IN PARTNERSHIP WITH PLYMOUTH UNIVERSITY

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Module Code: PUSL2008	Module Name: Internet of Things
Coursework Title: Smart Weather Tracking System – Group No:37	
Deadline Date: 23/04/2020	Member of staff responsible for coursework:
Programme: Bsc (Hons) Computer Security and Bsc (Hons) Software Engineering	

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Group work: please list all names of all participants formally associated with this work and state whether the work was undertaken alone or as part of a team. Please note you may be required to identify individual responsibility for component parts.

We confirm that we have read and understood the Plymouth University regulations relating to Assessment Offences and that we are aware of the possible penalties for any breach of these regulations. We confirm that this is the independent work of the group.
Signed on behalf of the group: Hirushi Guruge

Individual assignment: ***I confirm that I have read and understood the Plymouth University regulations relating to Assessment Offences and that I am aware of the possible penalties for any breach of these regulations. I confirm that this is my own independent work.***
Signed:

Use of translation software: failure to declare that translation software or a similar writing aid has been used will be treated as an assessment offence.
I *have used/not used translation software.
If used, please state name of software……

Overall mark _____% Assessors Initials _____ Date_____

Smart Weather Tracking System

Group no: 37

Content

Acknowledgement

To complete this assignment, we got information from many sources such as documents, online sources, internet, knowledgeable people etc. Therefore, this assignment directly helped us to collect many information from ourselves.

We would like to thankful our Internet of Things (IoT) module lecturer Dr. Chandana Perera for giving us this opportunity to improve our knowledge while completing this assignment. We would like to show our gratitude towards everyone who helped us to complete this task successfully.

Introduction

"Weatherapp" is the application to predict the conditions of the atmosphere for a given location. Human beings have attempted to predict the weather informally from the past. "Weatherapp" is made by collecting quantitative data about the current state of the atmosphere at a given place.

There are variety of end users to weather forecasts. Some people need the weather forecast to protect their life and property. On the other hand, forecast which is based on the temperature is very important for fields like agriculture and fishing.

Temperature forecast is using by many companies to make their products accordingly and improve the demand among the people. As an example, in a rainy-day people do not tend to buy ice-cream.

Therefore, we can conclude like many people adjust their events using this rapidly changing weather.

Purpose: The purpose of developing this app is to give the information of the weather of a location selected by the user. (only in SriLanka)

Scope: The scope of this project is to create the hardware and the software part for the system called ‘Smart Weather Tracking’. But with the situation arises we could not create the hardware part as we discussed. Later, we hope to improve this application to take details for all the countries as well.

Another purpose of this software is to check the weather of upcoming five days as well. This app is basically a mobile application.

