Implementation:

For designing Arduino Based Solar Tracker Using LDR & Servo Motor you need to program Atmega 328 Arduino microcontroller. Below is the program that will interface servo motor & LDR with Arduino for Solar Tracking. Copy this code and upload it to your Arduino Board.

```
1  #include <EEPROM.h>
2  #include <Servo.h>
3
4  Servo myservo;
5
6  int sensor1=A1;
7  int sensor2=A0 ;
8  int calswitch=2;
9
10 int val1;
11 int val2;
12
13 int pos=0;
14 int error;
15 int state;
16
17 void setup() {
18 pinMode(sensor1,INPUT);
19 pinMode(sensor2,INPUT);
20 pinMode(calswitch,INPUT);
21
22 myservo.attach(10);
23 }
24
25 void loop() {
26 if(digitalRead(calswitch)==0) {
27 myservo.detach();
28
29 val1=analogRead(sensor1);
30 val2=analogRead(sensor2);
31
32 if (val1>val2) {error=val1-val2; state=0; }
33 else {error=val2-val1; state=1; }
34
35 EEPROM.write(0,error);
36 EEPROM.write(1,state);
37
38 delay(1000);
39 }
40
41 else{
42 myservo.attach(10);
43
44 val1=analogRead(sensor1);
45 val2=analogRead(sensor2);
46
```

```
47 state=EEPROM.read(1);
48 error=EEPROM.read(0);
49
50 if(state==0) { val1=val1-error;}
51 else { val2=val2-error;}
52
53 if (val1-val2>4) {myservo.write(pos); pos=pos-1; delay(10);}
54 else if (val2-val1>4) {myservo.write(pos); pos=pos+1; delay(10);}
55 else {myservo.write(pos);}
56
57 if (pos>90) {pos=90;}
58 else if (pos<0) {pos=0;}
59
60 }
61 }
```