**Experiment 3**

**Aim: To interface Push button/Digital sensor (IR/LDR) with Arduino/Raspberry Pi and write a program to turn ON LED when push button is pressed or at sensor detection.**

**Requirements:**

1. Standard 5mm LED
2. Two Resistors
3. Arduino Uno microcontroller board (ATmega328p)
4. Jumper wires
5. Push button

**Procedure:**

Step 1: Open [www.wokwi.com in](http://www.wokwi.com/) browser and select “Arduino Uno” microcontroller.

Step 2: In the Simulation part, select the above list by clicking “+” symbol, which are specified in above requirements.

Step 3: By using jumper wires, Connect Anode (A-pin) of LED to digital pin 3 of Arduino microcontroller through the resistor1 and Cathode (C-pin) of LED to ground.

Step 4: Give 5volt power supply to pushbutton 1:1L pin.

Step 5: Connect pushbutton 1:1R to both GND through resistor2& digital pin5.

Step 6: Write program in“sketch.ino”.

**Program:**

int flag=0;

voidsetup() {

// put your setup code here, to run once:

pinMode(3, OUTPUT);

pinMode(5, INPUT);

}

voidloop() {

// put your main code here, to run repeatedly:

int value=digitalRead(5);

if(value==1&& flag==0)

{

digitalWrite(3,HIGH);

delay(1000);

flag=1;

}

elseif(value==1&& flag==1)

{

digitalWrite(3,LOW);

delay(1000);

flag=0;

}

}

**Output:** When push button is pressed, LED will be turned ON by interfacing Push button with Arduino.



