

## LAB #2 (Button for Blinking Led)

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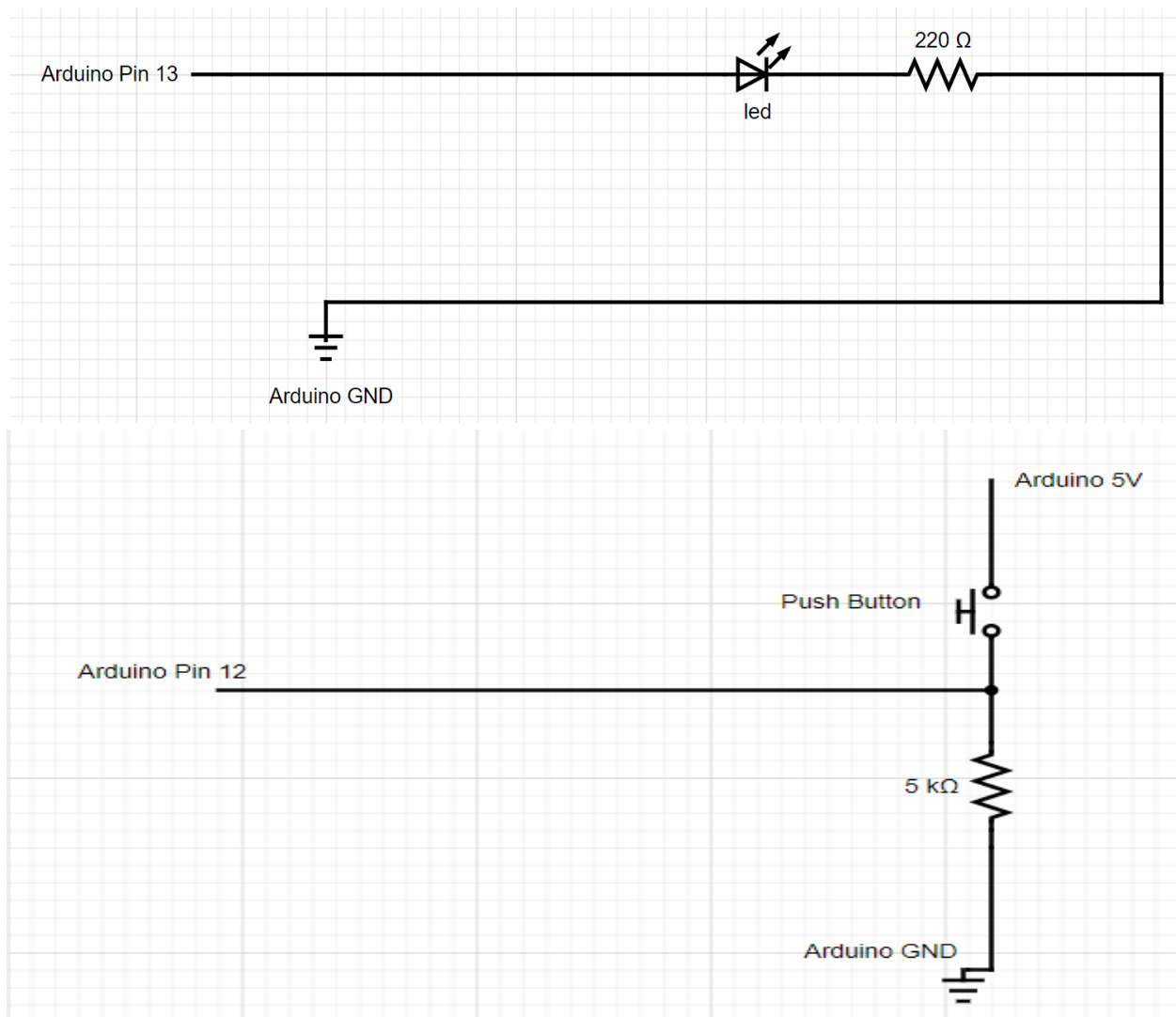
In the previous lab we took how to make a led blink, but there was no control over it, So let's add some control ^-^/, in this lab we want when a button is pressed the led starts to blink and when the button is not pressed the led stops blinking.

Required components for this lab:

- Breadboard
- Wires (male - male)
- 1 Led.
- 1 resistor in range of  $220\Omega$  to  $1K\Omega$ .
- 1 push button.
- 1 resistor in range of  $5K\Omega$  to  $10K\Omega$

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### Circuit diagram



# Code

```
#define led 13
#define btn 12

// btn reading var used to hold the reading of the button
int btnReading = 0;

void setup() {
  // put your setup code here, to run once:
  pinMode(btn, INPUT);
  pinMode(led, OUTPUT);
}

void loop() {
  // put your main code here, to run repeatedly:

  // read the button state and save it into the btnReading var
  btnReading = digitalRead(btn);

  // if the button reading is high (logic 1, true) then start blinking the led. otherwise don't blink the led.
  if(btnReading){
    // output logic high (logic 1) to the led.
    digitalWrite(led, HIGH);
    // wait for 2 sec
    delay(2000);

    // output logic low (logic 0) to the led
    digitalWrite(led, LOW);
    // wait for 2 sec
    delay(2000);
  }
}
```