Parte 1

```
'''

    Descripcion: Consumiendo API con Python

    Autor: Bryan Adrian Reyes Ibarra

    Fecha: 20 de octubre 2023

'''

import urllib.parse

import requests

main_api = "https://www.mapquestapi.com/directions/v2/route?"

orig = "Dolores Hidalgo"

dest = "San de Allende"

key = "O5CMuqQZ1j0AtUnjztO0XB1FtjkKOUvY"

url = main_api + urllib.parse.urlencode({"key": key, "from":orig, "to":dest})

json_data = requests.get(url).json()

print(json_data['route']['sessionId'])
```

C:\Users\Bryan\OneDrive\Documentos\Unidad 2\Api-mapquest>python parse-json1.py
AJsA5wcAACABAAAPAAAANAAAAKkAAAB42mNYycDAyMTAwMCekVqUapWcm3t9szgDAwND3bvndRwJMywt_uzh9hebYWkhsZfbnwELgGnM-7PMCMSvra2tZeBtjraY8eqOH4ie-
eqOHwMOINv8oUOFkYGBQZPLlYdBg6uhg4WBgcnBgUGBgcHRUcALpMaEgSGAQYBhEQMAp2ojTzgW3MU:car

Parte 2

```
'''

    Descripcion: Consumiendo API con Python

    Autor: Bryan Adrian Reyes Ibarra

    Fecha: 20 de octubre 2023

'''


import urllib.parse

import requests

main_api = "https://www.mapquestapi.com/directions/v2/route?"

orig = "Dolores Hidalgo"
```

```python
dest = "San de Allende"

key = "O5CMuqQZ1j0AtUnjztO0XB1FtjkKOUvY"

url = main_api + urllib.parse.urlencode({"key": key, "from":orig, "to":dest})

json_data = requests.get(url).json()

print(json_data['route']['sessionId'])

#Extrae la distancia y tiempo

print(json_data['route']['distance'])

print(json_data['route']['time'])

#Extrae del primer elemento Legs el campo formattedTime

formatted_time = json_data['route']['legs'][0]['formattedTime']

print(formatted_time)

#Parte 3

print("URL: " + (url))


json_data = requests.get(url).json()

json_status = json_data["info"]["statuscode"]


if json_status == 0:

    print("API Status: " + str(json_status) + " = A successful route call.\n")
```

PS C:\Users\bryan\OneDrive\Documentos\Unidad 2\Api-mapquest> & C:/Users/bryan/AppData/Local/Programs/Python/Python312/python.exe "c:/Users/
bryan/OneDrive/Documentos/Unidad 2/Api-mapquest/parse-json3.py"
AJsA5wcAACABAAAPAAAANAAAAKkAAAB42mNYycDAyMTAwMCekVqUapWcm3t9szgDAwND3bvndRwJMywt_uzh9hebYWkhsZfbnwELgGnM-7PMCMSvra2tZeBtjraY8eqOH4ie-eqOHwM
OINv8oUOFkYGBQZPLlYdBg6uhg4WBgcnBgUGBgcHRUcALpMaEgSGAQYBhEQMAp2ojTzgW3MU:car
26.8364
2352
00:45:55
URL: https://www.mapquestapi.com/directions/v2/route?key=O5CMuqQZ1j0AtUnjztO0XB1FtjkKOUvY&from=Dolores+Hidalgo&to=San+de+Allende
API Status: 0 = A successful route call.

Parte 3

```python
'''
    Descripcion: Consumiendo API con Python

    Autor: Bryan Adrian Reyes Ibarra

    Fecha: 20 de octubre 2023
'''

import urllib.parse

import requests

main_api = "https://www.mapquestapi.com/directions/v2/route?"

orig = "Dolores Hidalgo"

dest = "San de Allende"

key = "O5CMuqQZ1j0AtUnjztO0XB1FtjkKOUvY"

url = main_api + urllib.parse.urlencode({"key": key, "from":orig, "to":dest})

json_data = requests.get(url).json()

print(json_data['route']['sessionId'])

#Extrae la distancia y tiempo

print(json_data['route']['distance'])

print(json_data['route']['time'])

#Extrae del primer elemento Legs el campo formattedTime

formatted_time = json_data['route']['legs'][0]['formattedTime']

print(formatted_time)

print("URL: " + (url))

json_data = requests.get(url).json()

json_status = json_data["info"]["statuscode"]


if json_status == 0:

    print("API Status: " + str(json_status) + " = A successful route call.\n")

#Parteb 3

while True:
```

```python
orig = input("Starting Location: ")

dest = input("Destination: ")

url = main_api + urllib.parse.urlencode({"key": key, "from":orig, "to":dest})

print("URL: " + (url))

json_data = requests.get(url).json()

json_status = json_data["info"]["statuscode"]

if json_status == 0:

    print("API Status: " + str(json_status) + " = A successful route call.\n")
```

PS C:\Users\bryan\OneDrive\Documentos\Unidad 2\Api-mapquest> & C:/Users/bryan/AppData/Local/Programs/Python/Python312/python.exe "c:/Users/bryan/OneDrive/Documentos/Unidad 2/Api-mapquest/parse-json3.py"
AJsA5wcAACABAAAPAAAANAAAAKkAAAB42mNYycDAyMTAwMCekVqUapWcm3t9szgDAwND3bvndRwJMywt_uzh9hebYWkhsZfbnwELgGnM-7PMCMSvra2tZeBtjraY8eqOH4ie-eqOHwM
OINv8oUOFkYGBQZPL1YdBg6uhg4WBgcnBgUGBgcHRUcALpMaEgSGAQYBhEQMAp2ojTzgW3MU:car
26.8364
2352
00:45:37
URL: https://www.mapquestapi.com/directions/v2/route?key=O5CMuqQZ1j0AtUnjztO0XB1FtjkKOUvY&from=Dolores+Hidalgo&to=San+de+Allende
API Status: 0 = A successful route call.

Parte 4

```python
'''

    Descripcion: Consumiendo API con Python

    Autor: Bryan Adrian Reyes Ibarra

    Fecha: 20 de octubre 2023

'''

import urllib.parse

import request

while True:

    orig = input("Starting Location: ")

    if orig == "quit" or orig == "q":

        break

    dest = input("Destination: ")

    if dest == "quit" or dest == "q":

        break
```

```python
main_api = "https://www.mapquestapi.com/directions/v2/route?"

orig = "Dolores Hidalgo"

dest = "San de Allende"

key = "O5CMuqQZ1j0AtUnjztO0XB1FtjkKOUvY"


url = main_api + urllib.parse.urlencode({"key": key, "from":orig, "to":dest})

json_data = requests.get(url).json()

print(json_data['route']['sessionId'])

#Extrae la distancia y tiempo

print(json_data['route']['distance'])

print(json_data['route']['time'])

#Extrae del primer elemento Legs el campo formattedTime

formatted_time = json_data['route']['legs'][0]['formattedTime']

print(formatted_time)

print("URL: " + (url))

json_data = requests.get(url).json()

json_status = json_data["info"]["statuscode"]

if json_status == 0:

    print("API Status: " + str(json_status) + " = A successful route call.\n")
```

```
Starting Location: Dolores Hidalgo
Destination: Silao
URL: https://www.mapquestapi.com/directions/v2/route?key=O5CMuqQZ1j0AtUnjztO0XB1FtjkKOUvY&from=Dolores+Hidalgo&to=Silao
API Status: 0 = A successful route call.
```

Parte 4

```python
'''
    Descripcion: Consumiendo API con Python
    Autor: Bryan Adrian Reyes Ibarra
    Fecha: 20 de octubre 2023
'''

import urllib.parse
import requests

main_api = "https://www.mapquestapi.com/directions/v2/route?"
orig = "Dolores Hidalgo"
dest = "San de Allende"
key = "O5CMuqQZ1j0AtUnjztO0XB1FtjkKOUvY"

url = main_api + urllib.parse.urlencode({"key": key, "from":orig,
"to":dest})
json_data = requests.get(url).json()
print(json_data['route']['sessionId'])

#Extrae la distancia y tiempo
print(json_data['route']['distance'])
print(json_data['route']['time'])
#Extrae del primer elemento Legs el campo formattedTime
formatted_time = json_data['route']['legs'][0]['formattedTime']
print(formatted_time)

print("URL: " + (url))

json_data = requests.get(url).json()
json_status = json_data["info"]["statuscode"]

if json_status == 0:
    print("API Status: " + str(json_status) + " = A successful route
call.\n")

if json_status == 0:
    print("API Status: " + str(json_status) + " = A successful route
call.\n")
    print("=============================================")
    print("Directions from " + (orig) + " to " + (dest))
    print("Trip Duration:    " + (json_data["route"]["formattedTime"]))
    print("Miles:            " + str(json_data["route"]["distance"]))
    print("Kilometers:       " + str((json_data["route"]["distance"])*1.61))
```

```
    #print("Fuel Used (Ltr): " + str((json_data["route"]["fuelUsed"])*3.78))
    print("===========================================")
```

```
00:46:20
URL: https://www.mapquestapi.com/directions/v2/route?key=O5CMuqQZ1j0AtUnjztO0XB1FtjkKOUvY&from=Dolores+Hidalgo&to=San+de+Allende
API Status: 0 = A successful route call.

API Status: 0 = A successful route call.

===========================================
Directions from Dolores Hidalgo to San de Allende
Trip Duration:   00:39:12
Miles:           26.8364
Kilometers:      43.206604000000006
===========================================
```

