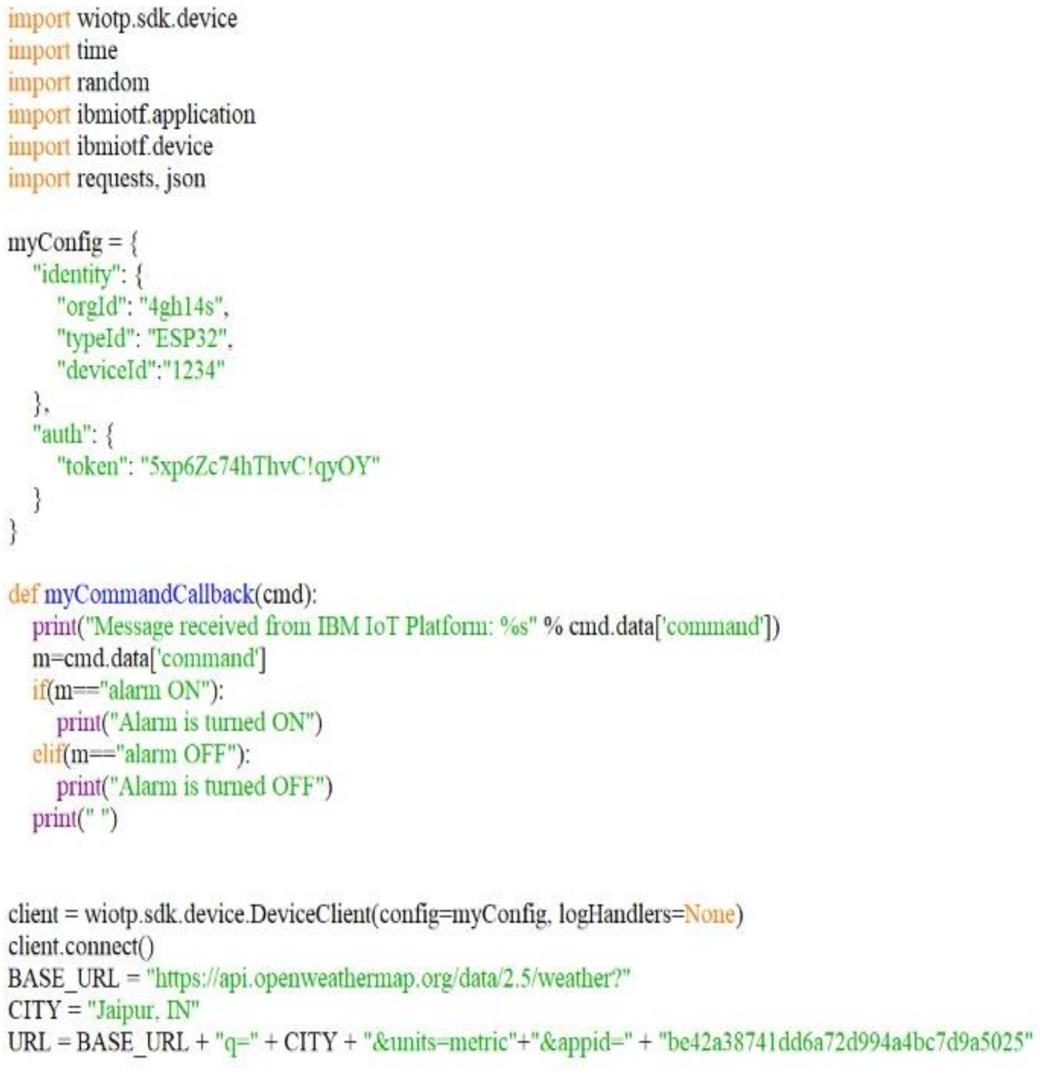
