

LAMPIRAN

```
//Arduino PWM Speed Control :
```

```
//motor1
```

```
int E1 = 5;
```

```
int M1 = 4;
```

```
//motor2
```

```
int E2 = 6;
```

```
int M2 = 7;
```

```
int a = 0;
```

```
int b = 0;
```

```
int c = 0;
```

```
void setup()
```

```
{
```

```
  pinMode(M1, OUTPUT);
```

```
  pinMode(M2, OUTPUT);
```

```
  Serial.begin(9600);    // Set up komunikasi serial pada 9600 bps
```

```
}
```

```
void loop()
```

```
{
```

```
  const int sensorMin = 0;    // sensor minimum, discovered through experiment
```

```
const int sensorMax = 600; // sensor maximum, discovered through experiment
```

```
int sensorReading1 = analogRead(A0);  
int sensorReading2 = analogRead(A1);  
int sensorReading3 = analogRead(A2);  
int range1 = map(sensorReading1, sensorMin, sensorMax, 0, 1);  
int range2 = map(sensorReading2, sensorMin, sensorMax, 0, 1);  
int range3 = map(sensorReading3, sensorMin, sensorMax, 0, 1);
```

```
Serial.println(sensorReading1, DEC);  
Serial.println(sensorReading2, DEC);  
Serial.println(sensorReading3, DEC);  
delay(1000);
```

```
switch (range1) {  
case 0: // your hand is on the sensor  
    a=0;  
    break;  
case 1: // your hand is close to the sensor  
    a=1;  
    break;  
}
```

```
switch (range2) {  
case 0: // your hand is on the sensor  
    b=0;  
    break;  
case 1: // your hand is close to the sensor  
    b=1;
```

```

    break;
}

switch (range3) {
case 0: // your hand is on the sensor
    c=0;
    break;
case 1: // your hand is close to the sensor
    c=1;
    break;
}

for (int x=0;x<=5;x++){

if (x==0){
    batasnol();
}
if (x==1){
    batassatu();
}
if (x==2){
    batasdua();
}
if (x==3){
    batastiga();
}
if (x==4){
    batasempat();
}
}

```

```
    if (x==5){
    bataslima();
    }
    delay(500);
    }
}

void maju()
{
    digitalWrite(M2,LOW);
    digitalWrite(M1,HIGH);
    analogWrite(E2,230);
    analogWrite(E1,255);
}

void mundur()
{
    digitalWrite(M2,HIGH);
    digitalWrite(M1,LOW);
    analogWrite(E2,255);
    analogWrite(E1,230);
}

void berhenti()
{
    digitalWrite(M2,LOW);
    digitalWrite(M1,LOW);
    analogWrite(E2,0);
    analogWrite(E1,0);
}
```

```
void batasnol(){
    if (a==0 && b==0 && c==0){
        mundur();
        delay(15000);
    }
}
```

```
void batassatu(){
    if (a==1 && b==0 && c==0){
        berhenti();
        delay(30000);
        mundur();
        delay(15000);
    }
    else {
        mundur();
    }
}
```

```
void batasdua(){
    if (a==0 && b==1 && c==0){
        berhenti();
        delay(26000);
        mundur();
        delay(15000);
    }
    else{
        maju();
    }
}
```

```
}
```

```
void batastiga(){  
    if (a==1 && b==1 && c==0){  
        berhenti();  
        delay(24000);  
        mundur();  
        delay(15000);  
    }  
    else{  
        maju();  
    }  
}
```

```
void batasempat(){  
    if (a==0 && b==0 && c==1){  
        berhenti();  
        delay(30000);  
        mundur();  
        delay(15000);  
    }  
    else{  
        maju();  
    }  
}
```

```
void bataslima(){  
    if (a==1 && b==0 && c==1){  
        berhenti();  
    }  
}
```

```
    delay(30000);
      mundur();
    delay(15000);
  }
else{
  maju();
}
}
```