Assignment 02: Scrape the Simplilearn Website Resource Page

The comments/sections provided are your cues to perform the assignment. You don't need to limit yourself to the number of rows/cells provided. You can add additional rows in each section to add more lines of code.

If at any point in time you need help on solving this assignment, view our demo video to understand the different steps of the code.

Happy coding!

1: View and print the Simplilearn webpage content in a good format

In [1]:
```python
#Import the required libraries
from bs4 import BeautifulSoup
from urllib.request import urlopen
```

In [2]:
```python
#Provide the url for web scraping
url = "https://simplilearn.com/resources"
```

In [3]:
```python
#Scrape the web page document
webpage = urlopen(url)
```

In [5]:
```python
#Create the soup object and parse the webpage using an html parser
sl_soup = BeautifulSoup(webpage,"html.parser")
```

In [6]:
```python
#Close the webpage object
webpage.close()
```

```
In [7]:    1  #View the soup contents
           2  sl_soup.contents
```

ptography-beginners-guide-pdf","small_description":"Download this public key
cryptography beginner's guide to know the A to Z of public key cryptograph
y.","type":"ebook","image_url":"https%3A%2F%2Fwww.simplilearn.com%2Fice9%2Feb
ooks%2Fpublic_key.jpg","video_url":null,"duration":null,"ebook_url":"%2Fdownl
oadables%2Febooks%2Febook_cryptography.pdf","url_join":null,"thumbnail_image_
url":"https%3A%2F%2Fwww.simplilearn.com%2Fice9%2Ffree_resources_article_thum
b%2FThe-Complete-Guide-to-Using-AI-in-eCommerce_Thumbnail.jpg","date":null,"t
ime":null,"timezone":null,"source_timezone":null,"created_at":"2020-09-30T18:
21:13+05:30","updated_at":"2020-09-30T20:37:59+05:30","display_type":"Eboo
k","downloads":115],"updated_at":"2020-10-27T20:10:11+05:30","segment_data":
{"_id":"5f98ad7a0ffe098a288b456c","id":6,"value":"IT Security Management","im
age_url":"http%3A%2F%2Fcfs22.simplicdn.net%2Fice9%2Ffrs%2FITSecurityManagemen
tN-roD.png","bg_image_url":"http%3A%2F%2Fcfs22.simplicdn.net%2Fice9%2Ffrs%2FI
TSecurityManagement.png","header_color_code":"#408b86","is_focused":true,"ur
l":"\u002Fresources\u002Fit-security-management","title":"It Security Managem
ent Free Resources | Simplilearn","meta_description":"Get access to the lates
t It Security Management articles, webinars, eBooks & videos in this free res
ources section.","meta_keywords":"It Security Management articles, resources,
insights, tips, Simplilearn.com","title_article":"It Security Management Arti
cles, Tips Written by Experts | Simplilearn","meta_description_article":"Read

```
In [8]:    1  #Use the prettify() method to view the well-formatted html output
           2  print(sl_soup.prettify())
```

```
etails .nav-menu span,.content-details .nav-menu nav span{width:100%;vertical
-align:top}.content-details .nav-menu.sticky-top,.content-details .nav-menu.s
ticky-bottom{max-height:calc(100vh - 64px)}.content-details .nav-menu::-webki
t-scrollbar{display:none}.content-details .nav-menu:hover::-webkit-scrollbar
{display:block}.content-details ::-webkit-scrollbar{width:4px}.content-detail
s ::-webkit-scrollbar-track{background:transparent}.content-details ::-webkit
-scrollbar-thumb{background:#d2d6de;border-radius:2px}.content-details ::-web
kit-scrollbar-thumb:hover{background:#cbced3}.content-details .detail-menu{wi
dth:calc(74% - 45px);margin-left:45px;margin-bottom:0}.content-details .detai
l-menu h3+a{font-size:16px;left:0}.detail-menu a.card .card-img{height:137p
x}.content-details .nav-menu span span{display:none}.footer-links{margin-top:
32px}}@media (max-width: 1199px){h2 b{display:none}}@media (min-width: 1200p
x){.frs-slider .slid-detail .card-content h2{font-size:32px}.content-details
.detail-menu .card{min-height:360px;width:calc(33.333% - 20px)}.content-detai
ls .detail-menu .card:last-child{clear:none;margin-right:0}.content-details .
detail-menu .card:nth-child(even){margin-right:30px}}@media (max-width: 767p
x){.nav-menu .list-menu.current-nav .show-focus{overflow:scroll;-webkit-overf
low-scrolling:touch}}.label{font-size:13px;font-weight:400;line-height:16px;c
olor:#848DA0;border-radius:9px;display:inline-table !important;min-width:76p
x;text-align:center;border:1px solid #848DA0;padding:0 17px;margin-top:8px}im
```

