

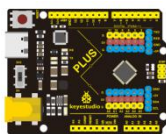
## Project 10: A Small Desk Lamp



### 1. Project Introduction

In fact, you can use Arduino to turn on an LED. In this project, we will use a cartoon lamp card, a button switch and an LED to make a small desk lamp.

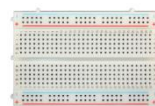
### 2. Project Hardware



Plus Development  
Board\*1



Plus Board  
Holder



400-Hole  
Breadboard



USB Cable\*1



Button switch\*1

Red M5 LED

10K $\Omega$

220 $\Omega$

\*1

Resistor\*1

Resistor\*1

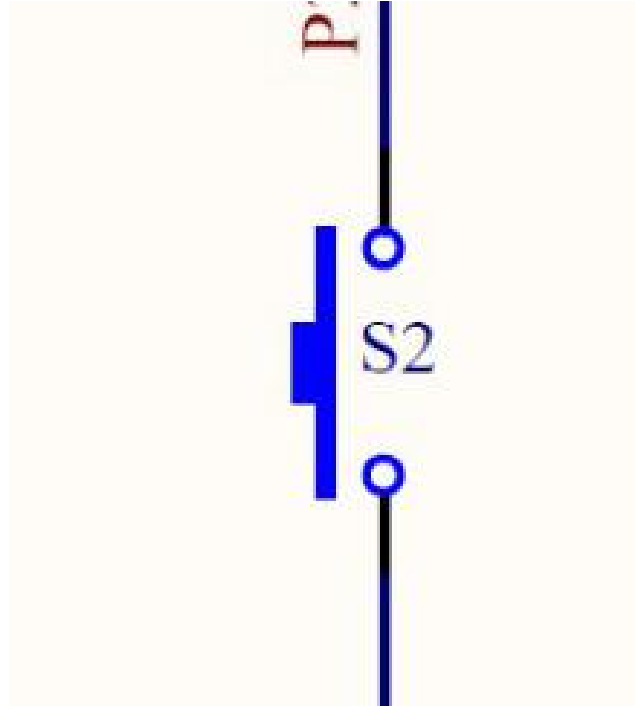
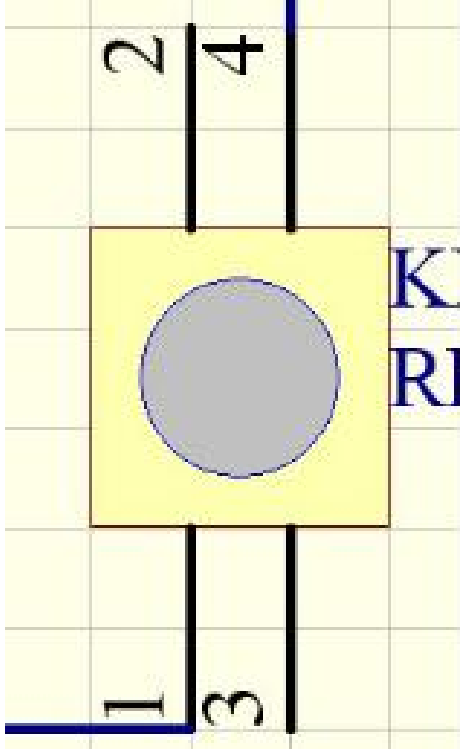


