



# **Electronic Commerce**

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## COMMITTEE REPORT

We certify that we have read this graduation project report as examining committee, examined the student in its content and that in our opinion it is adequate as a project final report training.

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## ABSTRACT

In the contemporary digital realm, the landscape of e-commerce is constantly evolving, presenting both opportunities and challenges for businesses and consumers alike. However, amidst the vast array of online shopping platforms, navigating the e-commerce landscape efficiently and effectively can be daunting for users.

To address these challenges, our project introduces a groundbreaking e-commerce application that revolutionizes the online shopping experience. Leveraging cutting-edge technology, our platform offers a seamless and personalized shopping journey tailored to the preferences and needs of each individual user.

Our application utilizes advanced algorithms to provide real-time updates on product availability, pricing fluctuations, and personalized recommendations based on user behavior and preferences. Through an intuitive and user-friendly interface, customers can easily browse through a curated selection of products, compare prices, and make informed purchasing decisions.

Furthermore, our e-commerce application prioritizes transparency and trust by providing detailed product descriptions, customer reviews, and secure payment options. Additionally, integrated communication tools enable seamless interaction between buyers and sellers, fostering open dialogue, addressing concerns, and providing timely assistance throughout the purchasing process.

By bridging the gap between consumers and sellers, our innovative e-commerce application enhances the online shopping experience, empowering users to discover new products, make informed decisions, and enjoy a seamless and personalized shopping journey. This holistic approach ultimately fosters a thriving e-commerce ecosystem where both businesses and consumers thrive.

## ACKNOWLEDGMENT

We would like to express our deep appreciation and gratitude to our respected supervisor, Dr. Issam Jibren. Throughout our project, his guidance and encouragement have been invaluable. In addition to being a supervisor, he has been an active and influential presence, always pushing us forward. His exceptional guidance has provided us with answers and insights to any questions we had. From the depths of our hearts, we extend our sincere thanks to him.

We would also like to express our deep gratitude to our parents, whose unwavering support has been a constant source of strength. Words cannot adequately express our gratitude, but we simply say thank you for everything.

To our esteemed doctors, we extend our thanks for the amazing three years of our lives. We hope that our project has made them proud. Their guidance and expertise have been invaluable, shaping our journey and preparing us for the future.

Lastly, we express our gratitude to our friends who have stood by our side throughout these three years. Your companionship and support are immeasurable, and we are grateful for the memories we have shared. Thank you for being there for us.

## DEDICATION

Throughout the long journey of developing this project, we extend our heartfelt thanks and appreciation to ourselves and our beloved families, who have always stood by us with unwavering positivity and continuous support. We also express our deep gratitude to all the friends and colleagues who offered their helping hands and advice along our journey.

Our families have shown us that perseverance and dedication in overcoming challenges can achieve the impossible. Step by step, we have overcome obstacles, and today we celebrate our accomplishment thanks to their boundless support.

To all individuals who have contributed their creative and valuable efforts to this project, we express our deep gratitude and honor their endeavors. Their presence and dedication have had an invaluable impact on the success of this work.

Therefore, we extend our appreciation and gratitude to all who have shared this journey with us, and we commit to continuing to build upon these partnerships and relationships that have proven their worth in achieving shared successes.

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## LIST OF SYMBOLS

Symbol	Meaning
E-Commerce	Electronic Commerce
Baas	Backend-as-a-Service
IDE	Integrated Development Environment
JDK	Java Development Kit

# CHAPTER ONE : INTRODUCTION

### **1.1 Overview**

We live in the age of technology, and with the rapid development of technology, solutions have been found. These solutions are also evaluated over time, to keep pace with user needs. Therefore, we developed the e-commerce application to be the ideal solution for those searching for personal and household products in general. With e-commerce, customers can get all the products they are looking for, at their fingertips wherever they are and whenever they want.

### **1.2 Problem Statement**

People face a variety of problems when it comes to purchasing their products. Among these problems are people who do not know where to find the products they are looking for, and who find it difficult to reach places that sell these products. People face the problem of different prices when purchasing products from different places, in addition to the time and effort spent searching for the products they want. Moreover, it is difficult to determine the quality of an original product from an imitation.

### **1.3 Research objectives**

This study aims to know the problems that people face in Jordan and the extent of their satisfaction with e-commerce in Jordan, which will help the development team to understand people's needs and analyze them to come up with functional and non-functional system requirements.

## 1.4 Used Technologies and Tools

### 1.4.1 Software

#### Firestore

Firestore is a Backend-as-a-Service (Baas). It provides developers with a variety of tools and services to help them develop quality apps, grow their user base, and earn profit. It is built on Google's infrastructure. Firestore is categorized as a NoSQL database program, which stores data in JSON-like documents. [\[1\]](#)

#### Google Places API

The Places API is a service that accepts HTTP requests for location data through a variety of methods. It returns formatted location data and imagery about establishments, geographic locations, or prominent points of interest.

#### Google Sign-In

With Google Sign-In, users can easily log in to our app using their Google account, eliminating the need for new credentials. By clicking "Sign in with Google," users grant access to their email, name, and profile picture, allowing us to customize their experience and offer additional features. This integration streamlines login, prioritizes security, and enhances personalization within our application.

## Java SDK

The Java SDK (Software Development Kit) equips developers with the necessary tools and libraries to create, test, and debug Java applications. As a new Java developer, we suggest downloading the JDK (Java Development Kit) to swiftly initiate your development journey. The JDK includes essential components like the Java runtime environment, compiler, and other tools needed for Java development. Additionally, you can opt for integrated development environments (IDEs) such as IntelliJ IDEA or Eclipse, which streamline Java application development with features like code completion and debugging capabilities.

## 1.5 Languages

### Flutter

Flutter is an open source framework by Google for building beautiful, natively compiled, multi-platform applications from a single codebase.[\[2\]](#)

### Dart

Dart is a client-optimized language for developing fast apps on any platform. Its goal is to offer the most productive programming language for multi-platform development, paired with a flexible execution runtime platform for app frameworks.[\[3\]](#)

### 1.5.1 Editors and Other Tools

#### Visual Studio

Visual Studio Code is a lightweight but powerful source code editor which runs on your desktop and is available for Windows, mac OS and Linux. It comes with built-in support for JavaScript, Type Script and Node.js and has a rich ecosystem of extensions for other languages and runtimes (such as C++, C#, Java, Python, PHP, Go, .NET). Begin your journey with VS Code with these introductory videos. [\[4\]](#)

#### Android Studio

Android Studio is the official Integrated Development Environment (IDE) for Android app development. Based on the powerful code editor and developer tools from IntelliJ IDEA, Android Studio offers even more features that enhance your productivity when building Android apps, [\[5\]](#)

such as:

- A flexible Gradle-based build system.
- A fast and feature-rich emulator.
- A unified environment where you can develop for all Android devices.
- Live Edit to update composables in emulators and physical devices in real time.
- Code templates and GitHub integration to help you build common app features and import sample code.
- Extensive testing tools and frameworks.
- Lint tools to catch performance, usability, version compatibility, and other problems
- C++ and NDK support.



## 1.6 Methodology

This application was developed using a form of Agile methodology, because it was the most suitable method that could match our project's nature that needs users while developing the software to get feedbacks with fast responding and related time constraints. The application development needed to work through iterations with specific amount of time. The Agile is an iterative approach to project management and software development that helps teams deliver value to their customers faster and with fewer troubles. Instead of betting everything on a "big bang" launch, an agile team delivers work in small, but consumable, increments. Requirements, plans, and results are evaluated continuously so teams have a natural mechanism for responding to change quickly [5].

