Requirements Document

[Company name] | [Company address]

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# **Introduction and Scope**

This is a requirements document that will capture all levels of requirements to be developed as part of the summer software project.

All requirements are given an assigned unique identification string. This will consist of the projects initial ‘WEA’ followed by a number so they can be tracked through the project and handled when it comes to systems testing at the conclusion of cycles of development.

The format of this number will be a 4-digit number starting from 0000.

e.g. WEA-0001

The following terminology is used in this document:

• “Shall” A mandated requirement.

• “Will” A statement of intent, or a statement relating to something outside the scope of the system to be developed, but that is relevant to the system under consideration.

• “Should” A desirable requirement. Compliance is not required.

Requirements that are mandatory to the project to implement will have ‘-M’ after their number to show at a glance what requirements take priority.

# **System Description**

The systems functionality is to allow web users to input their current weather data into a system from a given location and then receive an accurate prediction on the current and future weather in their area for that day. The system will use historic data combined with the user input to make its prediction about what the weather will be. It will then display this information back to the user.

Admins will be able to update the system will historic data to create these predictions.

# **Client Requirements**

(WEA-0000-M) Software **Shall** run as a web application

(WEA-0001-M) Software **Shall** allow users to login

(WEA-0002-M) Software **Shall** allow users to input current weather data

(WEA-0003-M) Software **Shall** present the user with a prediction after they input their data

(WEA-0004-M) Software **Shall** base predictions on past weather events

(WEA-0005) Software **Will** be accessible from Android 12 devices

(WEA-0006) Software **Will** be accessible on Windows 10 devices

(WEA-0007) Software **Will** store historical data about past weather events

(WEA-0008-M) Only software admins **Shall** be able to create or edit historical data

(WEA-0009) Users **Will** have an account before they are allowed to input data or be shown any predictions

# **Functional Requirements**

(WEA-0010) Users **should** be able to make an account using an id email and password

(WEA-0011) Users **should** be able to login using their account

(WEA-0012) - Users **should** be able to input detail about the current weather conditions including:

* + location
  + pressure
  + humidity
  + temperature

(WEA-0013) Admins **should** be able to input data into the database

(WEA-0014) Admins **should** be able to reset users’ passwords

(WEA-0015-M) Users **shall** be shown a prediction of weather after inputting data

# **Non-Functional Requirements**

(WEA-0016-M) Users **shall** be able to access the website from a Windows 10 PC

(WEA-0017-M) Users **shall** be able to access the website from any Android 12 mobile device

(WEA-0018-M) The database **shall** be able to store data including temperature, pressure, location, humidity, etc

(WEA-0019) User details **should** be stored securely

(WEA-0020-M) The weather prediction output **shall** be based on historic weather data

(WEA-0021-M) The user **shall** receive their weather prediction within 1 minute of inputting their current weather data

(WEA-0022) The user **will** need to have an account before they are able to input weather/location data

(WEA-0023) The Weather Prediction **will** show the predicted weather for that day only

(WEA-0024) Weather data from the previous day **should** become historic weather data by 9:00am the next day

(WEA-0025) Only Admins **will** be able to access/edit the historic weather database

# **Derived Requirements**

This section states requirements that have been derived from the initial client, functional and non-functional requirements. All of these requirements will have the initially requirements in brackets that they are initially derived from. At the end of the requirement, it will state the requirement it was initially derived from

## Database Requirements

(WEA-0026-M) The System **Shall** be able to Create Weather data Entries from the database when requested by an admin *(WEA-0008-M)*

(WEA-0027-M) The System **Shall** be able to View Weather data Entries from the database when requested by an admin *(WEA-0008-M)*

(WEA-0028-M) The System **Shall** be able to Modify Weather data Entries from the database when requested by an admin *(WEA-0008-M)*

(WEA-0029-M) The System **Shall** be able to Delete Weather data Entries from the database when requested by an admin *(WEA-0008-M)*

(WEA-0030-M) The System **Shall** store historic weather data with the following data types:

* Temperature (⁰C)
* Humidity (%)
* Pressure (Millibar)
* Location (County)

*(WEA-0012)*

(WEA-0031-M) The System **Shall** store user accounts *(WEA-0010)*

(WEA-0032) The System **Will** store users last 10 weather entries  *(WEA-0021-M)*

(WEA-0033-M) The System **Shall** give a response to a query within 5 second *(WEA-0015-M)*

## GUI Requirements

(WEA-0039-M) The systems GUI **shall** run a on website *(WEA-0016-M) (WEA-0017-M)*

(WEA-0040-M) The systems GUI **shall** have a means to input weather data *(WEA-0013)*

## Server Requirements

(WEA-0034-M) The System **Shall** be able to create a weather prediction for a given county from the historical data for that county *(WEA-0003-M)*

(WEA-0035-M) The System **Shall** be able to able to create a weather prediction for a given county using the user inputted weather data *(WEA-0003-M)*

(WEA-0036-M) The System **Shall** be able to interface to a Webserver to allow access from a Website *(WEA-0000-M)*

(WEA-0037-M) The System **Shall** allow access to the database information for admin users only *(WEA-0013)*

(WEA-0038-M) The System **Shall** allows users or admins to make weather predictions *(WEA-0013)*