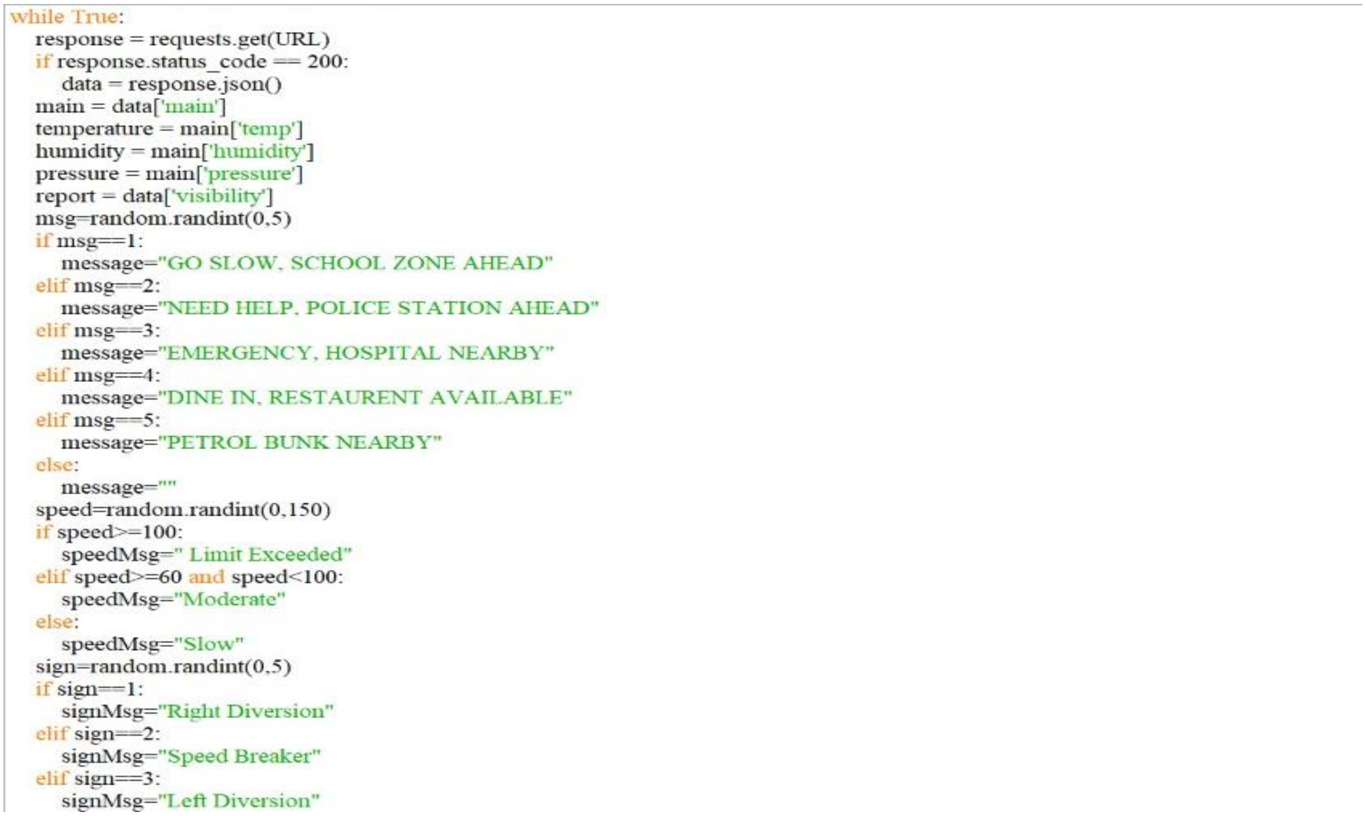
SPRINT -3