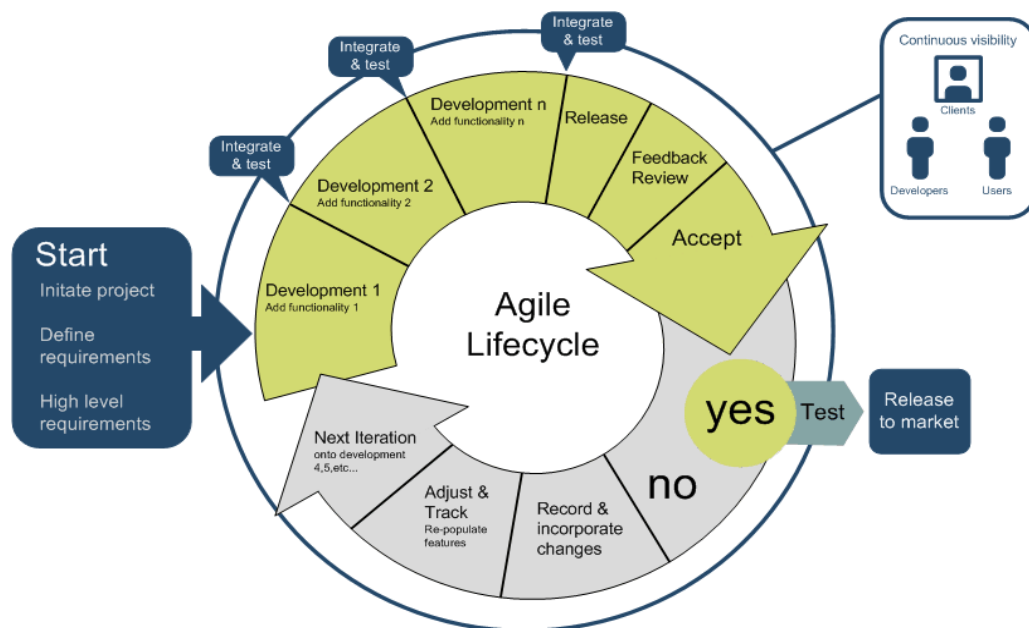


Figure 1 agile mode

## 1.7 Project Plan (Gantt Chart)

The Gantt charts module in OpenProject displays the work packages in a timeline. You can collaboratively create and manage your project plan, have your project timelines available to all team members and share up-to-date information with stakeholders. You can add start and finish dates and adapt it via drag and drop directly in the Gantt chart.[\[6\]](#)

Also, you can add dependencies, predecessors or followers within the Gantt chart. The project begins by implementing a subset of the software requirements and iteratively enhances advanced versions until the full system is implemented. In every iteration, modifications are made to the design and new functional capabilities are added. The basic idea behind this method is to develop the system through repeated (iterative) cycles.

From 02/12/2023 to 04/29/2023 we call these recurring courses (construction): Requirements (5 days), Design and development (7 days), documentation (20 days (about 3 weeks)). And we repeated this construct for 3 months and performed four iterations of the construct.

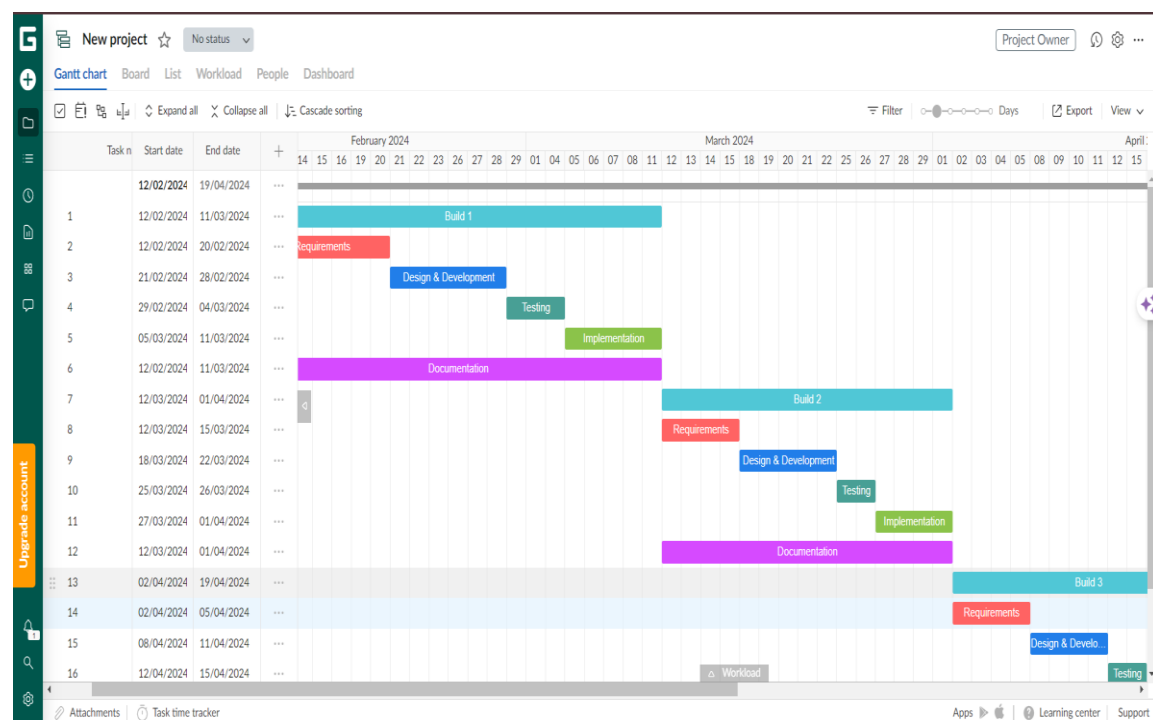


Figure 2 Gantt Chart

# CHAPTER TWO: PLANNING & REQUIREMENTS

**In this chapter**, websites similar to the idea of our application will be discussed and their problems will be studied to avoid their presence in our application.

## 2.1 Related works

We studied the market and discovered a similar website called <https://waqtee.com/>, which offers a variety of products related to watches in Jordan, but it is not like e-commerce, which offers multiple offers for products, including watches, specifies their specifications, and offers you many related options. Whatever you want at the best prices.

## 2.2 Comparison between e-commerce and waqtee.com

	<b>e-commerce</b>	<b>waqtee.com</b>
Service price	All free	Some features are paid
World Wide Compatibility	Restricted to Jordan	Restricted to Jordan
Usability	Hard, crowded without any sorting	Easy to use

*Table 1 Comparison between e-commerce and waqtee.com*

## 2.3 Initial Requirements

### 2.3.1 Functional Requirements

- 1) As a user, I want to be able to access the application by my email and password.
- 2) As a user, I want to be able to create an account using my email.
- 3) As a user, I want to be able to access the application by my Google email.
- 4) As a user, I want to be able to create an account using my Google email.
- 5) As a user, I want to be able to filter and sort products based on buyer gender (male, female) or watch type (smart, traditional).
- 6) As a user, I want to be able to see product details.
- 7) As a user, I want to be able to rate the product through the rating bar.
- 8) As a user, I want to be able to add the product to the cart.
- 9) As a user, I want to be able to increase or decrease the number of products I want to purchase.
- 10) As a user, I want to be able to purchase my own products.
- 11) As a user, I want to be able to decide where my products go.
- 12) As a user, I want to be able to pay by card or cash.
- 13) As a user, I want to be able to update profile information.
- 14) As a user, I want to be able to log out of the application.

### 2.3.2 Non-Functional Requirements

- **Performance**
  - The application has to load and respond within three seconds for all key functionalities.
  - It needs to handle a concurrent consumer load of as a minimum a thousand users without performance degradation.
- **Reliability**
  - The system should have an uptime of 99.9% to ensure users can access it reliably.
  - Regular data backups should be performed to prevent data loss in case of unforeseen events.
- **Security**
  - All user information must be encrypted and can only be accessed by the user himself.
- **Compatibility**
  - The system must have as few errors as possible, and the errors that may occur do not affect the function of the system.
- **Usability**
  - The utility have to adhere to accessibility standards, ensuring it is usable by means of people with disabilities.
  - User interfaces and interactions must observe fine practices for a effective consumer experience.
- **Maintainability**
  - The codebase must be nicely-documented to facilitate ease of protection and destiny improvements.
  - Regular updates and bug fixes must be deployed seamlessly without disrupting consumer activities.

### 2.3.3 Use case diagram

A use case diagram is a graphical depiction of a user's possible interactions with a system. A use case diagram shows various use cases and different types of users the system has and will often be accompanied by other types of diagrams as well. The use cases are represented by either circles or ellipses. The actors are often shown as stick figures.

