CSC 214 ASSIGNMENT 03

Do not cheat.

The goal of this assignment is to write an Android application that logs various changes in the lifecycle state of the application, and that persists and restores the state of the application when the devices is rotated from one orientation to another..

Assignment Instructions

1. Create a new application from scratch (do not copy previous assignments). Name your main activity class "LoggingLifecycleActivity." Override each of the lifecycle methods mentioned in the lecture to do the following:
    a. call the same method on the super class.
    b. log a message with a custom tag and the name of the method being called. The tag should be defined as a constant in your activity and should include your first name.

2. Implement two different layouts; one for portrait orientation, and one for landscape orientation. Both layouts must include at least one `ImageView`, one `ImageButton`, and one `TextView`.
    a. The portrait orientation layout should display the views vertically in the order: `ImageButton`, `ImageView`, `TextView`.
    b. The landscape orientation layout must display the `ImageView` and `ImageButton` side-by-side, and the `TextView` across the top or bottom.

3. Add at least two custom drawables to your project. The `ImageView` should display one of these drawables by default. When clicked, the `ImageButton` should change the image displayed by the `ImageView` (i.e. it must rotate through the different custom images each time it is pressed).

4. Create an integer variable in your activity that keeps track of the number of times that the orientation of the device is changed, and uses the `TextView` to display a message and this number (e.g. "Display Rotated X Times"). The number should increment by 1 each time the device is rotated (CTRL-F12 is used to rotate an emulator). The images displayed by the `ImageView` and `ImageButton` should **not** change when the device orientation is changed. Use a `Bundle` to store/load the state each time the app is destroyed and recreated.

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**.