# IoT System for Controlling Speed and Direction of Motor

Introduction:

The Internet of Things is transforming various fields by enabling smart, interconnected systems. This project leverages IoT to develop a system for remotely controlling the speed and direction of a motor. By integrating sensors, microcontrollers, communication modules, and motor control circuits, users can adjust motor performance via a web interface or mobile app.

This system is ideal for applications in robotics, automation, and machinery control, offering enhanced flexibility, convenience, and efficiency. The project aims to seamlessly combine hardware and software for reliable and precise motor control, showcasing the potential of IoT in modernizing traditional motor management.

Circuit Used:
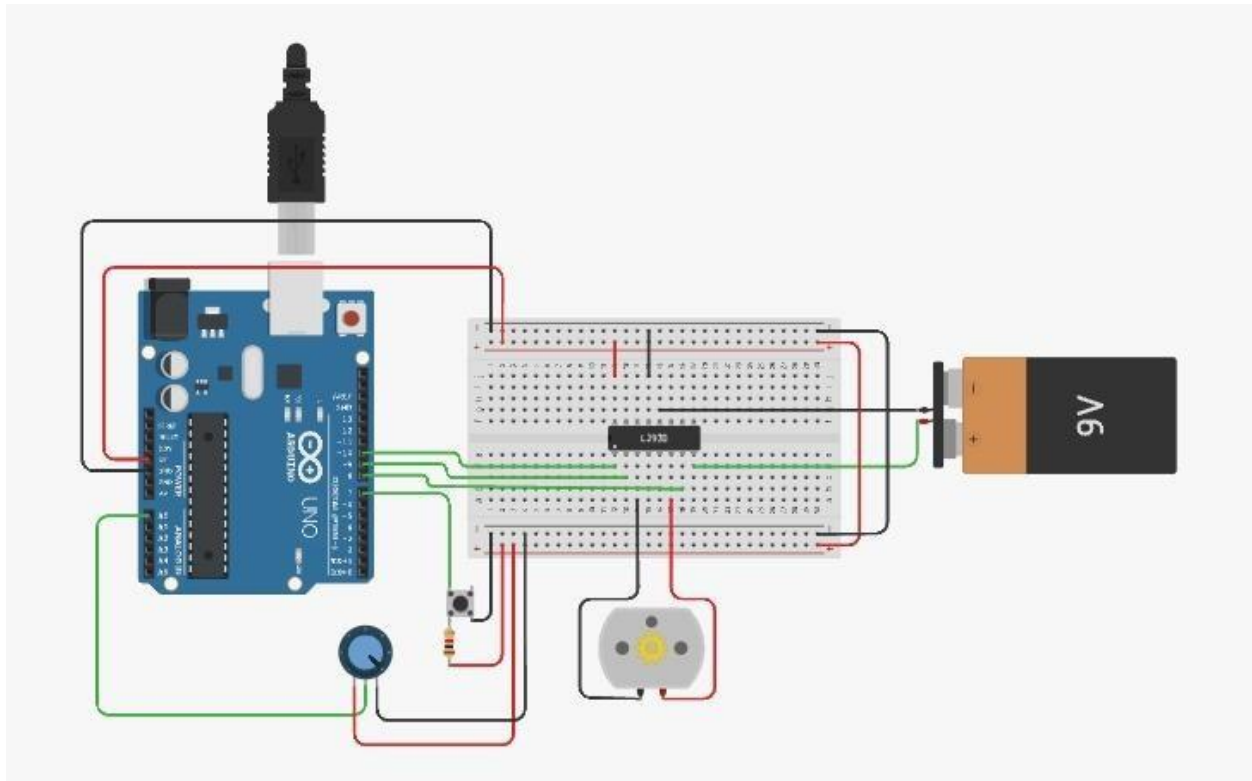
Code Used:

```cpp
//Tech Trends Shameer
//Control DC Motor Using Blynk and ESP8266

#define BLYNK_PRINT Serial


#define BLYNK_TEMPLATE_ID "TMPL2oMf4Ex8U"
#define BLYNK_TEMPLATE_NAME "Control DC motorr"
#define BLYNK_AUTH_TOKEN "hRBF-k4Phd1df8zhJMh-5lG5u125-tNN"

#include <ESP8266WiFi.h>
#include <BlynkSimpleEsp8266.h>


