CS 5551 Advanced Software Engineering

Assignment 2 Solution

03 February 2016

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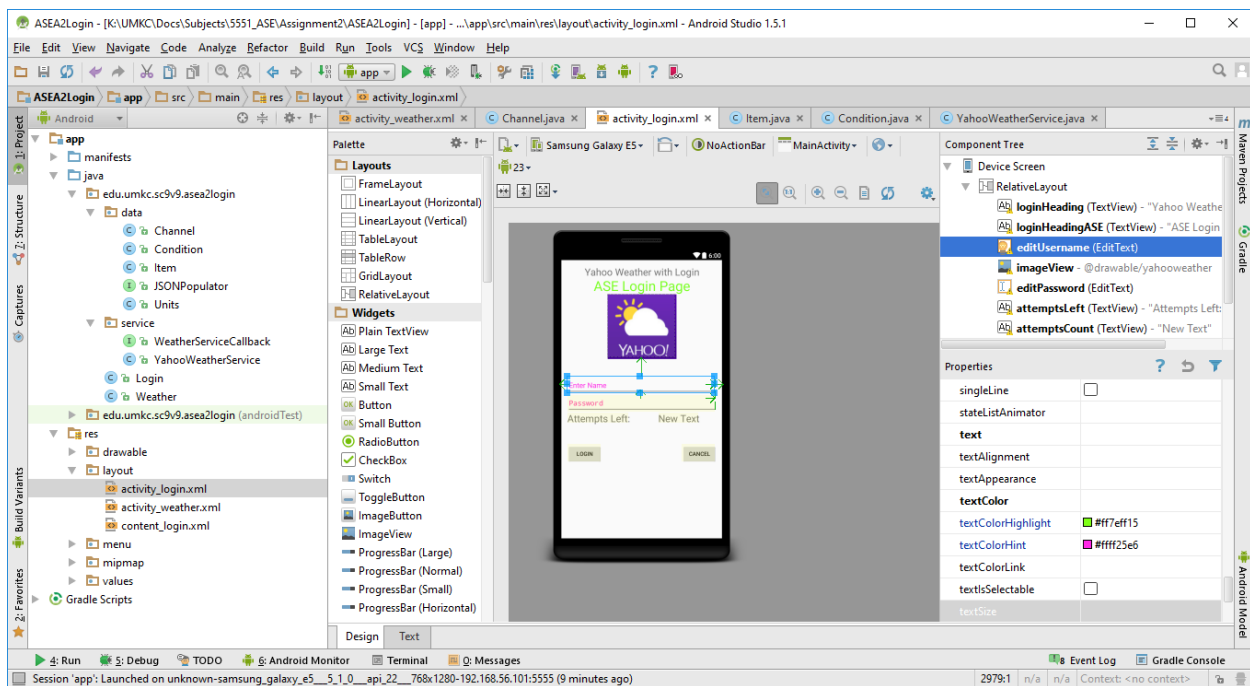
Class ID 7