Parte 5

```python
'''
    Descripcion: Consumiendo API con Python
    Autor: Bryan Adrian Reyes Ibarra
    Fecha: 20 de octubre 2023
'''

import urllib.parse
import requests

main_api = "https://www.mapquestapi.com/directions/v2/route?"
orig = "Dolores Hidalgo"
dest = "San de Allende"
key = "O5CMuqQZ1j0AtUnjztO0XB1FtjkKOUvY"

url = main_api + urllib.parse.urlencode({"key": key, "from":orig,
"to":dest})
json_data = requests.get(url).json()
print(json_data['route']['sessionId'])

#Extrae la distancia y tiempo
print(json_data['route']['distance'])
print(json_data['route']['time'])
#Extrae del primer elemento Legs el campo formattedTime
formatted_time = json_data['route']['legs'][0]['formattedTime']
print(formatted_time)

print("URL: " + (url))

json_data = requests.get(url).json()
```

Parte 6

```python
json_status = json_data["info"]["statuscode"]

if json_status == 0:
    print("API Status: " + str(json_status) + " = A successful route
call.\n")

if json_status == 0:
    print("API Status: " + str(json_status) + " = A successful route
call.\n")
    print("==============================================")
    print("Directions from " + (orig) + " to " + (dest))
    print("Trip Duration:    " + (json_data["route"]["formattedTime"]))
    print("Miles:            " + str(json_data["route"]["distance"]))
    print("Kilometers:       " + str((json_data["route"]["distance"])*1.61))
    #print("Fuel Used (Ltr): " + str((json_data["route"]["fuelUsed"])*3.78))
    print("==============================================")

    #print("Fuel Used (Ltr): " +
str("{:.2f}".format((json_data["route"]["fuelUsed"])*3.78)))
print("==============================================")
for each in json_data["route"]["legs"][0]["maneuvers"]:
    print((each["narrative"]) + " (" +
str("{:.2f}".format((each["distance"])*1.61) + " km)"))
print("==============================================\n")
```

```
Keep right onto Carretera Dolores Hidalgo-S Miguel de Allende toward MEX-51/San Miguel de Allende/Guanajuato/MEX-110. Go for 19.2 mi. (30.9
2 km)
Continue toward Querétaro/MEX-57. Go for 108 ft. (0.03 km)
Take the 1st exit from roundabout onto Calle Libramiento José Manuel Zavala (MEX-51) toward Querétaro/MEX-57. Go for 2.8 mi. (4.51 km)
Keep left toward Calle Libramiento José Manuel Zavala. Go for 0.4 mi. (0.63 km)
Continue on Calle Libramiento José Manuel Zavala. Go for 0.5 mi. (0.86 km)
Turn left onto Calle de Jericó. Go for 351 ft. (0.11 km)
Turn right onto Calle La Paloma. Go for 92 ft. (0.03 km)
Turn left onto Calle Las Flores. Go for 0.1 mi. (0.19 km)
Arrive at Calle Las Flores. (0.00 km)
==============================================

PS C:\Users\bryan\OneDrive\Documentos\Unidad 2\Api-mapquest> 
```

Parte 7

AJsA5wcAACABAAAPAAAANAAAAKkAAAB42mNYycDAyMTAwMCekVqUapWcm3t9szgDAwND3bvndRwJMywt_uzh9hebYWkhsZfbnwELgGnM-7PMCMSvra2tZeBtjra
Y8eqOH4ie-eqOHwMOINv8oUOFkYGBQZPLlYdBg6uhg4WBgcnBgUGBgcHRUcALpMaEgSGAQYBhEQMAp2ojTzgW3MU:car
26.8364
2352
00:47:51
URL: https://www.mapquestapi.com/directions/v2/route?key=O5CMuqQZ1j0AtUnjztO0XB1FtjkKOUvY&from=Dolores+Hidalgo&to=San+de+Al
lende
API Status: 0 = A successful route call.