

ŘEŠENÍ ÚLOH

Úkol A)

```
1  #define trigPin 2
2  #define echoPin 3
3  #define ledMin 10
4  #define ledMax 11
5  int maximumRange = 200;
6  int minimumRange = 0;
7  long duration, distance;
8
9  void setup(){
10     Serial.begin (9600);
11     pinMode(trigPin, OUTPUT);
12     pinMode(echoPin, INPUT);
13     pinMode(ledMin, OUTPUT);
14     pinMode(ledMax, OUTPUT);
15 }
16 void loop(){
17     digitalWrite(trigPin, LOW);
18     delayMicroseconds(2);
19     digitalWrite(trigPin, HIGH);
20     delayMicroseconds(10);
21     digitalWrite(trigPin, LOW);
22     duration = pulseIn(echoPin, HIGH);
23     distance = duration * 0.034/2;
24     if(distance < 10){
25         digitalWrite(ledMin,HIGH);
26         digitalWrite(ledMax,LOW);
27     }else if(distance > 100){
28         digitalWrite(ledMax,HIGH);
29         digitalWrite(ledMin,LOW);
30     }else{
31         digitalWrite(ledMin,LOW);
32         digitalWrite(ledMax,LOW);
33     }
34     if(distance>=maximumRange || distance<=minimumRange){
35         Serial.println("Mimo dosah");
36     }else{
37         Serial.print(distance);
38         Serial.println(" cm");
39     }
40     delay(500);
41 }
```