CSC 214 PROJECT 3

The Kitchen Sink Project

The goal of Project 3 is to create an app of your own design that meets the requirements below.

0. Basic Features

Your App Must Include *all* of the following features.

- A design based on Model View Controller (MVC)
- Best Practices for communication between fragments and activities.
- A custom theme that includes custom colors and styles for at least the most common widgets (**`TextView`**, **`Button`**, **`EditText`**).
- Separate interfaces for phone and tablet form factors; make good use of the space on larger screens.
- A landscape orientation that makes sense. And no, "facebook and twitter do it" does not excuse locking the orientation.
- At least 2 activities.
- A layout comprised of one or more fragments. There should not be any widgets outside of a fragment other than the layouts containing the fragments.
- Up navigation.
- An options menu.
- A **`RecyclerView`** or a **`ViewPager`**.
- Persistence: your app must function properly even if the "don't keep activities" developer option is enabled. The TAs will be instructed to enable this setting.
- At least one dialog.
- At least one toast.
- Logging, logging, logging.
- Robust error handling. Your app should not crash.
- A SQLite Database used for persistence across restarts.

1. Advanced Features

Your app must feature at least 5 of the following features

- The ability to use the camera to take and save photographs
- The ability to use the camera to record and save video
- Playing sounds with SoundPool
- Playing longer sounds or video with MediaPlayer
- Network connectivity
- Services
- One or more Google Play services (e.g. Maps)

Additional Enhancements (Extra Credit Opportunities)

You may earn extra credit for any enhancements above and beyond the most basic implementation of the features above or by adding additional features. You may receive up to 20% extra credit in total, but you **must** mention your extra features in your readme in order to be considered for extra credit.

Grading Criteria

You will be graded according to the following criteria.

Initial Proposal (10%) - Due in 1 Week!

You are expected to submit a proposal for your project that is at least one page that answers the following questions:

- What will your app do?
- Who is it for and why do they need or want it?
- Why is it unique/necessary? Is it a totally new idea, or does it fix an existing app that is broken?
- Include screenshots/mockups of your proposed interface. These can be hand drawn as long as they are legible, or even screenshots of the UI designed in Android Studio.

Class Definitions (10%)

You are expected to have a clean, understandable design. MVC is required. Use packages to separate code when appropriate.

Basic Features (55%)

Fully implement the required basic features.

Advanced Features (25% total)

Implement at least 5 features from the list of advanced features.

Code Style (Lose up to 10%)

- Modularity of design - Objects that make sense. High cohesion, low coupling.
- Comments - Where appropriate!
- Names - Variables, Methods, Classes, and Parameters
- Indentation and White Space

Documentation (Lose up to 10%)

In addition to submitting the Java code (.java files), you are required to submit a README text document which specifies the following:

1. A one paragraph description of your class designs and schema (if appropriate).
2. The typed version of the academic honesty pledge: “I affirm that I did not give or receive any unauthorized help on this project, and that all work will is my own.”

3. Full documentation for any enhancements that you wish to be considered for extra credit. YOU must explain what your enhancements are, and how the TA should enable them or otherwise detect their presence.

HAND IN

Projects will be submitted as ZIP archives via Blackboard. You will be given 3 weeks to complete the project, and there will not be an assignment due the same week that the project is due. This is more than enough time to complete the project.You will also have unlimited attempts to submit your project (only the last submission will be graded), which means that you will be able to upload your solution as soon as you have something working, and try for improvements or extra credit afterwards. Because of this, late submissions **will not** be accepted.

The project is due on the last day of classes: Wednesday May 3rd, 2017. Do not procrastinate*.*

You will be expected to submit:

- Your Android Studio project complete with all resources and source files.
- Documentation described in the section above. If you submitted any additional files, make sure to explain their function in your documentation.

Grading

Each TA will run your code in Android studio on a virtual device. If your program produces only partial functionality, you will receive a grade for the features that you did complete. Each TA will also conduct a code review to evaluate the correctness of your code and the code design and to determine whether or not it was likely stolen.