

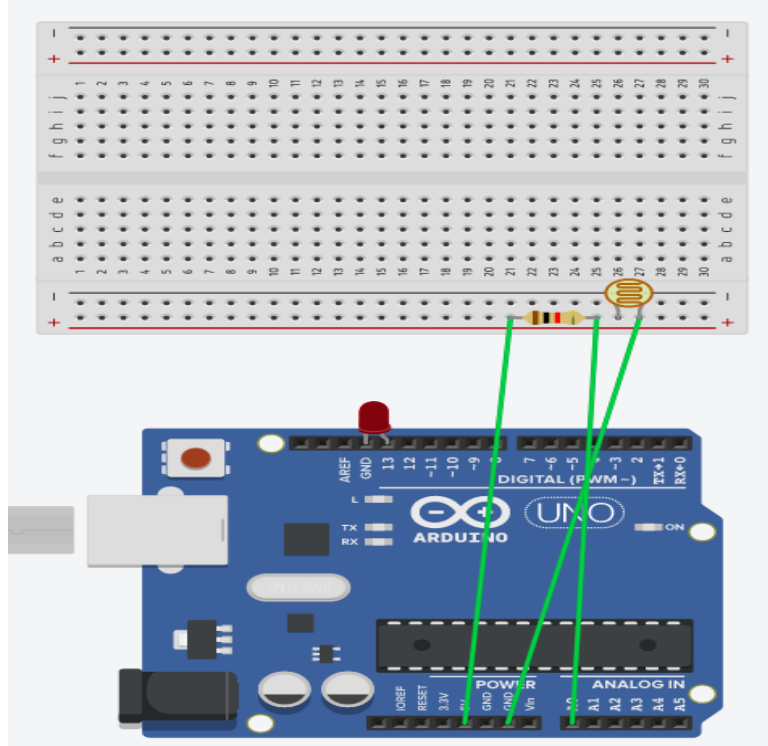
# Exp.5: Night Lamp

## Circuit Diagram:

## Theory

### Concept Used:

The LED turns on when the LDR isn't receiving any light. So the resistance of the LDR increases and as a result the voltage drop across it also increases.



## Learning and Observations:

Following observations were recorded during the experiment:

- The LED turns on when the LDR isn't receiving any light.
- The LDR needs to be connected to the ground to give LOW input when it is not subjected to darkness.

## Problems and Troubleshooting:

No problem was faced while performing the experiment and it was conducted successfully.

## Precautions:

The following precautions need to be considered while performing this experiment:

- The connections of the USB in both the PC and the ARDUINO UNO board should be snug.
- The USB ports of the PC and the ARDUINO UNO should be in a working condition.

- The sketch should be logically and syntactically correct and germane to the experiment that needs to be performed.
  - The correct serial port should be selected that is the one through which the ARDUINO UNO has been connected.
  - Look for errors during compilation and upload of the executable to the ARDUINO UNO.
  - Disconnect the digital 1 and 0 pins while uploading the program to the board.
- Do not open more than one instance of the ARDUINO IDE at a time.

### **Learning outcomes:**

The various learnings as the outcome of performing the above-mentioned experiment are:

- Use of the analog Read() function.
- Connecting an LDR to take input and send it to ARDUINO.
- Setup of a potential divider circuit.