

ŘEŠENÍ ÚLOH

Úkol A)

```
1  void setup() {
2      pinMode(11, OUTPUT);    //červená
3      pinMode(10, OUTPUT);    //zelená
4      pinMode(9, OUTPUT);     //modrá
5  }
6
7  void loop() {
8      // Kód pro zelenou barvu
9      digitalWrite(11, 255);
10     digitalWrite(10, 0);
11     digitalWrite(9, 255);
12     delay(3000);
13     // Kód pro modrou barvu
14     digitalWrite(11, 255);
15     digitalWrite(10, 255);
16     digitalWrite(9, 0);
17     delay(3000);
18     // Kód pro červenou barvu
19     digitalWrite(11, 0);
20     digitalWrite(10, 255);
21     digitalWrite(9, 255);
22     delay(3000);
23 }
```

Úkol B)

```
1 void setup() {
2     pinMode(11, OUTPUT);
3     pinMode(10, OUTPUT);
4     pinMode(9, OUTPUT);
5 }
6
7 void loop() {
8     // Kód pro tyrkysovou barvu
9     digitalWrite(11, 255);
10    digitalWrite(10, 0);
11    digitalWrite(9, 0);
12
13    // Kód pro žlutou barvu
14    digitalWrite(11, 0);
15    digitalWrite(10, 0);
16    digitalWrite(9, 255);
17
18    // Kód pro fialovou barvu
19    digitalWrite(11, 0);
20    digitalWrite(10, 255);
21    digitalWrite(9, 0);
22 }
23
```

Úkol C)

```
1  void setup() {
2      pinMode(11, OUTPUT);
3      pinMode(10, OUTPUT);
4      pinMode(9, OUTPUT);
5  }
6
7  void loop() {
8      //tyrkysová barva
9      setColor(255,0,0);
10     delay(1000);
11     setColor(255,0,0);
12     delay(1000);
13     setColor(255,0,0);
14     delay(3000);
15     //žlutá barva
16     setColor(0,0,255);
17     delay(1000);
18     setColor(0,0,255);
19     delay(1000);
20     setColor(0,0,255);
21     delay(3000);
22     //fialová barva
23     setColor(0,255,0);
24     delay(1000);
25     setColor(0,255,0);
26     delay(1000);
27     setColor(0,255,0);
28     delay(3000);
29 }
30
31 void setColor(int redC, int greenC, int blueC ) {
32     digitalWrite(11, redC);
33     digitalWrite(10, greenC);
34     digitalWrite(9, blueC);
35 }
```

Úkol D)

```
1  const int redPin = 11;
2  const int greenPin = 10;
3  const int bluePin = 9;
4
5  int redIntens;
6  int greenIntens;
7  int blueIntens;
8
9  int x;
10
11 int display_time = 10;
12 int common_anode=1;
13
14 void setup(){
15     pinMode(redPin, OUTPUT);
16     pinMode(greenPin, OUTPUT);
17     pinMode(bluePin, OUTPUT);
18 }
19
20 void loop(){
21     for (x = 0; x < 767; x++){
22
23         if(x <= 255){
24             redIntens = 255 - x;
25             greenIntens = x;
26             blueIntens = 0;
27         }else if (x <= 511){
28             redIntens = 0;
29             greenIntens = 255 - (x - 256);
30             blueIntens = (x - 256);
31         }else{
32             redIntens = (x - 512);
33             greenIntens = 0;
34             blueIntens = 255 - (x - 512);
35         }
36
37         setColor(redIntens, blueIntens, greenIntens);
38         delay(display_time);
39     }
40 }
41
42 void setColor(int redC, int greenC, int blueC){
43     if(common_anode==1){
44         redC=255-redC;
45         greenC=255-greenC;
46         blueC=255-blueC;
47     }
48 }
```

```
49     analogWrite (redPin, redC);  
50     analogWrite (greenPin, greenC);  
51     analogWrite (bluePin, blueC);  
52 }
```