char auth[] = BLYNK_AUTH_TOKEN;

char ssid[] = "hima 2";  // type your wifi name
char pass[] = "hima1234";  // type your wifi password

int M1PWM = D5;
int M2PWM = D6;
int M1F = D1; //GPIO5
int M1R = D2; //GPIO4
int M2F = D3; //GPIO0
int M2R = D4; //GPIO2

int pinValue1;
int pinValue2;

BLYNK_WRITE(V1)
{
  int pinValue1 = param.asInt();
  analogWrite(M1PWM,pinValue1);
  Blynk.virtualWrite(V1,pinValue1);
  Serial.print("V1 Slider Value is ");
  Serial.println(pinValue1);
}

BLYNK_WRITE(V2)
{
  int pinValue2 = param.asInt();
  analogWrite(M2PWM,pinValue2);
  Blynk.virtualWrite(V1,pinValue2);
  Serial.print("V2 Slider Value is ");
  Serial.println(pinValue2);
}


void setup(){
  pinMode(M1PWM, OUTPUT);
  pinMode(M2PWM, OUTPUT);
  pinMode(M1F, OUTPUT);
  pinMode(M1R, OUTPUT);
  pinMode(M2F, OUTPUT);
  pinMode(M2R, OUTPUT);
  Serial.begin(9600);
  Blynk.begin(auth,ssid,pass);

}

void loop(){
  Blynk.run();

}
```
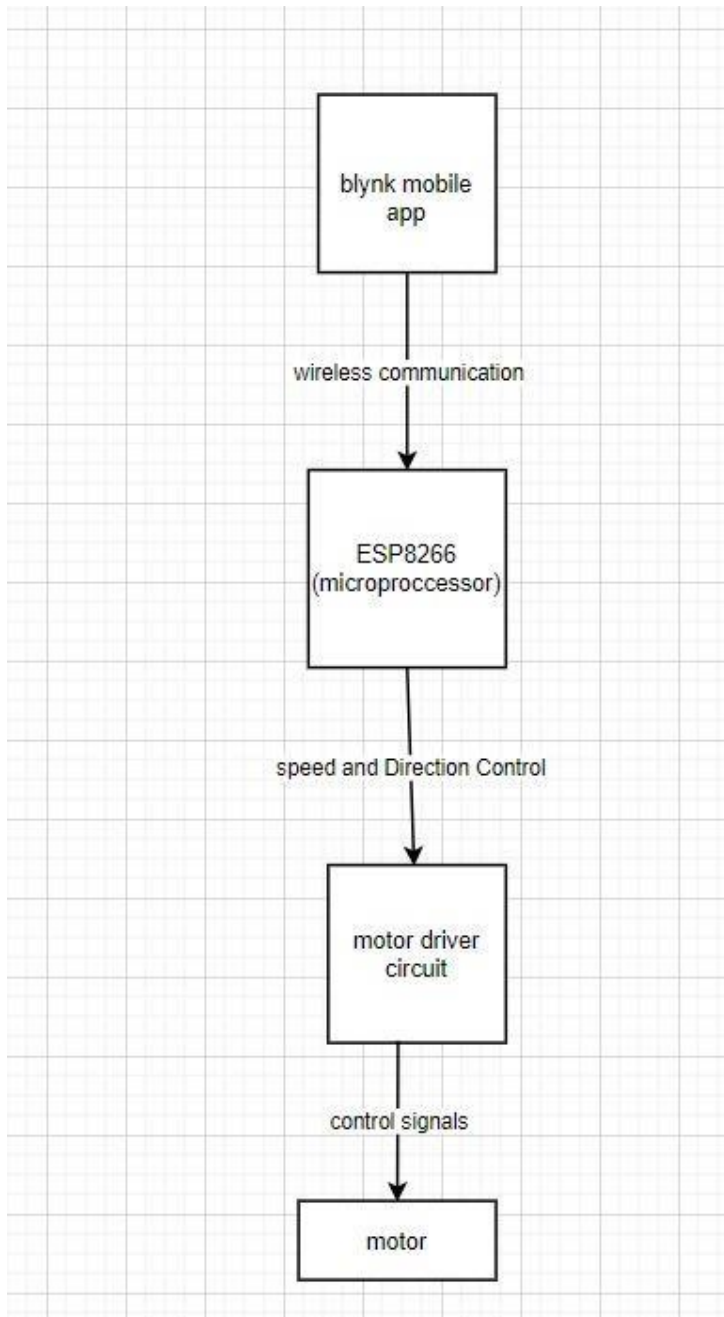
Block Diagram:

Hardware Implementation:

Kindly Find Attached in the video with the clarification.

https://drive.google.com/file/d/1gjf0x82AGat4m4-Okbmea2xMLkqOb4Oj/view?usp=sharing