



# YCCE

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution Affiliation to Rashtrasant Tukadoji Maharaj Nagpur University)

Institute code : 4167



## **MINI PROJECT**

- **SUBJECT**: Electronics Devices And Circuits Lab
- **PROJECT NAME**: Darkness Detector Using LDR
- **BRANCH**: Electronics And Telecommunication
- **SEMESTER**: III
- **SECTION**: C
- **TEAM MEMBERS**:

| <b><u>NAME</u></b>          | <b><u>ROLL NO.</u></b> |
|-----------------------------|------------------------|
| Sontakke Shrikant Sanjay    | D10                    |
| Bhadake Ram Bharat          | D11                    |
| Bhanarkar Shravil<br>Keshav | D16                    |

**AIM:** Detecting Darkness Using LDR

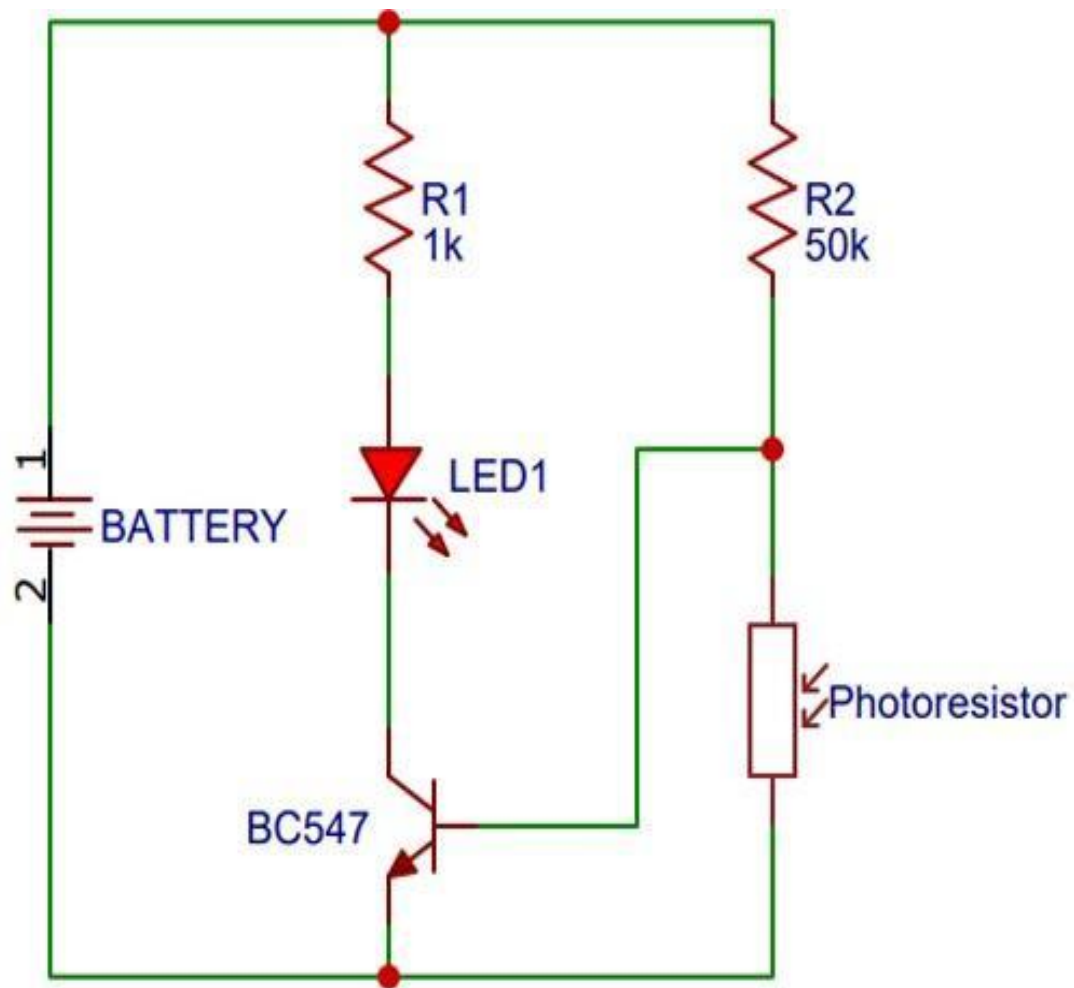
**COMPONENTS:**

- Bread Board
- LED
- BC547
- Resistor (47k and 100ohm)
- LDR
- 9V Battery
- Connecting Wires

**WORKING PRINCIPLE:**

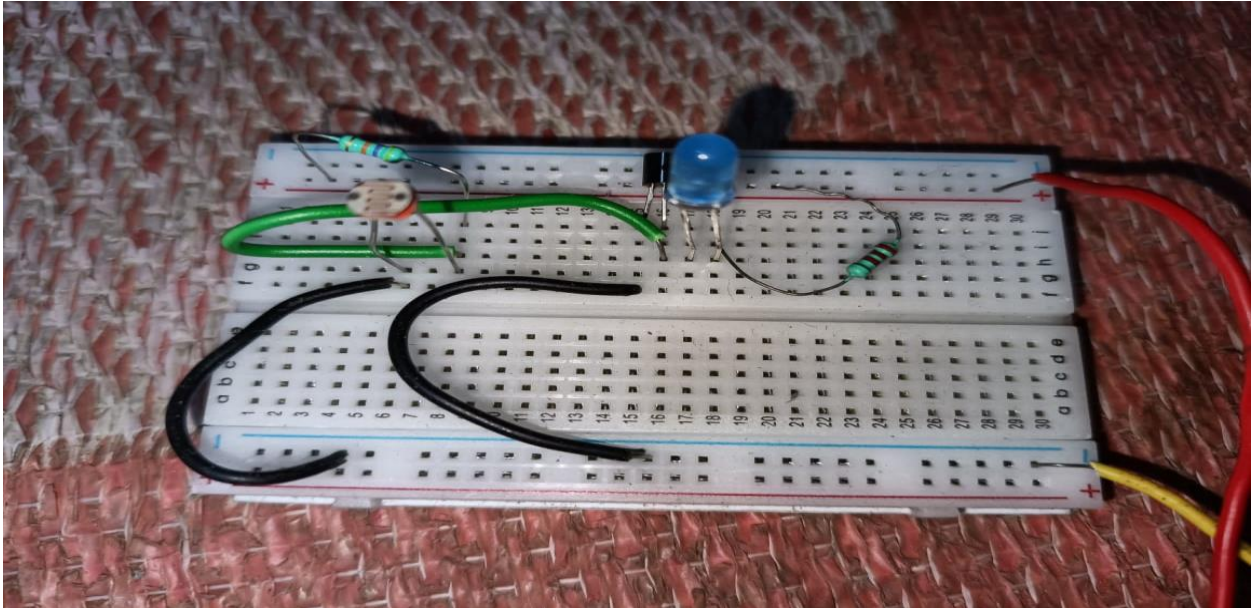
The circuit is based around LDR which is also called a photoresistor. The resistance of LDR is dependent on the intensity of light. The 50k resistor and the LDR makes a voltage divider circuit. When the intensity of light falling on the LDR is high, it will have a higher resistance and hence the voltage divider will give a low output to the base pin of the BC547 BJT. BC547 is a NPN transistor, and when the BJT is in on-state, i.e. the emitter-base junction is in forward biased condition. The electronic path for our LED is completed and hence the LED illuminates.

## CIRCUIT DIAGRAM:



## **OBSERVATIONS:**

- **Before Darkness :**



- **After Darkness:**

