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| Module Code: CNET343SL | Module Name: Distributed Systems | |
| Coursework Title: Weather Reporting System Proposal | | |
| Deadline Date: 03/12/2021 | | Member of staff responsible for coursework: Mr. Pramudya Thilakaratne. |
| Programme: BSc (Hons) Plymouth Software Engineering | | |
| Please note that University Academic Regulations are available under Rules and Regulations on the University website [www.plymouth.ac.uk/studenthandbook](http://www.plymouth.ac.uk/studenthandbook). | | |
| 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.  J.A. Mujeeb – 10707284  G.M.D.D. Ratnayake – 10707351  S.O. Perera – 10707315  N. S. De Alwis – 10707160  M. D. A. Medhavi – 10707278  P. P. L. Dilhani – 10709402  ***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: J.A. Mujeeb | | |
| 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\_\_\_\_\_\_\_\_\_** | | |

\*Please delete as appropriateSci/ps/d:/students/cwkfrontcover/2013/14

# Introduction to The Distributed System –

The use of weather reporting in day-to-day life is very important. Its utilization could greatly influence the outcome of a scenario. It could be something as simple as deciding whether you should take your umbrella on your way out, or even as major as handling cultural operations, agriculture and farming or livestock protection implementations.

With Sri Lanka’s weather rapidly varying, weather can transition from largely homogeneous temperatures to torrential rain in a heartbeat. With the adaptation of unexpectedly frequent changes, it is crucial to make sure to be prepared.

Sri Lanka is liable to prevailing and predictable effects of climate change. Preceding natural disasters (such as tsunamis, floods, landslides, droughts, and cyclones) can greatly substantiate this. Profoundly weather-sensitive sectors in Sri Lanka include transport, agriculture, construction, energy, and disaster risk management.

It is important to note that even with weather stations, live broadcasts, and television/radio stations existent, not all are aware of the continuously differentiating weather conditions.

The impacts and effects of climate change could invite climate change-induced hazards and disasters. The unawareness of weather reports may affect the lives of many. Thousands of citizens are prone to being affected by the threat of climate change. They may find themselves in life threatening situations. Weather prediction is essential in order to provide citizens with pragmatic information. Furthermore, this also aids in the reduction of weather-related losses, personal safety and health, enhancement of societal benefits and in supporting economic prosperity.

It is abundantly clear that weather forecasting reports are essential to mitigate the effects civilians getting caught in a severe crisis.

# Introduction to Quick Weather –

What is distributed system?

A distributed system is a system that uses independent hardware to create a software, where it would look like a complete system working as one, but they use multiple computers to make a distributed system work. Distributed systems do not use the primary memory of other hardware elements but uses the multiple independent processing elements in the hardware. They communicate using asynchronous messages over a networked communication.

Distributed systems are a newer concept that was bought into this technological world, with this newer concept people can now create systems that would solve real world problems to ease up human life.

In the following report, our team would like to highlight the main outcome of our system.

To make the reader of this report get a clear idea, we have simply built a web application and a mobile application that will be running as a client application.

People often need to know what the weather around them would be like, but since Sri Lanka is still a developing country, it is only specified in either the news or rather in the radio stations. A weather would mainly focus on the current location of the user, but with Quick Weather, any user can check the weather around the country without having to go through a hassle of signing into the system.

Our main intention is to build a system that will show our users the needed weather for any planned activities in their personal lives.

# Usefulness of real-world application –

QUICK WEATHER can perform 02 main functions –

Technologies used –

1. Laravel
2. Java in web and mobile application both
3. MySQL for the database

Methodology –

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Individual contribution –

1. J.A. Mujeeb (10707284) -
2. G.M.D.D. Ratnayake (10707351) -
3. S.O. Perera (10707315) -
4. N. S. De Alwis (10707160) -
5. M. D. A. Medhavi (10707278) -
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The overall accomplishment of this project demanded a significant amount of guidance from many individuals. As a team, we are extremely fortunate to have had this from start to finish.

Finally, we wouldn’t have been able to successfully complete this assignment without the hard work and assistance of all the team colleagues itself. We all enjoyed working with each other.