Assignment 9

Aim:

Write a program using Arduino / Rasberry Pi Kit for Demonstration of IOT Application

Traffic light controller

Code:

```
int Lane1[] = {13,12,11}; // Lane 1 Red, Yellow and Green
int Lane2[] = {10,9,8};// Lane 2 Red, Yellow and Green
int Lane3[] = {7,6,5};// Lane 3 Red, Yellow and Green
int Lane4[] = {4,3,2};// Lane 4 Red, Yellow and Green

void setup()
{
  for (int i = 0; i < 3; i++)
  {
      pinMode(Lane1[i], OUTPUT);
      pinMode(Lane2[i], OUTPUT);
      pinMode(Lane3[i], OUTPUT);
      pinMode(Lane4[i], OUTPUT);
  }
  for (int i = 0; i < 3; i++)
  {
      digitalWrite(Lane1[i], LOW);
      digitalWrite(Lane2[i], LOW);
      digitalWrite(Lane3[i], LOW);
      digitalWrite(Lane4[i], LOW);
  }
```

```cpp
}

void loop()
{
 digitalWrite(Lane1[2], HIGH);
 digitalWrite(Lane3[0], HIGH);
 digitalWrite(Lane4[0], HIGH);
 digitalWrite(Lane2[0], HIGH);
 delay(7000);
 digitalWrite(Lane1[2], LOW);
 digitalWrite(Lane3[0], LOW);
 digitalWrite(Lane1[1], HIGH);
 digitalWrite(Lane3[1], HIGH);
 delay(3000);
 digitalWrite(Lane1[1], LOW);
 digitalWrite(Lane3[1], LOW);
 digitalWrite(Lane1[0], HIGH);
 digitalWrite(Lane3[2], HIGH);
 delay(7000);
 digitalWrite(Lane3[2], LOW);
 digitalWrite(Lane4[0], LOW);
 digitalWrite(Lane3[1], HIGH);
 digitalWrite(Lane4[1], HIGH);
 delay(3000);
 digitalWrite(Lane3[1], LOW);
 digitalWrite(Lane4[1], LOW);
 digitalWrite(Lane3[0], HIGH);
 digitalWrite(Lane4[2], HIGH);
 delay(7000);
```

```
  digitalWrite(Lane4[2], LOW);
  digitalWrite(Lane2[0], LOW);
  digitalWrite(Lane4[1], HIGH);
  digitalWrite(Lane2[1], HIGH);
  delay(3000);
  digitalWrite(Lane4[1], LOW);
  digitalWrite(Lane2[1], LOW);
  digitalWrite(Lane4[0], HIGH);
  digitalWrite(Lane2[2], HIGH);
  delay(7000);
  digitalWrite(Lane1[0], LOW);
  digitalWrite(Lane2[2], LOW);
  digitalWrite(Lane1[1], HIGH);
  digitalWrite(Lane2[1], HIGH);
  delay(3000);
  digitalWrite(Lane2[1], LOW);
  digitalWrite(Lane1[1], LOW);
}
```

Output: