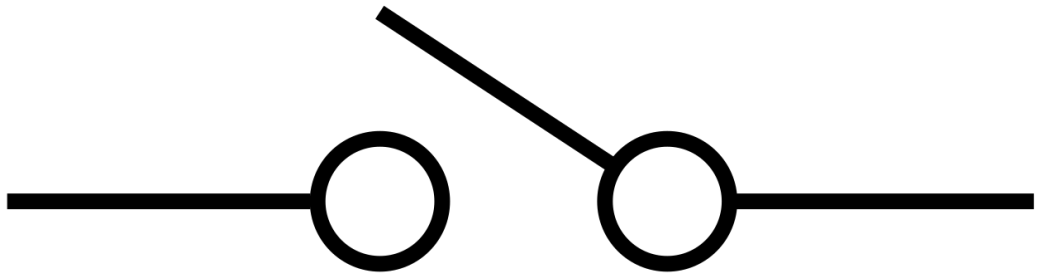
Digital Input

Read digital signals with Arduino Pin

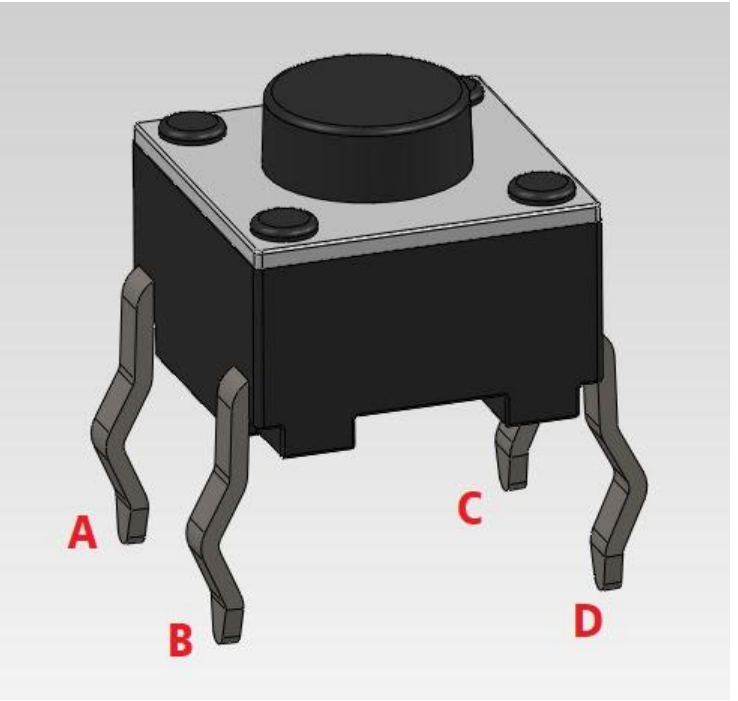
Digital Inputs



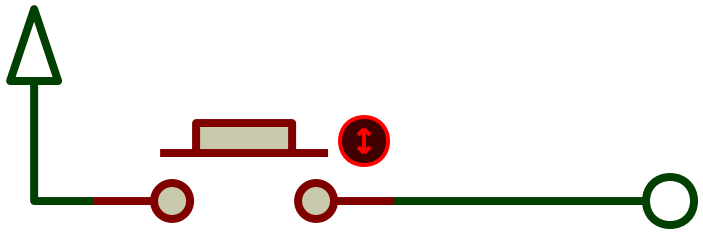
Tactile Switch

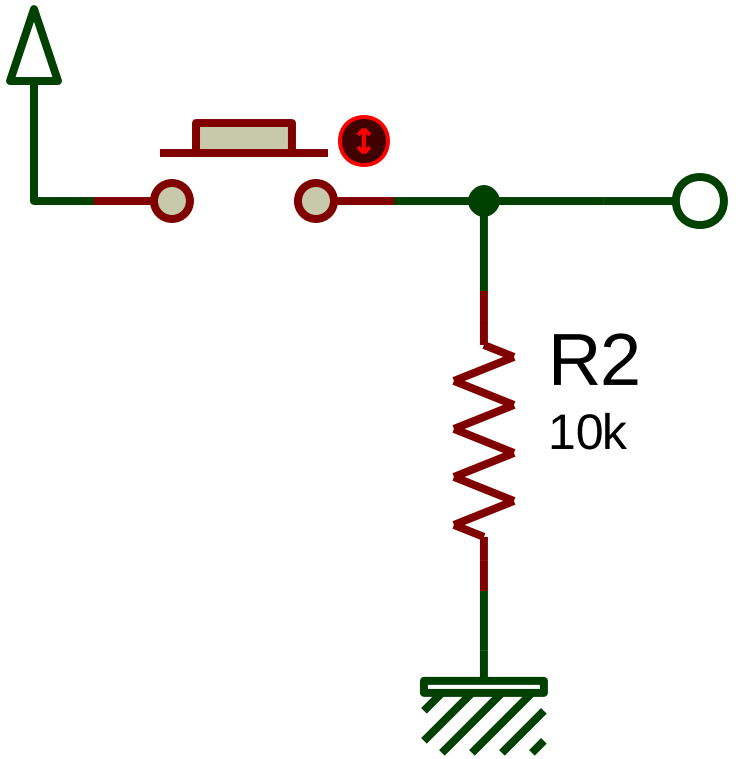
Pin A is ===== Pin B SHORT

Pin C is ===== Pin D SHORT

