Faculty of Engineering & Applied Science

SOFE 4610U Design And Analysis of IoT Software Systems

Smart Kitchen Ventilation System

Architectural Design Report

Github: https://github.com/Waleed20210/IOT-Project

Deadline date: 12/02/2022

Group Number*: 4*

Course Instructor: *Ramiro Liscano*

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Acceptance Tests

Test Name	Detect Room Temperature and Humidity					
Test Description	The system should be able to detect temperature and humidity in the room					
Test	**Action**	**Expected Output**	**Pass**	**Fail**	**N/A**	**Comments**
1	Increase the room temperature to ~28C	The serial output should print the corresponding temperature value to screen	X			Temperature value is printed to screen
2	Increase the humidity in the room to ~50%	The serial output should print the corresponding humidity value to screen	X			Temperature value is printed to screen
Overall Test Result			X			

Test Name	Testing fan reactivity to sensor events					
Test Description	The System should be able to turn a fan on or off when the temperature or humidity rises					
Test	**Action**	**Expected Output**	**Pass**	**Fail**	**N/A**	**Comments**
1	Increase the room temperature to 35 C or above	The fan is on and ventilating the area	X			An external source of heat was required to simulate this test such as a hot stove
2	Increase the room humidity to 50% or above	The fan is on and ventilating the area	X			An external source of humidity was required for this test, such as a kettle
Overall Test Result			X			

Test Name	User can read temperature or humidity data and can remotely turn the fan on/off					
Test Description	The user should be able to read a notification if the temperature or humidity crosses their thresholds and send command to turn					
Test	**Action**	**Expected Output**	**Pass**	**Fail**	**N/A**	**Comments**
1	Temperature sensor increases beyond threshold of 35C. User taps button to turn fan on	Notification in web page, “fan on” command is transmitted to turn the fans on		X		MQTT errors with broker and cluster
2	Humidity value increases beyond threshold of 45%	Notification in web page, “fan on” command is transmitted to turn the fans on		X		MQTT errors with broker and cluster
Overall Test Result				X		