SPRINT 1

TEAMID:
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BRAIN:

```
# 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 else localityInfo["usualSpeedLimit"]/2
    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["schools"]["activeTime"]]
            doNotHonk = activeTime[0][0]<=now[0]<=activeTime[1][0] and
activeTime[0][1]<=now[1]<=activeTime[1][1]


    return({
        "speed" : finalSpeed,
        "doNotHonk" : doNotHonk
    })
```

MAIN:

```
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 SCHEDULE
        '''
```

WEATHER CODE:

```
import
requests
as reqs


          def get(myLocation,APIKEY):
              apiURL =
          f"https://api.openweathermap.org/data/2.5/weather?q={myLocation}&appid={APIKEY}"
              responseJSON = (reqs.get(apiURL)).json()
              returnObject = {
                  "temperature" : responseJSON['main']['temp'] - 273.15,
```

```
        "weather" : [responseJSON['weather'][_]['main'].lower() for _ in
range(len(responseJSON['weather']))],
        "visibility" : responseJSON['visibility']/100, # visibility in percentage where
10km is 100% and 0km is 0%
    }
    if("rain" in responseJSON):
        returnObject["rain"] = [responseJSON["rain"][key] for key in responseJSON["rain"]]
    return(returnObject)
```