Relay module experiment

Overview

This is a simple button control relay experiment. Delay() function is not used to eliminate jitter and improve the running efficiency of the program.

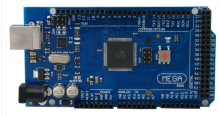
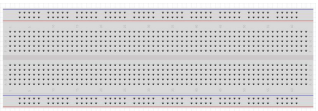
Specification

Null

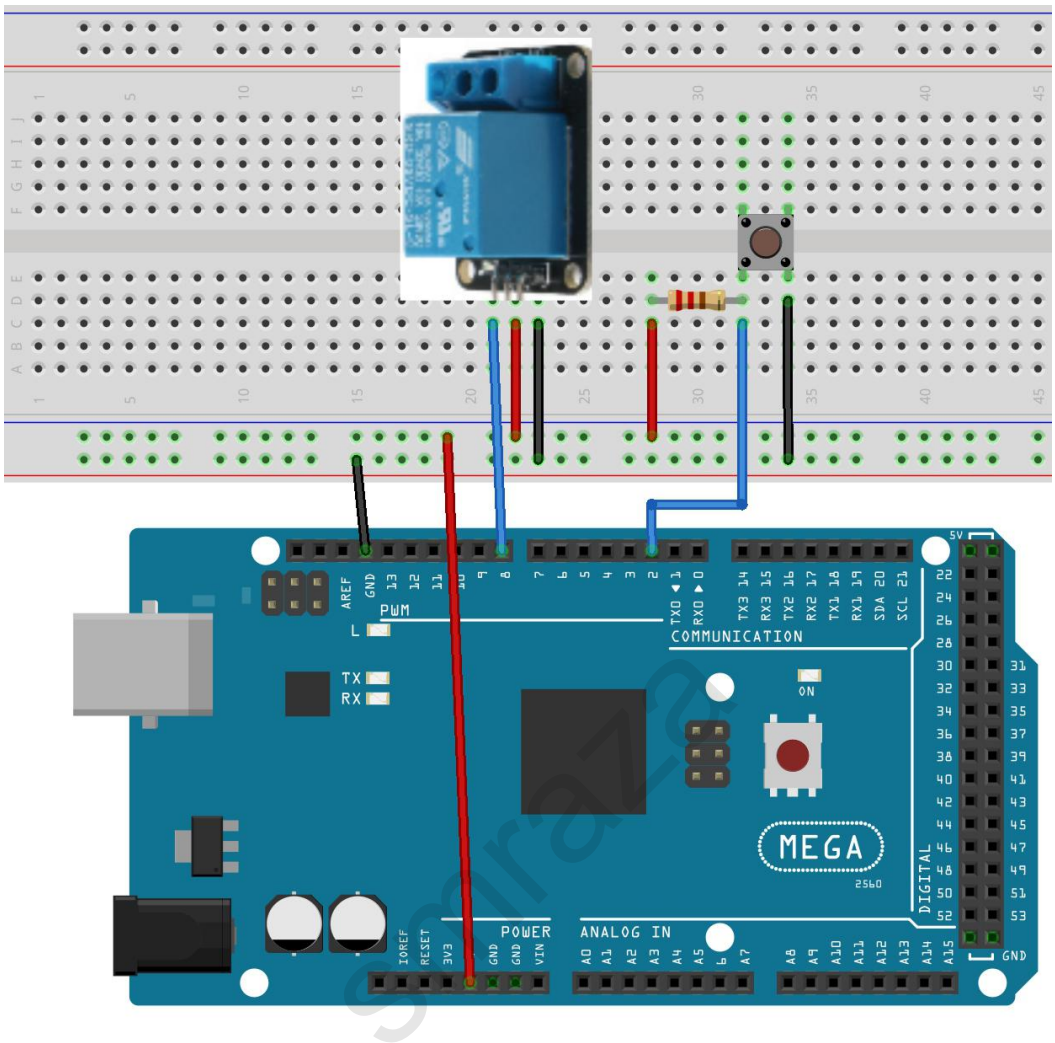
Pin definition

Arduino	Relay module
5VC	VCC
GND	GND
D8	IN

Hardware required

Material diagram	Material name	Number
	Relay module	1
	Button	1
	10KΩ resistor	1
	USB Cable	1
	MEGA 2560	1
	Breadboard	1
	Jumper wires	Several

