PROJECT 3

LDR sensor

1. INTRODUCTION: -

Another important category of sensors that you need to interface with ESP32 is analog sensors. There are many types of analog sensors, LDRs (Light Dependent Resistors), current and voltage sensors being popular examples.

COMPONENTS: -

1. **Led**
2. **Wemos**
3. **Ldr sensor**

APPLICATION: -

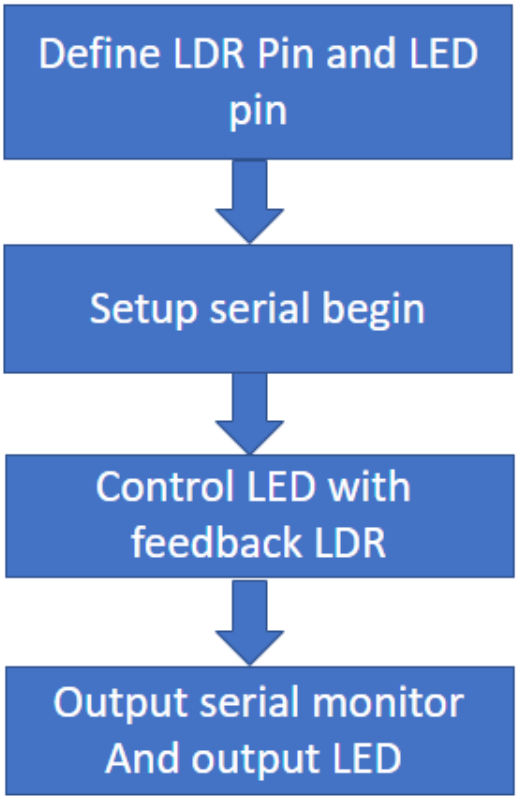
These devices are used where there is a need to sense the presence and absence of light is necessary.

These resistors are used as light sensors and the applications of LDR mainly include alarm clocks, street lights, light intensity meters, burglar alarm circuits.

OBJECTIVES: -

Light dependent resistors, LDRs, or photoresistors are electronic components that are used to detect light & change the operation of a circuit dependent upon the light levels.

FLOW CHART :-


Define LDR Pin and LED pin
Setup serial begin
Control LED with feedback LDR
Output serial monitor And output LED

PROGRAMMING: -

```
const int ledPin = D2;
const int ldr Pin = A0;
void setup() {
Ser ial.begin(9600);
pinMode(ledPin, OUTPUT);
pinMode(ldr Pin, INPUT);
}
void loop() {
int ldr Status = analogRead(ldr Pin);
if (ldr Status <=300) {
digitalWr ite(ledPin, HIGH);
Ser ial.pr int(ldr Status);
Ser ial.pr intln("LDR is DARK, LED is ON");
}
else {
digitalWr ite(ledPin, LOW);
Ser ial.pr intln("LED is OFF");

 }
}
```

HARDWARE CONNECTION: -

1. **Connect LED to LDR**
2. **Connect D1 to AO.**
3. **Connect GND to GND.**
4. **Connect 5V to 5V.**
5. **LED** ના પોજીટિવિને રસિસ્ટોર સાથે **WeMos** ની **D11** સાથે કનેક્ટ કરો .અને **GND** પિન ને **GND** સાથેકનેક્ટ કરો .

CURCUIT DIAGRAM: -