

LAMPIRAN

6.1 Source Code

```
#include <AFMotor.h>
#include <NewPing.h>
#include <Servo.h>

#define TRIG_PIN A0
#define ECHO_PIN A1
#define MAX_DISTANCE 600
#define MAX_SPEED 190 // sets speed of DC motors
#define MAX_SPEED_OFFSET 20

NewPing sonar(TRIG_PIN, ECHO_PIN, MAX_DISTANCE);

AF_DCMotor motor1(1, MOTOR12_1KHZ);
AF_DCMotor motor2(2, MOTOR12_1KHZ);
AF_DCMotor motor3(3, MOTOR34_1KHZ);
AF_DCMotor motor4(4, MOTOR34_1KHZ);
Servo myservo;

boolean goesForward=false;
int distance = 100;
int speedSet = 0;

void setup() {

myservo.attach(10);
```

```
myservo.write(115);
delay(2000);
distance = readPing();
delay(100);
distance = readPing();
delay(100);
distance = readPing();
delay(100);
distance = readPing();
delay(100);
}

void loop() {
  int distanceR = 0;
  int distanceL = 0;
  delay(40);

  if(distance<=15)
  {
    moveStop();
    delay(100);
    moveBackward();
    delay(300);
    moveStop();
    delay(200);
    distanceR = lookRight();
    delay(200);
    distanceL = lookLeft();
```



```

delay(200);

if(distanceR>=distanceL)
{
  turnRight();
  moveStop();
}else
{
  turnLeft();
  moveStop();
}
}else
{
  moveForward();
}
distance = readPing();
}

int lookRight()
{
  myservo.write(50);
  delay(500);
  int distance = readPing();
  delay(100);
  myservo.write(115);
  return distance;
}

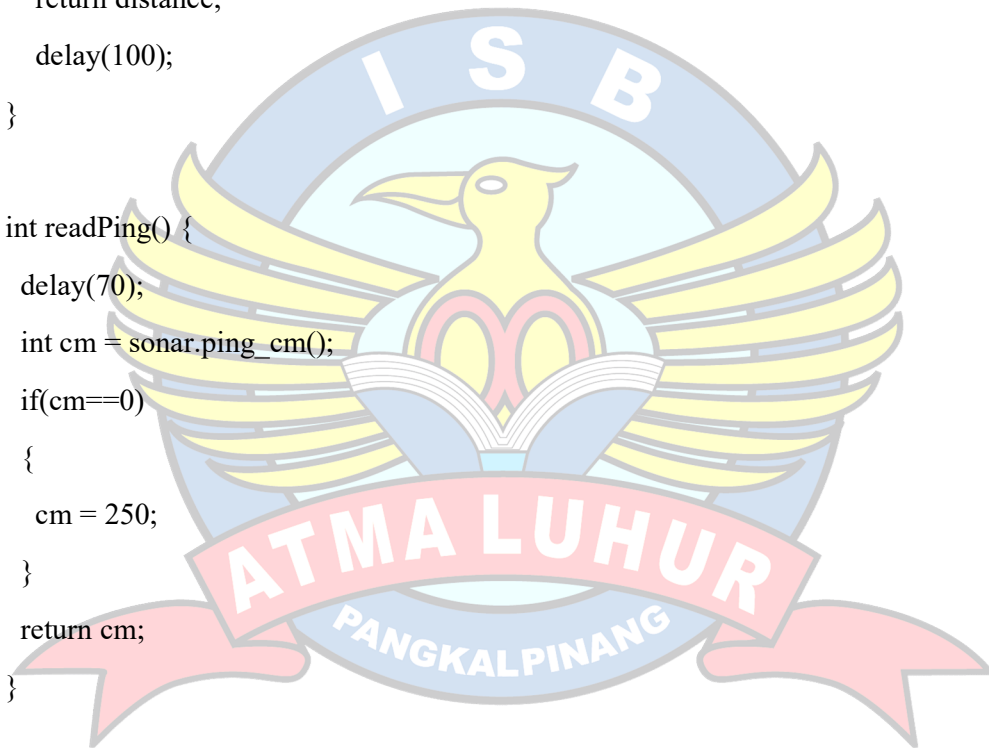
```



```
int lookLeft()
{
  myservo.write(170);
  delay(500);
  int distance = readPing();
  delay(100);
  myservo.write(115);
  return distance;
  delay(100);
}
```

```
int readPing() {
  delay(70);
  int cm = sonar.ping_cm();
  if(cm==0)
  {
    cm = 250;
  }
  return cm;
}
```

```
void moveStop() {
  motor1.run(RELEASE);
  motor2.run(RELEASE);
  motor3.run(RELEASE);
  motor4.run(RELEASE);
}
```



```

void moveForward() {

if(!goesForward)
{
    goesForward=true;
    motor1.run(FORWARD);
    motor2.run(FORWARD);
    motor3.run(FORWARD);
    motor4.run(FORWARD);
    for (speedSet = 0; speedSet < MAX_SPEED; speedSet +=2) // slowly bring the
speed up to avoid loading down the batteries too quickly
    {
        motor1.setSpeed(speedSet);
        motor2.setSpeed(speedSet);
        motor3.setSpeed(speedSet);
        motor4.setSpeed(speedSet);
        delay(5);
    }
}

}

void moveBackward() {
    goesForward=false;
    motor1.run(BACKWARD);
    motor2.run(BACKWARD);
    motor3.run(BACKWARD);
    motor4.run(BACKWARD);

    for (speedSet = 0; speedSet < MAX_SPEED; speedSet +=2) // slowly bring the
speed up to avoid loading down the batteries too quickly

```



```
{  
  motor1.setSpeed(speedSet);  
  motor2.setSpeed(speedSet);  
  motor3.setSpeed(speedSet);  
  motor4.setSpeed(speedSet);  
  delay(5);  
}
```

```
void turnRight() {  
  motor1.run(FORWARD);  
  motor2.run(FORWARD);  
  motor3.run(BACKWARD);  
  motor4.run(BACKWARD);  
  delay(500);  
  motor1.run(FORWARD);  
  motor2.run(FORWARD);  
  motor3.run(FORWARD);  
  motor4.run(FORWARD);  
}
```

```
void turnLeft() {  
  motor1.run(BACKWARD);  
  motor2.run(BACKWARD);  
  motor3.run(FORWARD);  
  motor4.run(FORWARD);  
  delay(500);  
  motor1.run(FORWARD);
```



```
motor2.run(FORWARD);  
motor3.run(FORWARD);  
motor4.run(FORWARD);  
}
```





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AVOIDER ROBOT(MOVER) BERBASIS ARDUINO UNO






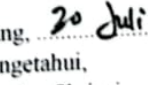

Dosen Pembimbing : Harrizki Arie Pradana,S.Kom., M.T.

Pangkalpinang, 31 Agustus 2021.
Penulis

(Alvin Meidi Sanjaya)

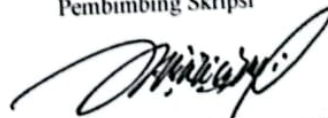
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Pert.	Tanggal	Uraian	Paraf Pembimbing
1	5 april	Bimbingan bab I	
2	6 april	Revisi bab I	
3	7 april	Bimbingan bab II	
4	14 april	Revisi bab II	
5	15 april	Bimbingan bab III	
6	19 april	Revisi bab III	
7	20 april	Bimbingan bab IV	
8	22 april	Bimbingan bab V	

Pangkalpinang, 20 Juli 2021

Mengetahui,
Pembimbing Skripsi



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