

System test cases based on the following link
<http://users.csc.calpoly.edu/~jdalbey/206/Assign/HowToTestCase.html>

System Test Case 1

Purpose

Test if system displays relevant weather information

Requirement traceability

1.1 – A user shall be able to review daily rainfall totals every second.

1.2 – A user shall be able to view the temperature in degrees Fahrenheit and humidity in % composition of atmosphere every second.

1.3 – A user shall be able to review wind speed in miles per hour and wind direction every second.

Setup:

Obtain the most current version of the Wilderness Weather Monitoring Station Software System application

Set up the application to run with command line arguments.

Have the sensor hardware collect simulated data (ie read simulated raw data from csv file).

Follow the steps below:

Action	Input	Expected Output
Launch the application		The display user interface appears.
Verify that all relevant weather information appears on the display user interface.		Information on temperature, rainfall, humidity, wind speed and wind direction should appear.
Check that the values for the weather information are valid.		Temperature, rainfall, humidity, wind speed and wind direction should update and have values corresponding to the simulated data.

Example of test data

Temp Rain Amount Humidity WindSpeed WindDirection Boolean

System Test Case 2

Purpose

Test if system can turn off weather sensor

Requirement Traceability

1.4 – A user shall be able to turn on and off the weather sensor from the console.

Setup:

Obtain the most current version of the Wilderness Weather Monitoring Station Software System application

Set up the application to run with command line arguments.

Have the sensor hardware collect simulated data (ie read simulated raw data from csv file).

Follow the steps below:

Action	Input	Expected Output
Launch the application		The display user interface appears.
Turn off sensor		System should no longer receive weather updates from sensor.

Note:

By default, all sensors are on.

System Test Case 3

Purpose

Test if system can turn on weather sensor

Requirement Traceability

1.4 – A user shall be able to turn on and off the weather sensor from the console.

Setup:

Obtain the most current version of the Wilderness Weather Monitoring Station Software System application

Set up the application to run with command line arguments.

Have the sensor hardware collect simulated data (ie read simulated raw data from csv file).

Follow the steps below:

Action	Input	Expected Output
Launch the application		The display user interface appears.
Turn off sensor		System should no longer receive weather updates from sensor.
Turn on sensor.		System should start receiving weather updates.

Note:

By default, all sensors are on.

System Test Case 4

Purpose

Test if system displays weather forecast

Requirement traceability

1.5 – A user shall be able to review their local weather forecast.

5.0 - The tower shall be able to generate a weather forecast prediction.

5.1 - The tower shall be able to report its current weather forecast prediction to display console.

Setup:

Obtain the most current version of the Wilderness Weather Monitoring Station Software System application

Set up the application to run with command line arguments.

Have the sensor hardware collect simulated data (ie read simulated raw data from csv file).

Follow the steps below:

Action	Input	Expected Output
Launch the application		The display user interface appears.
Verify that weather forecast appears on the display user interface.		Weather forecast should appear on the screen.
Check that the forecast updates each second.		System should display updating forecast information