



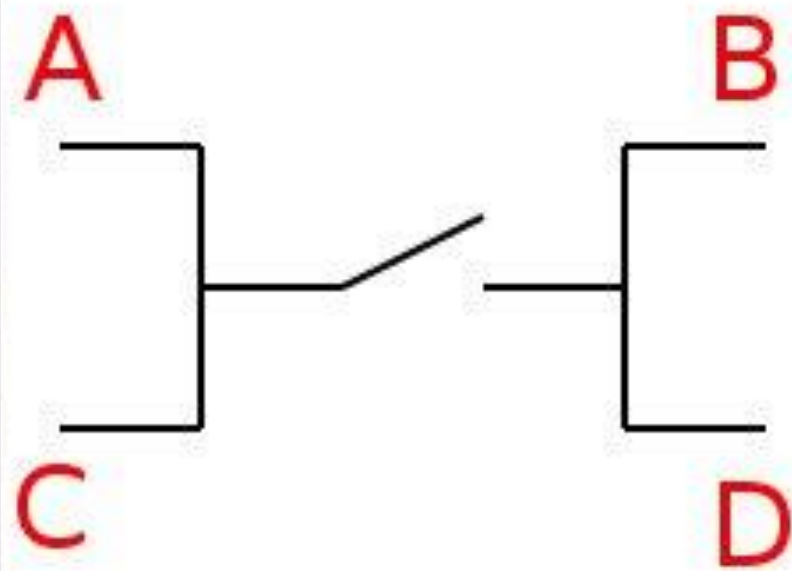
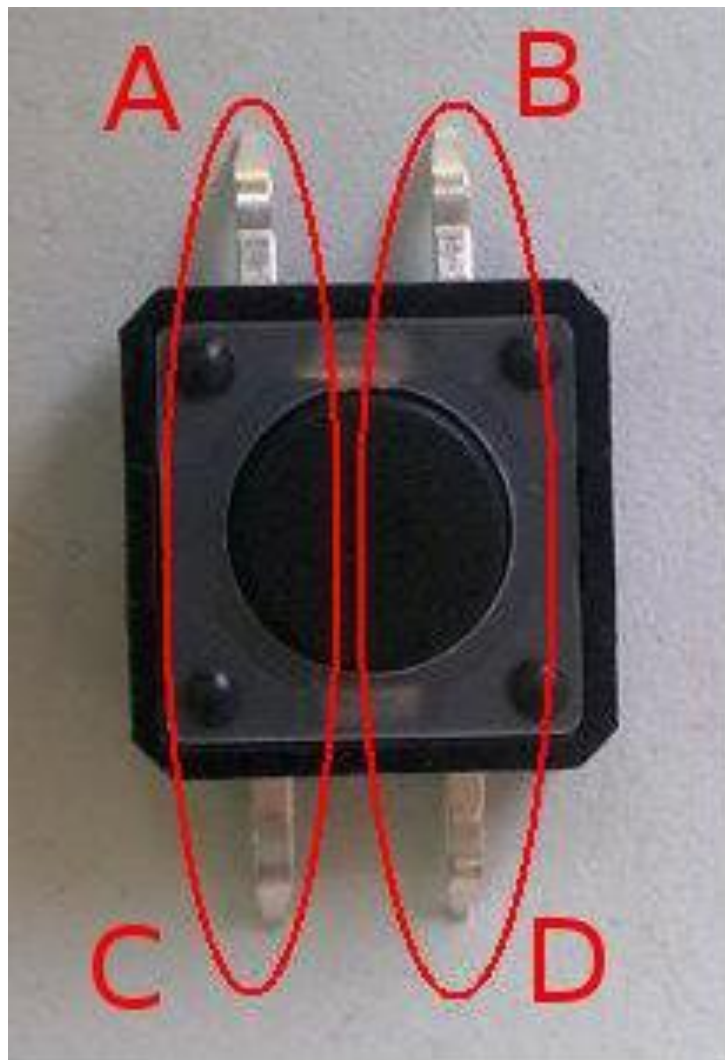
## 1.3

