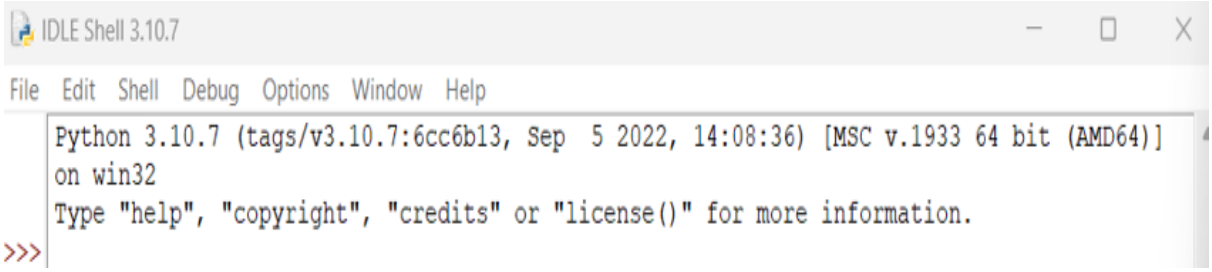
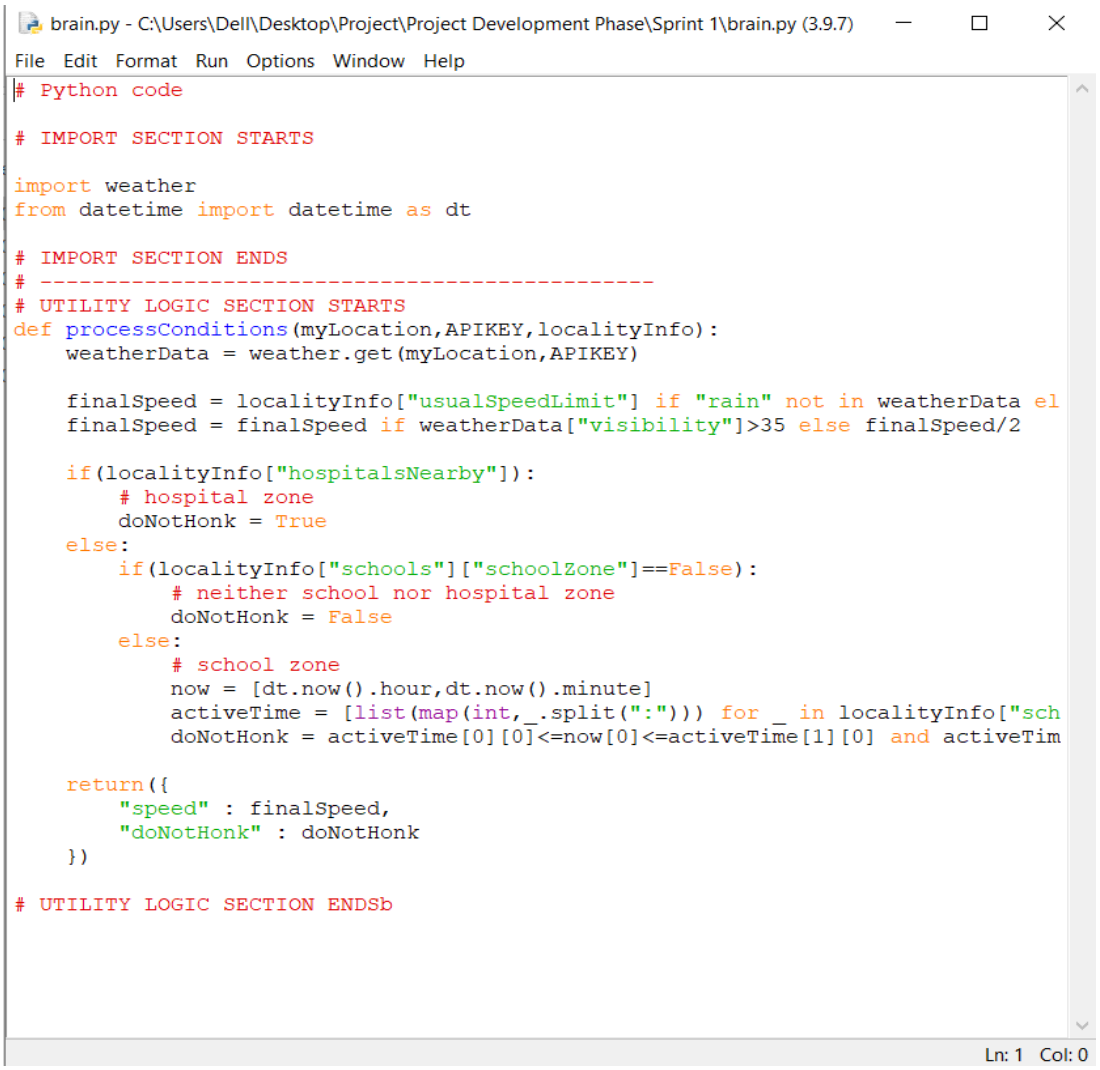
OUTPUT


