Lab 5
Lab5classID
100 Points
Customized Data Decisions
Chapters 10 & 11
(Previous chapters needed as well.)
edu.wmich.lab5classID

In our fifth lab of the semester we will create an app that takes user input and customizes output. This Android application will incorporate various elements from Chapter10 and Chapter11 to include: frame and tween animations, as well as storing and reading data from **SharedPreferences**. You will also need skills and knowledge from current and previous lectures.

Since this Android application **is not designed** primarily for the tablet, you should switch back to your phone AVD for development. However, still code for **Android 5.x (Lollipop, API 22) with Gradle updates** **and make sure it works--although perhaps not as well--in both tablet and phone orientation *with phone being the default.***

As always, you choose the overall theme of your app, but it must be a consistent theme to include the images and various other items that will be incorporated.

Lab Parameters

For this lab, you will need to create an app that centers around customizing results based on data a user enters. Using SharedPreferences store the user's entered data within the app so that **it can be accessed by any other Activity within the app.**

The following items should be a part of your app. Suggestions for improvements are included **[in brackets]** **and suggestions for extra challenges are [noted as such] and [such]**.

Activities
Splash Activity This activity should include your app name and any other pertinent information. It must also contain a **tween animation that alpha and/or scales**. Make sure that the Splash activity remains present for the tween to go through at least once cycle.
Main Activity The main activity should **at least** ask for the user's name, email, and something that can be numbered. For example, number of items, length of services, length or time, cost of services or products, etc. Make sure to **limit** what the user can enter via the field type. This data needs to be stored in **SharedPreferences**. **[Checking for empty entries and informing the user is also beneficial. You can also collect more data.]**
Result Activity The result activity should display all user-entered information pulled from the **SharedPreferences**. It should also check for at **least three ranges** with a default fourth measured against the user's numerical entry. For example, in Chapter11 the sample app uses number of flight miles. You determine the logical conditions to test. However, the resulting condition should determine what happens. **You can set the conditional results in any order but they are as follows**: **Condition**: Dynamically load an image within the result activity. **Condition**: Dynamically load a different image within the result activity. **Condition**: Present the user with a button that takes them to the **frame animation** activity. **[You could also accomplish this dynamically in the code without a button.]** **Condition**: Present the user with a button that takes them to the **tween animation** activity. **[You could also accomplish this dynamically in the code without a button.]** [**If you want to try dynamically loading all of the resulting items from condition tests on the **same result activity**, please do so. This means you **will not have** Frame and Tween activities, but it will require a great deal of coding that must be documented.**]
Frame Activity A frame animation activity. This should consist of at least five (5) images that illustrate the results of the condition test. Make sure to repeat it more than once. **All user entered data should appear here in a message as well.**
Tween Activity A tween animation activity. The animation should rotate or translate **[combination tweens are beneficial]**. **All user entered data should appear here in a message as well.**

Make sure to:

- Check the Frame and Tween Resources in eLearning
- Avoid all informational errors on images and elsewhere
- Make all appropriate changes (to include style) in the AndroidManifest and document them
- Maintain a theme throughout your app
- Maintain a concept throughout your app
- Make decisions using the **correct decision structures**

Important items to note

- **Buttons can (and should be) be hidden until needed. Make sure you perform this with at least one button.**
- Follow variable and file naming conventions: self-documentation with variable names is critical
- **Use Android 5.1.1 (API 22, Lollipop) as the minimum SDK on setup**
- Use appropriate image types and densities
- Document every file that you create and/or change
- Include your classID as appropriate

Deliverables

This lab (entire project folder) should be turned in as a .zip file named with your Lab number and classID. For example, if your classID was **bjones4242** (Bubba Jones), the file would be:

Lab5bjones4242.zip

Refer to the **Documentation Guide** at for guidance on comments and lab preparation.

When you are finished, make sure to upload
AND
submit your lab in eLearning.