2: View the title

```
In [9]:    1  #View the title of the scraped document
           2  print(sl_soup.title)
```

```
<title>Resources | Free Resources to shape your Career - Simplilearn</title>
```

3: Print all the href links present in the Simplilearn webpage

In [11]:
```python
#Find all href links
for href in sl_soup.findAll("a",href=True):
    print(href["href"])
```

https://www.simplilearn.com (https://www.simplilearn.com)

https://www.simplilearn.com/ai-or-data-science-mapping-your-career-path-webin
ar?source=frs_home_carousal (https://www.simplilearn.com/ai-or-data-science-m
apping-your-career-path-webinar?source=frs_home_carousal)
https://www.simplilearn.com/things-to-know-about-ppc-webinar?source=frs_home_
carousal (https://www.simplilearn.com/things-to-know-about-ppc-webinar?source
=frs_home_carousal)
https://www.simplilearn.com/non-data-roles-that-need-data-analytics-skills-gu
ide-pdf?source=frs_home_carousal (https://www.simplilearn.com/non-data-roles-
that-need-data-analytics-skills-guide-pdf?source=frs_home_carousal)
https://www.simplilearn.com/creating-chatbots-guide-pdf?source=frs_home_carou
sal (https://www.simplilearn.com/creating-chatbots-guide-pdf?source=frs_home_
carousal)
javascript:void(0);
javascript:void(0);
javascript:void(0);
javascript:void(0);
#agile-and-scrum

4: Search and print the resource headers of the Simplilearn webpage

In [12]:
```python
#View all the headers name
#the div information is obtained from the web page (view page source)
for article in sl_soup.findAll("h2"):
    print(article.string)
```

AI or Data Science? Mapping Your Career Path
20 Things to Know Now About PPC
The Rise of the Data-Driven Professional: 6 Non-Data Roles That Need Data Analy
tics Skills
The Ultimate Guide to Creating Chatbots

In [13]:
```python
for article in sl_soup.findAll("h4"):
    print(article.string)
```

Product Owner vs Product Manager: Know the Differences, Skills Needed, and Care
er Paths
Top 20 Scrum Master Interview Questions and Answers in 2020
Free eBook: Guide To Scrum Methodology
How to Use VLOOKUP in Excel?: A [Step-by-Step] Guide
Applications of Data Science, Deep Learning, and Artificial Intelligence
The Rise of the Data-Driven Professional: 6 Non-Data Roles That Need Data Analy
tics Skills
SEO Practices in 2000 vs. SEO in 2020: What's the Same and What's Different
The 5 Types of Influencers You Need to Know
Digital Marketing Career Guide: A Playbook to Becoming a Digital Marketing Spec
ialist
Webinar Wrap-up: Expert Tips for a Successful Cyber Security Career Today
Ethical Hacking Roadmap Infographics
Public Key Cryptography Beginner's Guide
12 Reasons to Get a TOGAF Certification in 2020
Student Spotlight: Inspiring Story of Career Transformation Through a Certifica
tion
Free eBook: Enterprise Architecture Salary Report
What is PRINCE2 Certification? - Scope and Significance in India
6 Successful Project Estimation Techniques
An Introduction to Project Management: A Beginner's Guide
5 Prerequisite Questions For A Salesforce Certification
Top 23 Salesforce Interview Questions and Answers for 2020
Free eBook: Salesforce Developer Salary Report
Top 7 Cloud Database in 2020: Transforming Cloud Computing
Advantages and Disadvantages of Cloud Computing
Getting Started With AIOps
Webinar Wrap-up: Why Building a Successful Career Is Like Building a Startup
6 Key Performance Appraisal Questions and How to Prepare for Them
Appraisal Guide 101
Krishna Kumar Leads "India EdTech Goes Global" Panel at ASU-GSV Summit
4 Learning Trends Emerging in the Digital Economy Age
IDC Study: How Blended Learning Impacts Training Success
Top Digital Transformation Trends in Government
Time to Learn AI
Skilling for the Digital Economy: A Role-Based Approach
What Are SQL Commands? The Best Introduction
How to Create a Database In MySQL?
DevOps Career Guide: A Comprehensive Playbook To Becoming A DevOps Engineer