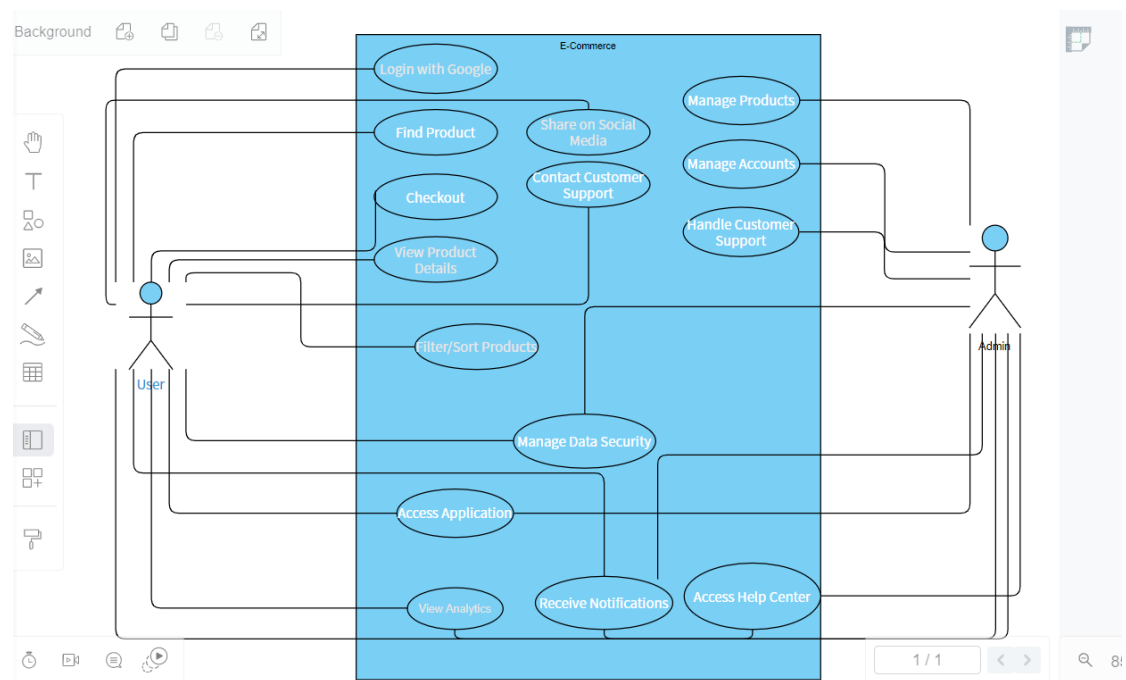


Figure 3 Use case diagram

# CHAPTER THREE: METHODOLOGY AND DESIGN

In this chapter, we will talk about methodology that we decide to use through **E-Commerce** development phases.

### 3.1 Overview

The System Design and Architecture chapter is a critical component in the development of any software project. It serves as the blueprint for constructing a robust and scalable system that meets the functional and non-functional requirements outlined in the project specifications. This chapter delves into the high-level structure, components, and interactions that form the foundation of the entire software system.

### 3.2 Flow chart

A communication flow chart is a graphical representation that illustrates how information flows within an organization or project. It maps out the process, departments, individuals, and communication channels involved. By visualizing communication patterns, it enables stakeholders to identify bottlenecks, gaps, and areas of improvement throughout the communication process.



### 3.2.1 Login flow chart



Figure 4 Login flow chart

### 3.2.2 Signup flow chart



Figure 5 Signup flow chart

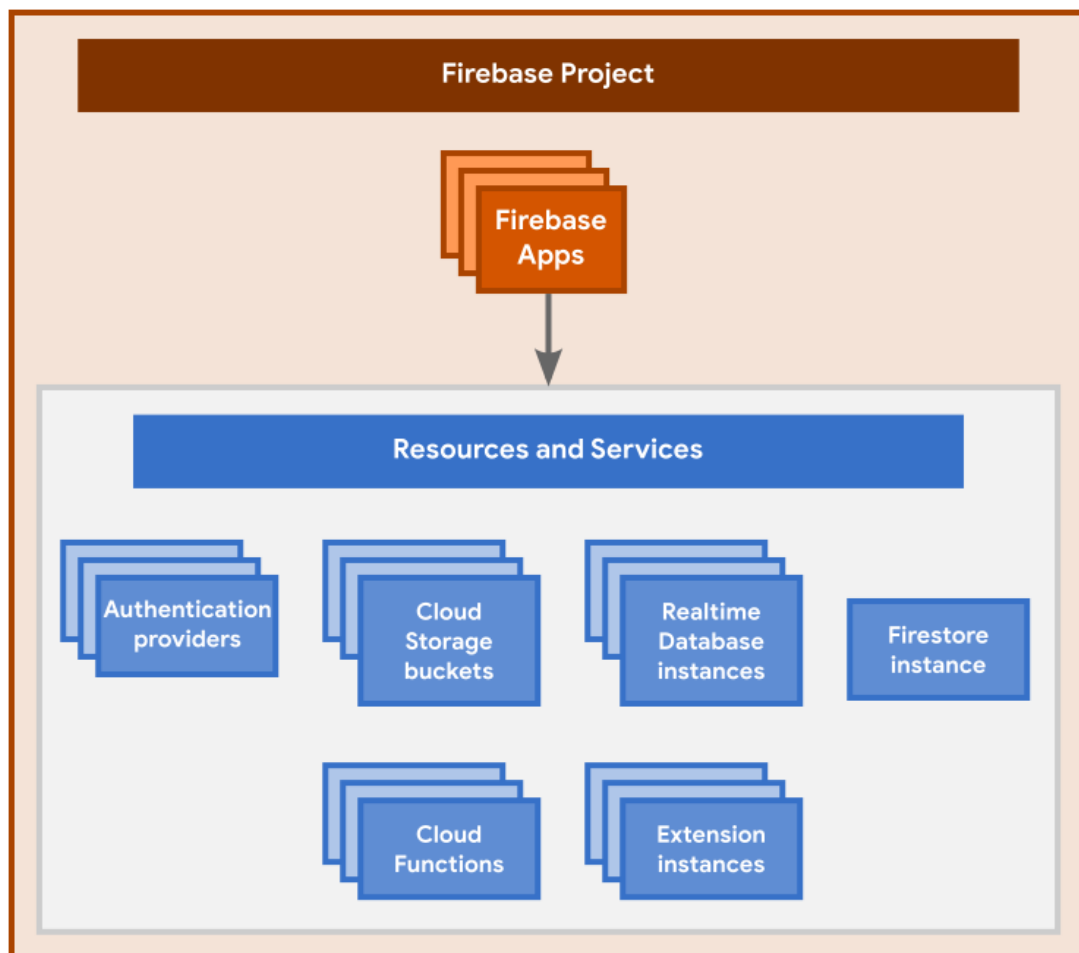
### 3.2.3 buy flow chart



Figure 6 buy flow chart

### 3.3 Firebase Database

Firebase Database is a cloud-hosted NoSQL database provided by Google as part of the Firebase platform. It offers real-time synchronization and data storage for mobile and web applications, making it easy for developers to build collaborative and responsive applications without managing server infrastructure.



*Figure 7 Firebase Database*

# CHAPTER FOUR: IMPLEMENTATION

#### 4.1 Introduction

This chapter will discuss the system implementation (application). And save Technical information about the system, including system design and software Decisions taken. It should be noted that this application was created from scratch or by To express. We have used Flutter and dart language on android studio and Visual studio code platform to develop this application This application was developed using Firebase tools.

#### 4.2 Hardware Specification

This app will target phones that works with android OS, these phones should include these specifications as a minimum requirement:

- 1- Free Storage Space 50MB (Size of App is 15MB).
  - 2- Internet Access.
  - 3- Minimum of memory 1 GBs.
- Kit Kat Android version (4.4) or above is required for this application. any increase in the aspects mentioned above, user experience will be much better in performance.