Connection diagram



Sample code

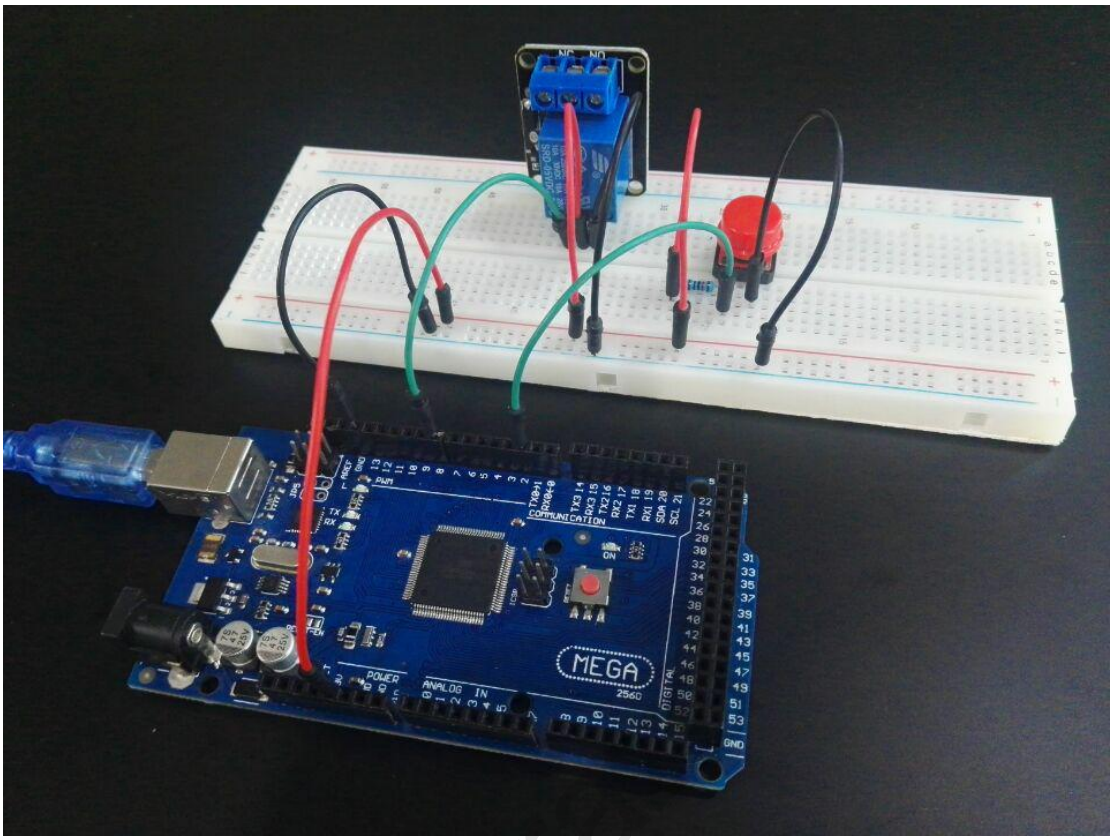
Note: sample code under the **Sample code** folder

```
const int buttonPin = 2;
const int relay = 8;
int relayState = HIGH;
int buttonState;
int lastButtonState = LOW;
long lastDebounceTime = 0; // Last output pin trigger time
long debounceDelay = 50;    //Elimination of jitter, if the output is not stable increase in time

void setup() {
    pinMode(buttonPin, INPUT);
    pinMode(relay, OUTPUT);
    digitalWrite(relay, relayState);
}

void loop() {
    int reading = digitalRead(buttonPin); //Read button data
    if (reading != lastButtonState) {
        lastDebounceTime = millis();
    }
    if ((millis() - lastDebounceTime) > debounceDelay){
        if (reading != buttonState) {
            buttonState = reading;
            if (buttonState == HIGH) {
                relayState = !relayState;
            }
        }
    }
    digitalWrite(relay, relayState);
    lastButtonState = reading;
}
```

Example picture



Language reference

Tips：click on the following name to jump to the web page.
If you fail to open, use the Adobe reader to open this document.
const
millis()

Application effect

When the button is pressed, the state of the relay will be changed.

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