5: Search resource topics

In [49]:
```python
1  #View all the resource topics
2  #the class information is obtained from the web page (view page source)
3  for article in sl_soup.findAll("h2"):
4      print(article.string)
```

```
AI or Data Science? Mapping Your Career Path
20 Things to Know Now About PPC
The Rise of the Data-Driven Professional: 6 Non-Data Roles That Need Data Analy
tics Skills
The Ultimate Guide to Creating Chatbots
```

6: View the article names and navigate through them

In [32]:
```python
1  #Create article object for finding the list (Hint: the class information is
2  url2="https://www.simplilearn.com/project-estimation-techniques-article?sour
3  webpage2 = urlopen(url2)
4  sl_article = BeautifulSoup(webpage2,"html.parser")
5  test = sl_article.find(class_="desig_author empty-text")
```

In [33]:
```python
1  #View the type of the article object
2  type(test)
```

Out[33]: bs4.element.Tag

In [34]:
```python
1  #Find all the article names
2  test.findAll('p')
```

Out[34]: [<p>There are many different types of estimation techniques used in <a href="ht
tps://www.simplilearn.com/tutorials/project-management-tutorial/what-is-project
-management" target="_blank">Project Management with various streams like E
ngineering, IT, Construction, Agriculture, Accounting, etc. A <a href="https://
www.simplilearn.com/tutorials/project-management-tutorial/project-manager-roles
-and-responsibilities" target="_blank">Project manager is often challenged
to align mainly six project constraints - Scope, Time, Cost, Quality, Resource
s, and Risk in order to accurately estimate the project. The common questions t
hat come into the mind of a project manager at the start of the project are–</p
>,
 <p>While accurate estimates are the basis of sound project planning, there are
many techniques used as project management best practices in estimation as - An
alogous estimation, Parametric estimation, Delphi method, 3 Point Estimate, Exp
ert Judgment, Published Data Estimates, Vendor Bid Analysis, Reserve Analysis,
Bottom-Up Analysis, and Simulation. Usually, during the early stages of a proje
ct life cycle, the project requirements are feebly known and less information i
s available to estimate the project. The initial estimate is drawn merely by as
sumptions knowing the scope at a high level, this is known as '<a href="http
s://en.wiktionary.org/wiki/ballpark_estimate" rel="nofollow" target="_blank">Ba
ll-park estimates', a term very often used by project managers.</p>,
 <p><div banner-id="5f718304aa161c2a528b459e" class="engagingBanner"><div class
="detail-info-banner" data-reactroot=""><div class="left-clm"><h4>Post Graduate
Program in Project Management</h4>With University of
Massachusetts<a class="btn" href="https://www.simplilearn.com/pgp-projec
t-management-certification-training-course?source=GhPreviewCTABanner" target="_
blank">View Course</div><div class="right-clm"><img alt="Post Graduate Prog
ram in Project Management" class="lazy" data-src="https://www.simplilearn.com/i
ce9/banners/free_resources_banners/lead_banners/Banner3.png" src="https://www.s
implilearn.com/ice9/assets/form_opacity.png"/></div></div></div></p>,
 <p>Once more detail is learned on the scope of the project, this technique is
usually followed where high-level chunks at the feature or design level are est
imated and are decomposed progressively into smaller chunks or work-packets as
information is detailed.</p>,
 <p>This technique is used when the requirements are known at a discrete level
where the smaller workpieces are then aggregated to estimate the entire projec
t. This is usually used when the information is only known in smaller pieces.</
p>,
 <p>This technique is used when there is a reference to a similar project execu
ted and it is easy to correlate with other projects. Expert judgment and histor
ical information of similar activities in a referenced project are gathered to
arrive at an estimate of the project.</p>,
 <p>This technique uses independent measurable variables from the project work.
 For example, the cost for construction of a building is calculated based on th
e smallest variable as the cost to build a square feet area, the effort require
d to build a work packet is calculated from the variable as lines of codes in a
software development project. This technique gives more accuracy in project est
imation.</p>,
 <p>This technique uses a mathematical approach as the weighted average of an o
ptimistic, most likely and pessimistic estimate of the work package. This is of
ten known as the <a href="https://en.wikipedia.org/wiki/Program_evaluation_and_
review_technique" rel="nofollow" target="_blank">PERT (Program Evaluation and R
eview Technique).</p>,
 <p>This technique uses assumptions based on varying factors like scope, time,
cost, resources, etc., to evaluate the possible outcomes of the project by doin

