LETS READ DATA FROM INPUT Device
Push button and PRINT TO MONITOR

Task:

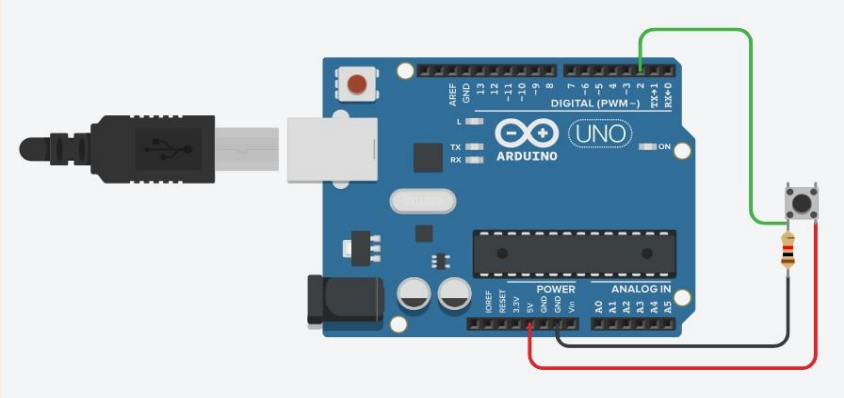
- Create a circuit with Arduino UNO, a breadboard and a push button

Questions:

- WHY IS RESISTOR NEEDED
- Understand the meaning of Serial.begin (),
- Are we reading digital data or analog data

Components:

- Arduino
- Push button
- Resistor-1kΩ




```
void setup() {
  // put your setup code here, to run once:
  Serial.begin(9600);
  pinMode(7, INPUT);
  }
void loop() {
 int button_val=digitalRead(7);
  Serial.print("ButtonValue :" );
  Serial.println(button_val);
   delay(100);

}
```

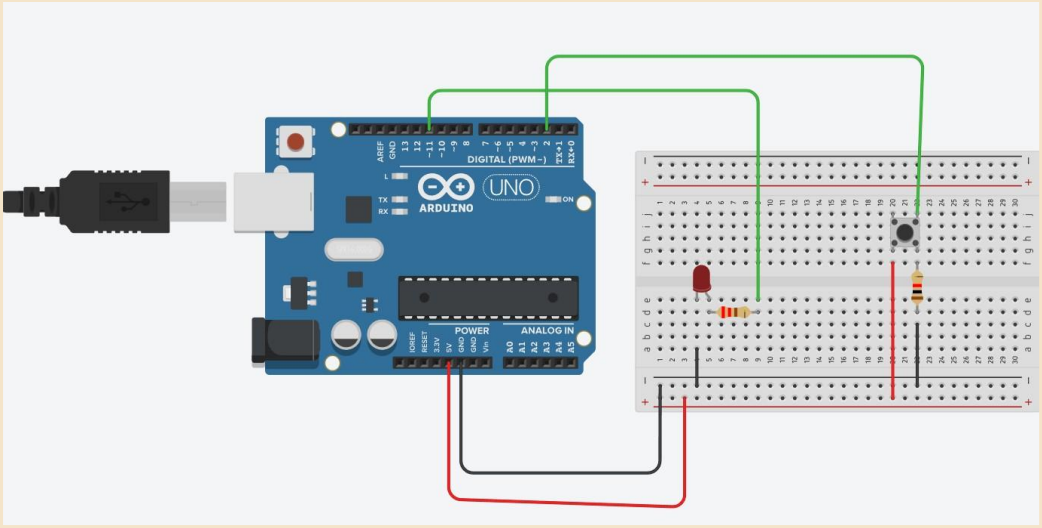
Integrate Input and Output (Control Output Based on Input)
Lets see if we can switch led only when button is pushed else off

Task:

- Create a circuit with Arduino UNO, a breadboard and a push button to switch ON/OFF an LED , resistors

Questions:

- Mention Bush button pins.
- Can we control an output based on input
- Can we use analog write ?? Check what happens ??



```
int ledPin=11;   //initialize led connected to pin 11
int Button_pin=2;//initialize led connected to pin 2
//definition digital 8 pins as pin to control the LED
void setup()
{
  Serial.begin(9600);//Begin serial port to see output in serial monitor
  pinMode(Button_pin,INPUT); //Set digital pin 2 input mode
  pinMode(ledPin,OUTPUT);    //Set the digital 11 OUTPUT: Output mode
}
void loop()
{
    Serial.print("Button Value is:"); // Prrint
    int Button_val=digitalRead(Button_pin);// read the button pin value into integer but_val
    Serial.println(Button_val);
    digitalWrite(ledPin,Button_val); //HIGH is set to about 5V PIN8
 }
```