**Ubiquitous Computing Repeat CA - Android Weather App (40%)**

**This project should be demonstrated to the lecturer in the first week of September (exact date to be decided and posted on Moodle in August).**

Lecturer: Simon McLoughlin

You are required to design and develop a Weather app for Android devices. The app should provide the following functionality

* Present the user with a screen (and welcome message of course) that allows them to select either the current weather or the forecast for the next 5 days.
* In the same screen the user should be able to enter their location. There should be an option to do this automatically using the location API or manually where the user can simply enter the city and country where they are. For this you may have to look up the geographical coordinates for their chosen city, also available through the weather apis.
* The application should then generate a query string from the user details that will be sent as a request to a server offering weather data. Openweathermap and Yahoo offer this service but you have to register with them and they give you an API key that you need to provide to access the service. It’s free for development purposes. Have a look at the server website to see the format of the query string.
* The service will then respond with the weather data as either an XML or JSON file which you will have to parse. There are parsers available as part of the Android API and also 3rd party but parsing the data yourself should be straightforward also as you are looking for specific tags in the returned data so it is a text processing exercise.
* Once the data is parsed you need to display it to the user on a new screen. There should be a screen for the current weather if that was selected and a screen for the 5 day forecast if that option was selected. You should use images and text to display the results. For example if the weather is rainy you should provide a small image reflecting this, likewise for other conditions. You should also display the temperature (for both current and forecast options). Other weather data if available should also be displayed but make sure the screen is not too busy. See the following links for weather APIs

<https://developer.yahoo.com/weather/>

There are other servers that also provide weather data such as:

<http://openweathermap.org/api>

Marks will be awarded for:

The functionality of the application, i.e. it should meet all aspects the specification defined above.

The appearance and usability of the application (use of images and user interface components/views, layouts etc.)

The quality of the coding of the application.