```
const int red1 = 4;
const int yellow1  = 3;
const int green1  = 2;
const int red2 = 7;
const int yellow2  = 6;
const int green2  = 5;
const int red3 = 10;
const int yellow3  = 9;
const int green3  = 8;
const int red4 = 13;
const int yellow4  = 12;
const int green4  = 11;
#define D1 A0
#define D2 A1
#define D3 A2
#define D4 A3
void setup()
{
  Serial.begin(9600);
  pinMode(red1,     OUTPUT);
  pinMode(yellow1,  OUTPUT);
  pinMode(green1,   OUTPUT);
  pinMode(red2,     OUTPUT);
  pinMode(yellow2,  OUTPUT);
  pinMode(green2,   OUTPUT);
  pinMode(red3,     OUTPUT);
  pinMode(yellow3,  OUTPUT);
  pinMode(green3,   OUTPUT);
  pinMode(red4,     OUTPUT);
  pinMode(yellow4,  OUTPUT);
  pinMode(green4,   OUTPUT);
```

```
 pinMode(D1,INPUT);
 pinMode(D2,INPUT);
 pinMode(D3,INPUT);
 pinMode(D4,INPUT);
}
void loop()
{
 digitalWrite(green1 , HIGH);digitalWrite(yellow1 , LOW);digitalWrite(red1 , LOW);
 digitalWrite(green2 , LOW); digitalWrite(yellow2 , LOW);digitalWrite(red2 , HIGH);
 digitalWrite(green3 , LOW); digitalWrite(yellow3 , LOW);digitalWrite(red3 , HIGH);
 digitalWrite(green4 , LOW); digitalWrite(yellow4 , LOW);digitalWrite(red4 , HIGH);
 checkdensity1();
 digitalWrite(green1 , LOW); digitalWrite(yellow1 , HIGH);digitalWrite(red1 , LOW);
 digitalWrite(green2 , LOW); digitalWrite(yellow2 , LOW); digitalWrite(red2 , HIGH);
 digitalWrite(green3 , LOW); digitalWrite(yellow3 , LOW); digitalWrite(red3 , HIGH);
 digitalWrite(green4 , LOW); digitalWrite(yellow4 , LOW); digitalWrite(red4 , HIGH);
 delay(2000);
 digitalWrite(green1 , LOW); digitalWrite(yellow1 , LOW); digitalWrite(red1 , HIGH);
 digitalWrite(green2 , HIGH);digitalWrite(yellow2 , LOW); digitalWrite(red2 , LOW);
 digitalWrite(green3 , LOW); digitalWrite(yellow3 , LOW); digitalWrite(red3 , HIGH);
 digitalWrite(green4 , LOW); digitalWrite(yellow4 , LOW); digitalWrite(red4 , HIGH);
 checkdensity2();
 digitalWrite(green1 , LOW); digitalWrite(yellow1 , LOW); digitalWrite(red1 , HIGH);
 digitalWrite(green2 , LOW); digitalWrite(yellow2 , HIGH);digitalWrite(red2 , LOW);
 digitalWrite(green3 , LOW); digitalWrite(yellow3 , LOW); digitalWrite(red3 , HIGH);
 digitalWrite(green4 , LOW); digitalWrite(yellow4 , LOW); digitalWrite(red4 , HIGH);
 delay(2000);
 digitalWrite(green1 , LOW); digitalWrite(yellow1 , LOW); digitalWrite(red1 , HIGH);
 digitalWrite(green2 , LOW); digitalWrite(yellow2 , LOW); digitalWrite(red2 , HIGH);
 digitalWrite(green3 , HIGH);digitalWrite(yellow3 , LOW); digitalWrite(red3 , LOW);
 digitalWrite(green4 , LOW); digitalWrite(yellow4 , LOW); digitalWrite(red4 , HIGH);
```

```
 checkdensity3();
 digitalWrite(green1 , LOW); digitalWrite(yellow1 , LOW); digitalWrite(red1 , HIGH);
 digitalWrite(green2 , LOW); digitalWrite(yellow2 , LOW); digitalWrite(red2 , HIGH);
 digitalWrite(green3 , LOW); digitalWrite(yellow3 , HIGH);digitalWrite(red3 , LOW);
 digitalWrite(green4 , LOW); digitalWrite(yellow4 , LOW); digitalWrite(red4 , HIGH);
 delay(2000);
 digitalWrite(green1 , LOW); digitalWrite(yellow1 , LOW); digitalWrite(red1 , HIGH);
 digitalWrite(green2 , LOW); digitalWrite(yellow2 , LOW); digitalWrite(red2 , HIGH);
 digitalWrite(green3 , LOW);digitalWrite(yellow3 , LOW); digitalWrite(red3 , HIGH);
 digitalWrite(green4 , HIGH); digitalWrite(yellow4 , LOW); digitalWrite(red4 , LOW);
 checkdensity4();
 digitalWrite(green1 , LOW); digitalWrite(yellow1 , LOW); digitalWrite(red1 , HIGH);
 digitalWrite(green2 , LOW); digitalWrite(yellow2 , LOW); digitalWrite(red2 , HIGH);
 digitalWrite(green3 , LOW); digitalWrite(yellow3 , LOW); digitalWrite(red3 , HIGH);
 digitalWrite(green4 , LOW); digitalWrite(yellow4 , HIGH);digitalWrite(red4 , LOW);
 delay(2000);
}

void checkdensity1()
{
 int wait=0;
 while(!digitalRead(D1))
 {
 delay(1000);
 wait++;
 if(wait>60)
 {
 break;
 }
 }
 if(digitalRead(D1))
```

```
 {
  delay(4000);
 }

}

void checkdensity2()
{
 int wait=0;
 while(!digitalRead(D2))
 {
  delay(1000);
  wait++;
  if(wait>60)
  {
  break;
  }
 }
 if(digitalRead(D2))
 {
  delay(4000);
 }

}

void checkdensity3()
{
 int wait=0;
 while(!digitalRead(D3))
 {
  delay(1000);
```

```
  wait++;
  if(wait>60)
  {
  break;
  }
 }
 if(digitalRead(D3))
 {
  delay(4000);
 }

}

void checkdensity4()
{
 int wait=0;
 while(!digitalRead(D4))
 {
  delay(1000);
  wait++;
  if(wait>60)
  {
  break;
  }
 }
 if(digitalRead(D4))
 {
  delay(4000);
 }

}
```