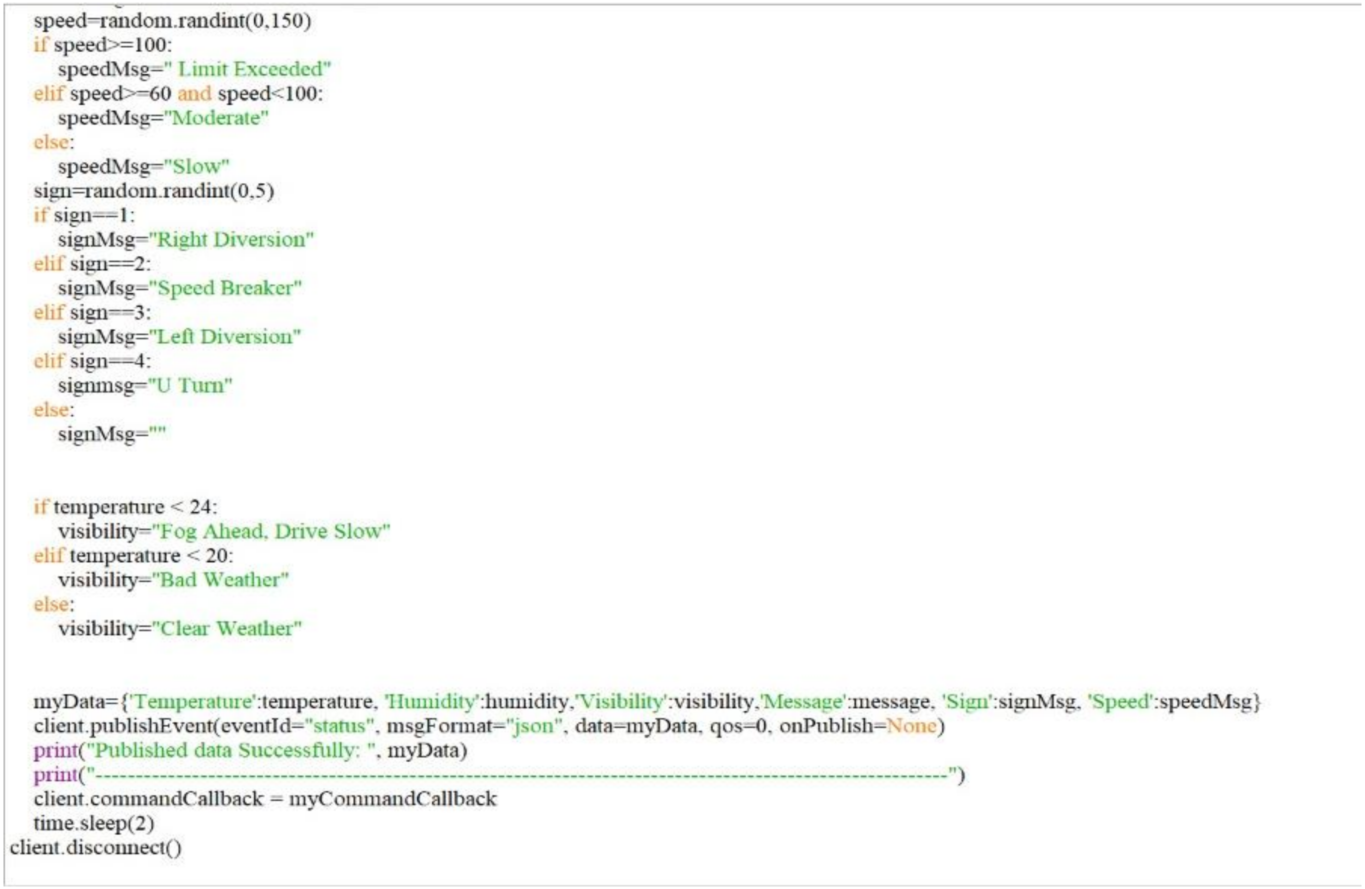
Date	12 NOVEMBER 2022
Team ID	PNT2022TMID22101
Project Name	Project – SIGNS WITH SMART CONNECTIVITY FORBETTER ROAD SAFETY
Maximum Marks	4 Marks



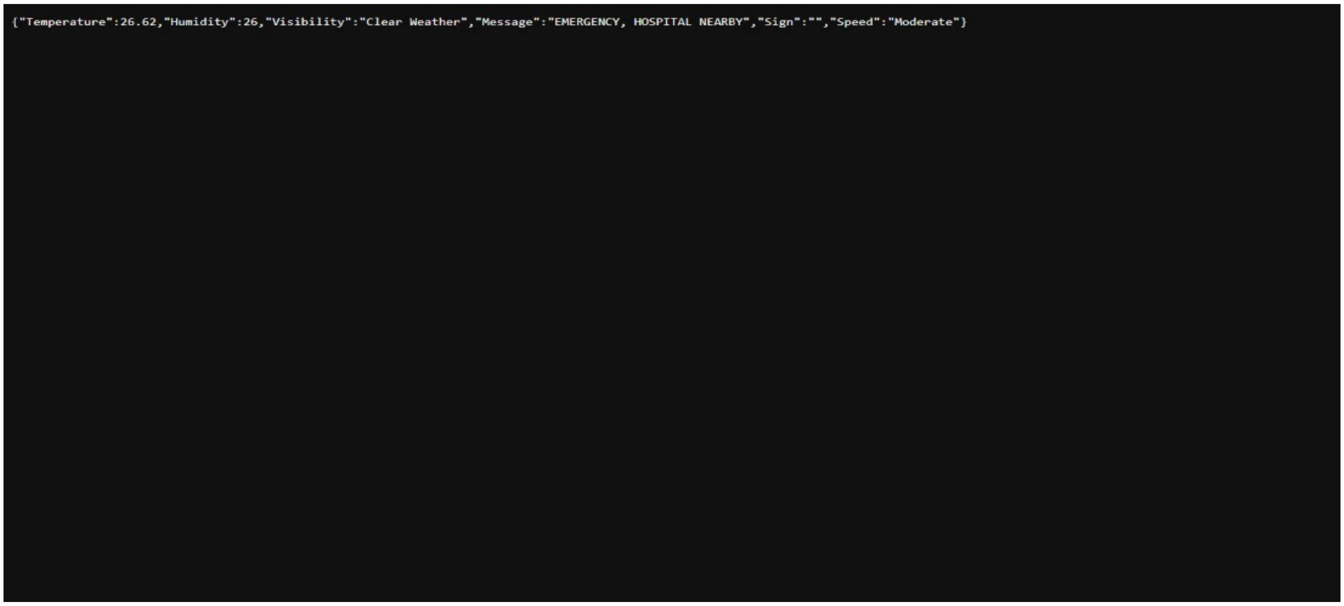
```
import wiotp.sdk.device
import time
import random
import ibmiotf.application
import ibmiotf.device
import requests, json

myConfig = {
  "identity": {
    "orgId": "4gh14s",
    "typeId": "ESP32",
    "deviceId":"1234"
  },
  "auth": {
    "token": "5xp6Zc74hThvC!qyOY"
  }
}

def myCommandCallback(cmd):
  print("Message received from IBM IoT Platform: %s" % cmd.data['command'])
  m=cmd.data['command']
  if(m=="alarm ON"):
    print("Alarm is turned ON")
  elif(m=="alarm OFF"):
    print("Alarm is turned OFF")
  print(" ")


client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()
BASE_URL = "https://api.openweathermap.org/data/2.5/weather?"
CITY = "Jaipur, IN"
URL = BASE_URL + "q=" + CITY + "&units=metric"+"&appid=" + "be42a38741dd6a72d994a4bc7d9a5025"
```