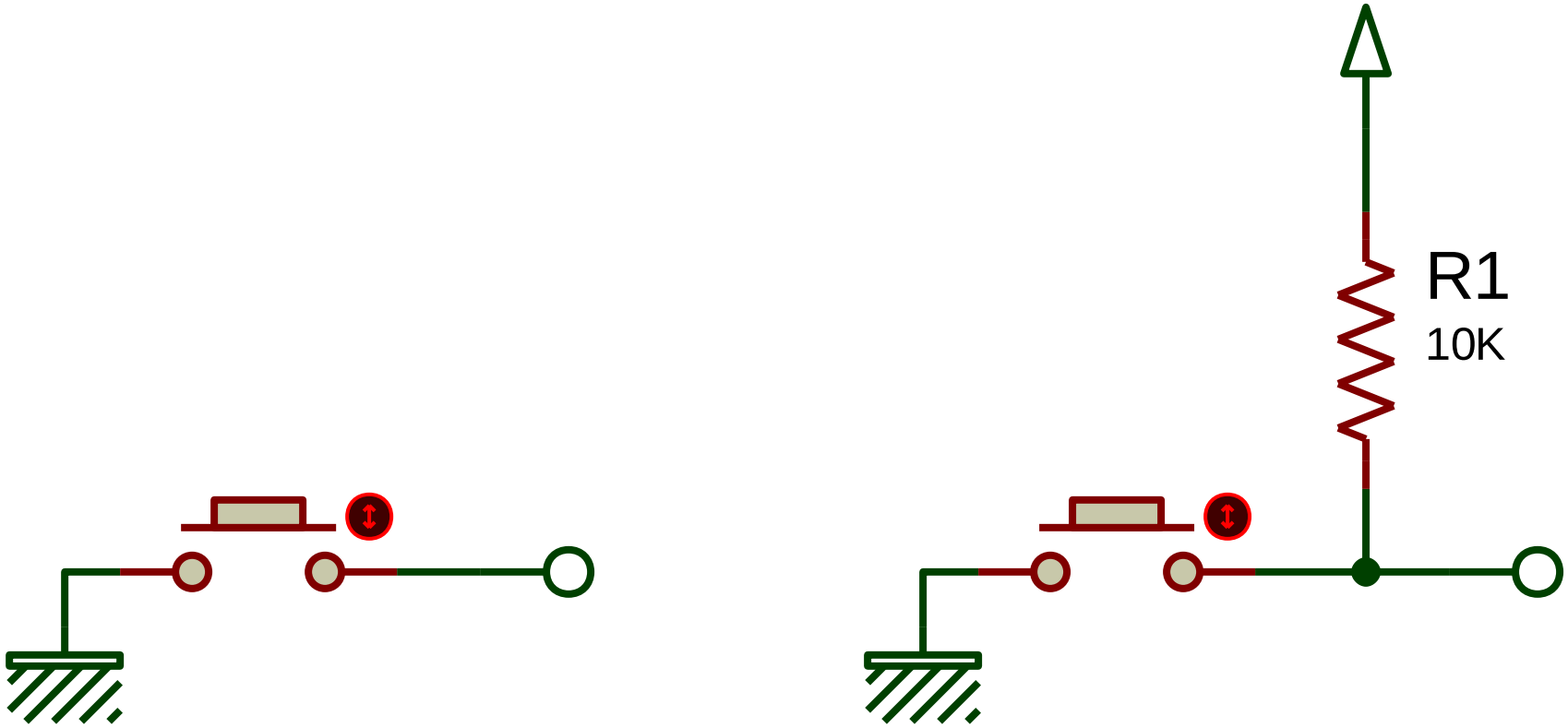


Pull Down





Pull Up



Digital Input

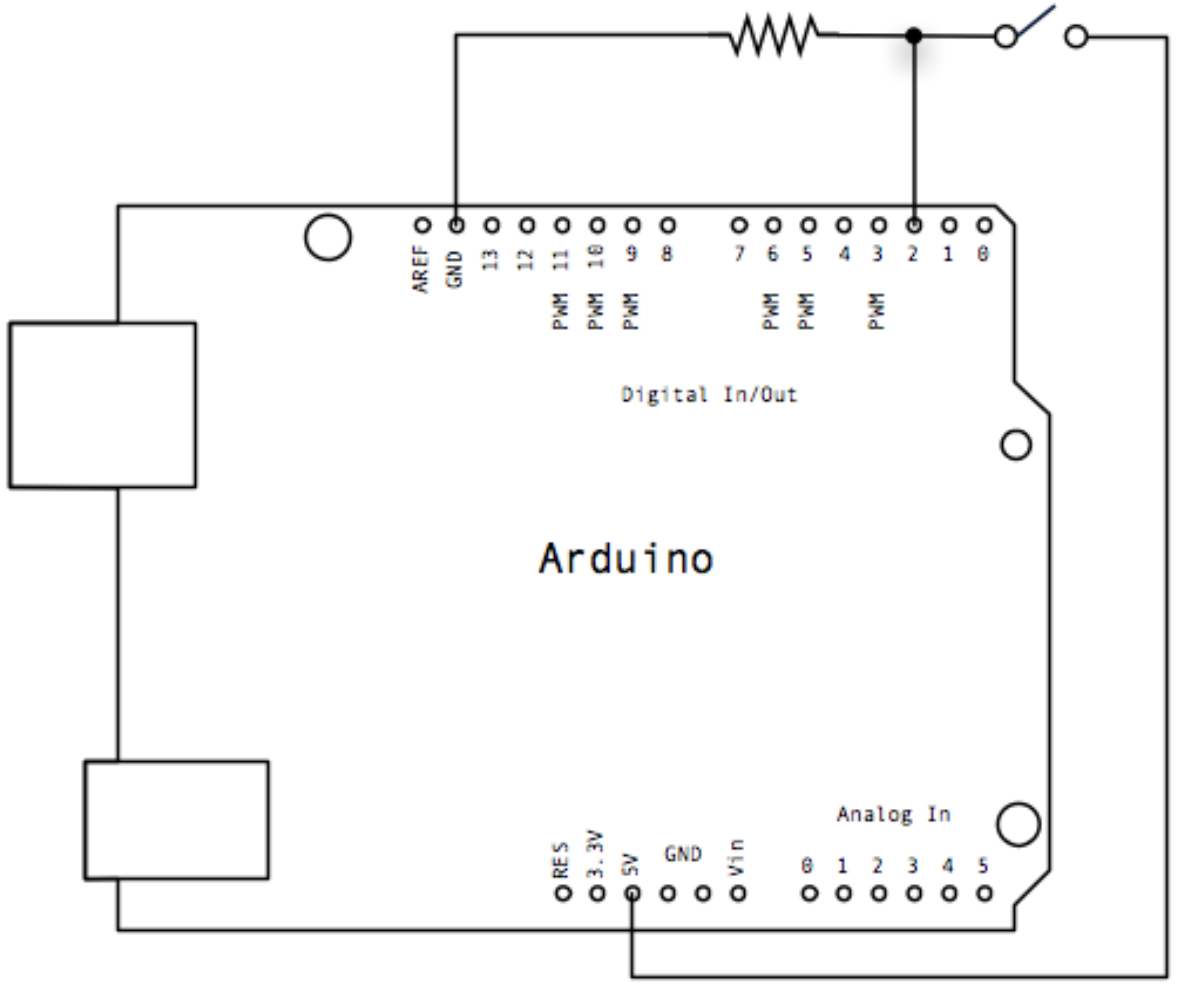
pinMode(pin number, INPUT);

