PROJECT 4

Solar Tracking System

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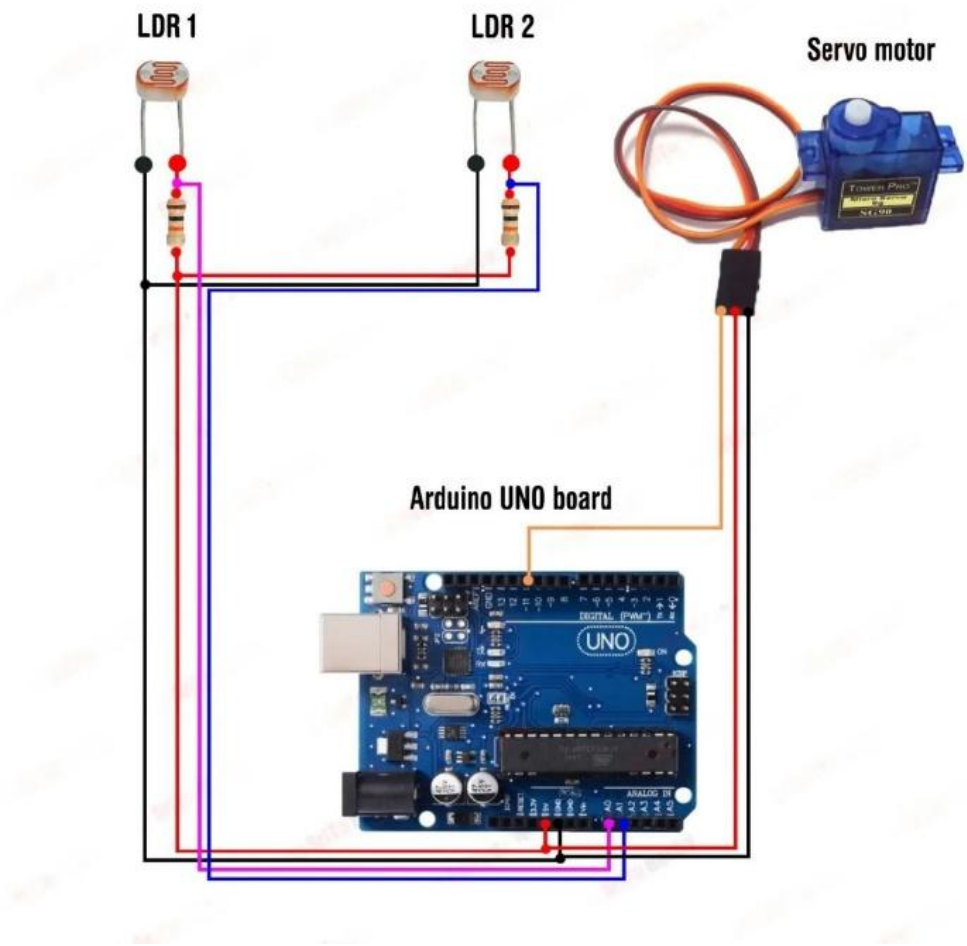
G11 ES

Components Used:

- Arduino UNO R3
- LDR * 2
- Battery
- Servo
- Bread Board
- Hookup Wires
- Solar Panel (optional)
- Resistor (1K ohm) * 2



Circuit Diagram

Program:

```
#include <Servo.h>

#define LDR1 A0
#define LDR2 A1
#define error 10

int Spoint =  90;
Servo servo;
void setup() {
  servo.attach(11);
  servo.write(Spoint);
  delay(1000);
}
void loop() {
  int ldr1 = analogRead(LDR1);
  int ldr2 = analogRead(LDR2);
  int value1 = abs(ldr1 - ldr2);
  int value2 = abs(ldr2 - ldr1);
  if ((value1 <= error) || (value2 <= error)) {
  } else
    {
      if (ldr1 > ldr2) {
        Spoint = --Spoint;
      }
      if (ldr1 < ldr2) {
        Spoint = ++Spoint;
      }
    }

  servo.write(Spoint);
  delay(80);
}
```

Advantages:

- It increases the efficiency of the solar panel.
- It manages the direction according to the sun.
- It will increase the falling time of sun rays on it.

Limitations:

- It requires more space than space required for normal solar panels.
- It will increase the overall cost of the solar project on roof.