Dorset College Dublin

ASSIGNMENT

LECTURER NAME: Bernard Joseph Roche	
STUDENT NAME: Peterson Eduardo Sampaio Silva	**STUDENT ID: 71557**
PROGRAMME:	**STAGE/YEAR: 2 year/ Semester 2**
MODULE NAME:CA3 UX/UI Design & Usability	
ASSIGNMENT NO. & TITLE: Project (60%) Online Shopping App	
GROUP (Names & Student IDs): None.	

- All assignments must be submitted through Moodle by the agreed submission date. - Only submit a signed hardcopy to your lecturer if requested and you must arrange to hand it <u>directly to the Lecturer and must include this cover sheet.</u> - No submissions will be accepted at Reception. - Late assignments will incur a penalty unless a learner has documented personal mitigating circumstances or if they have been granted an extension. All such documentation must be submitted at least 7 days prior to the submission date. For late submission the assessment grade will be reduced by 10% for each day that the assessment is late. After day five, the assignment will not be accepted.	Date Received: (Lecturer use only)

MODE OF SUBMISSION: SOFTCOPY _____   HARDCOPY _____

COMPONENTS OF SUBMISSION:
(e.g. no and type of pieces submitted, no of pages in a report, disk included?)

DECLARATION: I declare that:

- *By uploading this work to Moodle I automatically declare that this work is entirely my own and that I have acknowledged all materials and sources used in its preparation;*
- *I have not copied in part or whole or otherwise plagiarised the work of anyone else and have not knowingly allowed others to plagiarise my work in this way;*
- *I understand that plagiarism is a serious offence and that I am bound by Dorset College policy on Academic Integrity. I understand that I may be penalised if I have violated the policy in any way;*
- *This assignment has not been submitted for any other course or module at Dorset College or any other institution, without authorisation by the relevant lecturer(s);*
- *I have read and abided by all of the requirements set down for this assignment.*

SIGNATURE* …………………………………………………… DATE ……………………………………………
(* if this is a group assignment, each member of the group must sign).

Mobile App Report

Introduction

This was the final project that we were assigned to complete as part of our class project. We were given the task of creating an online store. It was important to use references and styles from what is available today from major sellers, including Temu, Shein, Amazon, among others, in order to create our presentation.

Having developed the application to meet the specific needs of modern consumers, we are seeking to provide you with a simple and intuitive experience, something that is easy to use and access within the timeframe that we have given you.

We have in our report the application development process from the draft, beginning and final visualization. We highlight the main steps, design decisions and functionality. During the project we were able to see some key aspects such as authentication, product listing and the requirements in the shopping cart, without leaving out the order history as requested during implementation. We had links and resources to complete the project, such as profile images, and item creation categories. These were for building the application through the Fake Store API.

By meeting the stipulated requirements and implementing the necessary functionalities, the application is expected to provide an efficient and satisfactory online shopping experience for users. This will contribute to the success of the project and meeting the course objectives.

Application Description: StorEdu

As our main objective, we had the challenge of developing and creating an application that simulates an online shopping platform. We can take some examples today, such as Amazon, Temu, Shein and others. As a personal project, I considered naming the App StorEdu where the word Store represents the nature of the project and the word Edu would be an abbreviation of the author's name, giving authenticity and a personal touch to the project.

Platform

Our project was created to be compatible with the Android platform, guaranteeing broad access to mobile device users with the Android system. We use the Kotlin programming language and Jetpack Compose tools, which are modern and efficient technologies allowing us to create a dynamic user interface providing a fluid, intuitive and pleasant browsing experience for users.

Brief history of development

Having some objectives and challenges provided by the lecturer, some design, functionality and security practices were applied. Where does our App go beyond just being an application, but also a project that demonstrates technical knowledge and skills.

