CHANGE THIS TO THE TITLE OF YOUR PROJECT

AND CHECK THE SPACING

Final Year Project
B.Sc.(Hons) in Software Development

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Chapter 1

Introduction

My project is a Native Android E-Commerce Application built in Android Studio using Kotlin/Java programming languages. The general concept of my application is to create a e-commerce app that mirrors Amazon or Alibaba.
A specific goal of this project was to learn how native development differs from hybrid development(Xamarin, Ionic, React Native etc). Hybrid development was a topic that had multiple course projects, but i never got to experience building a project based on native development in Android or iOS.

A focus i made on my application is integrating different technologies such as Firebase, Picasso and Retrofit. Using these technologies made certain aspects of my application easier to implement. For example Picasso which is a image downloading and caching library can manage many aspects of image processing in an android environment such as handling ImageView recycling, complex image transformations with minimal memory use and automatic memory and disk caching which all have a heavy amount of coding involved to be implemented manually.

Firebase is another technology i use which has a great number of features and products such as Cloud Firestore which stores and syncs data between users and devices - at global scale - using a cloud-hosted, NoSQL database.
Authentication to manage users in a secure way by offering authentication through email, password and third-party providers like GitHub, Google, Facebook and Twitter.
Realtime Database which is an efficient, low-latency solution for mobile apps that require synced states across clients in realtime.

1.0.1   Objectives for project

Use a new programming language and framework
One of the objectives i had set for this project is to use a new language and
framework, i made the choice of android and kotlin as it met all my objectives
for my project. The main goal of my project was to build a native mobile ap-
plication and compare it to hybrid applications that i have built throughout my
course.

Create a Native Mobile Application

Use new and useful technologies ss
Include social Media Integration ss

Create a Native Mobile Application

1.0.2 Sections

Methodology After setting objectives for my project, i set out to make a plan for development using Kanban boards. I used an agile approach for my development setting specific goals for each week. Validation and Testing was done using Junit.

Technology Review In this section i explain the Technologies used in my project, technologies such as Firebase, Kotlin, Android Studio are explained in great detail. I will also review programming in android with kotlin compared to my experience through out my four years in college. Comparisons such as Native development vs Hybrid development, use cases for different programming languages, language features such as more use of lambda expressions and more Kotlin features that make it a great alternative to java for android development.

System Design In this section i provided an explanation of the overall system architecture using UML class, sequence and interaction diagrams as well as screenshots of UI components such as how each view is formed with ImageView, TextBox etc.

System Evaluation In this section i evaluate my project against the objectives i set out.

Conclusion
In my conclusion i evaluate my overall goals for my project and list outcomes of the project. I go over discoveries made, what I've learned and what i can improve on in the future

Github Repository https://github.com/DarrenRegan/Final-Year-Project

My GitHub Repository contains my Dissertation, APK file which are both available for download with a click of a button at the top of the README.

- The README contains a quick explanation of the project as well as an installation guide, Devices used in testing as well as resources used along with links to research material.

- The code for my project is located at Final-Year-Project/app/src/main/ Java folder contains the code for activities and models

- Res folder contains the code for UI elements of the project, main/res/layout contains XML for all activities

Figure 1.1: The image caption should be succinct but descriptive.
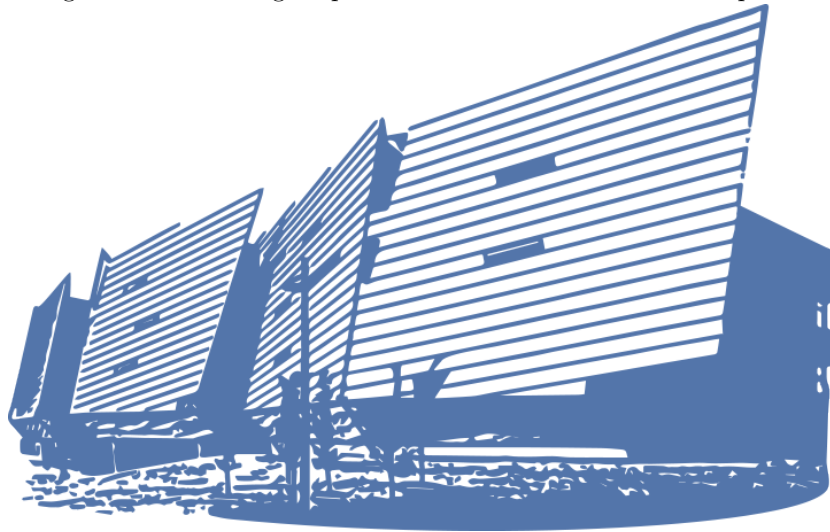
Chapter 2

