DT211-3 Mobile Software Development Android App Development Assignment

Marks

The app development assignment is worth 30% of your overall module 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. You will demo your app in the labs, to assess your own knowledge of your work.

The app must be your own work. If you use code snippets from web examples, you need to reference them using the comments within your code (please see the end of this document for details). Otherwise, you will be at risk of plagiarism penalties.

Specification

The purpose of this assignment is to develop an Android app. The app can be about any area that you want – but must include particular features as follows:

- The app must store data in a local SQLite 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 (of your choice)
- Use at least two Android features not covered in class. 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 multi-row lists, linking to camera, linking to network, animated images, location services, use of additional GUI features such as menus/tabs/dialogs , etc. Your choice. The more comprehensive the feature, the more marks you will get.

What do you have to hand in?

1. Design Document (5%) – Due 6 November 6pm
2. Screen Prints + Project Code (25%): 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 – Due 20 November Midnight

What needs to be in the Design document?

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.pdf

How will your app code be marked?

Layout / Comments: 5%

5% of marks in the assignment are allocated to code that has:

- comment header block on each .java file;
- Inline comments at the beginning of each method;
- Appropriately indented tidy java code.

Accuracy / Completeness: 50%

For supplying the deliverables listed (code), and for handing in a working app that meets the various points in the specification to a high standard. Your app should work without runtime errors so test it.

Quality of the User Interface: 20%

Are the screens easy to use? Are they laid out neatly? Do they look viable?

Overall quality and complexity of the app: 25%

Does your app function well and robustly? What extra features beyond the standard functionality requested are included? How complex is it? An example of this is the list – this can be a simple list of text items, or it can be more elaborate with icons, or custom row layouts.

In-Class Demo:

An in-class demo will also be used to assess your own knowledge of your work.

What sort of app should I develop?

Given the specification, you're going to be developing a simple app that captures information about something (e.g. a football team, a list of tasks, a list of books that you've read etc.), and lets you view and maintain that information. If you include the functionality requested, your app will have at least four or five screens in total.

An example of an app that includes the functionality required that you use all the time is the Contacts app on your phone. It lets you look at your list of contacts, add a new contact, edit a contact and delete a contact. (It does other things too but we're just mentioning ones relevant to this assignment). Pick something of interest to you and just use that (e.g. sports, music etc.).

Due Date

The Design Document is due on 6 November at 6pm.

Please submit your code no later than Wednesday November 20th at midnight; we will hold demos during the lab on 21 and 28 November. There will be 2 assignment submissions on Webcourses; one for the design document and one for the app code – please submit accordingly.

Regulations

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

Late assignments more than a week late 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: Any code snippets used from elsewhere must be referenced using comments in the code.

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.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

.