**IoT Enabled Smart Farming System** **|** Group 2

Test Plan

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# INTRODUCTION

Our project aims at developing an IoT Enabled Smart Farming System to control moisture of the soil remotely via a web application.

In this project we basically use four types of sensors as presented in the above figure;

* Soil Moisture Sensor
* Temperature Sensor
* Humidity Sensor
* Water Controlling Sensor

The data acquired from these sensors are detected by NodeMCU and those data is transferred to the database through Wi-Fi.

Then by login to the relevant website, the user can review all the current details and data history of his or her farm.

As well the user can control the moisture of the soil by providing required water quantity to the agricultural land. This is done by special sensor which is connected to the water supply system in the farm. The command that user gives is detected by NodeMCU via Wi-Fi and gives the command to the water supply system.

# OBJECTIVES AND TASKS

## 2.1 Objectives

* The sensors should be tested and confirmed to be worked properly.
* Accuracy of the sensors should be tested.
* Connection of the database should be tested.
* Communication between sensors and database and sensors and web application should be tested.
* Web application should be tested and confirmed to be work properly.
* Wi-Fi connection should be tested and confirmed that it transfers data fast.

## 2.2 Tasks

* Testing the sensors
* Testing the Wi-Fi connection
* Testing the database connection in both sides.
* Testing the web application

# HARDWARE REQUIREMENTS

* Computers
* Modems

# ENVIRONMENT REQUIREMENTS

To direct the testing Wi-Fi and internet facility will be required. Environment should noticeable the differences of temperature, humidity and moisture of the soil. Sever required to host the data.

# TEST SCHEDULE



# FEATURES TO BE TESTED

* Accessibility
* Availability
* Compatibility
* Coding Standards
* Content
* Performance
* Usability

# FEATURES NOT TO BE TESTED

Notable features and functions that will not be tested include: None