



**DALHOUSIE  
UNIVERSITY**

**Assignment-2  
Weather Application**

**CSCI5708 – Mobile Computing**

**Submitted by:**

**Shivam Gupta**

**B00810723**

**[Shivam.Gupta@dal.ca](mailto:Shivam.Gupta@dal.ca)**

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## Task Description

Task for the assignment is to develop a weather application using the concepts taught in the course.

## Learning Objectives

- To practice developing Android applications and develop confidence in app development.
- To practice the application of Neilson's usability heuristics.
- To develop experience with JSON and Android APIs.

## Design of the Application

Application is designed to be simple and easy to use. There is 1 TextView, 1 EditText and a Button which yields the result.

User can enter any city name in the input field and gets the weather of the city. Design is made in accordance with the wireframe provided in assignment 2 document.

## Implementation

Android Studio – Android 6.0 API 23 (Marshmallow) is used for app development and testing.

Layout:

- Simple layout is used with a blue background image.
- TextView is used which ask user to put a city name.
- EditText field is used, where the user will enter the city name for which the weather is needed.
- Button is used, on clicking of which, the weather will be displayed.

API Key and Implementation:

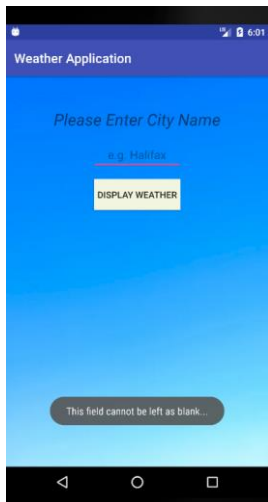
- Created an account on openweathermap.org and fetched the API for current weather data and personal API keys is also fetched.
- Volley library and JsonObject Request is used to call OpenWeatherMap API. I have used Volley's request and request queue class to implement the logic.

## Challenges Faced

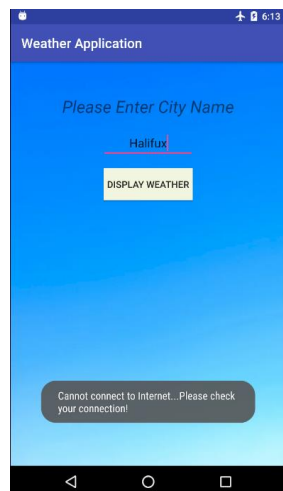
I tried using HttpURLConnection with AsyncTask and faced a lot of issues with it while working on threads.

## Test Cases

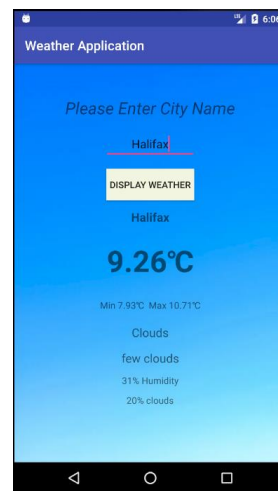
Following are the cases used to test the app on various parameters



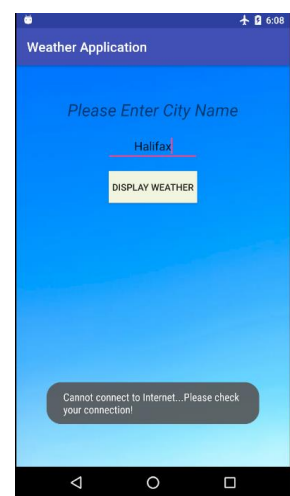
Blank city name



Incorrect city name



Correct city name



No internet connection

1. When the city name is not entered, If I have set a Toast Message reminding the user that the field cannot be left as blank.
2. when the city name is entered but must have been spelled incorrectly.
3. when a city is entered to check the weather.
4. when there is no internet to check the weather.
5. When the connection is timed out, there is an error message saying that the connection is timed out.

## References:

- [1] Openweathermap.org. (2019). *Weather API - OpenWeatherMap*. [online] Available at: <https://openweathermap.org/api> [Accessed 24 Mar. 2019].
- [2] Android Developers. (2019). *Send a simple request | Android Developers*. [online] Available at: <https://developer.android.com/training/volley/simple> [Accessed 24 Mar. 2019]
- [3] Stack Overflow (2019). *Error message help and resolution* [online] Available at: <https://www.stackoverflow.com> [Accessed 24 Mar. 2019]