

# SOFTWARE TEST PLAN

ARDUINO WEATHER STATION- HUMIDITY OUT

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## *ChangeLog Table:*

Version	Change Date	By	Description
1	19/4	Israt Sumiya	Edited
2	20/4	Yen Tran	Edited
3	26/4	Israt Sumiya	Edited

# 1 Introduction

This document is the software test plan which guides our thinking and encourages a better communication with other project team members, testers, managers and other stakeholders. It includes scope of testing, test strategy, workflow, methodologies, environment requirements, schedules which are used for the Arduino Weather Station - Humidity out project. It provides the framework for all testing related to this project.

## 1.1 Scope

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The overall purpose of testing is to ensure that our product meets all of its requirements. The list of the test items which must be tested:

- Arduino
- LCD
- Ethernet
- Frequency counter
- MQTT

Factors influencing test scope:

- Size of project
- Complexity of project
- Budget for project
- Time scope for project
- Number of testers
- Easily track bugs
- Ensures working test items

Individual test cases will be written for each version of the application that is released. This document will also be updated as required for each release.

## 1.2 Quality Objective

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The test team is responsible for testing the product and ensuring it meets their needs.

- Ensure the Application circuit Under Test conforms to functional and non-functional requirements
- Ensure the Application circuit Under Test meets the quality specifications defined by the client

- Bugs/issues are identified and fixed

## 1.3 Roles and Responsibilities

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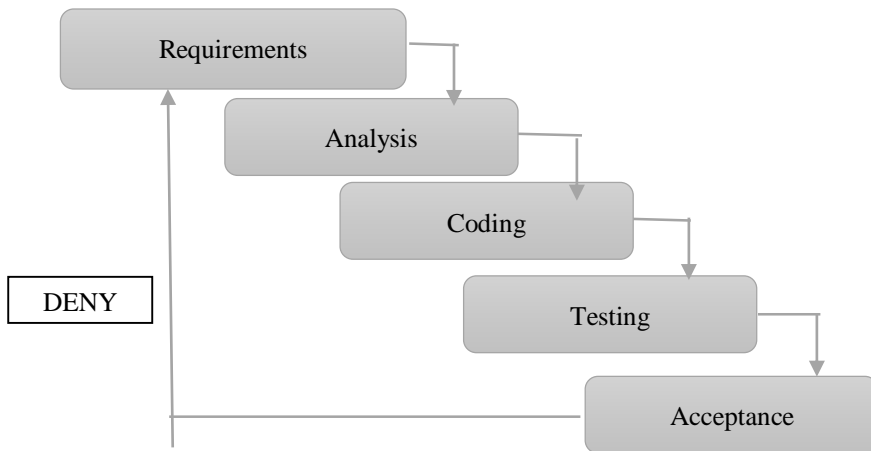
Role	Name	Responsibilities
QA Analyst	Israt jahan sumiya	Ensures every possible measurement has been taken for testing and manage all the activities to meet the objectives
Test Manager	Yen tran	To lead the team and have the full responsibility for the project's success
Configuration Manager	Hasan mahmud	Maintain product's performance
Developers	All team member	Directing software programming and documentation development. Working with customers or departments on technical issues
Installations	All team member	

# 2 Test Methodology

## 2.1 Overview

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The main purpose for selecting Waterfall methodology has always been to help internal teams move more efficiently through the phases of a project, which can work well. Also, requirements can be easily tested Using waterfall model.