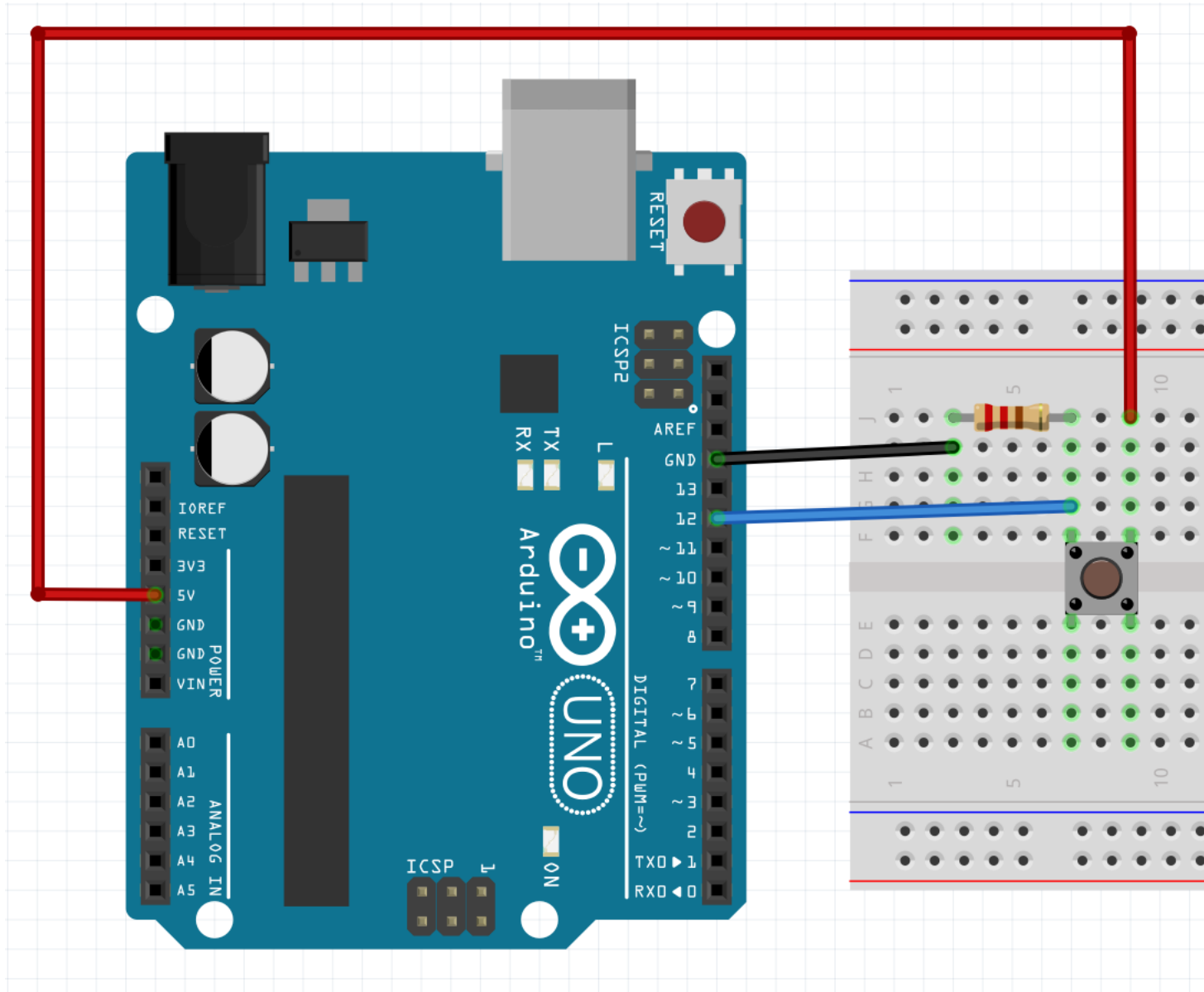
# BUTTON



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Button Pin	Arduino Pin
A	GND
A	12
B	5V

```
int button = 12;

void setup() {
  pinMode(button, INPUT);
  Serial.begin(9600);
}

void loop() {
  int buttonState = digitalRead(button);
  if (buttonState == HIGH) {
    Serial.println("Button pressed");
  }
}
```



Update the  
program to  
receive a  
single press

---

```
int button = 12;

void setup() {
  pinMode(button, INPUT);
  Serial.begin(9600);
}

void loop() {
  int buttonState = digitalRead(button);
  if (buttonState == HIGH) {
    while(digitalRead(button) == HIGH);
    Serial.println("Button pressed");
  }
}
```

```
int button = 12;
int lastState = LOW;

void setup() {
  pinMode(button, INPUT);
  Serial.begin(9600);
}

void loop() {
  int buttonState = digitalRead(button);
  if (buttonState != lastState) {
    if (buttonState == HIGH) {
      Serial.println("Button pressed");
    }
    lastState = buttonState;
  }
}
```





# Press and hold button for 5s

Hint: The **millis()** function return the total time in milliseconds from the Arduino board starts running

```
int button = 12;
int lastState = LOW;
int lastMillis = 0;

void setup() {
    pinMode(button, INPUT);
    Serial.begin(9600);
}

void loop() {
    int buttonState = digitalRead(button);
    if (buttonState != lastState) {
        lastMillis = millis();
        lastState = buttonState;
    }

    if (buttonState == HIGH) {
        if(millis() - lastMillis > 5000) {
            lastMillis = millis();
            Serial.println("Button long pressed");
        }
    }
}
```