24.14. Project - OMDB and TasteDive

This project will take you through the process of mashing up data from two different APIs to make movie recommendations. The TasteDive API lets you provide a movie (or bands, TV shows, etc.) as a query input, and returns a set of related items. The OMDB API lets you provide a movie title as a query input and get back data about the movie, including scores from various review sites (Rotten Tomatoes, IMDB, etc.).

You will put those two together. You will use TasteDive to get related movies for a whole list of titles. You'll combine the resulting lists of related movies, and sort them according to their Rotten Tomatoes scores (which will require making API calls to the OMDB API.)

To avoid problems with rate limits and site accessibility, we have provided a cache file with results for all the queries you need to make to both OMDB and TasteDive. Just use `requests_with_caching.get()` rather than `requests.get()` . If you're having trouble, you may not be formatting your queries properly, or you may not be asking for data that exists in our cache. We will try to provide as much information as we can to help guide you to form queries for which data exists in the cache.

Your first task will be to fetch data from TasteDive. The documentation for the API is at https://tastedive.com/read/api (https://tastedive.com/read/api).

Define a function, called `get_movies_from_tastedive` . It should take one input parameter, a string that is the name of a movie or music artist. The function should return the 5 TasteDive results that are associated with that string; be sure to only get movies, not other kinds of media. It will be a python dictionary with just one key, 'Similar'.

Try invoking your function with the input "Black Panther".

HINT: Be sure to include **only** `q` , `type` , and `limit` as parameters in order to extract data from the cache. If any other parameters are included, then the function will not be able to recognize the data that you're attempting to pull from the cache. Remember, you will *not* need an api key in order to complete the project, because all data will be found in the cache.

The cache includes data for the following queries:

q	type	limit
Black Panther	<omitted>	<omitted>
Black Panther	<omitted>	5
Black Panther	movies	<omitted>
Black Panther	movies	5
Tony Bennett	<omitted>	5
Tony Bennett	movies	5
Captain Marvel	movies	5
Bridesmaids	movies	5
Sherlock Holmes	movies	5

Save & Run | Load History | Show CodeLens

```
cations that we use in the automated tests; uncomment these if you are getting errors
s_from_tastedive("Bridesmaids")
s_from_tastedive("Black Panther")
```

Activity: 1 -- ActiveCode (assess_ac_24_1_1_1)

Please copy the completed function from above into this active code window. Next, you will need to write a function that extracts just the list of movie titles from a dictionary returned by `get_movies_from_tastedive`. Call it `extract_movie_titles`.

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```
# some invocations that we use in the automated tests; uncomment these if you are g
# extract_movie_titles(get_movies_from_tastedive("Tony Bennett"))
# extract_movie_titles(get_movies_from_tastedive("Black Panther"))
```

Activity: 2 -- ActiveCode (assess_ac_24_1_1_2)

Please copy the completed functions from the two code windows above into this active code window. Next, you'll write a function, called `get_related_titles` . It takes *a list of movie titles* as input. It gets five related movies for each from TasteDive, extracts the titles for all of them, and combines them all into a single list. Don't include the same movie twice.

Save & Run | Load History | Show CodeLens

```
1
2 # some invocations that we use in the automated tests; uncomment these if you are g
3 # get_related_titles(["Black Panther", "Captain Marvel"])
4 # get_related_titles([])
5
6
```

Activity: 3 -- ActiveCode (assess_ac_24_1_1_3)

Your next task will be to fetch data from OMDB. The documentation for the API is at https://www.omdbapi.com/ (https://www.omdbapi.com/)

Define a function called `get_movie_data` . It takes in one parameter which is a string that should represent the title of a movie you want to search. The function should return a dictionary with information about that movie.

Again, use `requests_with_caching.get()` . For the queries on movies that are already in the cache, you *won't* need an api key. You will need to provide the following keys: `t` and `r` . As with the TasteDive cache, be sure to **only** include those two parameters in order to extract existing data from the cache.

Save & Run | Load History | Show CodeLens