Objective: Creation of an android application that has login page and displays weather details using APIs.
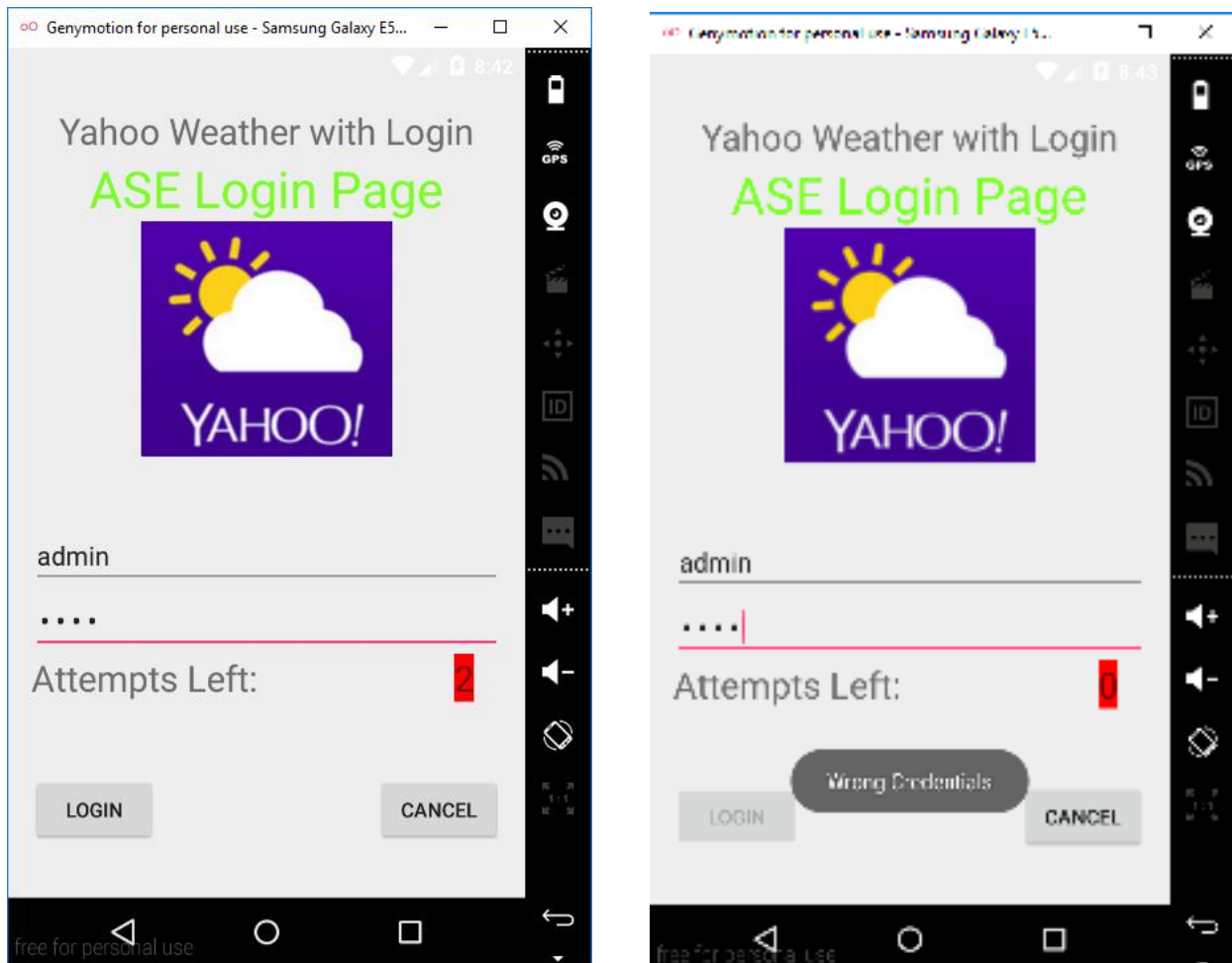
Implementation:

First, I've created an android project "ASEA2Login" in Android Studio.

Next, I've implemented the activity xml files for login with username and password editText fields, Login button and Cancel button.

I've updated the corresponding activity tags in androidmanifest.xml file and implemented the credentials validation logic in Login.java class file.

I've implemented the maximum login attempts limit. Once the user entered the password incorrectly for three consecutive times, the Login button will be disabled.

If the user correctly enters the login credentials, he will be redirected to Yahoo! Weather API based web page which shows the weather details of a city.

I've collected the endpoint URL for Yahoo! Weather API using the below link and used it in my application to fetch the weather details in JSON format.
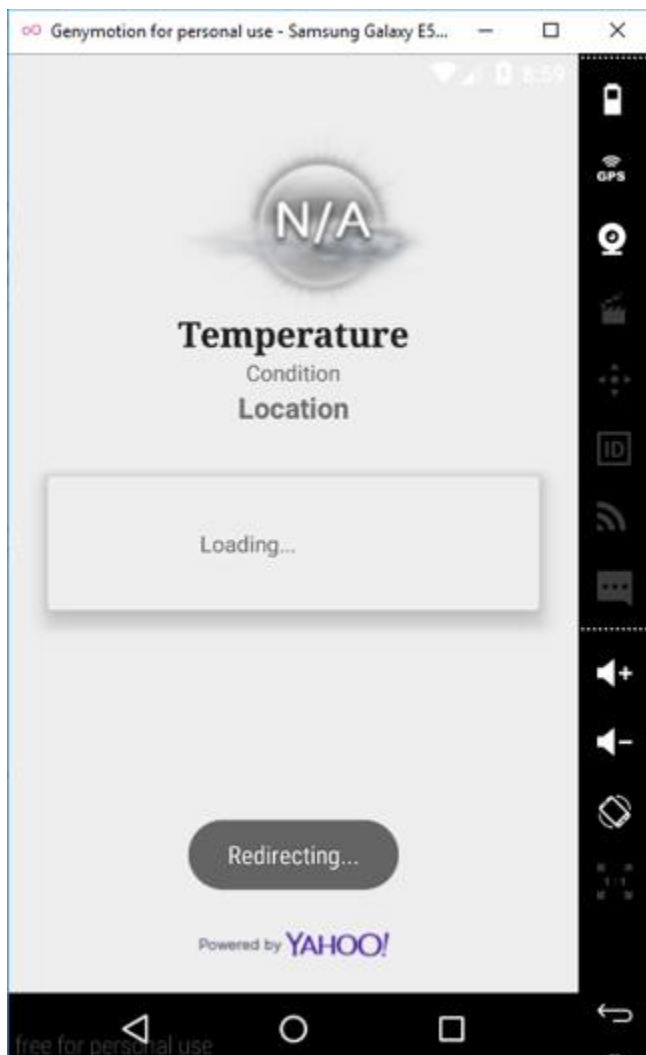
https://developer.yahoo.com/weather/

I've developed all the necessary logic to fetch the weather details in YahooWeatherService class file.

