Mobile Software Development CA

Android App Assignment

Please find below the details for your Android assignment. Students are advised to **carefully read** all four pages of this document before beginning work on the assignment. Any queries related to it should be emailed to david.leonard@dit.ie

IMPORTANT DEADLINES

What	Where	When
Report and Code Submission	**WebCourses**	Sunday December 9th at 23:55
Demo	**Lab**	Wednesday December 12th 09:00 – 11:00

SUBMISSION AND DEMO DETAILS

These two items should be uploaded to **WebCourses** by the deadline (December 9th at 23:55):

1) **Report** a word processing document e.g. word or pdf

2) Project files necessary to run **app** i.e. source code, resources, manifest, gradle files etc.

Just use the **Export to Zip File...** command (screenshot below) in Android studio:
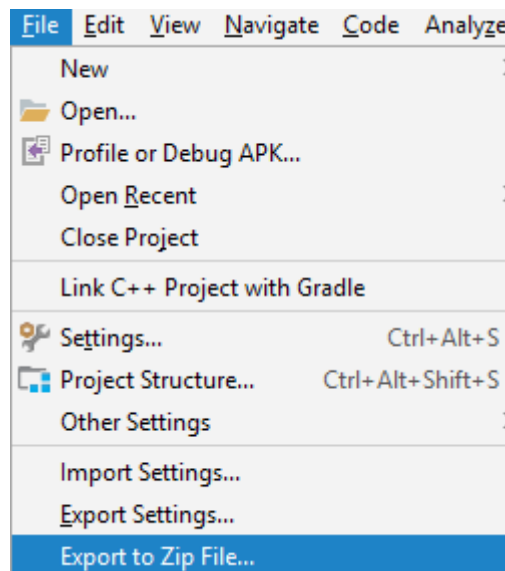
Demo details

Students will be expected to smoothly demonstrate their app and **answer any questions** about their code posed during the **allotted time** for their demo.

REGULATIONS / LATE SUBMISSIONS

        1.)   Assignments will **not** be corrected unless **demoed**.

        2.)   A 10% penalty will be applied for **each day late**.

The app must be your own work. Assignments that are copied or written by someone else will receive **Zero marks** and the plagiarism escalated as per DIT assessment regulations.

EXTERNAL CODE / CODE SNIPPETS

If you use code snippets that you obtained from an online or book example, you MUST reference with an opening AND closing comment around the code block itself in the .java file and/or XML file e.g. for java

```
// Reference: The following code is from Android example @www / wherever
    Code snippet here...
// Reference complete
```

If you don't reference code snippets and the code is not yours, it is technically plagiarised code. It is not practical to prevent students from using code snippets, but marks **will reduce** the more you rely on code written by someone else i.e. ultimately it is **your programming skills** that are being examined.

PERCENTAGE OF OVERALL GRADE

The app development assignment is worth **30%** of your overall mark in Mobile Software development. It is marked as follows:

1. **App** – 70 out of 100 marks (**conditional on successful demo**)
2. **Report** – 30 out of 100 marks

SPECIFICATION

The purpose of this assignment is to develop an Android app. The app can be about anything that you want, but has to include the following **skeleton features**:

1.) The app stores data in a local **SQLlite** database.

2.) It contains an **Input** screen where the user enters data.

3.) It has a **List** (populated with data from the SQLlite database).

4.) Has underlying **operations** on the database - i.e. all of `INSERT`, `UPDATE`, `SELECT`, `DELETE` usage on the database (user login functionality does not count towards this).

5.) At least one of each of the following: List screen, Input screen, Extra screen.

6.) Use at least two Android features outside of the above specification. The purpose of this is to demonstrate your ability at using the API to discover new features, which you can then implement because you should have built up enough general familiarity with Android to be able to do this. Examples of features might be using using the Camera API, Location services, more creative GUIs using features such as Touch input.

What sort of app should you develop

It's up to you, if it matches your interests then it should be fun to do. Given the specification, the idea is to develop an app that captures information about something (e.g. a sports team, news items, college work, social media,... etc.). You need to make sure that you include the functionality requested – so your app will have at least four or five screens in total.

REPORT

The report should be two pages covering the following topics:

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

2.) Reasons behind design decisions made e.g. efficiency, user experience etc.

3.) Tests that were carried out to ensure the app works correctly.

4.) Challenges faced during the development and how these were overcome.

5.) What interesting things you learned about Android during the course of developing the app.

MARKING SCHEME

Marks will be awarded under the following categories:

Report (30%)

The report will be marked based on the depth of coverage of the five topics and how this corresponds to a realistic development process for the delivered app.

App (70%)

1. **Correctness / Completeness** (28%)

   Working commented code that meets the deliverables listed in the **specifications** above to a high standard. Standard coding conventions that provide a useful guide are available at this link.

2. **Quality of the user interface** (14%)

   Usability and Coherence of UI screens i.e. the extent to which a real user or client's needs have been considered.

3. **Overall quality and complexity** (28%)

   Does the app function well and robustly? To what extent is it original? Are there creative aspects to it? How complex is it?