**Code:**

//These lines define constants representing the durations (in milliseconds) for the green, yellow, and red lights of  
// the traffic signals.  
  
int GREEN   = 4000;  
int YELLOW  = 1000;  
int RED   = 20000;  
  
//These variables are used to store the state of PIR (Passive Infrared) sensors.  
//They are initialized to 0.  
int pir1=0;  
int pir2=0;  
int pir3=0;  
int pir4=0;  
  
//pin modes are set for various pins. Pins 2 to 10 are set as outputs for controlling traffic signals,  
//while pins 11 to 13 and A0 are set as inputs for reading sensor values.  
// Pins A1, A2, and A3 are also set as outputs.  
void setup()  
{  
 pinMode(2, OUTPUT);  
 pinMode(3, OUTPUT);  
 pinMode(4, OUTPUT);  
 pinMode(5, OUTPUT);  
 pinMode(6, OUTPUT);  
 pinMode(7, OUTPUT);  
 pinMode(8, OUTPUT);  
 pinMode(9, OUTPUT);  
 pinMode(10,OUTPUT);  
 pinMode(11, INPUT);  
 pinMode(12, INPUT);  
 pinMode(13, INPUT);  
 pinMode(A0, INPUT);  
 pinMode(A1,OUTPUT);  
 pinMode(A2,OUTPUT);  
 pinMode(A3,OUTPUT);  
  
}  
void signal\_1()  
{  
 digitalWrite(4,HIGH);  
 digitalWrite(7,HIGH);  
 digitalWrite(A1,HIGH);  
 digitalWrite(9,HIGH);  
 delay(1000);  
 digitalWrite(9,LOW);  
 digitalWrite(8,HIGH);  
}  
void signal\_2()  
{  
 digitalWrite(10,HIGH);  
 digitalWrite(4,HIGH);  
 digitalWrite(A1,HIGH);  
 digitalWrite(6,HIGH);  
 delay(1000);  
 digitalWrite(6,LOW);  
 digitalWrite(5,HIGH);  
}  
void signal\_3()  
{  
 digitalWrite(7,HIGH);  
 digitalWrite(10,HIGH);  
 digitalWrite(A1,HIGH);  
 digitalWrite(3,HIGH);  
 delay(1000);  
 digitalWrite(3,LOW);  
 digitalWrite(2,HIGH);  
}  
void signal\_4()  
{  
 digitalWrite(7,HIGH);  
 digitalWrite(10,HIGH);  
 digitalWrite(4,HIGH);  
 digitalWrite(A2,HIGH);  
 delay(1000);  
 digitalWrite(A2,LOW);  
 digitalWrite(A3,HIGH);  
}  
void clear()  
{  
 digitalWrite(2,LOW);  
 digitalWrite(3,LOW);  
 digitalWrite(4,LOW);  
 digitalWrite(5,LOW);  
 digitalWrite(6,LOW);  
 digitalWrite(7,LOW);  
 digitalWrite(8,LOW);  
 digitalWrite(9,LOW);  
 digitalWrite(10,LOW);  
 digitalWrite(A1,LOW);  
 digitalWrite(A2,LOW);  
 digitalWrite(A3,LOW);  
}  
     
void loop()  // Read sensor values  
{  
 pir1 = digitalRead(13);  
 pir2 = digitalRead(12);  
 pir3 = digitalRead(11);  
 pir4 = digitalRead(A0);  
   
   
 // Check sensor states and trigger signal functions accordingly.  
 // Similar checks for pir2, pir3, pir4

 if(pir1==HIGH)  
 {  
  signal\_1();  
  delay(5000);  
  clear();  
 }  
 if(pir2==HIGH)  
 {  
  signal\_2();  
  delay(5000);  
  clear();  
 }  
 if(pir3==HIGH)  
 {  
  signal\_3();  
  delay(5000);  
  clear();  
 }  
 if(pir4==HIGH)  
 {  
  signal\_4();  
  delay(5000);  
  clear();  
 }  
 // If all sensors are HIGH, cycle through all signals briefly  
  // Cycle through all signals briefly.  
   
   
    if (pir1 == HIGH && pir2 == HIGH && pir3 == HIGH && pir4 == HIGH)  
     
 {  
  signal\_1();  
  delay(1000);  
  clear();  
   
  signal\_2();  
  delay(1000);  
  clear();  
   
  signal\_3();  
  delay(1000);  
  clear();  
   
  signal\_4();  
  delay(1000);  
  clear();  
 }  
     
}