Dalkey Dojo

Spring 2016 – Giant Pixel

WHAT YOU WILL NEED

Item #	Item Description	Image
1	Arduino UNO	
2	USB 2.0 Cable TypeA-B	
3	A laptop with the Arduino drivers and IDE installed	
4	Three Resistors - 1kΩ (One Kilo Ohm)	
5	A bunch of shunt leads	
6	Breadboard	
7	Red LED	
8	Green LED	
9	Blue LED	

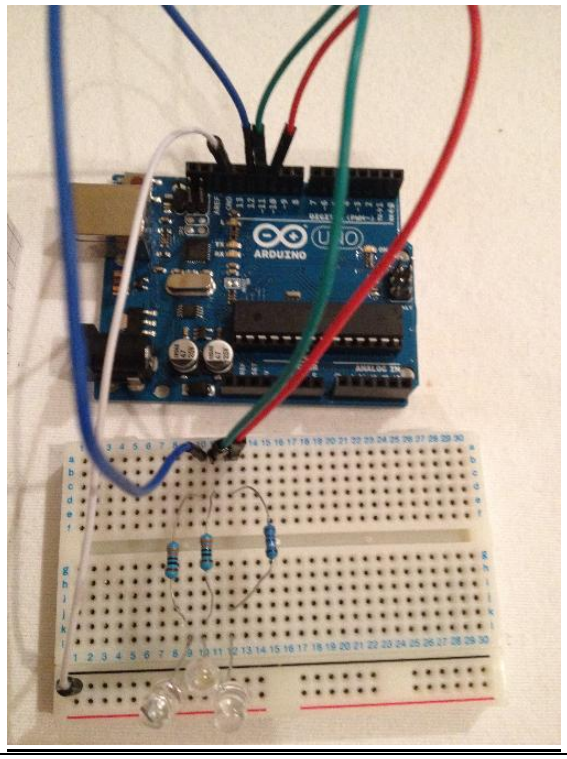
BASIC CODE & WIRING

```
int red = 10;
int green = 11;
int blue = 12;
int delayMS = 1000;

void setup()
{
  // initialize the digital pin as an output.
  pinMode(red, OUTPUT);
  pinMode(green, OUTPUT);
  pinMode(blue, OUTPUT);
}

void loop()
{
  //1 - Red
  digitalWrite(red, HIGH); delay(delayMS);
  digitalWrite(red, LOW); delay(delayMS);
  //2 - Green
  digitalWrite(green, HIGH); delay(delayMS);
  digitalWrite(green, LOW); delay(delayMS);
  //3 - Blue
  digitalWrite(blue, HIGH); delay(delayMS);
  digitalWrite(blue, LOW); delay(delayMS);

  //code for more colours goes here
}
```



CODE FOR MORE COLORS

```
  //4 - Yellow
  digitalWrite(red, HIGH); digitalWrite(green, HIGH); delay(delayMS);
  digitalWrite(red, LOW); digitalWrite(green, LOW); delay(delayMS);
  //5 - Magenta
  digitalWrite(red, HIGH); digitalWrite(blue, HIGH); delay(delayMS);
  digitalWrite(red, LOW); digitalWrite(blue, LOW); delay(delayMS);
  //6 - Cyan
  digitalWrite(green, HIGH); digitalWrite(blue, HIGH); delay(delayMS);
  digitalWrite(green, LOW); digitalWrite(blue, LOW); delay(delayMS);
```

TIPS

- Mind your eyes! Some of the leds are very bright use resistors to dim them
- Your giant pixel works best if the LEDS are close together and the same brightness. If they are not the same brightness - try using weaker or stronger resistors until it looks right to you.