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)

```
void setup() {
   pinMode(11, OUTPUT);
   pinMode(10, OUTPUT);
   pinMode(9, OUTPUT);
}

void loop() {
   // Kód pro tyrkysovou barvu
   digitalWrite(11, 255);
   digitalWrite(10, 0);
   digitalWrite(9, 0);

   // Kód pro žlutou barvu
   digitalWrite(11, 0);
   digitalWrite(10, 0);
   digitalWrite(9, 255);

   // Kód pro fialovou barvu
   digitalWrite(11, 0);
   digitalWrite(10, 255);
   digitalWrite(9, 0);
}

```

Úkol C)

```
void setup() {
   pinMode(11, OUTPUT);
   pinMode(10, OUTPUT);
   pinMode(9, OUTPUT);
}

void loop() {
   //tyrkysová barva
   setColor(255,0,0);
   delay(1000);
   setColor(255,0,0);
   delay(1000);
   setColor(255,0,0);
   delay(3000);
   //žlutá barva
   setColor(0,0,255);
   delay(1000);
   setColor(0,0,255);
   delay(1000);
   setColor(0,0,255);
   delay(3000);
   //fialová barva
   setColor(0,255,0);
   delay(1000);
   setColor(0,255,0);
   delay(1000);
   setColor(0,255,0);
   delay(3000);
}

void setColor(int redC, int greenC, int blueC ) {
   digitalWrite(11, redC);
   digitalWrite(10, greenC);
   digitalWrite(9, blueC);
}
```

Úkol D)

```
const int redPin = 11;
const int greenPin = 10;
const int bluePin = 9;

int redIntens;
int greenIntens;
int blueIntens;

int x;

int display_time = 10;
int common_anode=1;

void setup(){
  pinMode(redPin, OUTPUT);
  pinMode(greenPin, OUTPUT);
  pinMode(bluePin, OUTPUT);
}

void loop(){
  for (x = 0; x < 767; x++){

    if(x <= 255){
      redIntens = 255 - x;
      greenIntens = x;
      blueIntens = 0;
    }else if (x <= 511){
      redIntens = 0;
      greenIntens = 255 - (x - 256);
      blueIntens = (x - 256);
    }else{
      redIntens = (x - 512);
      greenIntens = 0;
      blueIntens = 255 - (x - 512);
    }

    setColor(redIntens, blueIntens, greenIntens);
    delay(display_time);
  }
}
void setColor(int redC, int greenC, int blueC){
  if(common_anode==1){
    redC=255-redC;
    greenC=255-greenC;
    blueC=255-blueC;
  }
```

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