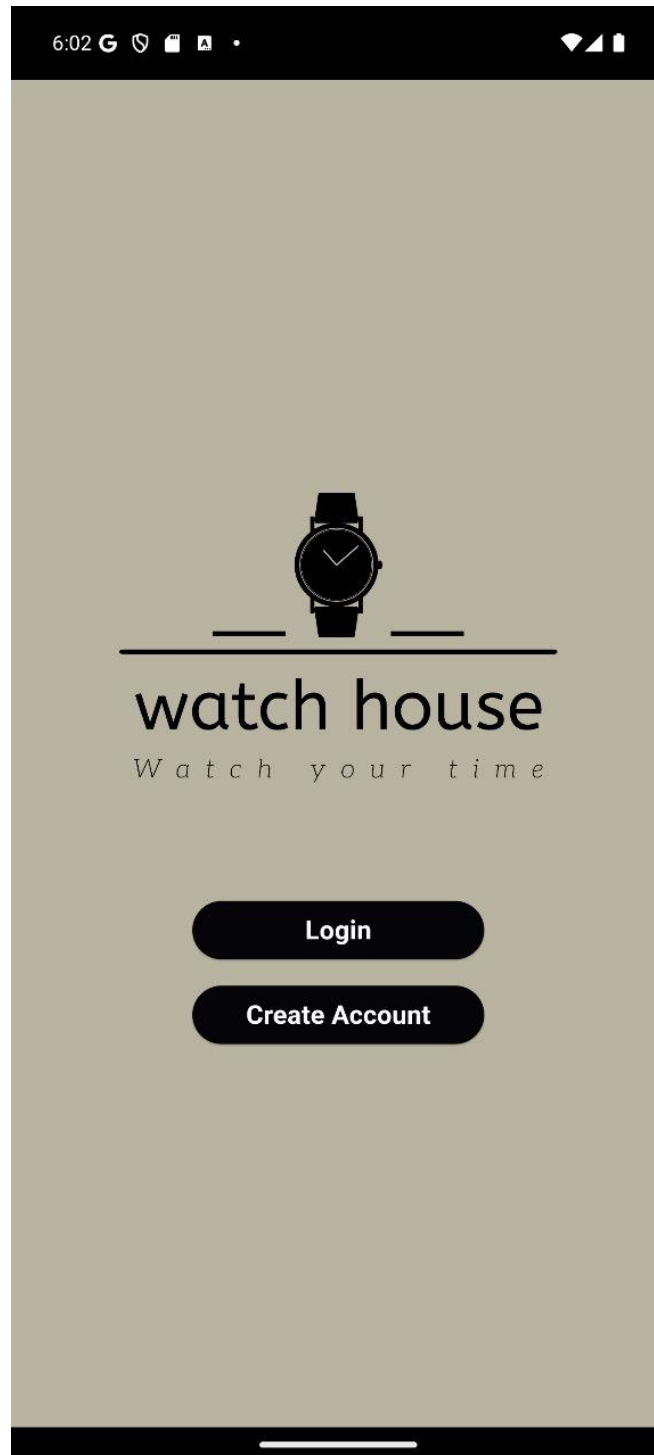
#### 4.3 System Interfaces

In this part of the doc, we are going to show the screens of the system and we will discuss each one of them.

Android Studio is the integrated development environment for Google's Android platform. Versions of Android Studio are compatible with some Apple, Windows and Linux operating systems. With support for Google Cloud Platform and Google app integration, Android Studio offers developers a well-stocked toolkit for creating Android apps or other projects.

#### 4.3.1 Welcome page

This page is the welcome page to the program. It displays the name of the program and its logo, and through it you can either go to the login page if you already have an account, or go to the create an account page if you do not have an account.



*Figure 8 Welcome page*

#### 4.3.2 Login page

This page allows access to the application using email and password, or allows access via a Google account.

If the user's email has not been verified, a verification request message will appear.

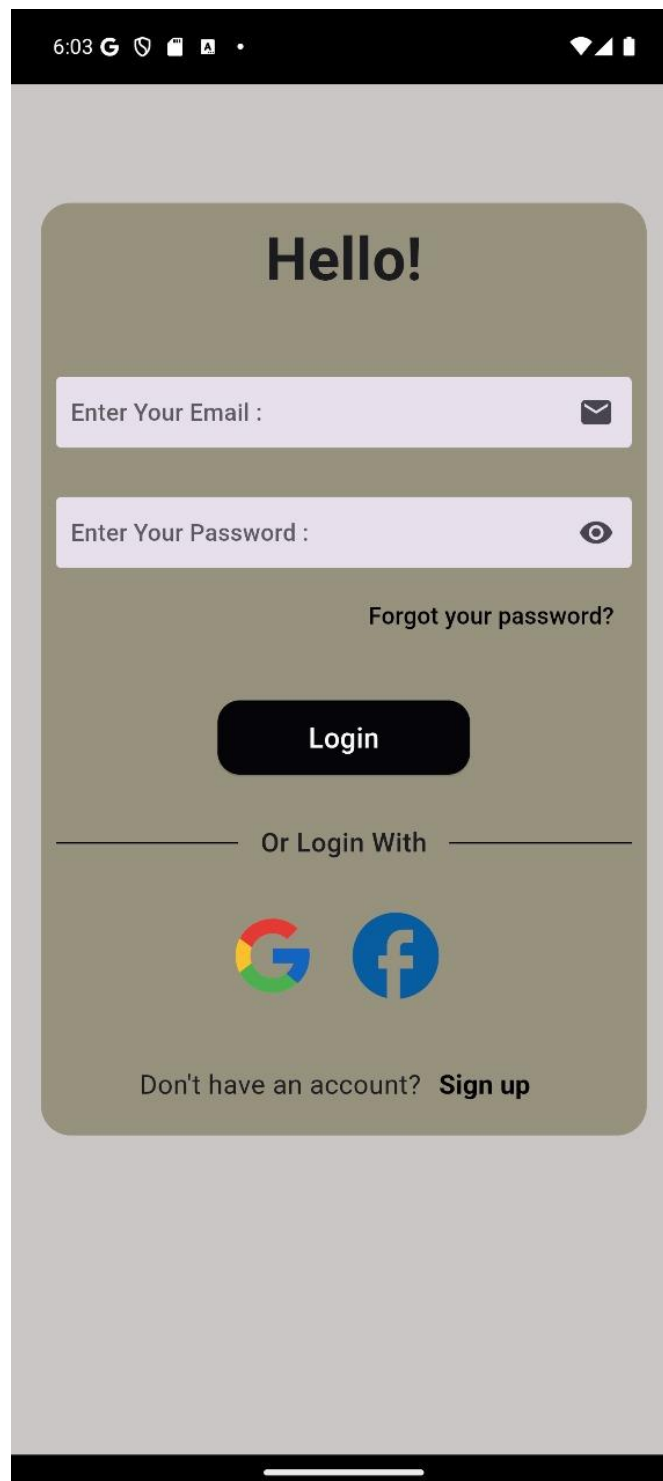
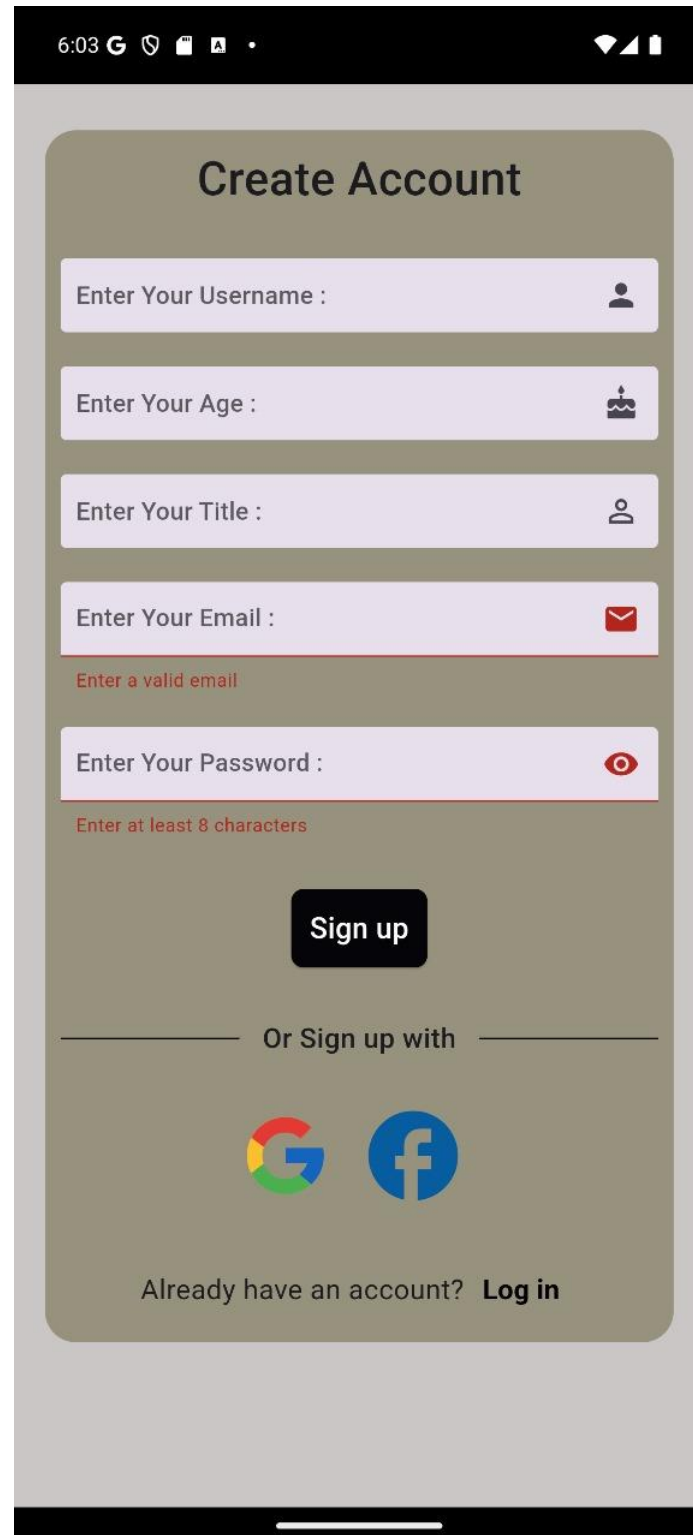


