Raspberry Pi with LDR:

Introduction: We will learn how to use an LDR “light-dependent resistor to control an LED” light-emitting diode”. The LED will be turned on and turned off depending on the light intensity in the room. This project can also be used for day and night detection.

Components:

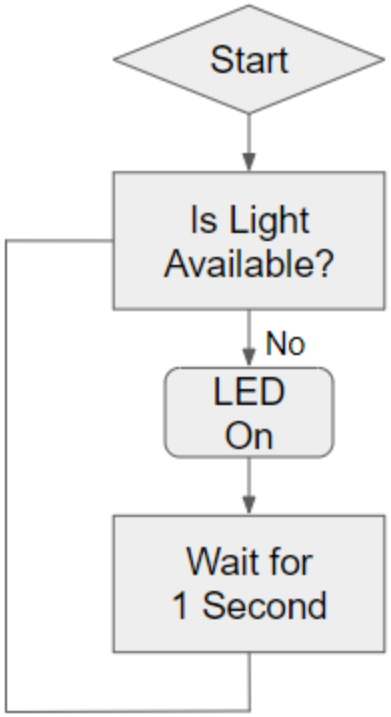
- Raspberry Pi
- Breadboard
- LDR Sensor Module
- LED
- Resistor
- Breadboard
- Jumper wires

Application:

- Automatic Street Light
- Laser Security System

Objectives:

Flow chart:



Code:

```
import RPi.GPIO as GPIO
from time import sleep
#Set warnings off (optional)
GPIO.setwarnings(False)
GPIO.setmode(GPIO.BCM)
#Set LDR and LED pins
LDR = 23
LED = 24
#Setup LDR and LED
GPIO.setup(LDR,GPIO.IN,pull_up_down=GPIO.PUD_UP)
GPIO.setup(LED,GPIO.OUT)
#flag = 0

while True:
    button_state = GPIO.input(LDR)
    print(LDR_state)
    if LDR_state == 0:
```

```
        GPIO.output(LED,GPIO.HIGH)
    else:
        GPIO.output(LED,GPIO.LOW)
    sleep(1)
```

Hardware connection:

LED Anode - Resistor

Resistor - GPIO24

LED Cathode - GND

Circuit diagram: