CE881 Assignment

The main aim of the assignment is to produce an Android app; this is split into two parts to help ensure that you make steady progress.

Assignment 1 is to demonstrate a working knowledge of Android fundamentals, and to design and describe a prototype of your app.

Assignment 2 is to implement the complete app and write a report on it. See the list of suggestions for some ideas. Before deciding on an app to develop you are strongly advised to discuss your choice with the module supervisor.

Assignment 1

This has two aims: to work demonstrate that you can write Android programs that perform a range of useful functions (see below). The second is to demonstrate progress on your main app by producing a prototype together with a brief report.

The aim of this part of the assignment is to describe the design and rationale for your app including an outline of how you intend to implement it including the classes, activities, intents and fragments. The deliverables are a **report** and a **prototype**.

The prototype can be based on a combination of working code and on mocked-up GUIs (e.g. designs showing the placement of each component in a view with or without the code behind it to make it operate). At least some working code and a deployable APK should be included.

The report should be split into the following sections:

- Introduction: explains the purpose of the app and outlines its main features.
- Background: brief description of similar apps including market research data indicating the size of the market for this type of app.
- Features: describe what your app will do as a set of bullet points with a brief description of each one. Features may be split into essential and desirable.
- Content: where the content will come from, what format it will be in, expected size, update cycles, etc.
- Implementation: outline any issues you foresee in implementing the app.
- Testing schedule: explain how you will test each part of the app.
- Plan: estimate of when you expect to implement each part, and how long it will take.

Length: 7 pages should be sufficient to describe all this, but this is not a strict limit.

Deliverables

- Report in Microsoft Word or PDF format

- Complete project tree containing all files necessary to run any prototype code, supplied in a .zip file

Submission (see OCS for deadline)

- A .zip file containing everything should be uploaded to the Online Coursework Submission (OCS) system. In Windows a .zip archive can be created by right-clicking on the root folder for the work and selecting "**Send to -> Compressed (zipped) folder**".

Marking guidelines:
- Successful Hello World App
  - The application starts successfully, screen is rendered properly, no start-up crashes, compiles out of the box, APK installs flawlessly **(10%)**
- Successful drawing of app components
  - Drawing should be handled irrespective of screen size/orientation **(5%)**
- Correct behaviour on transient state
  - Is screen rotation handled gracefully? **(5%)**
- Correct behaviour on permanent state
  - Is state saved regularly? **(5%)**
  - Is application exit handled gracefully? **(5%)**
- Does the app broadly adhere to good coding practices?
Are resources accessed properly through .xml files? **(5%)**
  - Is the project structure sane and adhering to android best practices? **(5%)**
  - Is there a clear separation between Model, View and Controller/Presenter? Views and Activities should not contain "application logic" code **(5%)**
- Are implicit intents used correctly? **(5%)**
- Are key pressed/screentouched events handled correctly? **(5%)**
- At least one functioning dialogue/menu item **(5%)**
- Well written report **(20%)**
- Overall mockup project quality **(20%)**