TV Show Explorer Version 3: Seasons

Now, you will be working with the cast of a TV show. For a given show, you will need to find and show the information about its cast crew.

What to do

- Before you start writing code, download the zip archive with JSON files containing the cast data: cast.zip. You need to unzip it to your program folder.
- Now, implement the `get_cast_by_id` function. This function will be somewhat similar to the existing `find_show` function, but there are some differences.

  The function will:

  a) Form the complete file name string. Make sure to include the `show_id` and access the correct directory in which the JSON cast files are stored. Example of a complete file name (if `show_id` is equal to 431): `cast/431_cast.json`

  b) Use the `load_json` function that you implemented in version 1 to open the file and return it as a list of dictionaries.

- Next, implement the function `format_cast`. This function will take a **list of dictionaries** with the data about a cast crew as an argument, and return a string containing the properly formatted names of the cast as which actor played which character.

  For each season, include the following information:

  - Actor's name
  - Character's name

  Here is an example of the formatted string that will be returned by this function:

  Example 1
  ```
  Jennifer Aniston as Rachel Green
  Courteney Cox as Monica Geller
  Lisa Kudrow as Phoebe Buffay
  Matt LeBlanc as Joey Tribbiani
  Matthew Perry as Chandler Bing
  ```

All functions defined in the template **must be present and implemented** in your code (you may **not** omit functions or change their definition). You **may** add extra functions if needed.

```python
import json

"""
New features in this version:
* Showing all actors in the show and their roles
"""

def load_json(filename) -> dict:
    """
    Load JSON from a file
    """
    # Implement in ver. 1

def find_show(query: str, shows: dict) -> str:
    """
    Search for TV shows in the shows dictionary
    Return the name of the first (only one) result based on the query
    If the show is not found, return None
    """
    # Implement in ver. 1

def get_show_data_by_name(show_name: str, shows: dict) -> dict:
    """
    Return the data for a show based on its name
    """
    # Implement in ver. 2

def format_show_details(show: dict) -> str:
    """
    Format the show details
    """
    # Implement in ver. 2

def get_cast_by_id(show_id: int) -> list[dict]:
    """
    Get the cast for a show
    """
    # TODO: Implement the function

def format_cast(cast: list[dict]) -> str:
    """
```

```
    Format the cast
    """
    # TODO: Implement the function


def main():
    # TODO: Update main():
    # 1. Ask the user to select a show
    # 2. Display the cast crew of the selected show


if __name__ == '__main__':
    main()
```

Hints

- Try opening one of the cast JSON files to see how the data is formatted.

Program name

Save your program as `shows3.py`.

Demo

https://asciinema.org/a/621390

Testing

To make sure your program works correctly, you should test it.

- Run your program with `python shows3.py`. Type `friends`, then press Enter. The output of your program must resemble the example output below:

```
Found: Friends (1994 - 2004, comedy, romance)
Cast:
Jennifer Aniston as Rachel Green
Courteney Cox as Monica Geller
Lisa Kudrow as Phoebe Buffay
Matt LeBlanc as Joey Tribbiani
Matthew Perry as Chandler Bing
David Schwimmer as Ross Geller
```

- Run your program with `python shows3.py`. Type `qwertyui`, then press Enter. Your program should print:

```
Can't find this TV show in the Top 100!
```

Submitting

Submit `shows3.py` via eClass.