Objectives and Justifications:

With the aim of improving the author's knowledge and skills in the field of application development, research was carried out on videos, codes and available resources, representing a valuable opportunity to apply theoretical concepts in a practical environment, facing real day-to-day challenges and implementing effective and non-effective solutions as well, as I believe we still have many things to learn. As I said previously, the importance of this project lies not only in its practical purpose as an online shopping platform, but also in the opportunity it offers me to consolidate and expand my knowledge in application development.

Although the initial priority of the project was to achieve the established requirements and develop an efficient solution, the potential for use and benefits for end users are also significant considerations during project development. Due to this, at this stage of the project, no thought was given to what the target audience would be.

Development Methodology

During the development of StorEdu, we took an iterative and incremental approach. We created the application in stages and tested it continuously. By combining design thinking with agile development, we were able to apply a flexible and adaptable approach to meet the project's needs.

At first, low-fidelity sketches were made to visualize and explore the overall structure and navigation flow of the application. As a result of these sketches, we were able to identify the main features and requirements of the application.

Figma was used to refine the sketches and create more detailed wireframes. During this phase, we could visualize the user interfaces and interactions between the different screens. Pages and components were developed and iterated gradually to ensure communication between screens and information retrieval worked.

During implementation, the project was divided into smaller, manageable parts. Each stage focusing on the implementation of a specific functionality or component of the application. This allowed for a more controlled and incremental approach, facilitating early detection of issues and adjustments as necessary.

However, throughout the development process, challenges arose related to integration with API resources links. To overcome these difficulties, additional research was conducted, including consulting videos and similar projects on YouTube. This was to find alternative solutions and ensure that the project's requirements were met.

When we refer to colours, it is very difficult to understand what your colour style is, and which color style will be most acceptable for a project. At first, we thought of blue tones as our first choice, when we saw in the final project that the blue colouring was not representing a sales app, we resorted to research and colour psychology to be able to understand a little more, and finally we tested the green colouring. In addition to bringing us an aspect of peace, the colour is easily similar to the colour of money, triggering the thought that you have money or that a certain product is cheap, thus increasing the chances of a sale being made.

