Project Name: Weather Station Arduino – Humidity out signal

Test Case

Test Case ID: Kakashi

Test Priority (Low/Medium/High): High

Module Name:

Test Title: Application Circuit and MQTT

Description: Test Arduino, LCD, Ethernet, button and MQTT signal/data

Test Designed by: Yen Tran

Test Designed date: 12/03/2020

Test Executed by: Hasan Mahmud, Israt Sumiya

Test Execution date: 12/04/2020

Pre-conditions: User has installed all the required components of the board as well as plug in the Ethernet with the internet modem

Dependencies: internet

Date	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
30/1	Arduino working	Test file "Blink.ino" and 1 single led	Led blinks every second	Led starts blinking every one second	Pass	
9/2	LCD screen	Test file "lcd.ino"	Lcd prints " hello, hyi!" and displays number from 0 to 99	Number increments start from 0 to 99	Pass	
25/2	Ethernet module: checking IP and virtual MQTT signal	Test file "Ethernet_1_emb_systems_ws_ref_1_2020.ino" Wiring pin A0,A1,A2,A3 to GND	Showing device IP and home IP: 10.10. 206 .150, voltage and frequency	Device IP:10.10.206.124 Conn: 10.10.206.150 Voltage: 3.6V Frequency: 0 Hz	Pass	
10/3	Ethernet module: checking IP and real MQTT signal	Test file "Ethernet_1_emb_systems_ws_ref_1_2020.ino"	Showing device IP and home IP Voltage and frequency	Cannot establish	Fail	Virus pandemic Fail to get the signal Move to alternative solution
13/3	Testing MQTT response	Log in with VPN to VM: 172.16.200.88 User: iotti Pw: iotti2017 Mosquitto_sub –t Mosquitto _pub –t Topic: "ICT4_out_2020" ***Send test message by***	In subscribe terminal: My message	In subscribe terminal: My message	Pass	

		Mosquitto _pub –t "ICT4_out_2020" –m "My message" ***See test message from*** Mosquitto_sub –t "ICT4_out_2020"				
6/4	MQTT broker from VM	Test file "Ethernet_1_emb_systems_READ_IP_3_2020.ino" Log in with VPN to VM: 172.16.200.88 User: iotti Pw: iotti2017 Mosquitto_sub –t "ICT4_out_2020" Mosquitto _pub –t "ICT4_out_2020"	See data send to MQTT broker in the type : IOTJS={"S_name":"Humidity_out","S_value": X } every one second	Connected with IP: 192.168.0.100 21:10:59.057 -> Connecting to MQTT 21:10:59.057 -> 193.167.167.59 21:10:59.810 -> Connected OK Time interval : 1 second	Pass	
12/4	MQTT broker to database	Test file "Ethernet_1_emb_systems_READ_IP_3_2020.ino" Log in with VPN to VM: 172.16.200.88 User: iotti Pw: iotti2017 Mosquitto_sub –t "ICT4_out_2020" Mosquitto _pub –t "ICT4_out_2020" ***Go to folder Embsys:*** Make main.cpp, mqtt_arduino1.cpp, mqtt_arduino1.h, mqtt.h, mqtt.cpp, SendTamk.cpp, SendTamk.h ./goE => data is sending to database	Successful JSON data line shows up Counting number of sending	No error showed up See sending numbers	Pass	

Post-conditions:

User is validated with database and can see data updated to the backend api in the right format.