Figure 9 Login page



#### 4.3.3 Signup Page

This page allows the user to create an account using email and password, or create an account for the application by linking a Google account.




The image shows a mobile application interface for creating a new account. At the top, the status bar displays the time as 6:03 and various system icons. The main heading is "Create Account". Below this, there are five input fields, each with a label and an icon: "Enter Your Username :" with a person icon, "Enter Your Age :" with a birthday cake icon, "Enter Your Title :" with a person icon, "Enter Your Email :" with an envelope icon, and "Enter Your Password :" with an eye icon. Below the email field, there is a red error message "Enter a valid email". Below the password field, there is a red error message "Enter at least 8 characters". A black "Sign up" button is positioned below the input fields. Below the button, there is a horizontal line with the text "Or Sign up with" in the center. Underneath this line are two circular icons: the Google "G" logo and the Facebook "f" logo. At the bottom, there is a link that says "Already have an account? Log in".

Figure 10 Signup Page

#### 4.3.4 Home Page

On this page, the user's most common wristwatches will be displayed, and watch categories will be displayed in the form of men's watches, women's watches, and smart watches.

The(  ) button allows the user to display the products he wants to buy, and through it he can purchase what he chooses.

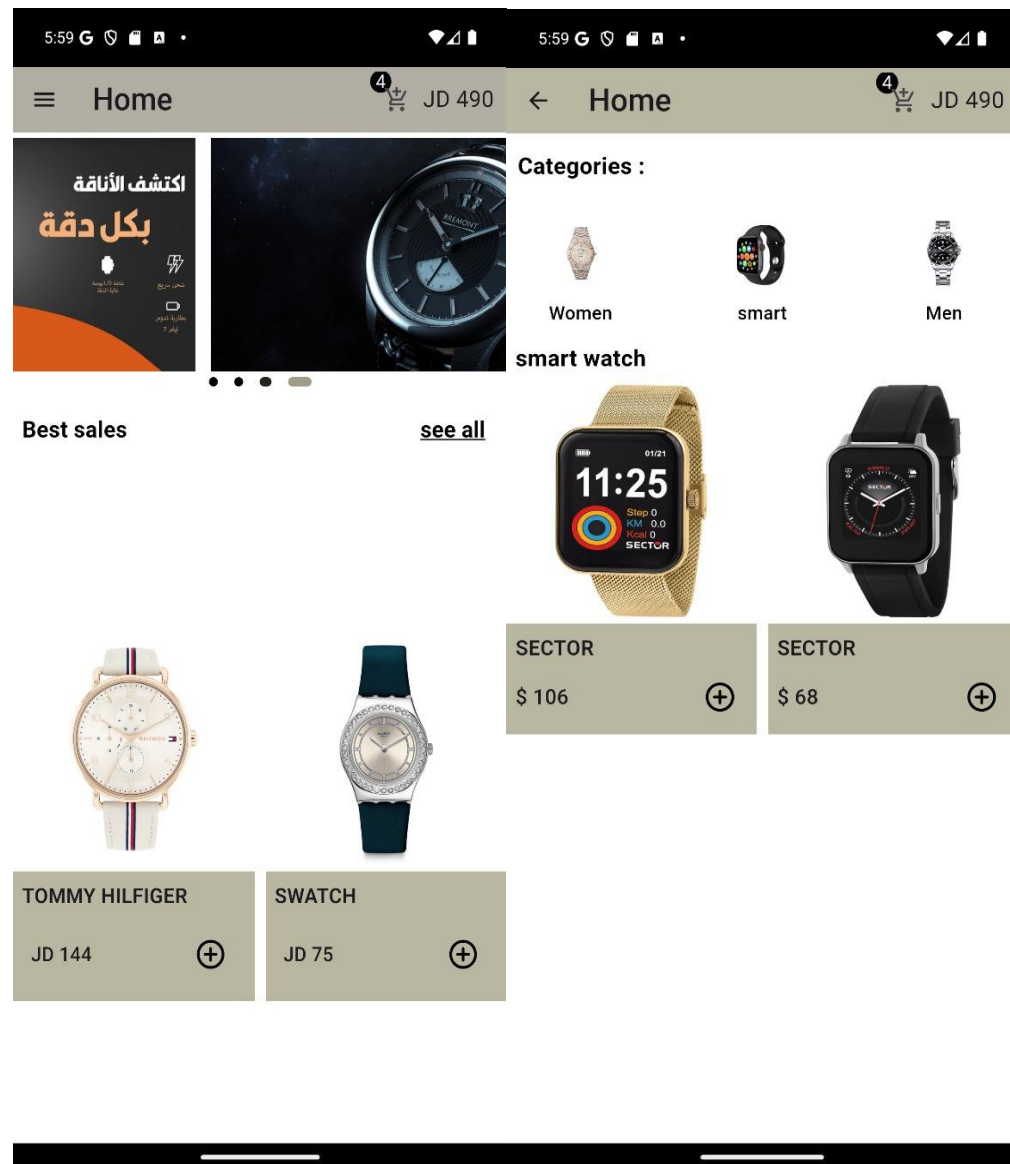


Figure 11 Home Page

#### 4.3.5 Home Page Banner

On this page, the user can access the home page and their products, their account settings, learn about the application, and log out of their account.

