**Mobile Software Development Report**

**Name:** Jennifer Nolan

**Student Number:** C16517636

**Course:** DT282/3

**Topics:**

1. **How you approached the development of each component of your app.**

To begin developing my app I created a basic design plan on paper to get my thoughts down and to ensure that all of the requirements were met. In this design plan I included basic overview points of what each page would do. After this I began developing the app page by page ensuring that a page was functioning completely before moving onto the next page of the app. I began with the types of eatery page using adapters to display the different categories and intents to move to the next page in the app. I used this same layout and process for the companies on the next page of the app.

Next I worked on a specific company’s details page. I firstly gathered all the required overview information of the company to be displayed to the user based on which company the selected. I also included an Image view of the company’s logo on this page. This page is where the majority of the applications functionality takes place. I first began with the more information button on this page. This button, once selected, uses the chrome application on the emulator to go to the company’s website or a review page about the company to give more information to the user about this company. Next I tackled the location button on this page. I firstly got the longitude and latitude of the company’s locations near Kevin Street and passed this information to the google map tool on the emulator. With this information the map is able to point to the location of the company on the map and display it to the user. Lastly on this page the users can add a company to their favourites, stored in the database, using the favourite button. Once selected this button will bring you to a new page in the application where the user can input their notes about a company, whether it be what the like to order there or events that may be going to happen there, and placing this information into the database.

Once the users has added to their favourites, the next page I creates is their list of favourites page which displays all the users favourite places entered into the database in a list format. If the user long clicks on one of these list elements they are brought to another page where the user can do one of two things to their favourite. They can either update the notes on the favourite and in the database or they can delete the favourite from their list and the database, done using the delete symbol in the toolbar of the update page.

Lastly while developing the app I included buttons on each page to navigate between the various pages in the application.

1. **Reasons behind design decision made e.g. efficiency, user experience etc.**

I decided to design my application this way as I wanted a simple app that could be navigated easily by all users. I did not want to overwhelm any user, either experienced or not. I wanted the application to be straightforward to use without to many different functionalities that may cause the user to struggle using the application. However I also wanted the user to be able to personalise a part of the app to a certain degree. Therefore, I added the option for the user to be able to add a company to their favourites. This allows the user to personally choose which company they would like to appear in their list.

1. **Tests that were carried out to ensure the app works correctly.**

As I was developing my app I tested the basic functionality of my app as I went along. Once I ensured that each page was functioning properly I moved on to developing the next page and repeated the process of developing then testing again. If I came across a problem that required more thought about how to fix it I would make the app “System.out.println” a variable, to see if the variable was holding the correct data, or if I wanted to see if a particular function was being called to and functioning correctly I would use “Log.d” to validate that the code was reaching that point successfully.

1. **Challenges faced during the development and how these were overcome.**

The first challenge I faced was the basic setup of my project on Android Studio. When creating a project in my Android Studio some of the files are not created completely, meaning that some of the files do not have the correct closing tags. This therefore throws up errors in the very beginning of the project. To fix this issue I took the files from previous projects that worked completely and copied the contents of these files into my assignment project to remove these project creation errors.

I also had challenges formatting the toolbar in my application when a ScrollView tag was involved. To fix this issue I had to try multiple different layout types in the xml file.

The last challenge I faced while developing my application was getting the position of a selected list element in the favourites list generated from the database. To overcome this issue I had to go through my code relating to this element of the app line by line to find the issue. In the end I found that the issue was when I was calling the select statement on the database I was calling the function as “getFavoriteWithId()” when the function was actually called “getFavourite**s**WithId()”.

1. **What interesting things you learned about Android during the course of developing the app.**

When developing my app I found it interesting to learn how to create and use a database from start to finish. Although we had a lab on this subject of database, some of the code had be pre done. However for my assignment I had to adapt the code we had for my own project and learn what each individual function does in relation to accessing the data in the database.

As well as that, the entire process of creating a substantial app from start to finish. It was interesting to learn about the designing of an app, dealing with errors and changing plans and design because of particular idea not working.