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import requests
import json
import os
import pandas as pd
import time

from Tools.scripts.dutree import display
from selenium import webdriver
from bs4 import BeautifulSoup



class Weather_API:

    def __init__(self, keyword):
        self.keyword = keyword

    def json_print(self, obj):
        # create a formatted string of the Python JSON object
        with open('api_data.txt', 'w') as json_file:
            json.dump(obj, json_file)
        text = json.dumps(obj, sort_keys=True, indent=4)
        print(text)

    def create_dataframe(self, obj):


        # creating a dataframe from nested JSON objects
        FIELDS = ["source.id", "source.name", "author", "title", "description", "url", "urlToImage",
"publishedAt",
                  "content"]
        df = pd.json_normalize(obj['articles'])
        final_df = df[FIELDS]
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        # final_df.set_index('source.id', inplace = True)
        display(final_df.head())

    def news_api(self):

        # Use the news-api to obtain articles published from
        url = ('https://newsapi.org/v2/everything?'
               'q={keyword}&'
               'apiKey=4e70cabb80884db08524a28ac33cdc1d'.format(keyword=self.keyword))

        response = requests.get(url)
        if (response.status_code == 200):
            print('API call successful!')
            json_response = response.json()
            if (len(json_response['articles']) == 0):
                print('No News Articles Found')
            else:

                # Print a String in Json Format
                self.json_print(json_response)

                # Create a pandas DataFrame
                self.create_dataframe(json_response)

        else:
            print('Status code: ', response.status_code)

class Web_Scraping:

                def __init__(self, location):
                    self.location = location
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        def selenium_webdriver(self):

            # Start the Driver
            driver = webdriver.Chrome(
executable_path=r"C:\Users\Vicky\Downloads\chromedriver_win32\chromedriver.exe")

            # Hit the url of NASA Earth Data website and wait for 15 seconds.
            url = ('https://earthdata.nasa.gov/search?q={location}'.format(location=self.location))
            driver.get(url)
            time.sleep(15)

            # Driver scrolls down 25 times to load the table.
            for i in range(0, 30):
                driver.execute_script("window.scrollBy(0,6000)")
                time.sleep(10)

            # Fetch the webpage and store in a variable.
            webpage = driver.page_source

            # Parse the page using BeautifulSoup
            HTMLPage = BeautifulSoup(webpage, 'html.parser')

            titles = []
            description = []
            links = []

            for lists in HTMLPage.find_all(class_='result'):
                if (lists.span.text != '' and len(lists.find_all('p')) != 0):
                    titles.append(lists.span.text)
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        description.append(lists.find('p', class_='').text)
        links.append(lists.find('p', class_='search-link').text)

# Create a DataFrame
df = pd.DataFrame(list(zip(titles, description, links)),
                  columns=['title', 'description', 'link'])

display(df)

# Store to csv file
df.to_csv('ws.csv', sep=',', index=False, header=True)

print('Web Scraping Successful!')

keyword = input('Enter Keyword to be searched: ').lower()
w_api = Weather_API(keyword)
w_api.news_api()

location = input('Enter Location: ').lower()
ws = Web_Scraping('India')
ws.selenium_webdriver()
```