Movement.ino

```
#include <WiFi.h>

#include <HTTPClient.h>

#include <Arduino_JSON.h>


const char* ssid = "Velop 1";

const char* password = "a1234567";



const char* serverName = "http://192.168.100.6/sensors/getMovement.php"; // change to your PC's IP address


String movementReadings;

String movementReadingsArr[3];


byte connectingCounter = 0;


void setup() {

Serial.begin(115200);


  connectToWifi();


}


void loop() {
```

```
delay(10);  //READ DATA FROM THE SERVER EVERY 10 ms

if(WiFi.status()== WL_CONNECTED){ //if we are still connected to wifi

   movementReadings = httpGETRequest(serverName);
    Serial.println(movementReadings);
    JSONVar myObject = JSON.parse(movementReadings);

    if (JSON.typeof(myObject) == "undefined") {
      Serial.println("Parsing input failed!");
      return;
    }

    Serial.print("JSON object = ");
    Serial.println(myObject);
    JSONVar keys = myObject.keys();

    for (int i = 0; i < keys.length(); i++) {
      JSONVar value = myObject[keys[i]];
      Serial.print(keys[i]);
      Serial.print(" = ");
      Serial.println(value);
      movementReadingsArr[i] = value;
    }

   // Serial.print("1 = ");
    //Serial.println(movementReadingsArr[0]);

    if(movementReadingsArr[0]["Direction"].equals("forward")){
```

```
      //Proceed to move FORWARD
    }
    else if(movementReadingsArr[0]["Direction"].equals("backward")){
      //Proceed to move BACKWARD
    }
    else if(movementReadingsArr[0]["Direction"].equals("right")){
      //Proceed to turn RIGHT
    }
    else if(movementReadingsArr[0]["Direction"].equals("left")){
      //Proceed to turn LEFT
    }


  }
  else {
    Serial.println("WiFi Disconnected");
  }
}

String httpGETRequest(const char* serverName) {

  WiFiClient client;
  HTTPClient http;

  // Your Domain name with URL path or IP address with path
  http.begin(client, serverName);

  // Send HTTP POST request
  int httpResponseCode = http.GET();
```

```
  String payload = "{}";

  if (httpResponseCode>0) {
    Serial.print("HTTP Response code: ");
    Serial.println(httpResponseCode);
    payload = http.getString();
  }
  else {
    Serial.print("Error code: ");
    Serial.println(httpResponseCode);
  }
  // Free resources
  http.end();

  return payload;
}



void connectToWifi(){
WiFi.begin(ssid, password);
Serial.print("Connecting to Wifi");
  while (WiFi.status() != WL_CONNECTED) {
    delay(1000);
    Serial.print(".");
    connectingCounter++;
    WiFi.begin(ssid, password);
     if(connectingCounter > 8){
      connectingCounter = 0;
```

```
      Serial.println(F("Unable to connect to the Wifi"));
       Serial.println(F("Restarting ESP32"));
       ESP.restart();
     }
  }
  Serial.println("");
  Serial.print("Connected to WiFi network with IP Address: ");
  Serial.println(WiFi.localIP());
}
```