|  |
| --- |
| **You should save/rename this document using the naming convention HWX-MUid.docx (example: HW9-johnsok9.docx).**  **Objective**: The objective of this exercise is to:   1. Learn how to read an API document   **Submit**: screenshots, your word document, html files and links to your web page(s)  You **may** discuss the concepts with your fellow students  You **may** **not** show or share code with your fellow students  You **may** **not** show or share code with internet sources  You **may** discuss this with your instructor or TA. |

# Part #1: Create TomTom free developer account with API key

*Estimated time: 15 minutes*

**Exercise:**

* + <https://developer.tomtom.com/>
  + Create a free developer account.
  + After account is verified
    - Dashboard 🡪 Keys
    - Create a new key
      * key name cse383
      * Routing and Search APIs
  + Screengrab showing successful account setup and key

Graphical user interface, application, Teams

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated

# Part #2: Understand an API

*Estimated time: 45-90 minutes*

**Exercise:**

This exercise is to find all the restaurants within 1000 meters of your home using the TomTom api service

* Get longitude and latitude of your home (google maps or your own choice)
* Use the TomTom search api to find all restaurants within a 1000-meter circle
  + I suggest using the API explorer – as it will use your Api key automatically
  + You may use any search you wish – however consider fuzzy search
  + <https://developer.tomtom.com/search-api/api-explorer>
  + Work out all the arguments to make this example work
  + Screen shot the request as well as the response

A screenshot of a computer

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated

First of many, names are:

1. Cleats Club Seat Grille
2. Cappelli’s Party Center
3. Krave Restaurant & Bar
4. Marion’s Mediterranean Restaurant and Tapas Bar
5. Bob Evan’s Restaurant
6. Arby’s

* Include
  + Is this a GET or POST?: **GET**
  + How did the arguments (including skipped ones) get sent to the server?: **The arguments in this case (GET) get sent to the server in the URL, as opposed to POST where they would have been sent in the body.**
  + What API Version is this?: **Version 2**

Curl command: **curl -X 'GET' \**

**'https://api.tomtom.com/search/2/search/41.678780%2C%20-81.373290.json?lat=37.337&lon=-121.89&radius=1000&minFuzzyLevel=1&maxFuzzyLevel=2&categorySet=7315&view=Unified&relatedPois=off&key=\*\*\*\*\*' \ -H 'accept: \*/\*'**

* + Request URL:
* **https://api.tomtom.com/search/2/search/41.678780%2C%20-81.373290.json?lat=37.337&lon=-121.89&radius=1000&minFuzzyLevel=1&maxFuzzyLevel=2&categorySet=7315&view=Unified&relatedPois=off&key=\*\*\*\*\***
  + Response Body: **Partially listed above**
  + Response Code: **200**
  + Response Headers:
* **content-type: application/json; charset=utf-8 tracking-id: d14787f3-369a-4bc0-8418-515fe3816f82**

My results (and more)

* Wokstar
* **Brighella**
* Yummy
* Bruschetta & Crostini
* Ristorante Da Somma
* **Buonarotti Restaurant**

# Part #3: Write Word Document

*Estimated time: 15 minutes*

**Exercise:**

* Always make sure it includes your name, class, assignment etc…
* Explain (relating to this assignment):
  + what worked
  + what didn’t
  + how long it took
  + What you liked
  + What you didn’t
  + What you learned
* Include
  + All required details from part 2
* TomTom Screenshots (inside word)
  + Account
  + API key
  + Request (will take more than 1)
  + Response (will take more than 1 screenshot)

# SUBMIT:

* Word Document (BELOW)

Andrew Boothe

CSE 383 Homework 9

10/26/2022

This assignment was an interactive way to begin learning about APIs and how they work. Personally, I had a lot of fun, and it was a great learning experience as my introduction to APIs. The directions allowed me to successfully use my API key to run a check on which restaurants were in my area. I was able to input the coordinates that my home is at, as well as a radius to define parameters for how far out I wanted to search. After formatting the output in JSON, the valid response code, body, and headers were all released. One thing I noticed was not accurate was the restaurant data being brought back from the API; the restaurants have mostly moved or been closed for years. This assignment took around an hour and a half for me to complete. I liked being able to see firsthand how the GET command was generated using the form fields I filled out and seeing how much closer restaurants are than they look. I did not like how the data was rather outdated. I learned about how important data is, a popular way of grabbing it, and the basic concept and practice of APIs.