IDLE Shell 3.10.7
File Edit Shell Debug Options Window Help
Python 3.10.7 (tags/v3.10.7:6cc6b13, Sep 5 2022, 14:08:36) [MSC v.1933 64 bit (AMD64)]
on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>


brain.py - C:\Users\Dell\Desktop\Project\Project Development Phase\Sprint 1\brain.py (3.9.7)
File Edit Format Run Options Window Help
# Python code
# IMPORT SECTION STARTS
import weather
from datetime import datetime as dt
# IMPORT SECTION ENDS
# --
# UTILITY LOGIC SECTION STARTS
def processConditions(myLocation,APIKEY,localityInfo):
weatherData = weather.get(myLocation,APIKEY)
finalSpeed = localityInfo["usualSpeedLimit"] if "rain" not in weatherData el
finalSpeed = finalSpeed if weatherData["visibility"]>35 else finalSpeed/2
if(localityInfo["hospitalsNearby"]):
# hospital zone
doNotHonk = True
else:
if(localityInfo["schools"]["schoolZone"]==False):
# neither school nor hospital zone
doNotHonk = False
else:
# school zone
now = [dt.now().hour,dt.now().minute]
activeTime = [list(map(int,_.split(":"))) for _ in localityInfo["sch
doNotHonk = activeTime[0][0]<=now[0]<=activeTime[1][0] and activeTim
return({
"speed" : finalSpeed,
"doNotHonk" : doNotHonk
})
UTILITY LOGIC SECTION ENDSb
Ln: 1 Col: 0

weather.py - C:\Users\Dell\Desktop\Project\Project Development Phase\Sprint 1\weather.py ...

File Edit Format Run Options Window Help

```
# Python code

import requests as reqs

def get(myLocation,APIKEY):
    apiURL = f"https://api.openweathermap.org/data/2.5/weather?q={myLocation}&ap
    responseJSON = (reqs.get(apiURL)).json()
    returnObject = {
        "temperature" : responseJSON['main']['temp'] - 273.15,
        "weather" : [responseJSON['weather'][_]['main'].lower() for _ in range(l
        "visibility" : responseJSON['visibility']/100, # visibility in percentag
    }
    if("rain" in responseJSON):
        returnObject["rain"] = [responseJSON["rain"][key] for key in responseJSO
    return(returnObject)
```

Ln: 1 Col: 0

main.py - C:\Users\Dell\Desktop\Project\Project Development Phase\Sprint 1\main.py (3.9.7)

File Edit Format Run Options Window Help

```
# Python code

# IMPORT SECTION STARTS

import brain

# IMPORT SECTION ENDS
# ------------------------------------------------
# USER INPUT SECTION STARTS

myLocation = "Chennai,IN"
APIKEY = "9cd610e5fd400c74212074c7ace0d62c"

localityInfo = {
    "schools" : {
        "schoolZone" : True,
        "activeTime" : ["7:00","17:30"] # schools active from 7 AM till 5:30 PM
        },
    "hospitalsNearby" : False,
    "usualSpeedLimit" : 40 # in km/hr
}

# USER INPUT SECTION ENDS
# ------------------------------------------------
# MICRO-CONTROLLER CODE STARTS

print(brain.processConditions(myLocation,APIKEY,localityInfo))

'''
MICRO CONTROLLER CODE WILL BE ADDED IN SPRINT 2 AS PER OUR PLANNED SPRINT SCHEDU
'''

# MICRO-CONTROLLER CODE ENDS
```

Ln: 1 Col: 0