Methodology

This chapter covers the various methodologies that were implemented in this project, this includes Research methodologies, Software development methodologies, project management, supervisor meetings, developments tools, testing and source control.

An overview of methodologies used in this project; **Research methodologies** which includes Mixed Methods, Quantitative Research and Qualitative Research. **Software development methodologies** which includes Agile Development, Continuous Delivery, Test Driven Development, Feature Driven Development, Extreme Programming etc. **Project management** which includes GitHub Kanban board and supervisor meetings. **Development tools** Android studio, Firebase. **Source Control** GitHub, Overleaf, Badge/Shield

2.1   Research Methodology

The research methodology that was used in this project was a Mixed Methods Research methodology, using a mix of both Qualitative Research and Quantitative Research. Qualitative research approaches are employed across many academic disciplines and is useful at an individual level. Qualitative data collection methods vary using unstructured or semi-structured techniques.

Various data collection tools were used for gathering data such as

2.2   Software Development Methodology
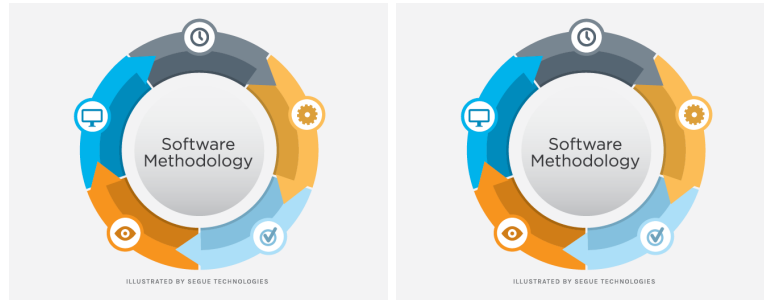
Explain Agile Development, Continuous Delivery, Test Driven Development, Feature Driven Development, Extreme Programming etc. How i implemented them in my project

2.3   Project management

Explain GitHub Kanban board and supervisor meetings. How i used both to improve my project

2.4   Development tools

Explain Android Studio, Firebase. Compare Android studio to Intellij
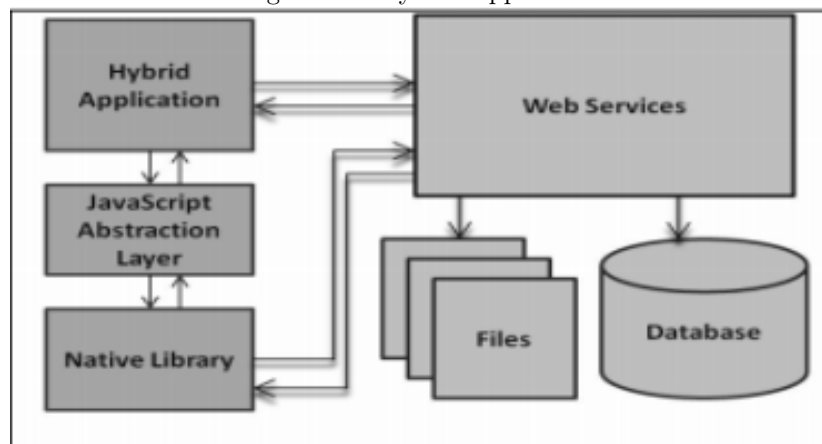
2.5   Source Control

Explain GitHub, Overleaf, Badge/Shield.

Chapter 3

Technology Review

Blah......

Figure 3.1: Hybrid Application

Chapter 4

System Design

Blah......

Chapter 5

System Evaluation

Blah......

Chapter 6

Conclusion

Blah......

Bibliography