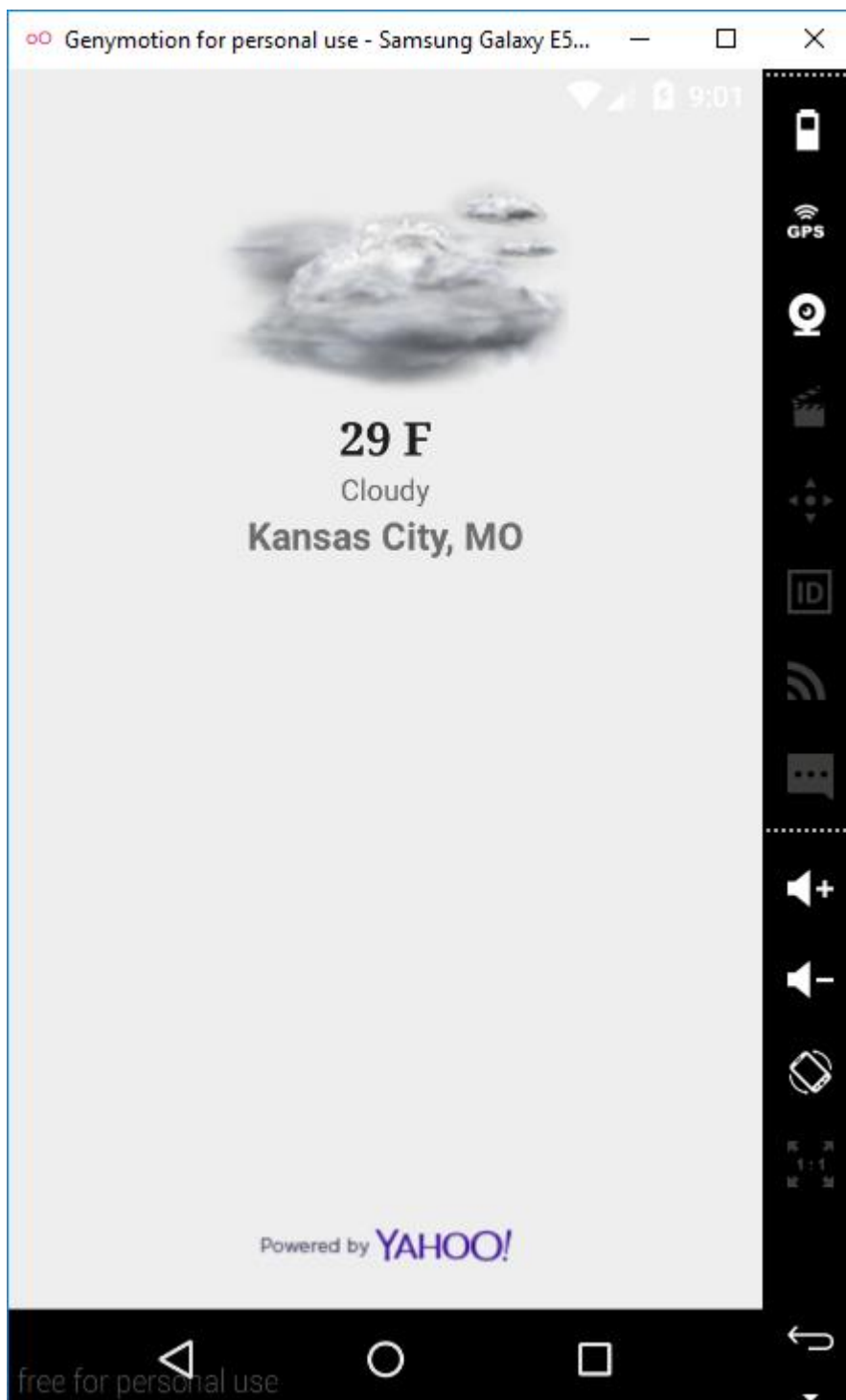I've also created separate classes for loading the variables like channel, condition, weather details etc.

I've placed all the required weather related png files in drawable folder and used these png files to display the dynamic icon for weather.

I've modified the AndroidManifest.xml file and added the activity tags information for both Login activity and Weather activity.

It will take some time to retrieve the weather information from Yahoo! Servers. To compensate this time, I've added the message "Loading…" as shown below.

After retrieving the weather information, the activity page will look like below.

Note: My laptop doesn't support Intel HAXM acceleration as it has AMD processor. So, I've installed GenyMotion emulator and added its plugin to Android Studio. All application testing and debugging is performed in GenyMotion emulator.