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Sub: IoT

Practical – 2[Batch-71]

Part-1: Push Button

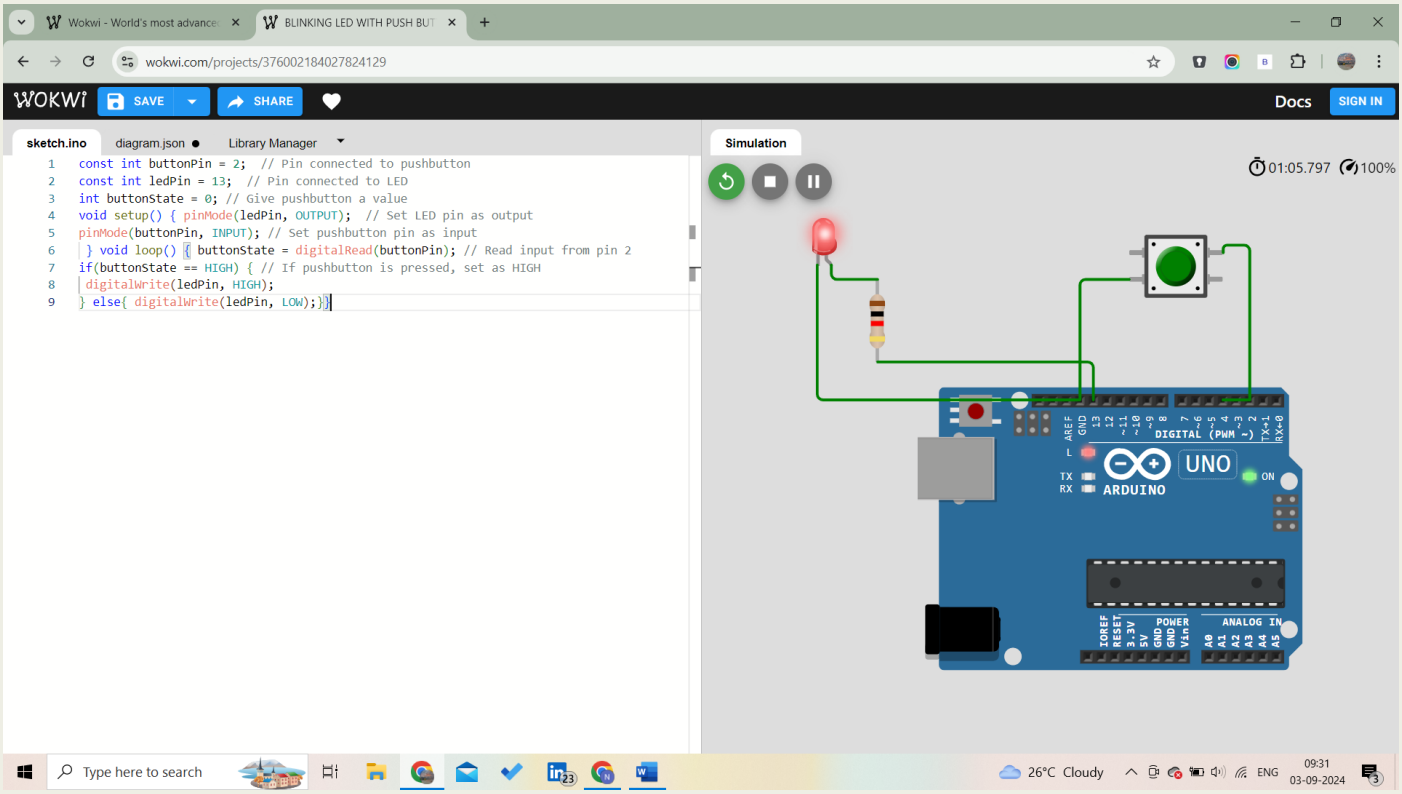
Parts needed:

1) Resistor
2) LED
3) Push- button
4) Ardunouno

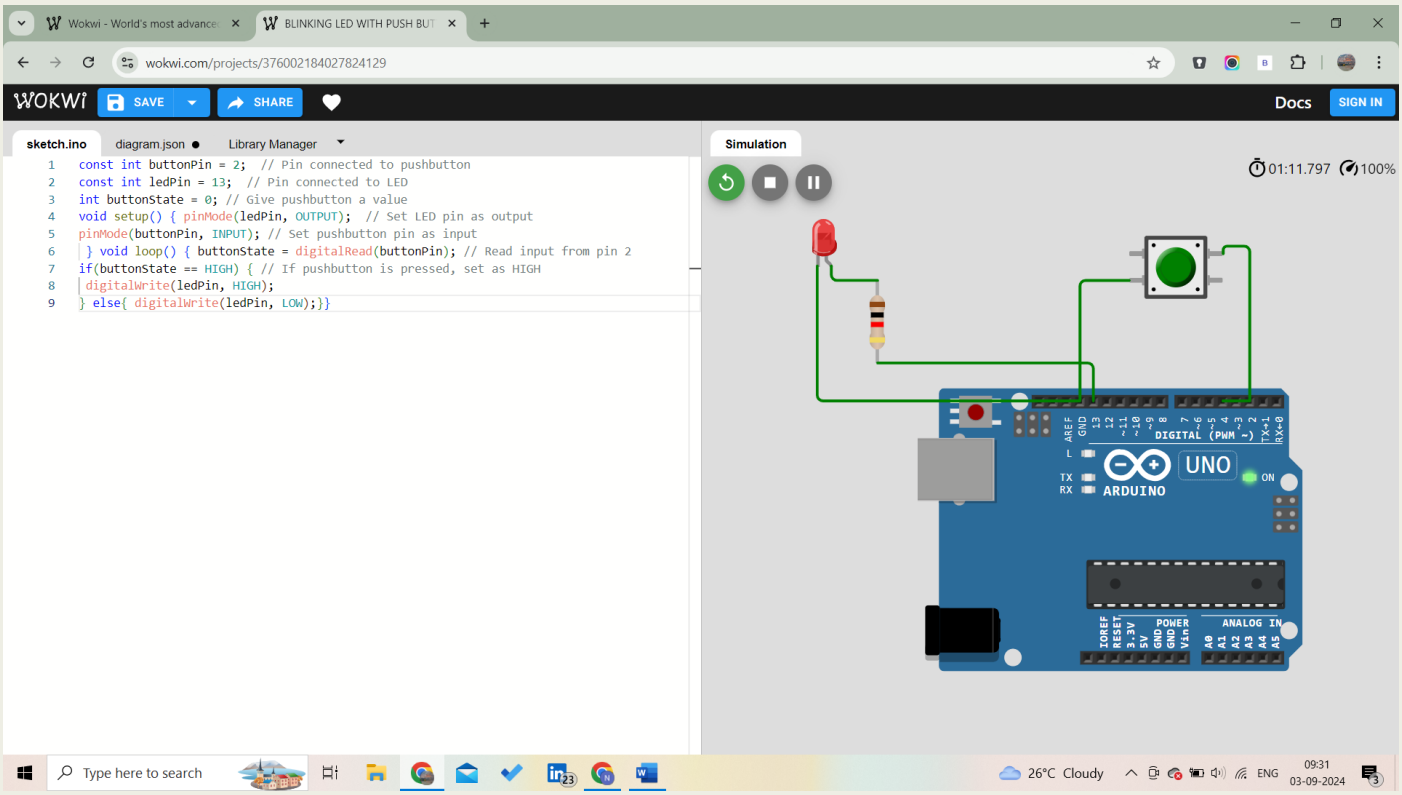
Code:

```
const int buttonPin = 2;  // Pin connected to pushbutton

const int ledPin = 13;  // Pin connected to LED

int buttonState = 0; // Give pushbutton a value

void setup() { pinMode(ledPin, OUTPUT);  // Set LED pin as output

pinMode(buttonPin, INPUT); // Set pushbutton pin as input

 } void loop() { buttonState = digitalRead(buttonPin); // Read input from pin 2

if(buttonState == HIGH) { // If pushbutton is pressed, set as HIGH

 digitalWrite(ledPin, HIGH);

} else{ digitalWrite(ledPin, LOW);}}
```

On condition:



Off Condition:



