DT228-3 Mobile Software Development CA

Android App Design and Development Assignment

Marks

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

- Design - worth 5% of your CA mark
- App source code and demo - worth 25% of your CA mark.

- Each student will demo their app in the lab.

Specification

The purpose of this assignment is to design and develop an Android app. The app can deal with any area that you want – but has to include the following skeleton features:

- The app must store data in a local SQLLite database
- It must contain an "input" screen where the user has to enter data
- Must include a list (with an underlying SELECT)
- Must do INSERT, UPDATE, SELECT, DELETE on the database
- Must have *at least* 1 list screen, 1 input screen, 1 extra screen
- Use at least *two* Android features outside of the above specification. The purpose of this is to demonstrate your proficiency 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, linking to network resources using HTTP and grabbing remote data, location services, more creative GUIs using features such as menus/tabs/dialogs , etc.

What do you have to hand in?

1) A design document by Tuesday October 27th @12 midday

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2) The project source code and screen prints by Tuesday November 24th@ 12 midday
    a. A screen print of your first screen.
    b. Project Code: Provide a single zipped file containing all directories/files in your Android project. Therefore, all classes, source code, resources, manifest file etc will be included. Include your name in the file name e.g. JohnMurphy.zip .

Please read the notes about code snippets and referencing towards the end of this document.

What needs to be in the Design document (for October 27th)

The Design document should specify:

- A description of your app (about half a page of text that explains what the app does;
- Use case diagram(s) to show what the user(s) can use the app for;
- A screen flow showing the flow of screens;
- A database description, indicating the table(s) and fields your app will need to use

Submit the design in webcourses as a PDF or .doc titled yourname.xxx .. e.g. JohnMurphy.doc

How will your app code be marked (for November 24th)?

Marks for the source code for the app will be as follows.

- **Accuracy/ Completeness** (40%) – for supplying the deliverables listed (working commented code), and for handing in an app that meets the various points in the specification to a high standard.

  Quality of the user interface (20%) – Are the screens easy to use? Are they

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laid out neatly? Do they look viable?

- **Overall quality and complexity of the app** (40%) –Does your app function well and robustly? What extra features beyond the standard functionality requested are included? How complex is it?

What sort of app should I develop?

Something of interest to you – it's up to you. Given the specification, you're going to be developing an app that captures information about something (e.g. a sports team, a list of tasks, a list of books that you've read... etc), and lets you view and maintain that information. You need to make sure that you include the functionality requested – so your app will have *at least* four or five screens in total.

Submission Dates (in webcourses)

Please submit the design document no later than Tuesday **October 27th @ 12 midday.** Please submit the source code/screen print no later than Tuesday **November 24th @ 12 midday.**

Regulations

Late assignments within a week of the due date will be marked out of 50%.

Late assignments more than a week late (without a documented reason) will not be marked.

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. Note: As described below, a**ny code snippets used from elsewhere must be referenced using comments in the code.**

External Code/ Code snippets

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- 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.and.etc

Intent. I = new  Intent (.. etc

// 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.

- Follow coding standards –indented code, comment header blocks for .java files, tidy code, naming standards, appropriate comments etc.- Google's java standards are fine:

  https://google-styleguide.googlecode.com/svn/trunk/javaguide.html