```
const int EnableL = 5;
const int HighL = 6;       // LEFT SIDE MOTOR
const int LowL =7;

const int EnableR = 10;
const int HighR = 8;       //RIGHT SIDE MOTOR
const int LowR =9;

const int D0 = 11;       //Raspberry pin 21    LSB
const int D1 = 12;       //Raspberry pin 22
const int D2 = 2;       //Raspberry pin 23
const int D3 = 3;       //Raspberry pin 24    MSB

int a,b,c,d,data;

void setup() {
pinMode(EnableL, OUTPUT);
pinMode(HighL, OUTPUT);
pinMode(LowL, OUTPUT);

pinMode(EnableR, OUTPUT);
pinMode(HighR, OUTPUT);
pinMode(LowR, OUTPUT);

pinMode(D0, INPUT_PULLUP);
pinMode(D1, INPUT_PULLUP);
pinMode(D2, INPUT_PULLUP);
pinMode(D3, INPUT_PULLUP);
}
```

```
void Data()
{
   a = digitalRead(D0);
   b = digitalRead(D1);
   c = digitalRead(D2);
   d = digitalRead(D3);

   data = 8*d+4*c+2*b+a;
}

void Forward()
{
  digitalWrite(HighL, LOW);
  digitalWrite(LowL, HIGH);
  analogWrite(EnableL,255);

  digitalWrite(HighR, LOW);
  digitalWrite(LowR, HIGH);
  analogWrite(EnableR,255);
}

void Stop()
{
  digitalWrite(HighL, LOW);
  digitalWrite(LowL, HIGH);
  analogWrite(EnableL,0);

  digitalWrite(HighR, LOW);
  digitalWrite(LowR, HIGH);
  analogWrite(EnableR,0);
```

```
}

void Left1()
{
  digitalWrite(HighL, LOW);
  digitalWrite(LowL, HIGH);
  analogWrite(EnableL,160);

  digitalWrite(HighR, LOW);
  digitalWrite(LowR, HIGH);
  analogWrite(EnableR,255);
}

void Left2()
{
  digitalWrite(HighL, LOW);
  digitalWrite(LowL, HIGH);
  analogWrite(EnableL,90);

  digitalWrite(HighR, LOW);
  digitalWrite(LowR, HIGH);
  analogWrite(EnableR,255);
}

void Left3()
{
  digitalWrite(HighL, LOW);
  digitalWrite(LowL, HIGH);
  analogWrite(EnableL,50);

  digitalWrite(HighR, LOW);
```

```
  digitalWrite(LowR, HIGH);
  analogWrite(EnableR,255);
}

void Right1()
{
  digitalWrite(HighL, LOW);
  digitalWrite(LowL, HIGH);
  analogWrite(EnableL,255);

  digitalWrite(HighR, LOW);
  digitalWrite(LowR, HIGH);
  analogWrite(EnableR,160);  //200
}
void Right2()
{
  digitalWrite(HighL, LOW);
  digitalWrite(LowL, HIGH);
  analogWrite(EnableL,255);

  digitalWrite(HighR, LOW);
  digitalWrite(LowR, HIGH);
  analogWrite(EnableR,90);   //160
}

void Right3()
{
  digitalWrite(HighL, LOW);
  digitalWrite(LowL, HIGH);
  analogWrite(EnableL,255);
```

```
  digitalWrite(HighR, LOW);
  digitalWrite(LowR, HIGH);
  analogWrite(EnableR,50);   //100
}

void loop()
{
  Data();
  if(data==0)
   {
     Forward();
   }
  else if(data==1)
   {
     Right1();
   }
  else if(data==2)
   {
     Right2();
   }
  else if(data==3)
   {
     Right3();
   }
  else if(data==4)
   {
     Left1();
   }
  else if(data==5)
   {
     Left2();
```

```
}
  else if(data==6)
   {
     Left3();
   }
  else if (data>7)
   {
     Stop();
   }




}
```