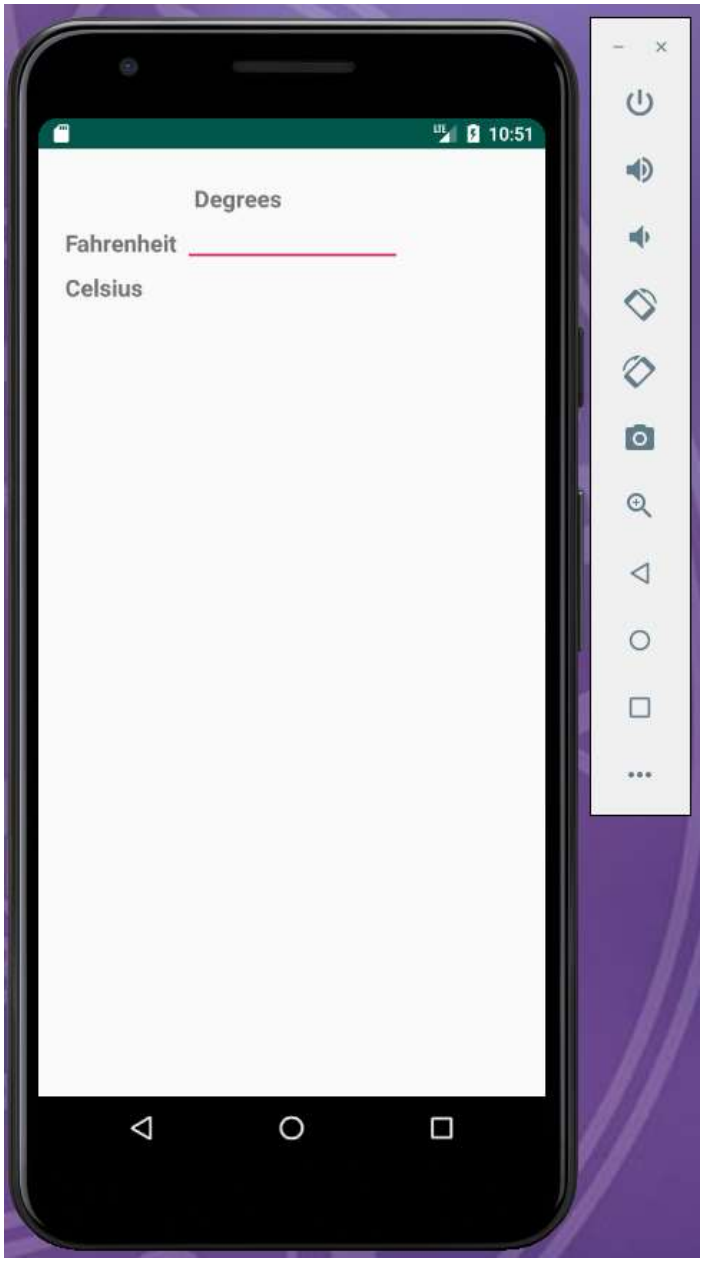
Assignment 3 Create the UI for the Temp Converter App and Write Java code for the temp converter app

In this assignment, you'll create the user interface for an app that converts temperature from degrees Fahrenheit to degrees Celsius. Furthermore, you'll write the Java code for an app that converts temperature from degrees Fahrenheit to degrees Celsius. When you're done, the app should look like this:



<Figure 1> Output Screen

Create the Project

1. Start Android Studio
2. Create a project for an Android app named ***your last name*_Assignment3** and store it in the appropriate directory. For example, I saved this project in

   C:\Users:DKwon\Desktop\AndroidExercise\KWON_Assignment3

   This project should be stored in a package named com.example.assignment1, and it should be based on the **Empty Activity template**.
3. Run it in an emulator. This should display a message that says "Hello world!" in the center of the screen.

Create the user interface

4. Navigate to the res\layout directory and open the layout for the activity. If necessary, click the Design tab to display the graphical editor.
5. Delete the TextView widget that displays the "Hello word!" message.
6. Add the 4 TextView widgets and 1 EditText widget to the layout. Set the id and text properties of each widget immediately after you add the widget. When you're done, the use interface should have the widgets and text shown above. However, these widgets may look different.
7. Test the UI by running an emulator. At this point, the app should allow you to enter the degrees in Fahrenheit. However, it does not yet convert those degrees to Celsius
8. Test the user interface by running an emulator.

Write the Java code

9. Open the Java class for the only activity of this app
10. Use the onCreate method to get references to the EditText widget and the TetxtView widget that displays the degrees in Celsius.
11. Create an event handler for the EditorAction event for the EditText widget. The event handler should calculate and display the degrees in Celsius when the Done key is pressed on the soft keyboard. The formula for converting temperatures from Fahrenheit to Celsius is:

    C = (f-32) * 5 / 9
12. Test the app. At this point, it should make the calculation correctly. However, it will lost its data if you change orientation or navigate away from the app.
13. Override the onPause method so it saves a string for the degrees Fahrenheit and Celsius. Then, modify onResume method so it gets these strings and sets them on the appropriate widgets.

14. Test the app again. This time, the app should always remember its data even if you change orientation or navigate away from the app and return to it.

Grading criteria

1. Check if the onCreate method does not have any errors and works correctly. If not, deduct 1 point each error and deduct 2 points if this method does not work correctly.
2. Check if the EditorAction method does not have any errors including math formula. If not, deduct 1 point each error and deduct 2 points if this method does not work correctly.
3. Check if both onPause and onResume methods work correctly. If not, deduct 1 point each error and deduct 3 points if those methods do not work correctly.

Submission

1. Please compress all your files and submit it in a **.zip** file format.