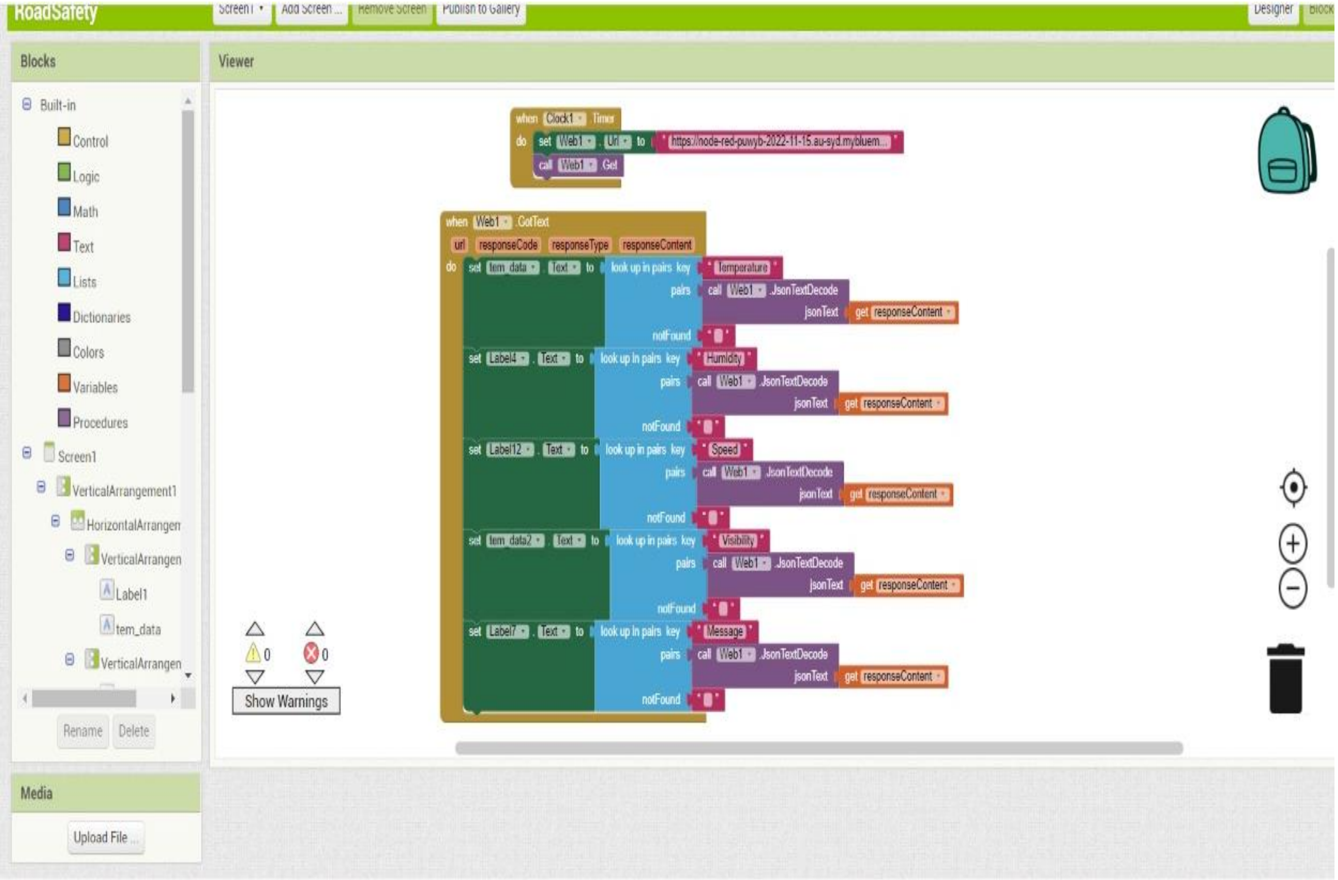
```
while True:
    response = requests.get(URL)
    if response.status_code == 200:
        data = response.json()
    main = data['main']
    temperature = main['temp']
    humidity = main['humidity']
    pressure = main['pressure']
    report = data['visibility']
    msg=random.randint(0,5)
    if msg==1:
        message="GO SLOW, SCHOOL ZONE AHEAD"
    elif msg==2:
        message="NEED HELP, POLICE STATION AHEAD"
    elif msg==3:
        message="EMERGENCY, HOSPITAL NEARBY"
    elif msg==4:
        message="DINE IN, RESTAURENT AVAILABLE"
    elif msg==5:
        message="PETROL BUNK NEARBY"
    else:
        message=""
    speed=random.randint(0,150)
    if speed>=100:
        speedMsg=" Limit Exceeded"
    elif speed>=60 and speed<100:
        speedMsg="Moderate"
    else:
        speedMsg="Slow"
    sign=random.randint(0,5)
    if sign==1:
        signMsg="Right Diversion"
    elif sign==2:
        signMsg="Speed Breaker"
    elif sign==3:
        signMsg="Left Diversion"
```



