Industrial Applications of Microcontrollers – A Practice Based Approach

TASK – 2

Assume that you are an embedded engineer working on a simple microcontroller project. Your task is to write an embedded C code that turns on an LED when a button switch is pressed. The LED should remain on as long as the button is pressed and should turn off when the button is released.

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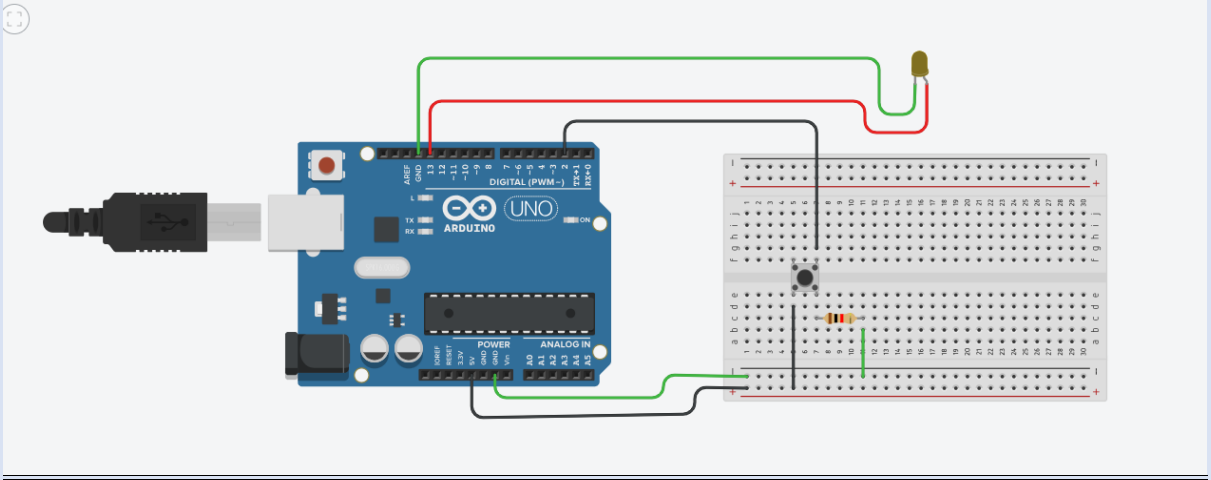
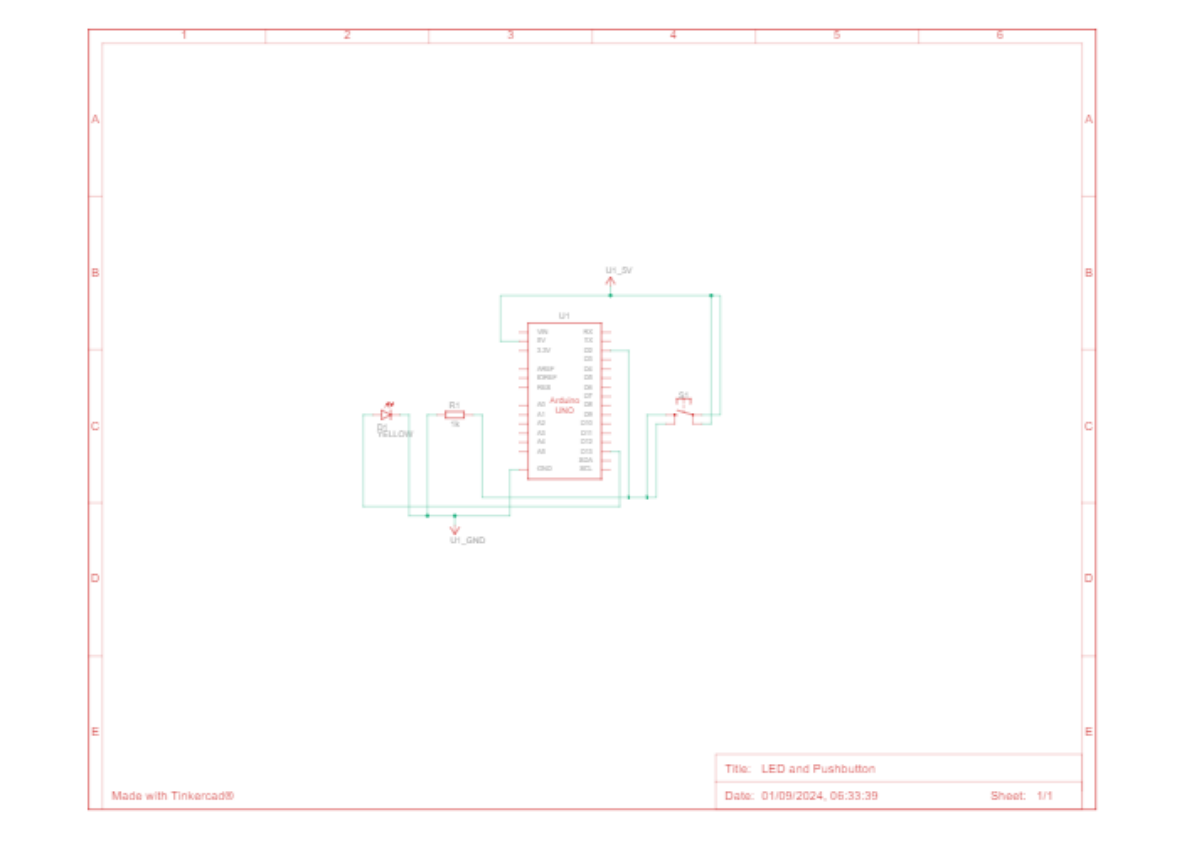
LED and Pushbutton on Microcontroller



LED and pushbutton circuit with Arduino UNO R3

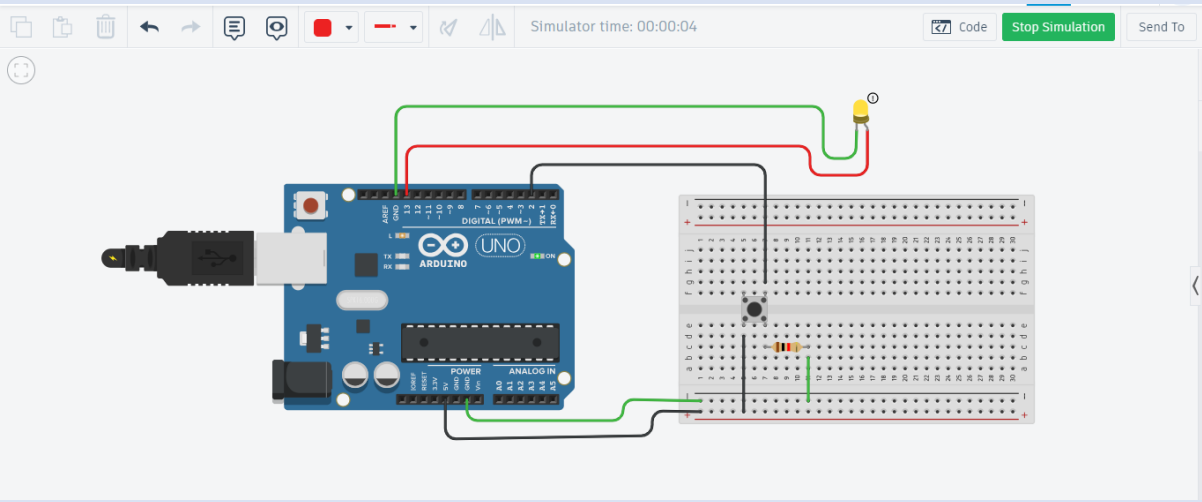


Circuit Diagram for the project

CODE for the working of LED when the switch is pressed

```
void setup()
{
  pinMode(2, INPUT);
  pinMode(13, OUTPUT);
}

void loop()
{
 if(digitalRead(2) == HIGH)
 {
   digitalWrite(13, HIGH);
 }
 else
 {
  digitalWrite(13, LOW);
  }
}
```



LED is on when the switch is pressed