

```
// Define pin numbers for LEDs
const int redPin = 9;
const int greenPin = 10;
const int bluePin = 11;
```

```
// Setup function
void setup() {
  // Set the pins as output
  pinMode(redPin, OUTPUT);
  pinMode(greenPin, OUTPUT);
  pinMode(bluePin, OUTPUT);
}
```

```
// Loop function
void loop() {
  // Gradually increase brightness of red LED
  for (int i = 0; i <= 255; i++) {
    analogWrite(redPin, i); // Increase red brightness
    analogWrite(greenPin, 255 - i); // Decrease green brightness
    analogWrite(bluePin, 0); // Keep blue off
    delay(10); // Short delay for smooth transition
  }
```



```
// Gradually increase brightness of green LED
for (int i = 0; i <= 255; i++) {
  analogWrite(redPin, 255 - i); // Decrease red brightness
  analogWrite(greenPin, i);    // Increase green brightness
  analogWrite(bluePin, 0);     // Keep blue off
  delay(10);
}
```

```
// Gradually increase brightness of blue LED
for (int i = 0; i <= 255; i++) {
  analogWrite(redPin, 0);      // Keep red off
  analogWrite(greenPin, 255 - i); // Decrease green brightness
  analogWrite(bluePin, i);     // Increase blue brightness
  delay(10);
}
}
```