```
1
2 # some invocations that we use in the automated tests; uncomment these if you are g
3 # get_movie_data("Venom")
4 # get_movie_data("Baby Mama")
5
6
```

Activity: 4 -- ActiveCode (assess_ac_24_1_1_4)

Please copy the completed function from above into this active code window. Now write a function called `get_movie_rating`. It takes an OMDB dictionary result for one movie and extracts the Rotten Tomatoes rating as an integer. For example, if given the OMDB dictionary for “Black Panther”, it would return 97. If there is no Rotten Tomatoes rating, return 0.

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```
1
2 # some invocations that we use in the automated tests; uncomment these if you are getting error
3 # get_movie_rating(get_movie_data("Deadpool 2"))
4
5
```

Activity: 5 -- ActiveCode (assess_ac_24_1_1_5)

Now, you’ll put it all together. Don’t forget to copy all of the functions that you have previously defined into this code window. Define a function `get_sorted_recommendations`. It takes a list of movie titles as an input. It returns a sorted list of related movie titles as output, up to five related movies for each input movie title. The movies should be sorted in descending order by their Rotten Tomatoes rating, as returned by the `get_movie_rating` function. Break ties in reverse alphabetic order, so that ‘Yahşi Batı’ comes before ‘Eyyvah Eyvah’.

Save & Run Load History Show CodeLens

```
1
2 # some invocations that we use in the automated tests; uncomment these if you are g
3 # get_sorted_recommendations(["Bridesmaids", "Sherlock Holmes"])
4
5
```

Activity: 6 -- ActiveCode (assess_ac_24_1_1_6)

Data file: permanent_cache.txt

```
  "http://www.omdbapi.com/r-json_t-Venom": "{\"Title\":\"Venom\",\"Year\":\"2018\",
  "https://tastedive.com/api/similarlimit-5_q-Tony Bennett_type-movies": "{\"Simila
  "http://www.omdbapi.com/r-json_t-Eyyvah Eyvah": "{\"Title\":\"Eyyvah Eyvah\",\"Ye
  "http://www.omdbapi.com/r-json_t-Deadpool 2": "{\"Title\":\"Deadpool 2\",\"Year\"
  "http://www.omdbapi.com/r-json_t-Sherlock Holmes: A Game Of Shadows": "{\"Title\"
  "http://www.omdbapi.com/r-json_t-The Five-Year Engagement": "{\"Title\":\"The Fiv
  "http://www.omdbapi.com/r-json_t-American Assassin": "{\"Title\":\"American Assas
  "http://www.omdbapi.com/r-json_t-Baby Mama": "{\"Title\":\"Baby Mama\",\"Year\":\
  "https://tastedive.com/api/similarlimit-5_q-Bridesmaids_type-movies": "{\"Similar
  "http://www.omdbapi.com/r-json_t-The Fate Of The Furious": "{\"Title\":\"The Fate
  "http://www.omdbapi.com/r-json_t-Ant-Man And The Wasp": "{\"Title\":\"Ant-Man and
  "https://tastedive.com/api/similarlimit-5_q-Captain Marvel_type-movies": "{\"Simi
  "http://www.omdbapi.com/r-json_t-Inhumans": "{\"Title\":\"Inhumans\",\"Year\":\"2
  "https://tastedive.com/api/similarq-Black Panther": "{\"Similar\": {\"Info\": [{\
  "http://www.omdbapi.com/r-json_t-Black Panther": "{\"Title\":\"Black Panther\",\"
  "http://www.omdbapi.com/r-json_t-Bachelorette": "{\"Title\":\"Bachelorette\",\"Ye
  "http://www.omdbapi.com/r-json_t-Prince Of Persia: The Sands Of Time": "{\"Title\
  "https://api.datamuse.com/wordsmax-3_rel_rhy-funny": "[{\"word\":\"money\",\"scor
}
```

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