TASK 1: PUSH BUTTON COUNTER

# Project Overview

In this project, we use Arduino and a push button to count how many times the button is pressed. Every time the button is pressed, the count is displayed on the Serial Monitor.

# Components Used

- Arduino UNO  
- Push Button  
- Resistor 10kΩ  
- Jumper wires  
- Breadboard (optional)

# Circuit Explanation

The push button is connected to pin 2 of Arduino. A pull-down resistor is used to keep the state LOW when the button is not pressed. When the button is pressed, it sends a HIGH signal to the Arduino, which increments the counter.

# Circuit Simulation Link

Wokwi Simulation: https://wokwi.com/projects/398046114090505217

# Arduino Code

// TASK 1: Push Button Counter  
int buttonPin = 2; // Button connected to digital pin 2  
int buttonState = 0; // Current state of button  
int lastButtonState = 0; // Previous state  
int counter = 0; // Counter value  
  
void setup() {  
 pinMode(buttonPin, INPUT);  
 Serial.begin(9600);  
}  
  
void loop() {  
 buttonState = digitalRead(buttonPin);  
  
 if (buttonState == HIGH && lastButtonState == LOW) {  
 counter++;  
 Serial.print("Button Pressed: Count = ");  
 Serial.println(counter);  
 delay(200); // debounce delay  
 }  
  
 lastButtonState = buttonState;  
}

# Conclusion

This simple task demonstrates how to use a digital input (push button) to perform a basic counting function in embedded systems. It helps understand button debouncing and serial communication.