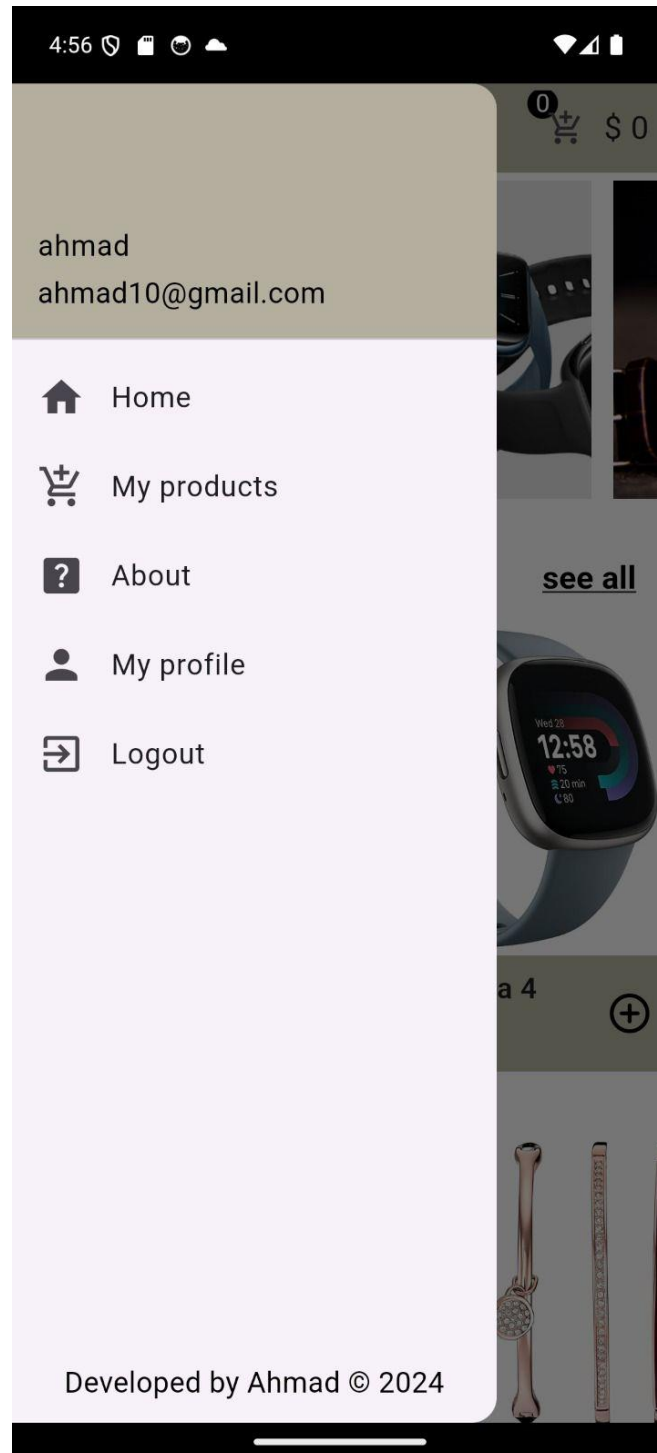


Figure 12 Home Page Banner

#### 4.3.6 Details Screen

This page displays a specific product description, pictures, product name, description, price, and how satisfied you are with the product, and you can add it to the basket.

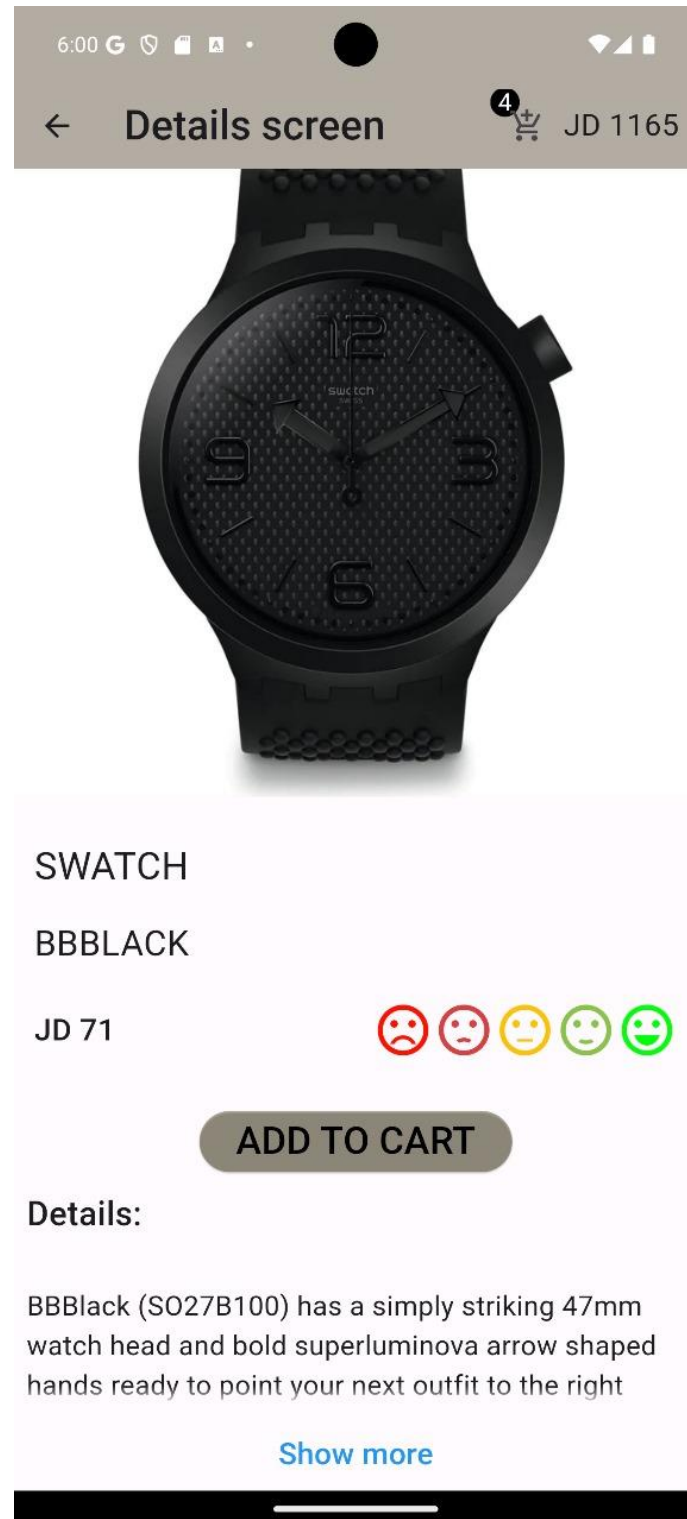


Figure 13 Details Screen

#### 4.3.7 Basket

This page displays the products that the user has chosen, displays the product and its quantity, and the total price of the products to be purchased is calculated.

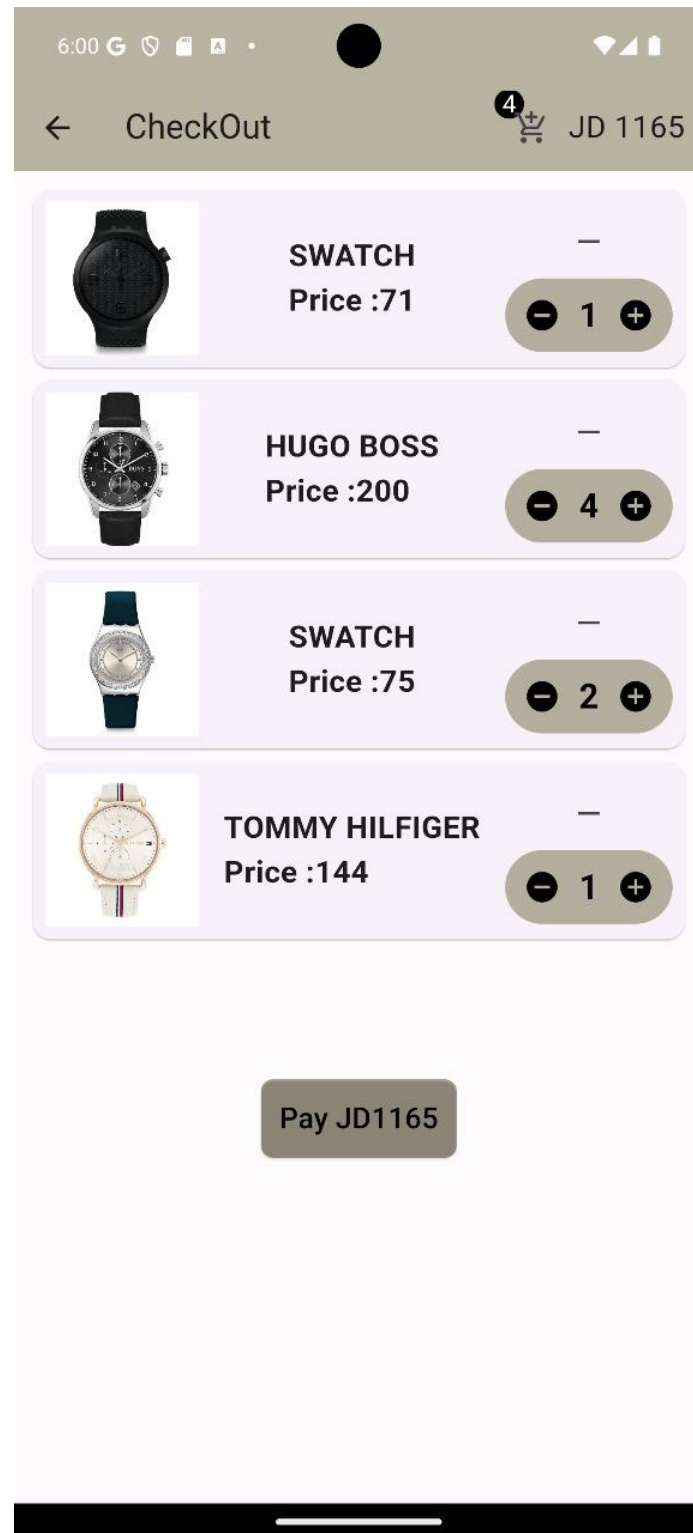


Figure 14 Basket

#### 4.3.8 Profile page

This page displays the user's information, his account, the date the account was created, the last login...

