

Assignment 11: REST GET API

Start Assignment

- Due Friday by 11:59pm
- Points 100
- Submitting a website url or a file upload
- Available Feb 14 at 12am - Mar 8 at 11:59pm

In this assignment you will add to a Python program to retrieve information from a movie database.

Preparation for Assignment:

1. Get an account on TMDb (The Movie Database):

<https://www.themoviedb.org/signup> ➞

[\(https://www.themoviedb.org/signup\)](https://www.themoviedb.org/signup)

- Please use your Texas State University email address.
- You will likely get a confirmation email for verifying your email address. You'll need to activate your account via the email

2. After getting your account, and logging in, click on the profile icon in the upper right (It is a circular icon with the first initial of the first word of your user name).

- Select "Settings" from the drop down menu.

3. On the left pane, select "API"

- Request an API key
- When asked what kind of key do want, click on "Developer."

- Scroll down click on the "Accept" button for the "Terms of Use" ... it's mostly asking that you agree to do nothing bad or for profit with the key.

4. You will be asked the following:


- **Type of Use:** Select "Education"
- **Application Name:** Pick a name of an app you would like to make. You are not committing to creating the app.
- **Application URL:** Enter "www.example.com"
- **Application Summary:** Enter in something like, "I'm learning how to use REST APIs in a college course."
- For the rest,
 - Please enter in your name
 - Your Texas State email.
 - If you don't wish to use your own address, please use:
 - Computer Science Dept, Texas State University
 - 601 University Ave
 - San Marcos, Texas 78666
 - The click the "Submit" button.
- You should now have an API key.

5. Now go to your **Personal Bitbucket**.

- To find your personal Bitbucket, click on the Bitbucket icon in the upper left of the Bitbucket page.
- Then select the menu item "Repositories"
- Then select the Workspaces drop down and type your name.
- You should see a workspace pop-up with your name on it.

6. Once in your personal workspace, create a new repository by starting with clicking on the "Create Repository" button in the

upper right.


- Select "Import Repository"
- **URL:** Enter the following URL:
https://bitbucket.org/txstatecs3398all/rest_tmdb_assignment/src

- **Project:** Scroll to the bottom of the drop down and select "Create New Project."
 - Name the project, "Rest API Assignments"
- **Repository Name:** <Your_NetID>_<this assignment number>
- **Access Level:** Make this a public repository
- **Advanced Settings:** Select language as "Python"
- Click "Import repository."

7. On your repository page, you should see an "Invite" button in the upper right


- Invite the instructor and the graders as developers (or administrators if you want). Their email addresses will be given in class and on Slack.





Assignment:

1. Review the NYTimes REST code here for hints on this assignment:

https://bitbucket.org/txstatecs3398all/rest_nytimes/src/master
 [\(https://bitbucket.org/txstatecs3398all/rest_nytimes/src/master/\)](https://bitbucket.org/txstatecs3398all/rest_nytimes/src/master/)

2. Using GitKraken, Vscode or a command line, clone to your machine, the "tmdb" repository that you had imported above.

- Use GitKraken only to clone as it may not let you edit the repo since it is private.
 - Use Vscode to do the editing and debugging.
3. Create a .env file and add your API key to the file. Name the API key: "TMDB_API_KEY".
4. In your browser go to:
- <https://developers.themoviedb.org/3/getting-started/introduction> 
- [\(https://developers.themoviedb.org/3/getting-started/introduction\)](https://developers.themoviedb.org/3/getting-started/introduction)
- In the left pane, scroll down until you see and click on "Trending"
 - It will take you to a documentation page that will help you complete the assignment.
5. Using the starter code add new code or change existing code **in VsCode** to do the following:
- Open a terminal window in VSCode and enter the following two commands to set up your VSCode environment:
 - *pip3 install requests*
 - *pip3 install load-dotenv*
 - For Media Type: If the last numeral of your NETID is:
 - 0,4,8: all
 - 1,5,7,9: movie
 - 2,3,6: tv
 - For Time Window: if the first numeral of your NETID is:
 - 0,1,2,3,4: week
 - 5,6,7,8,9: day

- **NOTE: Please use the VSCode debugger to examine the data you get back. It will allow you to see these dictionaries and whether the keys below are actually returned.**
- Depending upon your NETID, print out the following in formatted form (you choose the format).
- **If the fields below are not available, you may choose others:**
 - The **titles**, **popularity** and **vote_count** of the media type that are returned for movies
 - The **names**, **popularity** and **vote_count** of the media type that are returned for tvs
 - **Note:** You may have to test for **names** or **titles** if you are doing all media.
- **Sort and print out the following in formatted form (you choose the format)**
- Please consider using [sorted\(\) or list.sort\(\)](https://docs.python.org/3/howto/sorting.html)  [\(https://docs.python.org/3/howto/sorting.html\)](https://docs.python.org/3/howto/sorting.html) python methods for this part of the assignment. Here's another link: [https://www.w3schools.com/python/ref_func_sorted.a](https://www.w3schools.com/python/ref_func_sorted.asp)
 [_ \(https://www.w3schools.com/python/ref_func_sorted.asp\)](https://www.w3schools.com/python/ref_func_sorted.asp)
- If you use a [python lambda expression](https://www.w3schools.com/python/python_lambda.asp)  [\(https://www.w3schools.com/python/python_lambda.asp\)](https://www.w3schools.com/python/python_lambda.asp) and [use it without naming it](https://discuss.python.org/t/what-is-the-purpose-of-lambda-expressions/12415)  [\(https://discuss.python.org/t/what-is-the-purpose-of-lambda-expressions/12415\)](https://discuss.python.org/t/what-is-the-purpose-of-lambda-expressions/12415) but defining it 'in-line', you will get up-to 10 extra credit points.

- If the fields below are not available, you may choose others
 - The **titles** and **vote_average** in order of their **vote_average** for movies.
 - The **names** and **vote_average** in order of their **vote_average** for tvs.
 - The **names** and **popularity** in order of their **popularity** for actors.

6. Submit the URL of your repository and a copy of your Vscode Terminal output.

- You can get a copy of your Vscode terminal output by clicking in the terminal by,
 - typing CTRL-A
 - and then either CTRL-C or right click and select Copy as HTML
 - and then paste the buffer into a text or an html file if you selected "Copy as HTML"
- Include the html file in your Canvas submission

Rest TMDB Get

Criteria	Ratings	Pts
The media_type and time_window choices correspond to NETID settings.		20 pts
The .env directory is not in the Bitbucket Repository		30 pts
Variable names are related to what they represent		10 pts
There is print output with titles, popularity and vote_count		20 pts
There is printout of title, vote_average sorted on voter_average		20 pts
+10 pts if you use a lambda expression (well) for the sorting Extra credit (10 pts) if you use a lambda expression to make your code smaller (fewer lines) while doing the sorting.		0 pts
Total Points: 100		