pinMode(pin number, INPUT_PULLUP);

If(digital Read(2) == LOW)

If(digital Read(2) == HIGH)

Interfacing With Arduino, pull Down



Project

- connect a switch to arduino pin 2
- connect other point of switch to vcc
- connect a pull down resistor
- use an LED at pin 13
- if switch is pressed, LED will turn ON,
- if switch is not pressed, LED will turn OFF

RESET
ICSP2
AREF
GND
13
12
~11
~10
~9
8
7
~6
~5
4
~3
2
TX→1
RX←0
DIGITAL (PWM=~)
TX
RX
L
IOREF
RESET
3V3
5V
GND
VIN
POWER
A0
A1
A2
A3
A4
A5
ANALOG IN
ICSP
ON
UNO

Code

```
led = 13;
sw = 2;
void setup()
{
	pinMode(sw,INPUT);
	pinMode(led,OUTPUT);
}
void loop()
{
	if(digitalRead(sw) == HIGH)
	{
		digitalWrite(led,HIGH);
	}
	else
	{
		digitalWrite(led, LOW);
	}
}
```

Built-in Pullup resistor in Arduino

- Every pin of Arduino has a built-in pullup resistor
- Pulls the pin to high

pinMode(sw,INPUT_PULLUP); OR

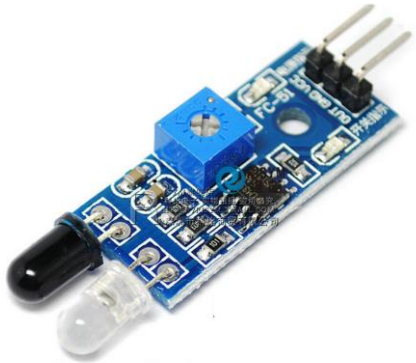
pinMode(sw,INPUT);

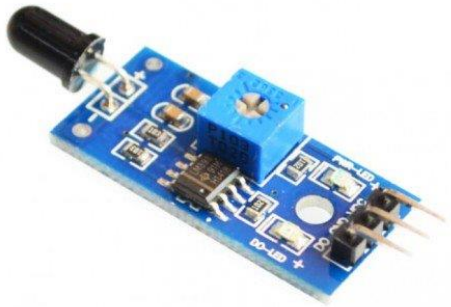
digitalWrite(sw,HIGH);

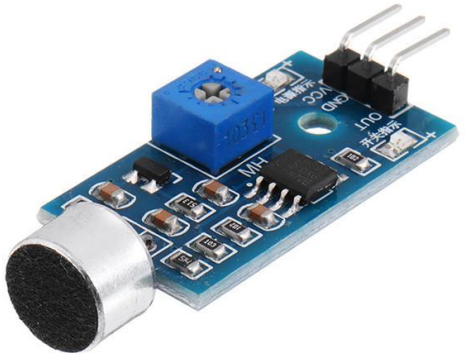
Use the switch against GND in this configuration and the code will also reverse

Using Digital Output Sensors

- You can use digital Output sensors directly with Arduino
- No need to enable / connect external pull Up or Down
- Sensor takes care of it







Tasks

- Interface one switch and one LED, led on when switch pressed and led off when switch is released
- 2 switches and 2 LED’s, when switch is pressed, both leds on, when switch 2 is pressed, both leds off
- When switch 1 is pressed, both led’s blink 5 times, when switch 2 is pressed, both LEDs will blink 15 times