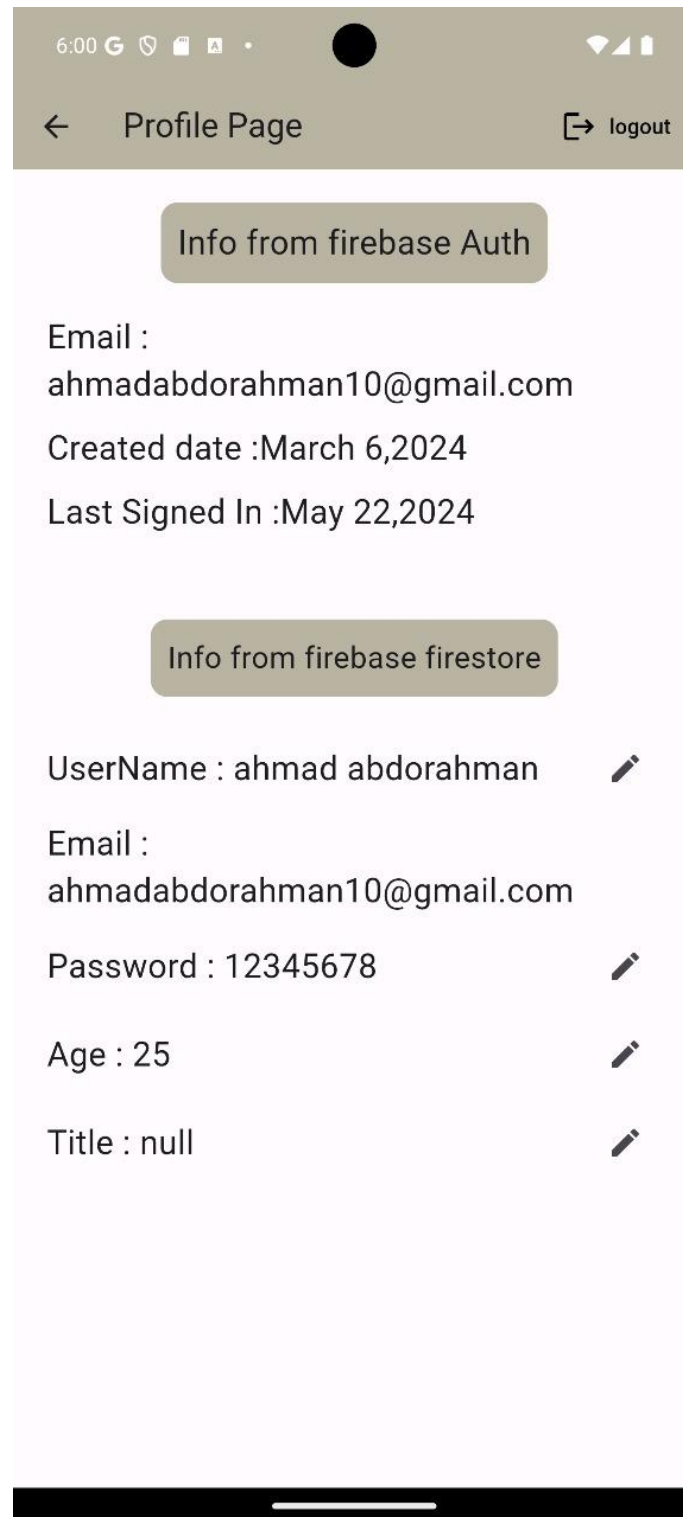
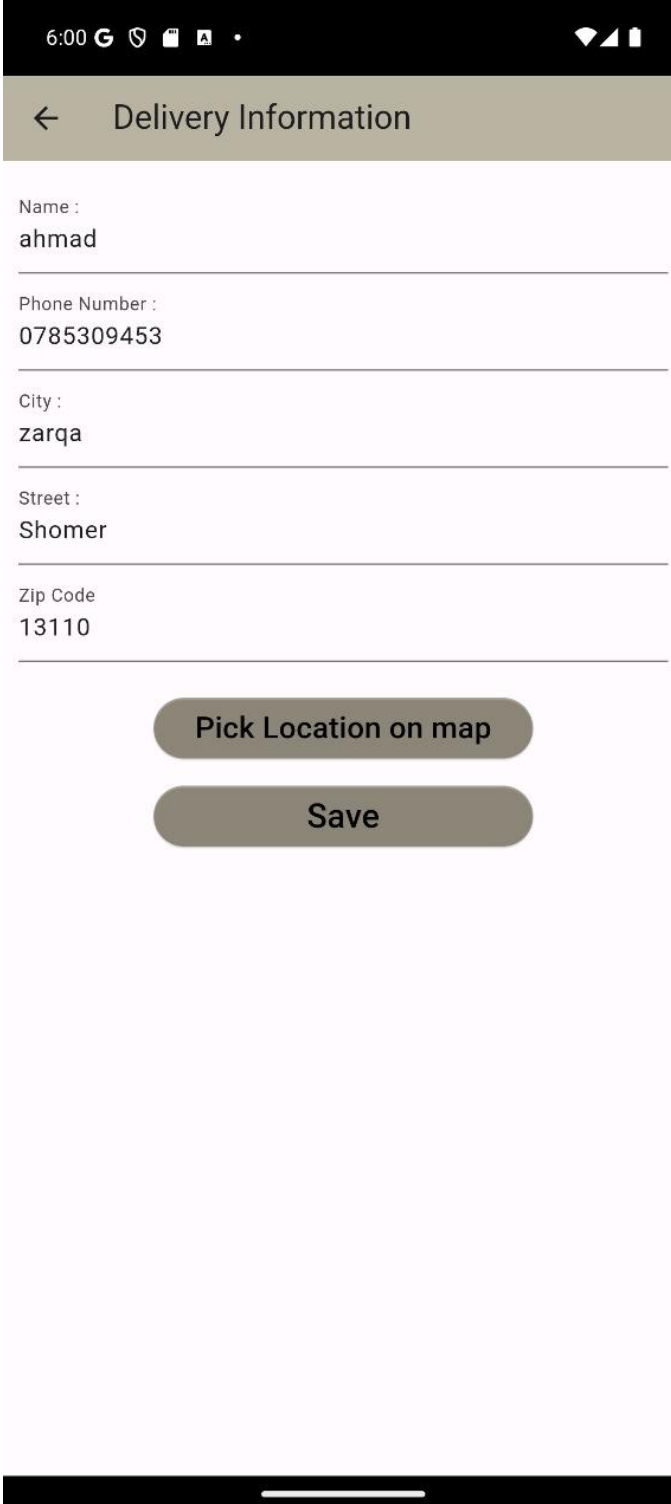


Figure 15 Profile page

#### 4.3.9 Delivery Information

This page displays the information required from the user that he needs to complete to determine the delivery address for the product he chose, name, phone number, city, street name, and specifying the address via Google Maps.



The screenshot shows a mobile application interface for 'Delivery Information'. At the top, there is a status bar with the time 6:00 and various icons. Below the status bar is a header bar with a back arrow and the title 'Delivery Information'. The form consists of several input fields with labels and values: 'Name : ahmad', 'Phone Number : 0785309453', 'City : zarqa', 'Street : Shomer', and 'Zip Code 13110'. Below the input fields are two buttons: 'Pick Location on map' and 'Save'. The bottom of the screen shows a black bar with a white line, indicating the home indicator on an iPhone.