C0DCCB	006C4B	FBFDF9	000000
Ash gray	Dartmouth green	Baby powder	Black
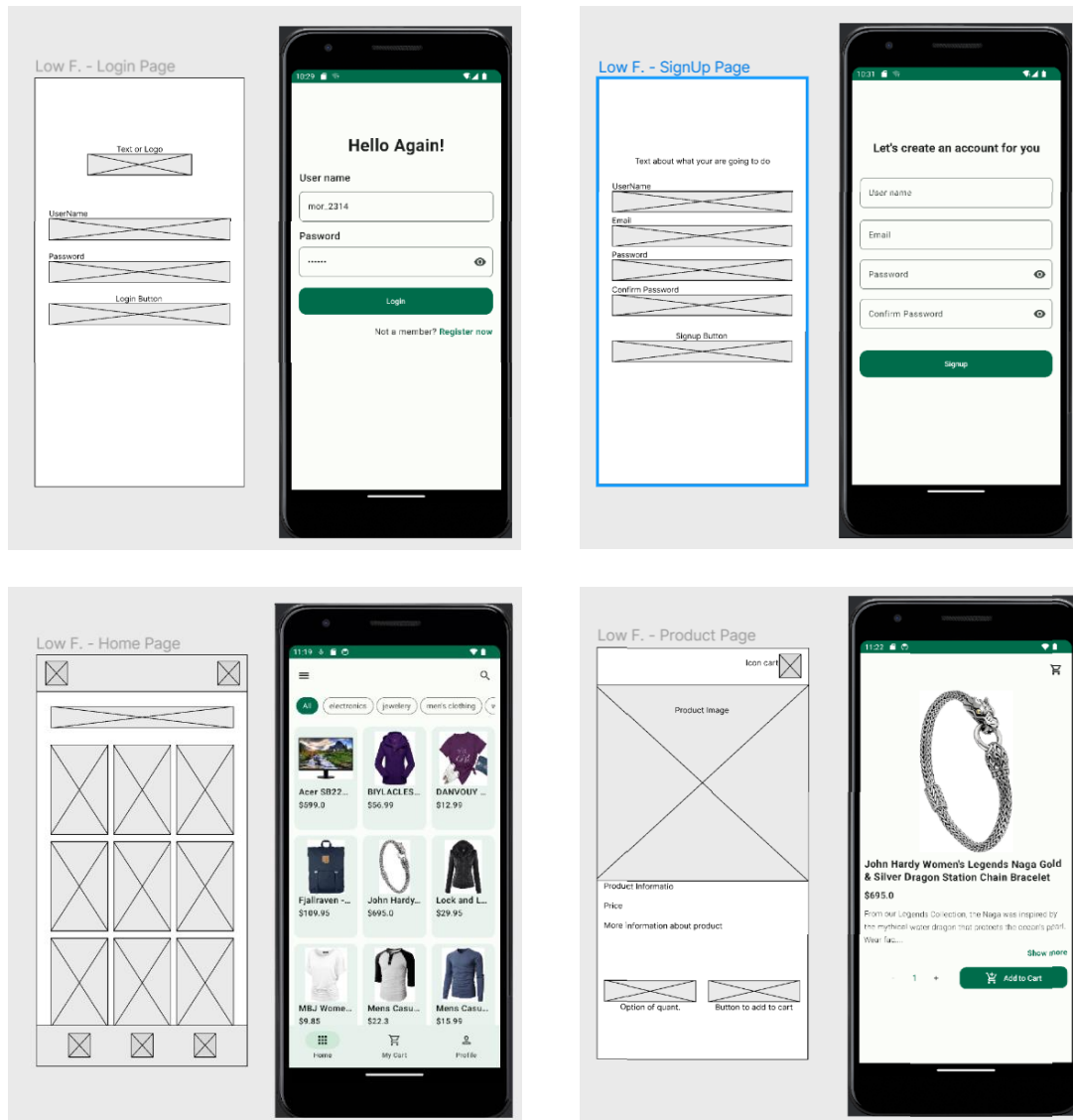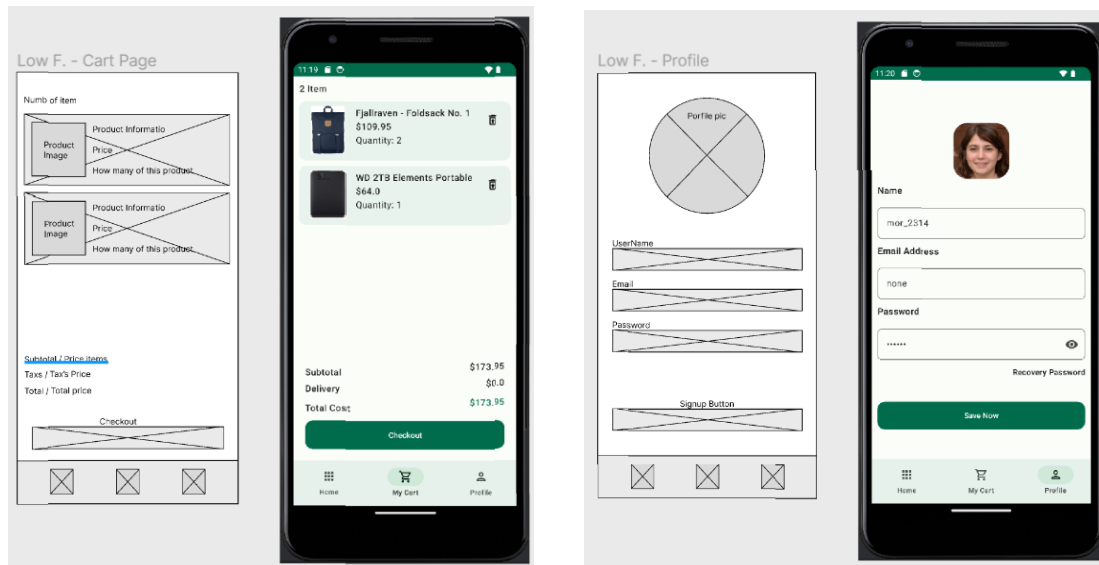
Looking at StorEdu's development journey, it is remarkable to see the transformation from its early stages to its final form. The project began with basic sketches and wireframes, while navigating the initial stages of ideation and planning.

