

Assignment

Q1. Write a python program to extract the video URL of the first five videos.

Ans: To extract video URLs from a website, the specific method depends on the structure of the webpage. If the webpage uses JavaScript to load content dynamically, you might need to use a tool like Selenium. If the content is available in the HTML source code, you can use a library like BeautifulSoup.

Here's an example using Python and BeautifulSoup to extract video URLs from a hypothetical webpage. This assumes that the video URLs are embedded in the HTML source code.

python

Copy code

```
import sys
from urllib.request import urlopen
from bs4 import BeautifulSoup

def extract_video_urls(url):
    try:
        response = urlopen(url)
        if response.getcode() == 200:
            soup = BeautifulSoup(response.read(), 'html.parser')
            video_urls = []
            for video_tag in soup.find_all('video'):
                src = video_tag.get('src')
                if src:
                    video_urls.append(src)
            return video_urls
        else:
            print f"Error: {response.status_code}"
    except Exception as e:
        print f"An error occurred: {e}"

if __name__ == '__main__':
    url = 'your_url_here'
    video_urls = extract_video_urls(url)
    for url in video_urls[:5]:
        print url
```

```
print "Video URLs:"
for          in enumerate          1
print f"Video {i}: {video_url}"
```

Note:

You need to install the `requests` and `beautifulsoup4` libraries if you haven't already.

You can install them using:

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This example assumes that the video URLs are embedded in the `src` attribute of HTML `video` elements. You may need to adjust the code based on the actual structure of the webpage you are working with.

If the webpage uses JavaScript to load content, you might need to use a headless browser automation tool like Selenium to interact with the dynamic content. If you provide the specific webpage structure or URL, I can provide a more tailored example.

Q2. Write a python program to extract the URL of the video thumbnails of the first five videos.
 Ans: To extract the URLs of video thumbnails from a webpage, you can use a similar approach as in the previous example. You'll use Python along with the `requests` library for making HTTP requests and the `BeautifulSoup` library for parsing the HTML content.

Here's an example program:

python

Copy code

```
import
from      import

def extract_thumbnail_urls          5
    try
```

```

if response.status_code == 200:

    soup = BeautifulSoup(response.text, 'html.parser')

    thumbnails = soup.find_all('img', 'class'

'thumbnail'

'src' for in

return
else
print f"Error: {response.status_code}"
except Exception as e:
print f"An error occurred: {e}"

'your_url_here'

5

if
print "Thumbnail URLs:"
for i, url in enumerate(thumbnails):
print f"Thumbnail {i}: {thumbnail_url}"
1

```

Make sure to replace 'your_url_here' with the actual URL of the webpage you want to scrape. Additionally, adjust the code based on the actual structure of the webpage, especially the HTML elements and attributes used for thumbnails.

This example assumes that the thumbnail URLs are embedded in the `src` attribute of HTML `img` elements. Modify the code accordingly based on the structure of the webpage you are working with.

Q3. Write a python program to extract the title of the first five videos.

Ans: To extract the titles of the first five videos from a webpage, you can again use Python along with the `requests` library for making HTTP requests and the `BeautifulSoup` library for parsing the HTML content.

Here's an example program:

python

Copy code

```
import sys
from urllib.request import urlopen

def extract_video_titles(url):
    try:
        response = urlopen(url)
        if response.getcode() != 200:
            print(f"Error: {response.status_code}")
            return None
        html = response.read().decode('html.parser')
        titles = []
        for tag in soup.findAll('h2', {'class': 'video-title'}):
            title = tag.get_text()
            if title:
                titles.append(title)
        return titles
    except Exception as e:
        print(f"An error occurred: {e}")
        return None

if __name__ == '__main__':
    url = 'your_url_here'
    titles = extract_video_titles(url)
    if titles:
        print("Video Titles:")
        for i, title in enumerate(titles):
            print(f"Video {i}: {title}")
```

Make sure to replace 'your_url_here' with the actual URL of the webpage you want to scrape. Adjust the code based on the actual structure of the webpage, especially the HTML elements and attributes used for video titles.

This example assumes that the titles are within `h2` elements with a class of 'video-title'. Modify the code according to the structure of the webpage you are working with.

Q4. Write a python program to extract the number of views of the first five videos.

Ans: Extracting the number of views from a webpage can be a bit more challenging, especially if the views are loaded dynamically using JavaScript. In such cases, you might need to use a tool like Selenium that allows for interaction with the dynamic content.

Here's an example using Selenium along with BeautifulSoup:

python

Copy code

```
from selenium import webdriver
from bs4 import BeautifulSoup

def extract_video_views(url):
    try:
        driver = webdriver.Chrome()
        driver.get(url)

        soup = BeautifulSoup(driver.page_source, 'html.parser')

        # Find all video elements with class 'views'
        video_views = soup.find_all('span', {'class': 'views'})

        # Extract the number of views for the first five videos
        views_list = []
        for i in range(5):
            view_text = video_views[i].text
            # Extract the number from the text (e.g., "123 views")
            view_count = int(view_text.split()[0])
            views_list.append(view_count)

        return views_list
    except Exception as e:
        print f"An error occurred: {e}"
    finally:
        driver.quit()
```

```

if

    'your_url_here'

5

if
    print "Number of Views:"
    for      in enumerate      1
    print f"Video {i}: {views}"

```

Make sure to replace 'your_url_here' with the actual URL of the webpage you want to scrape. Additionally, adjust the code based on the actual structure of the webpage, especially the HTML elements and attributes used for displaying the number of views.

This example assumes that the number of views is within `span` elements with a class of 'views'. Modify the code according to the structure of the webpage you are working with. Note that using automated tools for web scraping should comply with the terms of service of the website you are scraping.

Q5. Write a python program to extract the time of posting of video for the first five videos.
 Ans: To extract the time of posting for the first five videos from a webpage, you can use Python along with the `requests` library for making HTTP requests and the `BeautifulSoup` library for parsing the HTML content. Here's an example program:

python

```

Copy code

import
from      import

def extract_posting_times      5
    try

if      200

    'html.parser'

```

```

        'span'      'class' 'post-time'

        True for      in

    return
    else
    print f"Error: {response.status_code}"
    except      as
    print f"An error occurred: {e}"

    'your_url_here'

5

if
    print "Posting Times:"
    for      in enumerate      1
    print f"Video {i}: {time}"

```

Make sure to replace 'your_url_here' with the actual URL of the webpage you want to scrape.

Adjust the code based on the actual structure of the webpage, especially the HTML elements and attributes used for displaying the posting time.

This example assumes that the posting time is within `span` elements with a class of 'post-time'.

Modify the code according to the structure of the webpage you are working with.