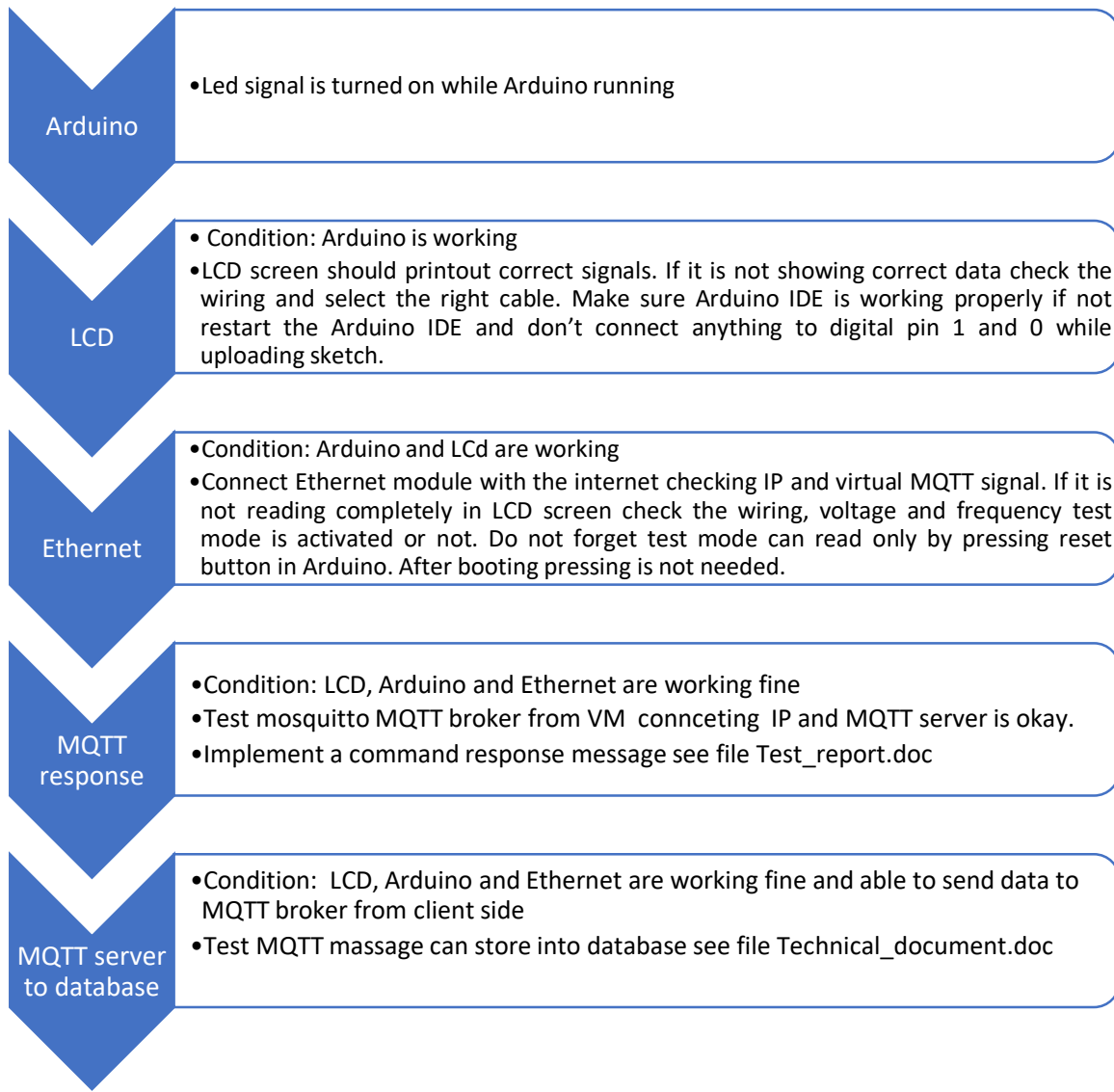
## 2.2 Test Levels

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The Testing Levels depends on the scope of the project, time and budget. Before testing software you need to add necessary libraries:

1. Ethernet
2. MQTT
3. TimerOne
4. LiquidCrystal

The test activities or cases that must be perform for every test level which is given below:



## 2.3 Bug

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Bugs	Type	Status
Messages are sent in the wrong format	syntax error	fixed

## 2.4 Test Completeness

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Here is some criteria to check Test Completeness:

- 100% test coverage

- All Test cases executed
- All bugs are fixed or will be fixed in next release

## 3 Test Deliverables/ Milestones

### 3.1 Test Schedule

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Task Name	Start	Finish	Effort	Comments
Arduino Test	29/1	30/1	1 day	Pass
LCD test	1/2	9/2	2 days	Pass
Ethernet testing	18/2	21/2	2 days	Pass
Frequency test	18/2	21/2	2days	Pass
Mosquitto test	8/3	13/3	1 day	Pass
MQTT client to server	19/3	6/4	3 days	Pass
MQTT server to database	6/4	12/4	2 days	Pass
Performance testing	12/4	20/4	2 days	Pass
Release to Product	22/4	23/4	1 days	Pass

### 3.2 Deliverables

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Deliverable	For	Date / Milestone
Test Plan	Project Manager; Test Team	11/3 23/4
Test cases	Test manager	23/4
Bug Reports	All the team	22/4
Test Strategy	Test team	11/3 23/4

## 4 Test Environment.

- Hardware: computer and fully installed circuit
- Software: Arduino IDE
- Internet connection between the board and computer
- VPN switched on and VM log in are a must

