AL-Azhar University

Faculty of Engineering

Computer & Systems Department

Arduino-traffic-light-with-pedestrian-button

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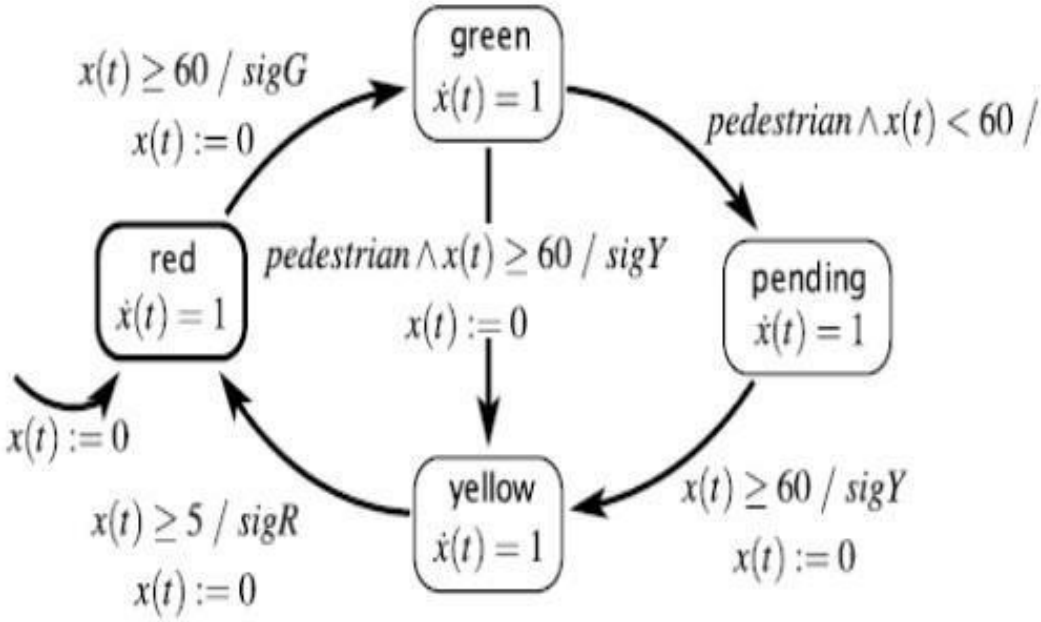
continuous variable: $x(t)$: $\mathbb{R}$
inputs: *pedestrian*: pure
outputs: *sigR*, *sigG*, *sigY*: pure



Used components:

1- **Arduino Uno.**
2- **Bread board**
3- **Bus button**
4- **Wires**
5- **Resistor 220 om**

Arduino code:

```
//declare LEDs int
greenLed = 8; int
orangeLed = 9;
int redLed = 10;

//declare Push button int
pushButton = 7;

int readPushbutton = 0;

void setup()
{
  pinMode (greenLed, OUTPUT);
pinMode (orangeLed, OUTPUT);
  pinMode(redLed, OUTPUT);

  //Turn the LEDs off
digitalWrite(greenLed, LOW);
digitalWrite(orangeLed, LOW);
  digitalWrite(redLed, LOW);

  //setting the buttons to input
  pinMode (pushButton, INPUT);


  //for the serial monitor
  Serial.begin(9600);
}

void loop ()
{

  int readPushbutton = digitalRead(pushButton);

  if (readPushbutton == 0 ) {
    digitalWrite (greenLed, HIGH);
digitalWrite (orangeLed, LOW);
          digitalWrite (redLed, LOW);
    delay (1000);
```

```
   }
   else if (readPushbutton == 1){
        Serial.println("PEDESTRIAN
WAITING");          digitalWrite(greenLed,LOW);
digitalWrite(orangeLed,HIGH);
digitalWrite(redLed, LOW);          delay(2000);

        digitalWrite(greenLed,LOW);
digitalWrite(orangeLed,LOW);     digitalWrite(redLed,HIGH);
Serial.println("PEDESTRIAN CROSSING");
        delay(5000);

   }


}
```

Simulation using tinkercad: