Python JokeAPI Tutorial

Contents

Time required: 30 minutes

- Comment each line of code as show in the tutorials and other code examples.

- Follow all directions carefully and accurately.

- Think of the directions as minimum requirements.

What is the JokeAPI?

The JokeAPI is a free https-based joke API which provides a JSON response.

Raw API data is typically in a text file in JSON or XML format. For our API projects, we will use JSON.

JavaScript Object Notation (JSON) is an open standard file and data interchange format. It uses human-readable text to store and transmit data objects consisting of attribute–value pairs and array data types.

Go to https://v2.jokeapi.dev/joke/Any?type=twopart&safe-mode to see some raw JSON data in two different formats.

What is a Dictionary?

A dictionary is a list of items. Dictionaries are mutable, they can be changed.

Here is a Python list that contains the number of days in the months of the year.

```
days = [31, 28, 31, 30, 31, 30, 31, 31, 30, 31, 30, 31]
```

If we want the number of days in January, use `days[0]`. December is `days[11]` or `days[-1]`.

Here is a dictionary of the days in the months of the year:

```
days = {'January':31, 'February':28, 'March':31, 'April':30, 'May':31,
        'June':30, 'July':31, 'August':31, 'September':30, 'October':31,
        'November':30, 'December':31}
```

.get()

The Python .get() method return the value for the given key if present in the dictionary. If not, then it will return None (if get() is used with only one argument)

To get the number of days in January, we can use **days.get('January')**

Dictionary Basics

Parameter	Details
Key	The desired key to lookup
value	The value to set or return

Tutorial Assignment: JokeAPI

The documentation for the JokeAPI is https://sv443.net/jokeapi/v2

1. Create a program named **joke_cli.py**

2. Right Click the URL below, Click Copy Link location. Paste this into your program to avoid typo's.
   https://v2.jokeapi.dev/joke/Any?type=twopart&safe-mode

```
1  """
2      Name: joke_cli.py
3      Author: William A Loring
4      Created: 04/18/21
5      Purpose: Get random jokes from the Official JokeAPI
6  """
7
8  # Import the requests module
9  import requests
10 import os
11
12 # Set this to False to only display the joke
13 IS_DEBUGGING = True
14
15 # URL for single random safe jokes
16 URL = "https://v2.jokeapi.dev/joke/Any?type=twopart&safe-mode"
```

```python
19 def main():
20      # Menu loop
21      while True:
22          # Call get_joke function
23          get_joke()
24          # Display menu choices
25          answer = input(
26              "\nAnother joke? ([y] or [Enter] to quit)? ")
27          # Exit program
28          if answer == "":
29              break
30          # Clear the screen
31          os.system("cls" if os.name == "nt" else "clear")
```

```python
34 def get_joke():
35      # Use the requests.get() function
36      # with the URL argument
37      joke = requests.get(URL)
38
39      # If the status_code is 200, successful connection and data
40      if(joke.status_code == 200):
41
42          # Convert the JSON data into a Python dictionary with key value pairs
43          joke_data = joke.json()
44
45          # Used to debug process
46          if(IS_DEBUGGING == True):
47
48              # Display the status code
49              print(
50                  f"\nStatus code: {joke.status_code} \n")
51
52              # Display the raw JSON data from API
53              print("The raw data from the JokeAPI:")
54              print(joke.text)
55
56              # Display the Python dictionary
57              print("\nThe JSON data converted to a Python dictionary:")
58              print(joke_data)
59
60          # Print the data using the dictionary created from the API JSON data
61          print()
62          print(f'{joke_data.get("setup")}')
63          print(f'{joke_data.get("delivery")}')
64
65      else:
66          print("JokeAPI unavailable")
67
68
69 # If a standalone program, call the main function
70 # Else, use as a module
71 if __name__ == "__main__":
72      main()
```

Example run debugging mode: **IS_DEBUGGING = True**

```
The status code for this API request is 200

The raw data from the JokeAPI:
{
    "error": false,
    "category": "Misc",
    "type": "twopart",
    "setup": "What's the difference between an in-law and an outlaw?",
    "delivery": "An outlaw is wanted.",
    "flags": {
        "nsfw": false,
        "religious": false,
        "political": false,
        "racist": false,
        "sexist": false,
        "explicit": false
    },
    "id": 92,
    "safe": true,
    "lang": "en"
}

The JSON data converted to a Python dictionary:
{'error': False, 'category': 'Misc', 'type': 'twopart', 'setup': "What's the dif
ference between an in-law and an outlaw?", 'delivery': 'An outlaw is wanted.', '
flags': {'nsfw': False, 'religious': False, 'political': False, 'racist': False,
 'sexist': False, 'explicit': False}, 'id': 92, 'safe': True, 'lang': 'en'}

Time for a joke!
What's the difference between an in-law and an outlaw?
An outlaw is wanted.
```

Example run debugging mode: **IS_DEBUGGING = False**

```
Time for a joke!
How much did your chimney cost?
Nothing, it was on the house.
```

Assignment Submission

Attach the program file to the assignment in Blackboard.