Lesson 1 Button

**Introduction**

In this experiment, you will learn how to turn on/off an LED by using an I/O port and a button. The "I/O port" refers to the INPUT and OUTPUT port. Here the INPUT port of the SunFounder Uno board is used to read the output of an external device. Since the board itself has an LED (connected to Pin 13), so you can use this LED to do this experiment for convenience.

Components

- 1 * Arduino Uno board

- 1 * USB cable

- 1 * Button

- 1 * Resistor (10kΩ)

- Jumper wires

- 1 * Breadboard

Be sure your circuit is wired correctly according to the diagram in the guidebook.
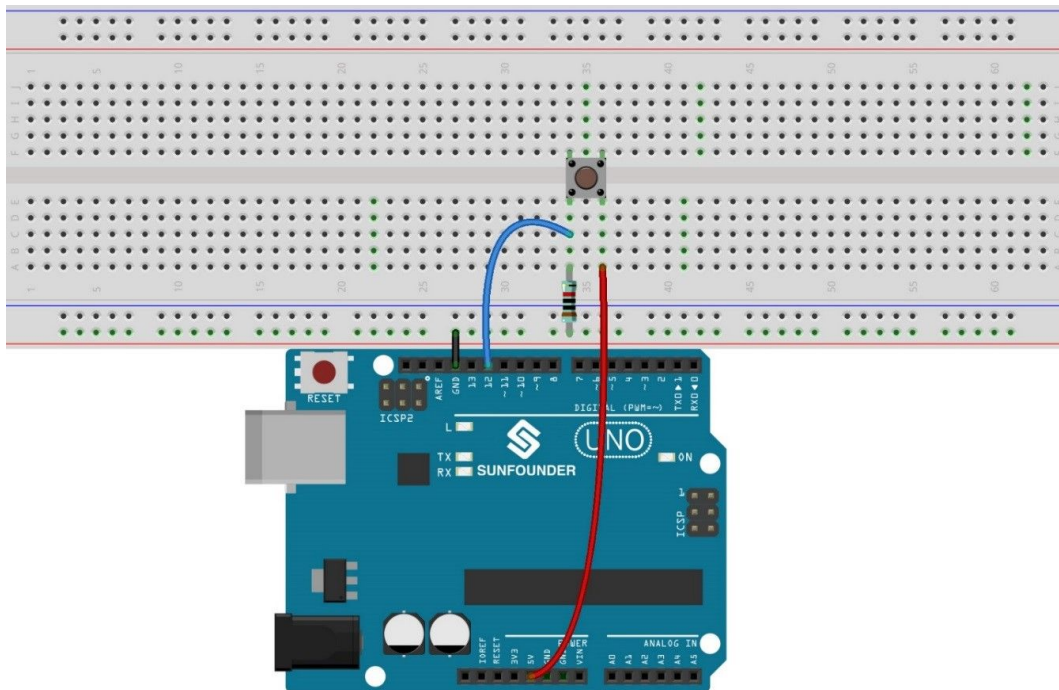
Lesson 1 Code: Enter this code sequence into Arduino CC EXACTLY as follows:

```
//Controlling Led By Button
//Turns on and off a LED ,when pressings button attach to pin12
//Email:support@sunfounder.com
//Website:www.sunfounder.com
//2015.5.7
/********************************/
const int keyPin = 12; //the number of the key pin
const int ledPin = 13;//the number of the led pin
/********************************/
void setup()
{
pinMode(keyPin,INPUT);//initialize the key pin as input
pinMode(ledPin,OUTPUT);//initialize the led pin as output
}
/********************************/
void loop()
{
//read the state of the key value
//and check if the kye is pressed
//if it is,the state is HIGH
if(digitalRead(keyPin) ==HIGH )
{
digitalWrite(ledPin,HIGH);//turn on the led
}
else
{
digitalWrite(ledPin,LOW);//turn off the led
}
}
/**********************************/
```