

Project 6: Battery Billboard

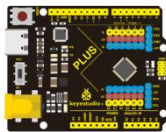


1. Project Introduction

We can see many billboards composed of different colour LEDs in daily life. They are constantly changing their light to attract customers' attention.

In this project, we will use 5 LEDs and a battery paper card to make an advertising panel about the battery. The sparkling light string makes it easy for customers to notice your battery if you are a battery salesperson.

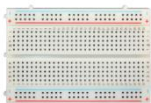
1. Project Hardware



Plus Development



Plus Board



400-Hole Breadboard



USB Cable*1

Board*1

Holder



Red M5 LED*5



220Ω Resistor*5



Preformed Jumper



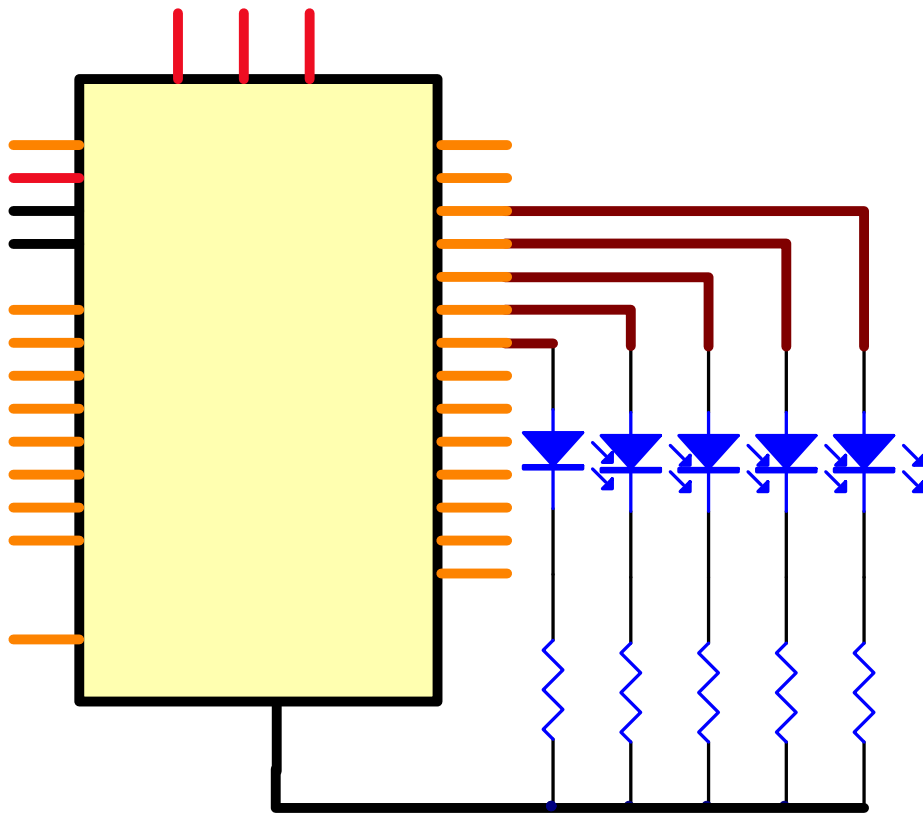
battery billboard

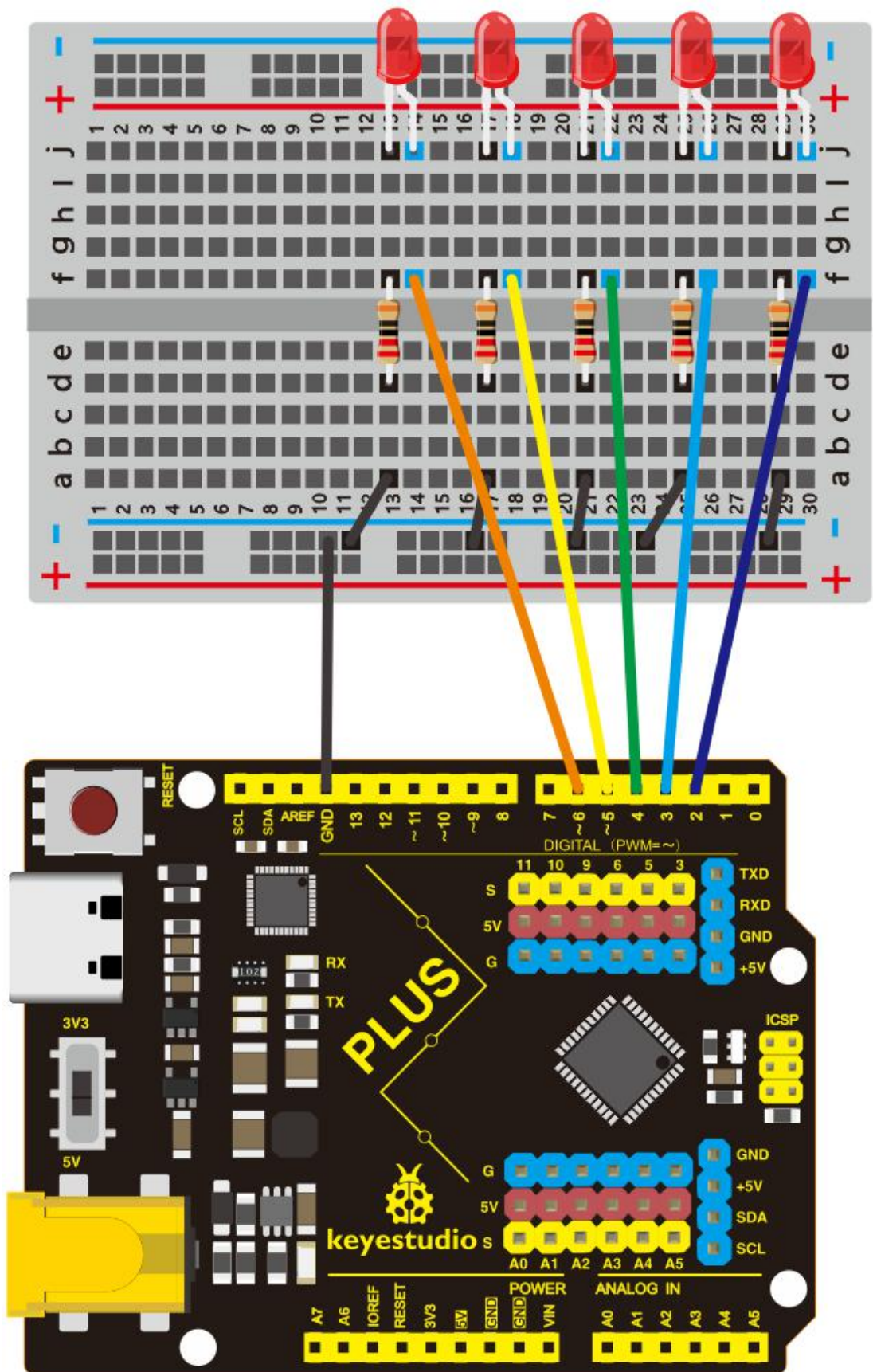
Wire*5

Card*1

Flexible jumper Wire*6

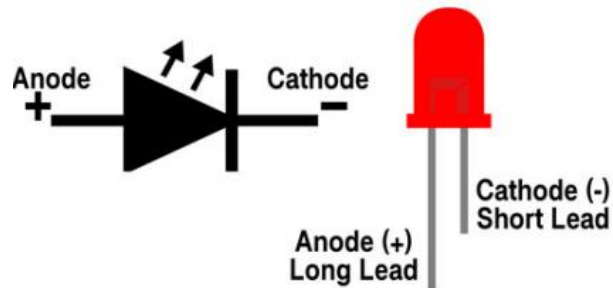
3.Circuit Connection



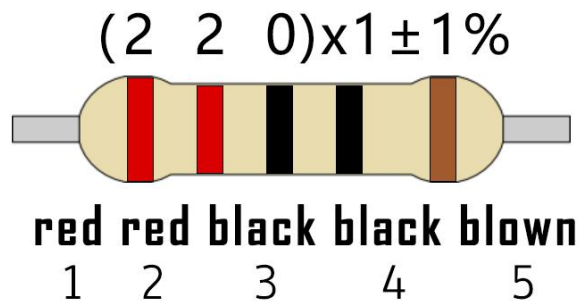


NOTE:

How to connect an LED



How to identify 5 band 220Ω Resistor



4.Project Code

```
/*
```

```
keystudio STEM Starter Kit
```

```
Project 6
```

```
Advertising running lights
```

```
http://www.keystudio.com
```

```
*/
```

```
int BASE = 2 ;// the I/O pin for the first LED
```

```
int NUM = 5; // number of LEDs

void setup()
{
    for (int i = BASE; i < BASE + NUM; i++)
    {
        pinMode(i, OUTPUT);    // set I/O pins as output
    }
}

void loop()
{
    for (int i = BASE; i < BASE + NUM; i++)
    {
        digitalWrite(i, LOW); // set I/O pins as "low", turn off
LEDs one by one.

        delay(200); // delay
    }

    for (int i = BASE; i < BASE + NUM; i++)
    {
        digitalWrite(i, HIGH);    // set I/O pins as "high", turn
on LEDs one by one

        delay(200);    // delay
    }
}
```

}

//

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 button to upload the code.

5.Project Result

Done uploading ! The 5 LEDs connected to the D2-D6 pins of the development board will gradually light up and then gradually turn off, just like a battery being charged.