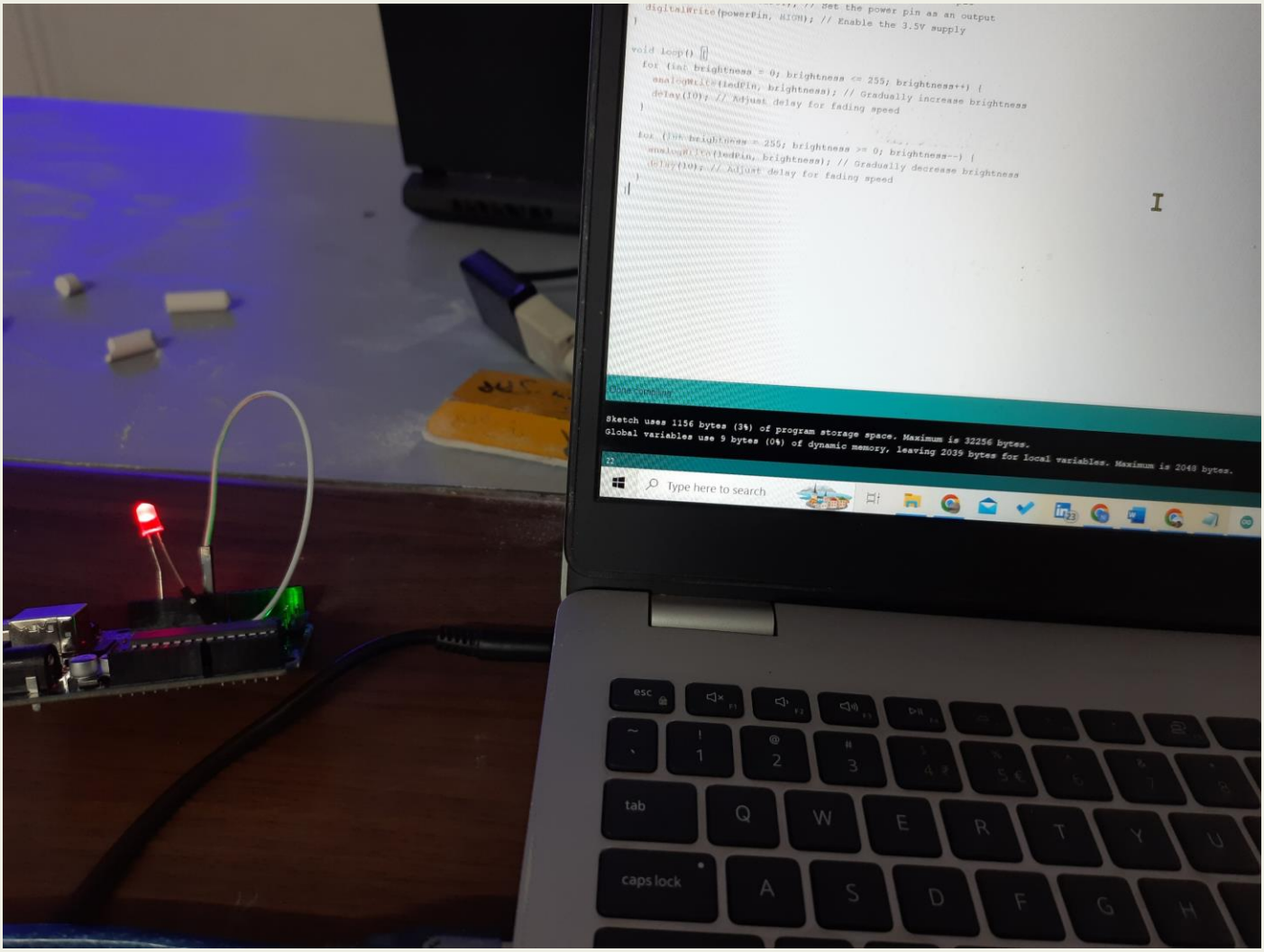
Part-2: Fading LED with the help of Arduino.

Part Needed:

1) Ardunouno
2) LED
3) Male-female wire

Code:

```
#include <Arduino.h>
const int ledPin = 9; // Replace 9 with the actual pin number used
const int powerPin = 10; // Pin to control the 3.5V supply

void setup() {
  pinMode(ledPin, OUTPUT); // Set the LED pin as an output
  pinMode(powerPin, OUTPUT); // Set the power pin as an output
  digitalWrite(powerPin, HIGH); // Enable the 3.5V supply
}

void loop() {
  for (int brightness = 0; brightness <= 255; brightness++) {
    analogWrite(ledPin, brightness); // Gradually increase brightness
    delay(10); // Adjust delay for fading speed
  }

  for (int brightness = 255; brightness >= 0; brightness--) {
    analogWrite(ledPin, brightness); // Gradually decrease brightness
    delay(10); // Adjust delay for fading speed
  }
}
```



Drive Link:

https://drive.google.com/file/d/15XNxqdtlcdTvlJCmkMoDVg2SgD-VFT7-/view?usp=sharing