Preformed&Flexible Jumper Wire   Desk lamp Paper Card\*1

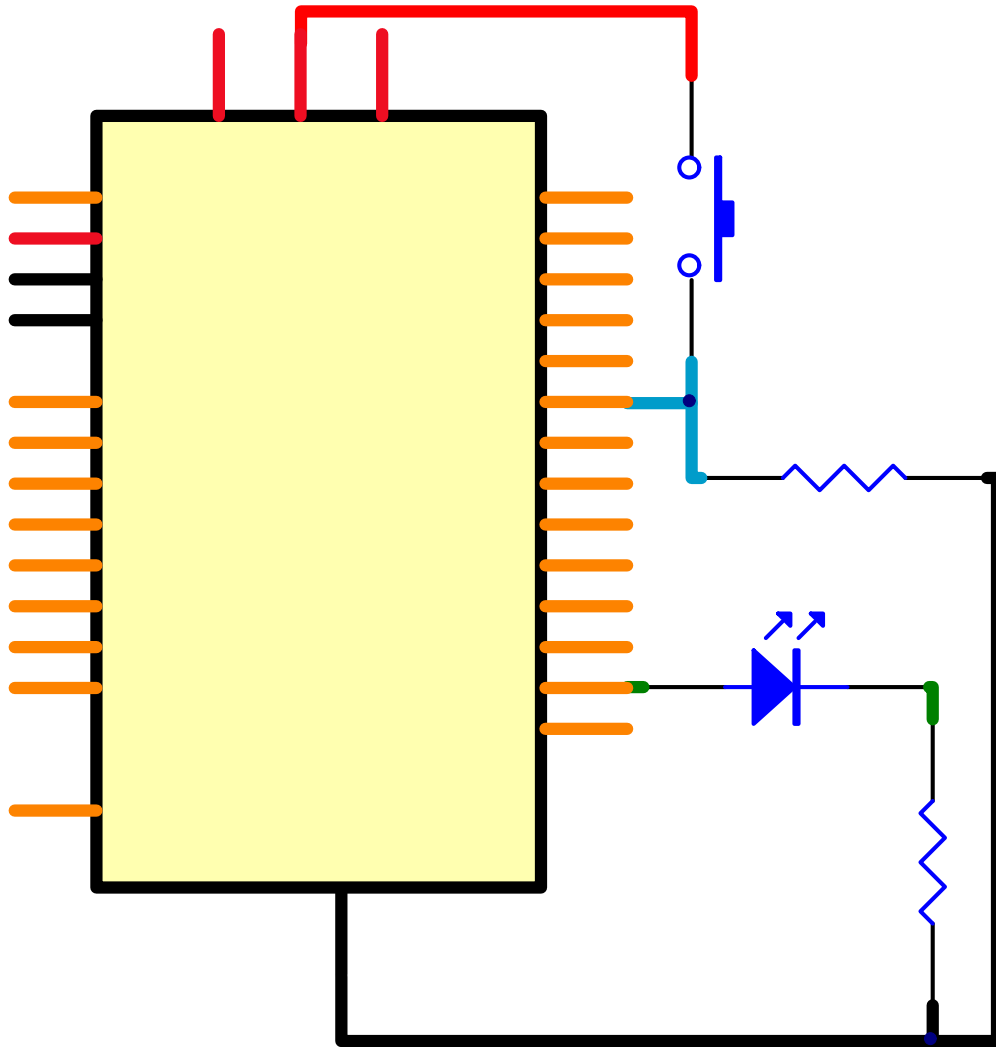
### 3.Little Knowledge

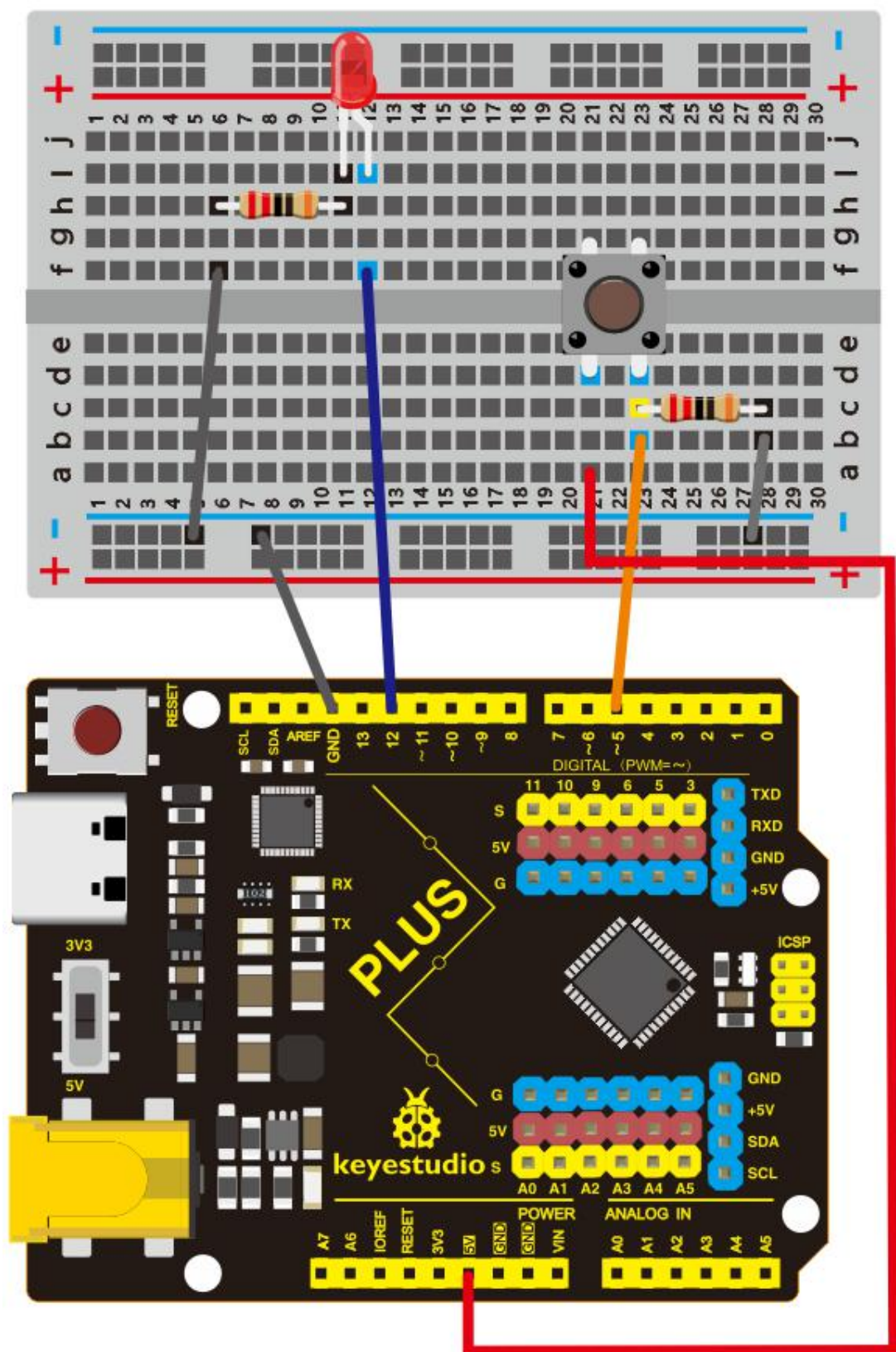
The button is a component that connects two points in a circuit when you press it.

