

CIS 3515 Assignment 1

Instructions:

Preamble: Ensure that we have a functional development environment.

1. *If this is your personal machine, ensure that you have a recent version of the Java Development Kit installed. Visit <https://www.oracle.com/java/technologies/downloads/> and download the latest version for your platform.*
2. *Install Android Studio. Visit <https://developer.android.com/studio> and download Android Studio for your platform.*
 - *The setup will install the IDE, SDK, and set up a default virtual (emulated) device.*
 - *If you are using a machine that already has Android studio installed, move on to the next step.*
3. *Ensure that you have Git installed on your machine: <https://git-scm.com/>*

Assignment:

4. Create a new project by importing the repository created from the GitHub Classroom link
 1. Launch Android Studio
 2. If presented with the Quick Start dialog, select **Get from VCS**
If presented with the development interface, close the project with **File -> Close Project**
 3. Select **GitHub** from the list then search for and open the repository that you created
If prompted, select “Trust Project”
 4. Once your application has been loaded by Android Studio, test it by clicking on the Run App button (the green **play** button in the toolbar). Raise any errors with your TA.
 5. If presented with a dialog to *Select Deployment Target* dialog, ensure an **Available Emulator** is selected. If no Emulators are listed, launch the Device Manager and follow the steps to create a new virtual device (Ask the TA for assistance).
5. In the Project view of your IDE under **app**, expand the **res->values** folder and open the **strings.xml** file
6. Add a new XML element under **resources** using the following information:
 1. *name:* my_greeting
 2. *value:* Hello, World. This is my first app!

Eg:

```
<resources>
```

```
<string name="app_name">Hello World</string>
<string name="my_greeting">Hello, World. This is my first app!</string>
</resources>
```

7. In the **Project** view, expand the **res->layout** folder and open the **activity_main.xml** file
8. Perform one of the following and save the file
 1. Select the “Hello World” TextView that was automatically generated for you
 2. In the *Attributes* pane, set the TextView’s ID attribute to “**textview**”
 3. In the *Attributes* pane, replace the Hello World **text** value with the following:
“**@string/my_greeting**”

or
Click on the **Code** tab above the Attributes pane (top-right of window), find the **TextView** tag, and replace the value of the **android:text** property with **@string/my_greeting**
9. Run your application again and note the change to the displayed text
10. Commit all the changes made so far (**Git** menu → **Commit...**) with a descriptive message of no more than one sentence.
11. Push your changes to your Repository (**Git** menu → **Push...**)
12. Next, add a button to the layout and arrange it within the layout as follows:
 - Center the button horizontally
 - Place the button **50dp** (density independent pixels) below **textview**
13. Ensure that the button’s ID attribute is set to “**button**”
14. Change the button’s **text** attribute “*Click Me*”
15. Change that button’s **click** behavior to have it update the text attribute on the TextView object to read “Clicked!” by adding the following code to your activity’s onCreate() method as the last 2 statements:

```
val textView = findViewById<TextView>(R.id.textview)
findViewById<View>(R.id.button).setOnClickListener{textView.text = "Clicked!"}
```

You will need to do include some import statements for the classes referenced in this code snippet. Let the IDE assist you by automatically generating the import statements. Press **Alt + Enter** or **Cmd + Enter** after placing the cursor over the error.

Make sure the code above comes ***after*** the call to `setContentView()`, otherwise your app will crash.

16. Commit the new changes to GitHub with a descriptive message.

Submit your GitHub project URL to Canvas before the deadline. No Commits are allowed after the deadline. Any commits after the submission deadline will incur a penalty, potentially leading to no points being awarded for the assignment.

Rubric

Error-free layout with centered views	20%
Using string resource (@string/my_greeting)	20%
Click behavior for button implemented	30%
Project shared to GitHub with 2 commits	30%