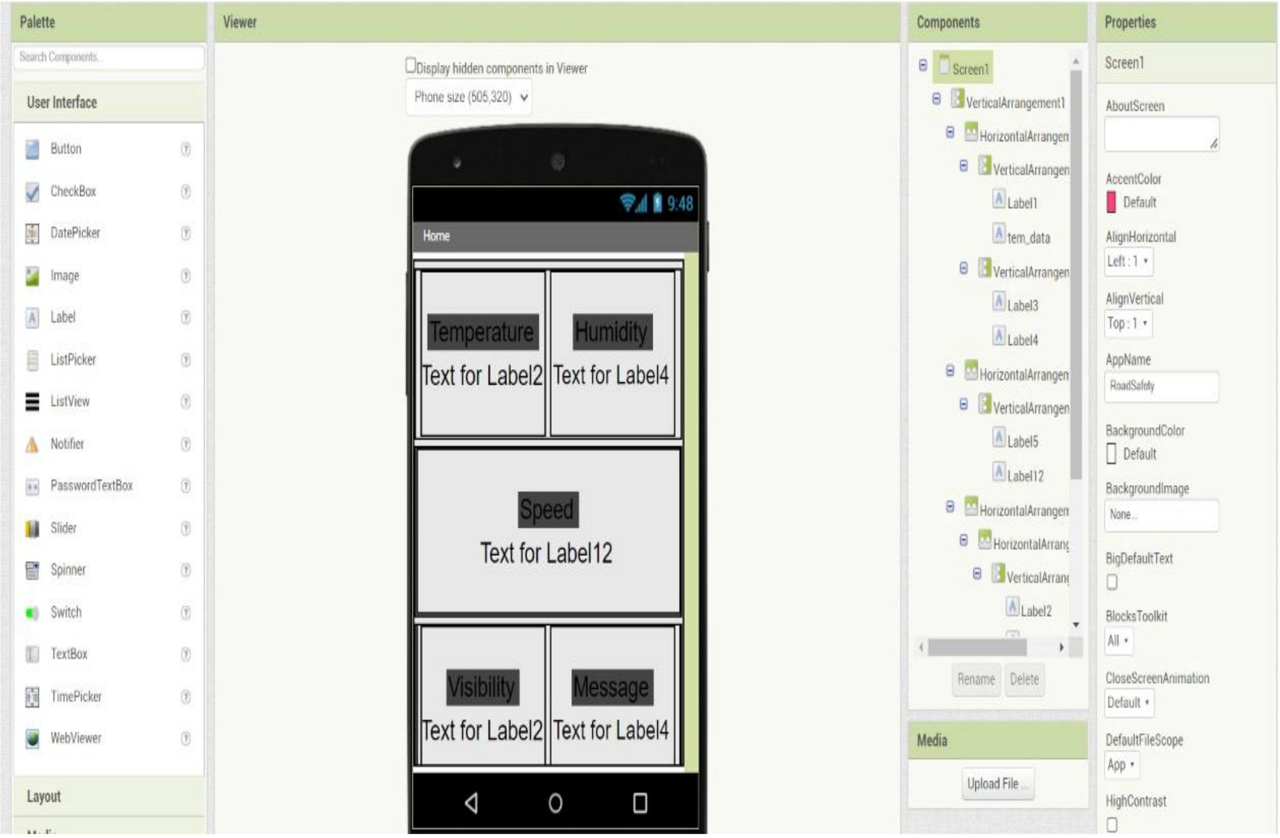
```
    speed=random.randint(0,150)
    if speed>=100:
        speedMsg=" Limit Exceeded"
    elif speed>=60 and speed<100:
        speedMsg="Moderate"
    else:
        speedMsg="Slow"
    sign=random.randint(0,5)
    if sign==1:
        signMsg="Right Diversion"
    elif sign==2:
        signMsg="Speed Breaker"
    elif sign==3:
        signMsg="Left Diversion"
    elif sign==4:
        signmsg="U Turn"
    else:
        signMsg=""


    if temperature < 24:
        visibility="Fog Ahead, Drive Slow"
    elif temperature < 20:
        visibility="Bad Weather"
    else:
        visibility="Clear Weather"


    myData={'Temperature':temperature, 'Humidity':humidity,'Visibility':visibility,'Message':message, 'Sign':signMsg, 'Speed':speedMsg}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
    print("Published data Successfully: ", myData)
    print("----------------------------------------------------------------------------------------------------")
    client.commandCallback = myCommandCallback
    time.sleep(2)
client.disconnect()
```



```
{"Temperature":26.62,"Humidity":26,"Visibility":"Clear Weather","Message":"EMERGENCY, HOSPITAL NEARBY","Sign":"","Speed":"Moderate"}
```



```
when Clock1 .Timer
do  set Web1 . Url to " https://node-red-puwyb-2022-11-15.au-syd.mybluem... "
    call Web1 .Get

when Web1 .GotText
  url  responseCode  responseType  responseContent
do  set tem_data . Text to  look up in pairs  key " Temperature "
                                            pairs  call Web1 .JsonTextDecode
                                                              jsonText  get responseContent
                                         notFound  " "
    set Label4 . Text to  look up in pairs  key " Humidity "
                                         pairs  call Web1 .JsonTextDecode
                                                           jsonText  get responseContent
                                      notFound  " "
    set Label12 . Text to  look up in pairs  key " Speed "
                                          pairs  call Web1 .JsonTextDecode
                                                            jsonText  get responseContent
                                       notFound  " "
    set tem_data2 . Text to  look up in pairs  key " Visibility "
                                             pairs  call Web1 .JsonTextDecode
                                                               jsonText  get responseContent
                                          notFound  " "
    set Label7 . Text to  look up in pairs  key " Message "
                                         pairs  call Web1 .JsonTextDecode
                                                           jsonText  get responseContent
                                      notFound  " "
```



Screen1
- VerticalArrangement1
  - HorizontalArrangen
    - VerticalArrangen
      - Label1
      - tem_data
    - VerticalArrangen
      - Label3
      - Label4
  - HorizontalArrangen
    - VerticalArrangen
      - Label5
      - Label12
  - HorizontalArrangen
    - HorizontalArranç
      - VerticalArranç
        - Label2

Screen1

AboutScreen

AccentColor: Default

AlignHorizontal: Left : 1

AlignVertical: Top : 1

AppName: RoadSafety

BackgroundColor: Default

BackgroundImage: None...

BigDefaultText: □

BlocksToolkit: All

CloseScreenAnimation: Default

DefaultFileScope: App

HighContrast: □