### **Project 4: Web Scraper**

#### **Objective:**

Build a Python script that scrapes data from a website (e.g., job postings, news headlines) and saves it in a CSV file. Use BeautifulSoup and requests libraries.

### **Instructions**

#### **Step 1: Set Up the Environment**

1. Create a new Python file called web\_scraper.py.

Install BeautifulSoup and requests libraries:  
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pip install beautifulsoup4 requests

#### **Step 2: Import Necessary Libraries**

Import the required libraries at the top of your script:  
python  
Copy code  
import requests

from bs4 import BeautifulSoup

import csv

#### **Step 3: Send a Request to the Website**

1. Use the requests library to send a request to the target website.

Check the response status and raise an exception if the request fails.  
python  
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url = "https://example.com"

response = requests.get(url)

if response.status\_code != 200:

raise Exception("Failed to load page.")

#### **Step 4: Parse the HTML Content**

Parse the response content using BeautifulSoup:  
python  
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soup = BeautifulSoup(response.text, "html.parser")

1. Identify the HTML tags containing the desired information (e.g., h2 tags for titles).

#### **Step 5: Extract and Save Data**

Extract the text from the identified HTML tags and store it in a list.  
python  
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headlines = soup.find\_all("h2")

data = [headline.get\_text() for headline in headlines]

Save the extracted data to a CSV file using the csv module.  
python  
Copy code  
with open("scraped\_data.csv", "w", newline="") as file:

writer = csv.writer(file)

writer.writerow(["Headline"])

for row in data:

writer.writerow([row])

#### **Step 6: Run and Test**

* Test the script by scraping a few different websites and saving the results to verify that the data is correctly saved in the CSV file.