

Smart Parking Spot

Team SL

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Concept

- Monitoring Parking Spot
- Digital visualisation through Mobile Device
- Controlling Gate

Hardware

- Raspberry Pi
- Arduino WiFi REv2
- Ultrasonic Sensor
- Servo Motor
- RGB Module

Mqtt Protocol

- Raspberry Pi :- MQTT Broker
- Arduino WiFi Rev2 :- Publisher / Subscriber
- IOT MQTT Panel app :- Publisher / Subscriber

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C Code Implementation

```
#include <Wi-Fi-NINA.h>
#include <PubSubClient.h>
#include <stdio.h>
```

```
const char* ssid = "Kajee06";
const char* password = "kajee19960106";
const char* mqtt_server = "192.168.186.1";
const int mqtt_port = 1883;
const char* mqtt_username = "kajee";
const char* mqtt_password = "1234";
```

```
WiFi.begin(ssid, password);

while (WiFi.status() != WL_CONNECTED) {
    delay(500);
    Serial.print(".");
}

Serial.println("");
Serial.println("WiFi connected");
Serial.println("IP address: ");
Serial.println(WiFi.localIP());

client.setServer(mqtt_server, mqtt_port);

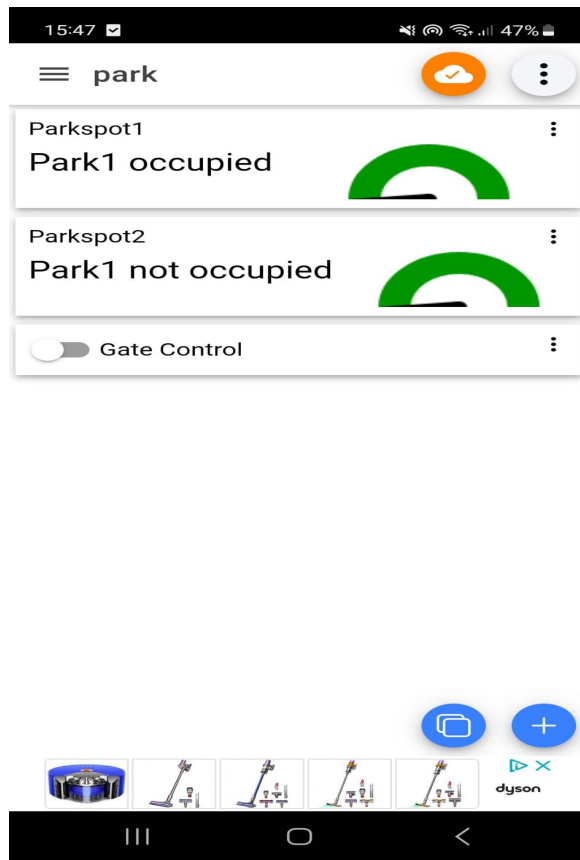
while (!client.connected())
{
    Serial.print("Attempting MQTT connection...");
    if (client.connect("arduinoClient", mqtt_username, mqtt_password))
    {
        Serial.println("connected");
    }
    else {
        Serial.print("failed, rc=");
        Serial.print(client.state());
        Serial.println(" try again in 5 seconds");
    }
}
```

```
if(distance1 <= 10)
{

client.publish("mytopic1", "Park1 occupied");
delay(50);
    digitalWrite (LED_RED, HIGH);
    digitalWrite (LED_GREEN, LOW);
    delay(500);

}
else{
    client.publish("mytopic1", "Park1 not occupied");
    delay(50);
    digitalWrite (LED_RED, LOW);
    digitalWrite (LED_GREEN, HIGH);
    delay(500);
}
```


IOT MQTT Panel App



Thank You