As development progressed, the project took shape, with features implemented and user interfaces refined. However, along the way, it became evident that certain design aspirations could not be fully realized due to various knowledge limitations and challenges encountered during the process.

Despite these obstacles, I was able to find other ways to present the project in its final iteration. While before and after photos may not portray identical images, they reflect the evolution and adaptation throughout the developmental journey.

Architecture and technologies

To complete a project in Android Studio using Kotlin and Jetpack Compose and meet all the requirements listed in the project, we need to use a variety of technologies and knowledge.

To authenticate users, it was necessary to use Firebase Authentication. This allowed users to register and log in with email/password, and also store the user ID locally to keep them logged in even after restarting the application. Although I had difficulty at this stage because I was unable to close the application and open it again during the previous login.

To list products, use Retrofit to make API requests and retrieve categories and products, displaying them in Jetpack Compose Lazy lists for smooth, efficient scrolling.

For the shopping cart, a ViewModel was used to keep the cart state and user interface updated as needed. In addition, ViewModel and LiveData could be employed to show a summary of the cart and total value.

Terms of Functionality

This was designed to challenge users, promoting knowledge and experience in the area.

It is clear that significant advances have been made in functionality. The buttons now have more accessible, intuitive positioning, colors, among others, facilitating user interaction. Additionally, screen transitions have been improved, providing more fluid navigation, and effectively directing the user to the final destination, which is the shopping cart.

In a way, this system was developed to familiarize users with design patterns and promoting greater intuition during interaction. Screen transitions, in particular, play a crucial role in this process, providing a more cohesive and intuitive user experience.

Conclusion

In conclusion, the project, StorEdu, is not just an online shopping platform, but a journey of learning and challenges for me as a developer. From the initial stages of conception to final implementation, the process was marked by a constant search for innovative and effective solutions. The technical and design challenges encountered along the way were faced with determination and creativity. This resulted in a product that not only meets functional needs, but also seeks to provide an exceptional shopping experience for users.

Throughout development, I explored and applied various technologies and methodologies. These included using Kotlin and Jetpack Compose in user interface development to integrate services such as Firebase Authentication and Retrofit for user authentication and product data recovery. Each obstacle overcome represented an opportunity to learn and grow for me, reflecting my ongoing commitment to excellence and innovation.

Despite the limitations and setbacks encountered throughout the process, the end result is a testament to the dedication and effort I invested in this project.

References

Roche, Bernard Joseph. "Bernard Joseph Roche." YouTube, https://www.youtube.com/results?search_query=bernard+joseph+roche.

Felipe, Alex. "Alex Felipe Dev." YouTube, https://www.youtube.com/@AlexFelipeDev.

TheAndroidFactory. "TheAndroidFactory." YouTube, https://www.youtube.com/@TheAndroidFactory.

Google. "Jetpack Compose." Android Developers, https://developer.android.com/develop/ui/compose.

Coolors. "Coolors." https://coolors.co/c0dccb-006c4b-fbfdf9-000000.

Figma. "Figma." https://www.figma.com.

Pinterest. "Login Screen Ideas." Pinterest, https://ie.pinterest.com/search/pins/?q=Login%20screen%20ideas&rs=typed.

FakeStoreAPI. "FakeStoreAPI." https://fakestoreapi.com.