**Schematic Diagrams:**



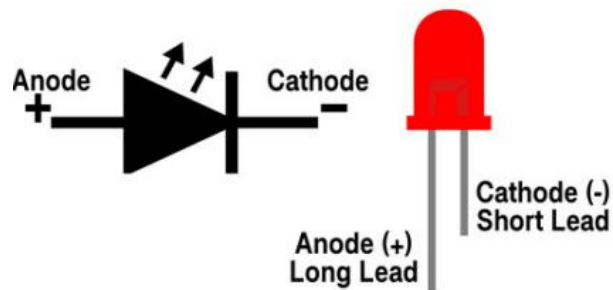
#### 4. Circuit Connection



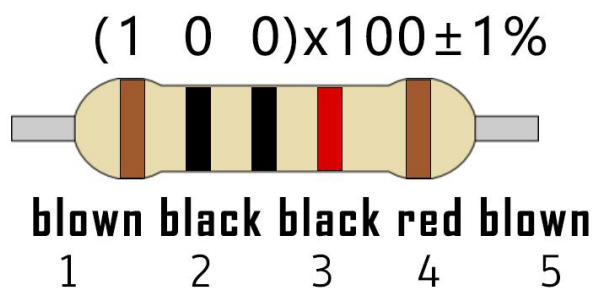
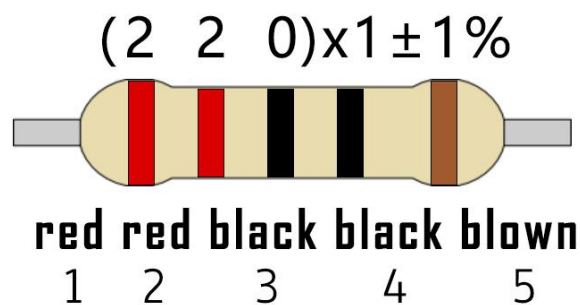


## NOTE:

How to connect an LED



How to identify 5 band 220Ω Resistor and a 5 band 10KΩ Resistor



## 5.Project Code

/\*

keystudio STEM Starter Kit

Project 10

Small desktop lamp

<http://www.keyestudio.com>

```
*/  
  
int ledpin=12;// initialize pin 12  
int inpin=5;// initialize pin 5  
int val;// define val  
void setup()  
{  
  pinMode(ledpin,OUTPUT);// set LED pin as "output"  
  pinMode(inpin,INPUT);// set button pin as "input"  
}  
void loop()  
{  
  val=digitalRead(inpin);// read the level value of pin 7 and  
  assign it to val  
  if(val==LOW)// check if the button is pressed, if yes, turn on  
  the LED  
  { digitalWrite(ledpin,LOW);}  
  else  
  { digitalWrite(ledpin,HIGH);}  
}  
////////////////////////////////////
```

1. Open up the Arduino IDE and copy the above code into a new sketch.
2. Select the correct **Board type** and **COM** port for the Arduino IDE.
3. Click **Upload** to upload the code.

## 6. Project Result

Done uploading ! We simulate a desk lamp.

When the button is pressed, LED will be on, otherwise, it remains off. In this way, the small desk lamp project is completed.

