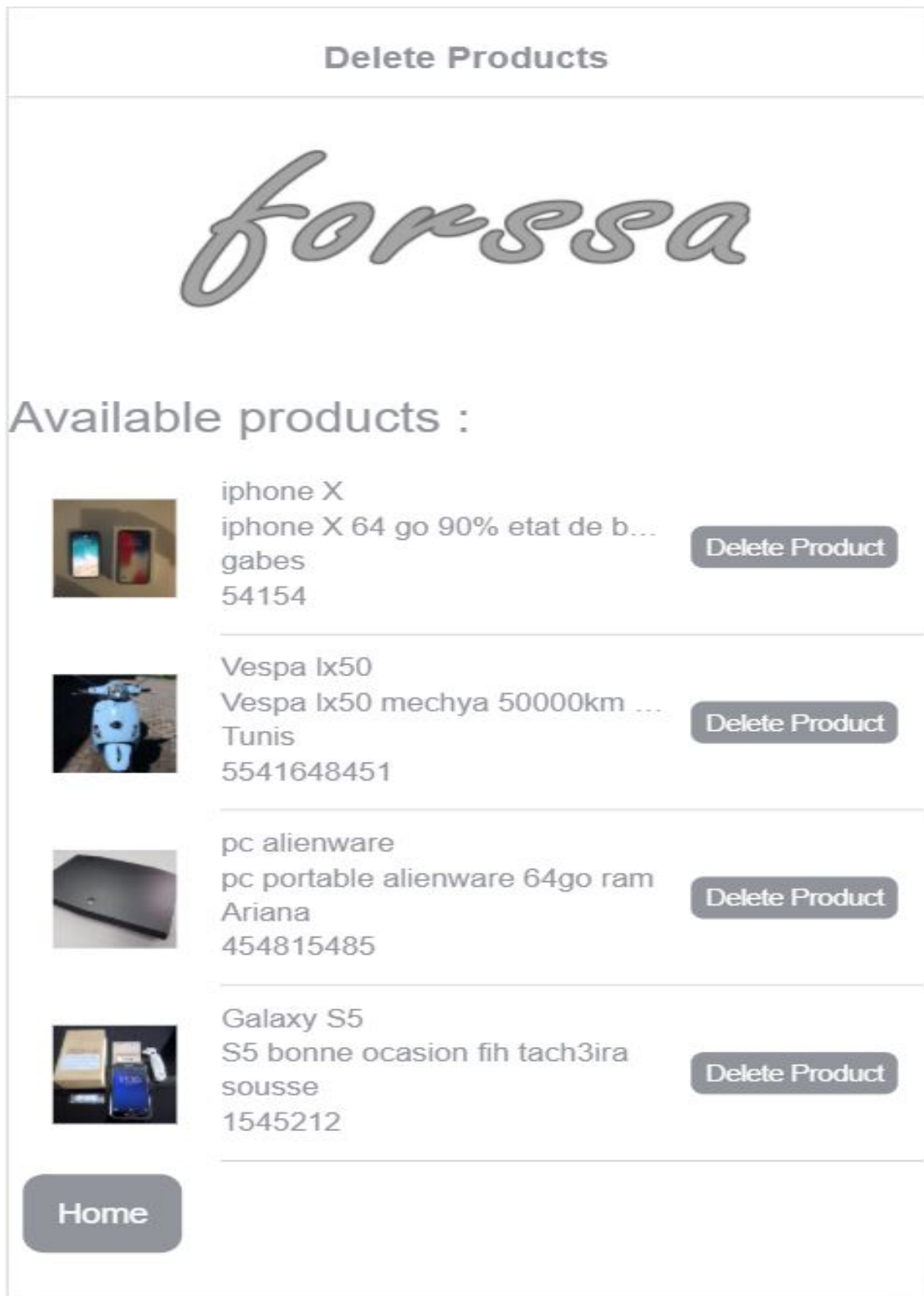
FIGURE 4.8 – List of products

FIGURE 4.9 – Add product

<div align="center">FIGURE 4.10 – Delete product</div>