

CSC 214 ASSIGNMENT 04

Don't. Cheat.

This is new, you should read it: The goal of this assignment is to write an Android application that includes multiple activities that exchange data between them. You may use the code on [the course github site](#) as a starting point *for reference* but it copying and pasting the code is prohibited by the academic honesty policy. Programmers learn by doing, not by cutting and pasting. You should consider changing the names of parameters and non-standard methods as well as commenting any code you retype to indicate that you understand what it is doing.

Assignment Instructions

1. Create a new application with an empty activity. The activity should have a simple layout that displays a message of your choice in a `TextView`. There should be at least two buttons: one to change the font, and one to change the message. The first should start the activity that you implement in part 2 (below), and the second should start the activity that you implement in part 3 (below). You **must not** lock the orientation of this activity.
2. Implement a second activity. The activity must include widgets that allow the user to change the following font properties: style (bold, italic, underline), color, and scale-independent-pixel (sp) size. All widgets must be initialized according to the current settings in the main activity. This activity should include an OK button and a Cancel button. If the user presses the OK button the changes should be saved and used to update the message displayed in the main activity. If the user presses cancel, the changes should be discarded. You **must not** lock the orientation of this activity.
3. Implement a third activity that uses a `FrameLayout` and a `Fragment` to display information on the screen. The `Fragment` **must not** be a layout fragment (hard wired using XML), and should be added to the activity programmatically. This activity should allow the user to change the message that is displayed by the main activity, perhaps with an `EditText`. This activity should include an OK button to keep the new message, or a Cancel button to discard it. This activity and **only** this activity should lock itself into portrait orientation.
4. All three activities should handle state changes gracefully, including destroying the activity if it is in the background and the “Don’t keep activities” developer option is enabled. You do not necessarily need to create separate portrait and landscape orientations, but you do need to persist data between orientation changes so that the

user's choices are not lost (e.g. which checkboxes are checked) when the screen orientation changes. **Do not** rely on widgets with IDs to persist your state for you!

HAND IN

Before handing in, create two additional files in your lab directory:

1. Create a README that contains the following:
 - a. Your contact information, TA name, and assignment number.
 - b. A brief (one paragraph at most) description of the assignment.
2. Create a directory titled "SampleOutput." This directory should contain:
 - a. A file called "logs.txt" that contains examples any relevant logs generated by your application. Remember to use LogCat filters to show *only* your log messages before copying them into the file.
 - b. Screenshots (in PNG or JPG format) taken from an Android Virtual Device that show examples of your application's user interface.
3. Name your file using your last name and the assignment number. For example: "stjacques_assignment01.zip". This makes it easier for the TAs to organize when grading multiple students.

Hand in by uploading the compressed (i.e. "zipped") folder containing your Android Studio project and the required additional files to Blackboard. Remember that **late submissions are not accepted**.