g impact analysis. In a usual scenario, the project estimate is done by conducting estimation workshops with the stakeholders of the project, senior team members who could give valuable inputs to the estimation exercise. The high-level scope is broken down into smaller work packages, components,</p>,
 <p>and activities, each work package is estimated by effort and resources needed to complete the work package. The project may be detailed into the smallest chunk that can be measured.</p>,
 <p>The following activities are done during the workshop:</p>,
 <p></p>,
 <p>The above exercise gives an exact estimate of the project and the outcome of the workshop may be a project plan and a project schedule with effort, resource, and cost estimates.</p>,
 <p>Happy learning! We wish you good luck with your PMP certification journey!</p>,
 <p style="text-align:center">PMBOK®, PMP®, and PMI® have registered trademarks of the Project Management Institute, Inc.</p>]

In [35]:
```
1  #Find first article name
2  first_next_p =test.p
3  first_next_p
```

Out[35]: <p>There are many different types of estimation techniques used in Project Management with various streams like Engineering, IT, Construction, Agriculture, Accounting, etc. A Project manager is often challenged to align mainly six project constraints - Scope, Time, Cost, Quality, Resources, and Risk in order to accurately estimate the project. The common questions that come into the mind of a project manager at the start of the project are–</p>

In [40]:
```
1  #Find next sibling (next article name)
2  find_next_sibling = first_next_p.next_sibling.next_sibling
3  find_next_sibling
```

Out[40]:
How much work is to be estimated (scope).
How to estimate the project (techniques).
How much time it will require to complete the project (Schedule).
Who will be doing the project (resources)?
What is the budget required to deliver the project (cost)?
Any intermediary dependencies that may delay or impact the project (Risks).

In [42]:
```python
#Find previous sibling (previous article name)
find_next_sibling.previous_sibling.previous_sibling
```

Out[42]: `<p>`There are many different types of estimation techniques used in `<a href="htt ps://www.simplilearn.com/tutorials/project-management-tutorial/what-is-project-management" target="_blank">`Project Management`</a>` with various streams like En gineering, IT, Construction, Agriculture, Accounting, etc. A `<a href="https://w ww.simplilearn.com/tutorials/project-management-tutorial/project-manager-roles-and-responsibilities" target="_blank">`Project manager`</a>` is often challenged t o align mainly six project constraints - Scope, Time, Cost, Quality, Resources, and Risk in order to accurately estimate the project. The common questions that come into the mind of a project manager at the start of the project are–`</p>`

In [ ]:
```

```