Hardware and Software Used

Hardware

- Computer with 4GB RAM
- Active internet connectivity

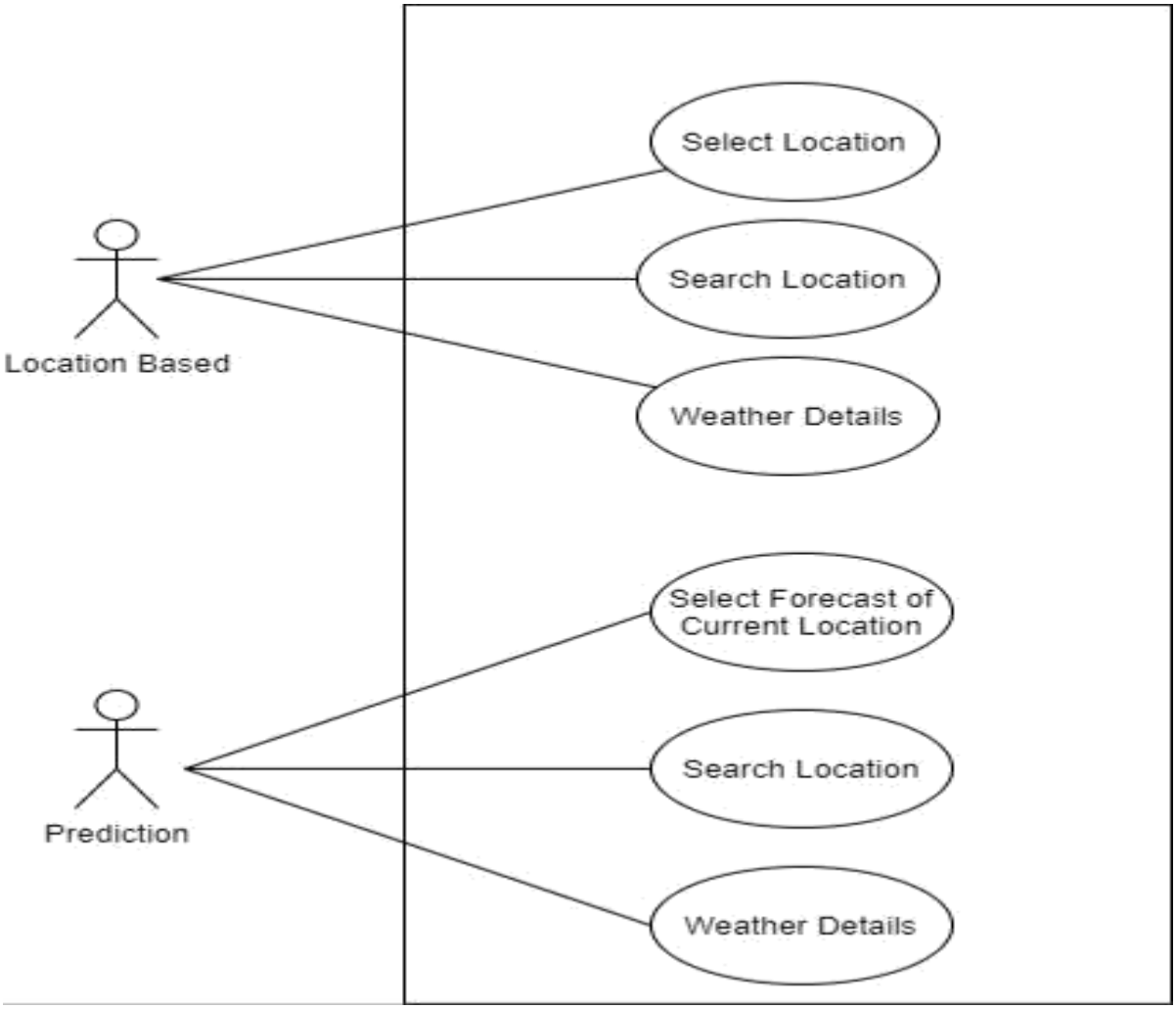
Software

- Android Studio
- Ms office
- Draw.io
- Officetimeline.com

System Design

1	Feasibility Study	02 March 2020
2	Planning	08 March 2020
3	Designing	10 March 2020
4	Coding	12 March 2020
5	Test Planning	18 April 2020
6	Testing	20 April 2020
7	Documentation	21 April 2020

UML Diagram

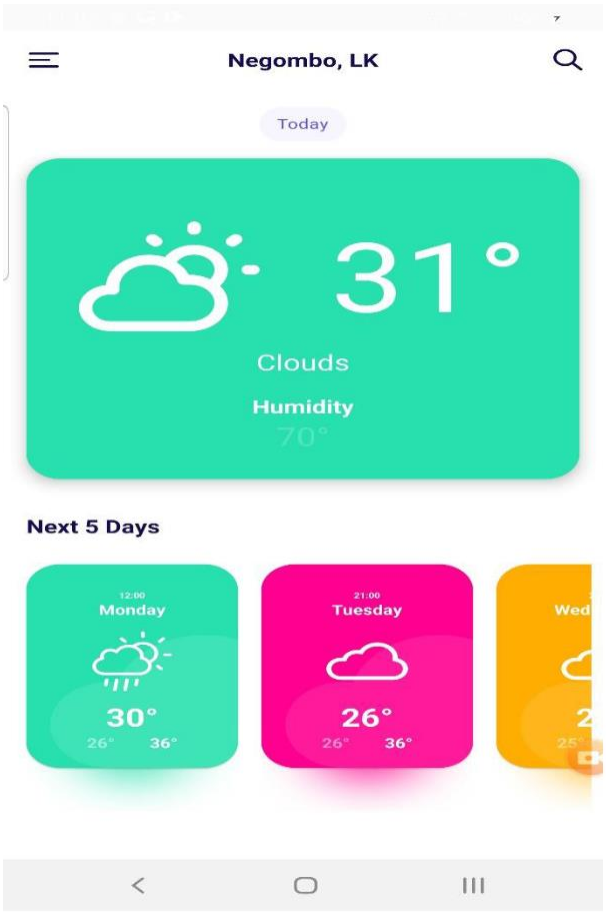

Select Location
Search Location
Weather Details
Location Based
Select Forecast of Current Location
Search Location
Weather Details
Prediction

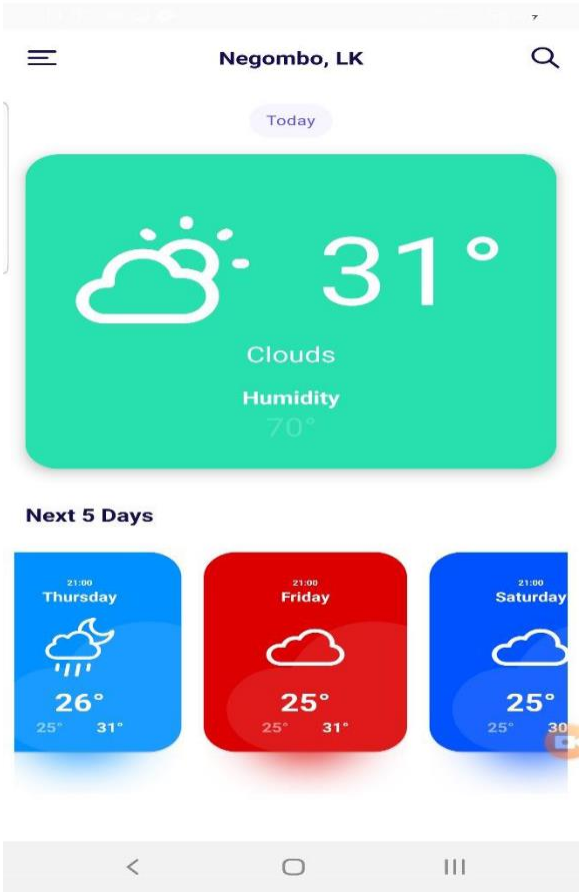
User Interface

In every software, user interface design is helping to make the user's interaction and it should not be complex. If the developer is able to create the interface perfectly it helps to take the user's attention directly.

Therefore, we paid more attention on creating the interface of the app. For that we used more colors like pink, blue etc. It helps to take the attraction of the user because many people like to see different colurs.

Following are the screenshots of the application of "Weatherapp".





Testing

So far, we have done the implementation and we needed to test the product with a user. In this situation we focused on performance testing. Before all as developers we tested the app. And afterwards we gave that app to an end user to test that application. For that we used the black box testing.

Conclusion

Because of this “Weatherapp” user will be able to get to know about the weather easily. Up to now the system is steady but improvements can make.

Bibliography

https://www.android.com/

https://www.youtube.com/watch?v=awYSrhUZQL0

https://online.officetimeline.com/app/#/file/27d3c3ac-834f-4075-b001-614aad87e801