

```
int sensorValue;
```

```
int sensorLow = 1023;
```

```
int sensorHigh = 0;
```

```
const int ledPin = 13;
```

```
const int controlPin1 = 2;
```

```
const int controlPin2 = 3;
```

```
const int enablePin = 9;
```

```
const int directionSwitchPin = 4;
```

```
const int onOffSwitchStateSwitchPin = 5;
```

```
int onOffSwitchState = 0;
```

```
int previousOnOffSwitchState = 0;
```

```
int directionSwitchState = 0;
```

```
int previousDirectionSwitchState = 0;
```

```
int motorEnabled = 0;
```

```
int motorSpeed = 0;
```

```
int motorDirection = 1;
```

```
const int luces1 = 6;
```

```
const int luces2 = 8;
```

```
const int luces3 = 10;
```

```
const int luces4 = 11;
```

```
const int luces5 = 12;
```

```
int switchstate = 0;
```

```
const int Pin = 7;
```

```
int anterior = 0;
```

```
int state = 0;
```

```
void setup() {
```

```
    pinMode(ledPin, OUTPUT);
```

```
    digitalWrite(ledPin, HIGH);
```

```
    pinMode(6, OUTPUT);
```

```
    pinMode(8, OUTPUT);
```

```
    pinMode(10, OUTPUT);
```

```
    pinMode(11, OUTPUT);
```

```
    pinMode(12, OUTPUT);
```

```
Serial.begin (9600);

while (millis() < 5000) {

    sensorValue = analogRead(A1);
    if (sensorValue > sensorHigh) {
        sensorHigh = sensorValue;
    }

    if (sensorValue < sensorLow) {
        sensorLow = sensorValue;
    }
    Serial.print("Sensor High");
    Serial.println(sensorHigh);
    Serial.print("Sensor Low");
    Serial.println(sensorLow);
}

digitalWrite(luces1, LOW);
digitalWrite(luces2, LOW);
digitalWrite(luces3, LOW);
digitalWrite(luces4, LOW);
digitalWrite(luces5, LOW);


pinMode(directionSwitchPin, INPUT);
pinMode(onOffSwitchStateSwitchPin, INPUT);
pinMode(controlPin1, OUTPUT);
pinMode(controlPin2, OUTPUT);
pinMode(enablePin, OUTPUT);


digitalWrite(enablePin, LOW);


pinMode(Pin, INPUT);


}

void loop() {

    sensorValue = analogRead(A1);
```

```
//int pitch = map(sensorValue, sensorLow, sensorHigh, 1, 100);
```

```
if (sensorValue < 750 ) {  
  digitalWrite(luces1, HIGH);  
  digitalWrite(luces2, HIGH);  
  digitalWrite(luces3, HIGH);  
  digitalWrite(luces4, HIGH);  
  digitalWrite(luces5, HIGH);
```

```
}  
if(sensorValue > 750 ){  
  digitalWrite(luces1, LOW);  
  digitalWrite(luces2, LOW);  
  digitalWrite(luces3, LOW);  
  digitalWrite(luces4, LOW);  
  digitalWrite(luces5, LOW);  
}
```

```
delay(1);
```

```
onOffSwitchState = digitalRead(onOffSwitchStateSwitchPin);  
delay(1);
```

```
directionSwitchState = digitalRead(directionSwitchPin);
```

```
motorSpeed = 250;
```

```
if (onOffSwitchState != previousOnOffSwitchState) {
```

```
  if (onOffSwitchState == HIGH) {  
    motorEnabled = !motorEnabled;  
  }  
}
```

```
if (directionSwitchState != previousDirectionSwitchState) {
```

```
  if (directionSwitchState == HIGH) {  
    motorDirection = !motorDirection;  
  }  
}
```

```
if (motorDirection == 1) {  
    digitalWrite(controlPin1, HIGH);  
    digitalWrite(controlPin2, LOW);  
} else {  
    digitalWrite(controlPin1, LOW);  
    digitalWrite(controlPin2, HIGH);  
}
```

```
if (motorEnabled == 1) {  
  
    analogWrite(enablePin, motorSpeed);  
    delay(35);  
    analogWrite(enablePin, 0);  
    delay(100);  
    analogWrite(enablePin, motorSpeed);  
} else {  
    analogWrite(enablePin, 0);  
}
```

```
previousDirectionSwitchState = directionSwitchState;
```

```
previousOnOffSwitchState = onOffSwitchState;
```

```
state = digitalRead (Pin);  
if (state != anterior){  
    digitalWrite (Pin, LOW);  
}  
;  
  
}
```