Field	Value
Name	ahmad
Phone Number	0785309453
City	zarqa
Street	Shomer
Zip Code	13110

16 Delivery Information Figure

#### 4.3.10 Google Maps

This page displays Google Maps for the user in order to determine the place he wants the product to be delivered to.



Figure 17 Google Maps



# CHAPTER FIVE: TESTING

## 5.1 Introduction

System testing must be done to make sure the basic functions of the website and that the requirements have correctly translated into the required system.

Like any project or scripts are being tested more than once to ensure quality but should not to over-process of testing to not waste the cost and effort of the project. In order to avoid these mistakes, we divide this process into several sections which:

Testing each sprint separately

Testing the integration of the sprints.

Acceptance testing.

Portability.

Usability.

## 5.2 Testing each sprint separately

When each sprint is completed, we test the functionality, it is correct or not and to ensure that it meets the customer requirements (validation & verification).

## 5.3 Testing the integration of the sprints

After we completed all the sprints, we test the compatibility and ensure that it's correct and integrates nicely without any problems.

## 5.4 Acceptance Testing

To evaluate users' requirements, we divided the project requirement into a user acceptance testing and worked to verify their achievement according to the time set in the plan and the results were as follows:

### Summary

User Story	Test Case	Expected Result	Pass/Fail
1	Login with a valid email and password	Successfully logged in	Pass
2	Login with an invalid email or password	Error message displayed	Pass
3	Create an account using a valid email	Account successfully created	Pass
4	Create an account using an invalid email	Error message displayed	Pass
6	Login or Create with a valid Google account	Successfully logged in	Pass

7	Login or Create with an invalid Google account	Error message displayed	Pass
8	filter and sort products based on gender or watch type	Products are filtered	Pass
9	see product details	Product details are displayed	Pass
11	Rate the product	The rating appears on the product page	Pass
12	add the product to the cart	The product has been added to the cart	Pass
13	Increase and decrease in the number of products	The product quantity has been modified	Pass
14	Buy my products.	Your purchase has been confirmed	Pass
15	Determine the delivery location for the product	The delivery location has been determined	Pass
16	Payment for products	The product has been paid for	Pass
17	update profile information	Profile information updated	Pass
18	log out of the application	Log out has been completed	Pass

*Table 2 user acceptance testing form to evaluate customer requirements*

### 5.5 Portability Testing

The application underwent thorough portability testing to ensure its compatibility across various Android versions. The primary focus was on Android 9.0, which served as the main driver for the application. The testing also extended to multiple Android versions, including 4.4 and 11.0. The results were highly satisfactory, with the application running seamlessly on each version, encountering minimal problems or issues.

#### Summary

Android Version	Test Results
Android 9.0 (Pie)	The application ran without any problems, serving as the primary driver
Android 4.4 (KitKat)	Tested with very few problems, demonstrating commendable backward compatibility.
Android 11.0 (R)	The application performed well on the latest version, with minimal issues observed

*Table 3 Potability testing*

## 5.6 Usability Testing

We ran a usability test on a group of users and focus on the tasks that our app provides to the customer by asking customers to use and implement these app tasks and we observe their behavior and listen to feedback.

### Summary

User Story	Usability Test Case	Observations/Feedback	Improvements Needed
1	Login Process	Users found login process straightforward.	-
2	Account Creation	Users successfully created accounts without confusion.	-
3	Login or Create with Google account	Users found the process of logging in and creating an account with Google easy and satisfactory.	-
4	Product classification process	Users found the product filtering process satisfactory.	-
5	product details	Users got the details they needed.	-
6	Rate the product	Users found the rating process fairly satisfactory.	Add a place so users can write comments, UI.
7	Add to cart	Users did not face any difficulty.	-
8	Modification of item quantity	Users did not face any difficulty.	-
9	Shopping process	Users found the process familiar and easy.	-
10	Payment and location process	Users wanted more payment options.	Add more payment options UI
11	Profile Update	Users successfully updated profile information.	-
12	log out process	Users were able to log out successfully.	-

Table 4 Usability Testing

# CHAPTER SIX: CONCLUSION AND FUTURE WORK

## 6.1 Project summary

This project aims to develop a comprehensive e-commerce application tailored to the needs of users in the Jordanian market. The primary goal was to address the challenges faced by consumers in traditional online shopping platforms by providing a seamless, personalized, and secure shopping experience.

The main problem addressed by the project was the inefficiencies and limitations of existing e-commerce platforms in Jordan, such as difficulty in finding specific products, varying prices, and concerns about product authenticity. The research question focused on how to create a user-friendly, feature-rich e-commerce application that bridges the gap between consumers and sellers while prioritizing transparency and trust.

The project scope included the development of a user-friendly interface, integration of advanced technologies such as Firebase and Google Places API, and adherence to stringent performance, reliability, security, compatibility, usability, and maintainability criteria. However, the initial scope was limited to the Jordanian market, and geographical expansion was not within the project's scope. Additionally, while inspired by agile methodology, the project operated within the constraints of iterative development cycles and time constraints.

In summary, the project aimed to deliver a valuable and impactful e-commerce solution for the Jordanian market, addressing the shortcomings of existing platforms while prioritizing user experience and security. Despite the scope limitations, the project strived to create a platform that empowers consumers, fosters trust between buyers and sellers, and contributes to the growth of the e-commerce ecosystem in the region.

## 6.2 Results and Recommendations

The project identified challenges in traditional e-commerce platforms, such as finding products, varying prices, and authenticity concerns. It developed a comprehensive e-commerce application addressing these issues, providing a seamless, personalized, and secure shopping experience. Advanced technologies like Firebase, Google Places API, and Google Sign-In were successfully integrated, meeting stringent quality standards.

Observations showed a growing importance of personalization and rising security concerns in online transactions. Unexpectedly, user interface design emerged as crucial for user engagement.

Recommendations include continuous improvement based on user feedback, geographical expansion, and enhanced security measures. Overall, the project contributes significantly to advancing e-commerce in the Jordanian market.

### 6.3 Recommendations for Future Work

1. **Personalization Enhancement:** Future research could focus on further enhancing personalization features. This might involve integrating more advanced algorithms to provide even more tailored recommendations and experiences for users.
2. **Geographical Expansion:** Considering the success in the Jordanian market, future projects could explore opportunities for geographical expansion. Adapting the platform to cater to other markets or regions could unlock new user segments and revenue streams.
3. **Security Reinforcement:** Given the increasing importance of security in online transactions, future projects should prioritize continuous monitoring and updating of security measures. This ensures user data remains protected, building trust and confidence among consumers.
4. **User Interface Optimization:** Improving user interface design should remain a focus for future projects. Enhanced visual appeal and intuitiveness can further enhance the user experience, driving engagement and satisfaction.
5. **Integration of Emerging Technologies:** Exploring the integration of emerging technologies such as augmented reality (AR) and voice commerce could provide unique and innovative shopping experiences for users, setting the platform apart from competitors.
6. **Sustainability Initiatives:** Considering the growing emphasis on sustainability, future projects could incorporate sustainability initiatives into the platform. This might include highlighting eco-friendly products or partnering with sustainable brands to appeal to environmentally conscious consumers.
7. **Continuous Feedback and Iteration:** It's essential for future projects to prioritize continuous feedback gathering and iteration. Regular updates and enhancements based on user feedback and market trends ensure the platform remains competitive and relevant in the evolving e-commerce landscape.

**By focusing** on these recommendations for future work, future projects in the same field can build upon the foundation laid by the current project, further enhancing the online shopping experience and driving innovation in the e-commerce industry.



## 6.4 Conclusion

In conclusion, this project has focused on developing a comprehensive e-commerce application tailored to the needs of users in the Jordanian market. Through thorough research and analysis, key challenges in existing e-commerce platforms were identified, and innovative solutions were implemented to address them.

The project's main contribution lies in the development of a robust e-commerce platform that offers a seamless, personalized, and secure shopping experience for users. By integrating advanced technologies and adhering to stringent quality standards, the application meets the evolving needs of consumers while fostering trust and transparency in online transactions.

In conclusion, this project marks the successful completion of a valuable initiative aimed at advancing e-commerce in the Jordanian market. Moving forward, the platform is poised to make a significant impact by empowering consumers, driving economic growth, and contributing to the flourishing e-commerce ecosystem in the region.

## References

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