Practical – 17

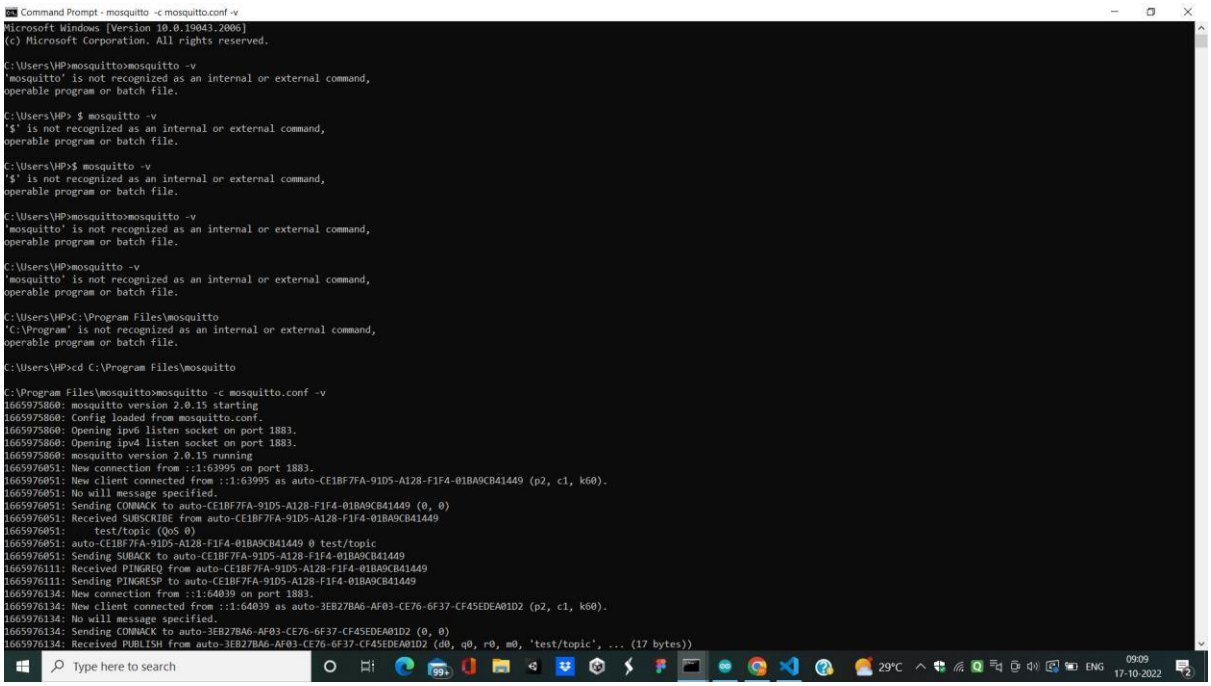
Aim :- Setup MQTT protocol for ESP8266 to publish/subscribe topic.

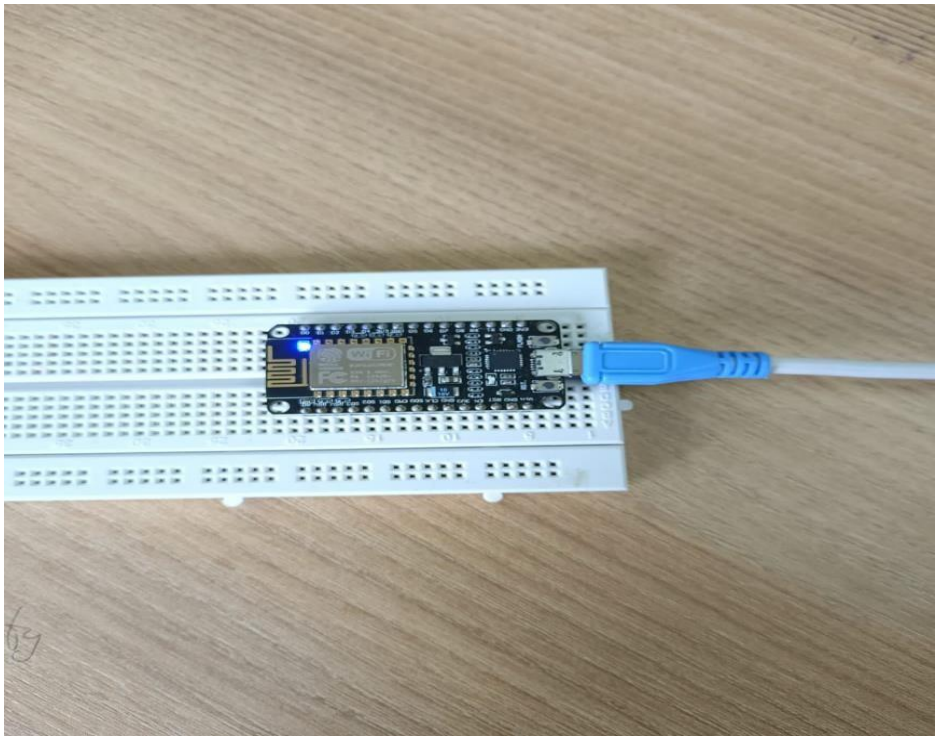
CODE:

```
#include <ESP8266WiFi.h>
#include <PubSubClient.h>
// WiFi
const char *ssid = "Galaxy"; // Enter your WiFi name const
char *password = "jujujujuju";  // Enter WiFi password
// MQTT Broker
const char *mqtt_broker = "192.168.254.184"; // Enter your WiFi or Ethernet IP
const char *topic = "test/topic"; const int mqtt_port = 1883; WiFiClient
espClient; PubSubClient client(espClient); void setup() {
 // Set software serial baud to 115200;
 Serial.begin(115200);

 // connecting to a WiFi network
WiFi.begin(ssid, password);  while
(WiFi.status() != WL_CONNECTED) {
delay(500);
  Serial.println("Connecting to WiFi..");
 }

 Serial.println("Connected to the WiFi network");

 //connecting to a mqtt broker
client.setServer(mqtt_broker, mqtt_port);
client.setCallback(callback);
```

