

```
const int redPin = 11;

const int greenPin = 10;

const int bluePin = 9;

void setup() {

  // Start off with the LED off.

  setColourRgb(0,0,0);

}

void loop() {

  unsigned int rgbColour[3];

  // Start off with red.

  rgbColour[0] = 255;

  rgbColour[1] = 0;

  rgbColour[2] = 0;

  // Choose the colours to increment and decrement.

  for (int decColour = 0; decColour < 3; decColour += 1) {

    int incColour = decColour == 2 ? 0 : decColour + 1;

    // cross-fade the two colours.

    for(int i = 0; i < 255; i += 1) {

      rgbColour[decColour] -= 1;

      rgbColour[incColour] += 1;

    }

  }

}
```

```
    setColourRgb(rgbColour[0], rgbColour[1], rgbColour[2]);  
    delay(5);  
  }  
}  
}  
  
void setColourRgb(unsigned int red, unsigned int green, unsigned int blue) {  
  analogWrite(redPin, red);  
  analogWrite(greenPin, green);  
  analogWrite(bluePin, blue);  
}
```