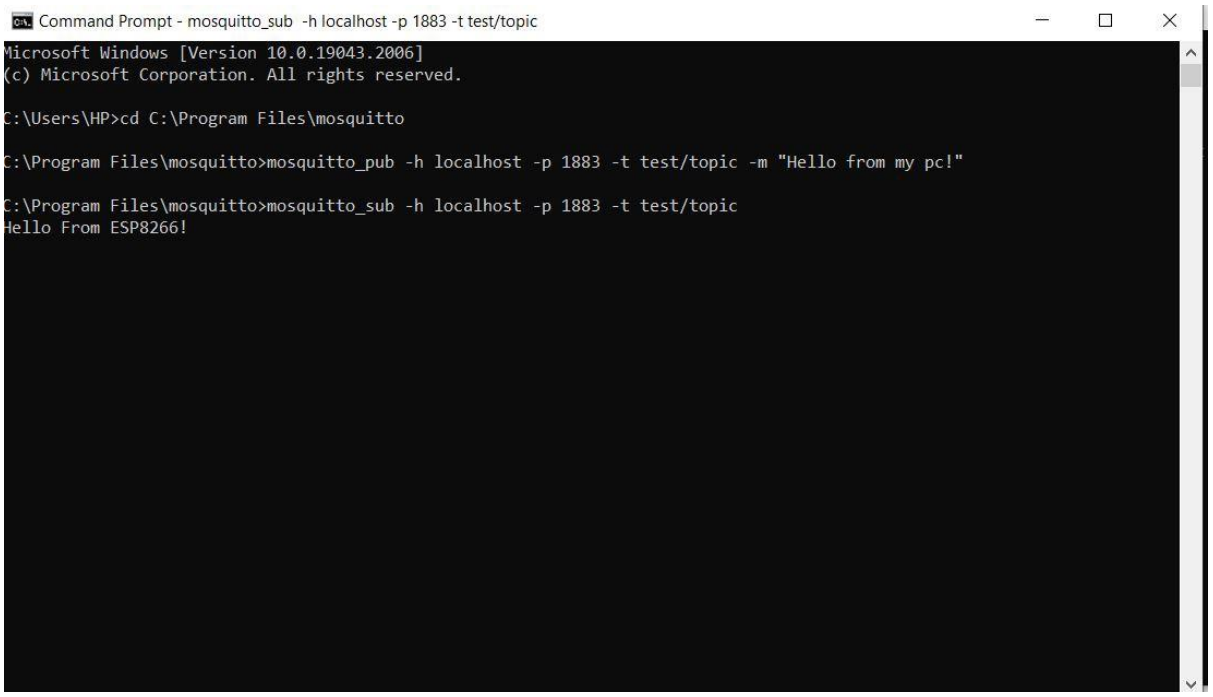
```
 while (!client.connected()) {  String
client_id = "esp8266-client-";  client_id
+= String(WiFi.macAddress());

 Serial.printf("The client %s connects to mosquitto mqtt broker\n", client_id.c_str());

 if (client.connect(client_id.c_str())) {
  Serial.println("Public emqx mqtt broker connected");
 } else {
  Serial.print("failed with state ");
Serial.print(client.state());   delay(2000);
 }
}

 // publish and subscribe
 client.publish(topic, "Hello From ESP8266!");
client.subscribe(topic);
}
void callback(char *topic, byte *payload, unsigned int length) {
 Serial.print("Message arrived in topic: ");
 Serial.println(topic);
 Serial.print("Message:");

 for (int i = 0; i < length; i++) {
  Serial.print((char) payload[i]);
 }

 Serial.println();
 Serial.println(" - - - - - - - - - - - -");
```

```
} void loop()
{
client.loop();
}
```





OUTPUT:


Command Prompt - mosquitto_sub -h localhost -p 1883 -t test/topic
Microsoft Windows [Version 10.0.19043.2006]
(c) Microsoft Corporation. All rights reserved.
C:\Users\HP>cd C:\Program Files\mosquitto
C:\Program Files\mosquitto>mosquitto_pub -h localhost -p 1883 -t test/topic -m "Hello from my pc!"
C:\Program Files\mosquitto>mosquitto_sub -h localhost -p 1883 -t test/topic
Hello From ESP8266!