

```
In [1]: from bs4 import BeautifulSoup
import requests
import pandas as pd
```

```
In [2]: # 1)Write a python program to display all the header tags from wikipedia.org and make data frame.

page= requests.get('https://en.wikipedia.org/wiki/Main_Page')
soup=BeautifulSoup(page.content)

# header tags
headers=[]#empty list for store the headers
for i in soup.find_all('span',class_="mw-headline"):
    headers.append(i.text)

df=pd.DataFrame({'Headers':headers})
df
```

Out[2]:

	Headers
0	Welcome to Wikipedia
1	From today's featured article
2	Did you know ...
3	In the news
4	On this day
5	From today's featured list
6	Today's featured picture
7	Other areas of Wikipedia
8	Wikipedia's sister projects
9	Wikipedia languages

In [ ]:

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In [3]: print('*'*127)
print('                Data Science')
print('*'*127)
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In [4]: # 2)Write a python program to display list of respected former presidents of India(
# from https://presidentofindia.nic.in/former-presidents.htm and make data frame.
```

```
page= requests.get('https://presidentofindia.nic.in/former-presidents')
soup=BeautifulSoup(page.content)
```

```
# 1)Names
names=[]#empty list for store the headers
for i in soup.find_all('div',class_="president-listing"):
    names.append(i.text.replace('\n',''))

# 2.term
```

```
term=[]
for i in soup.find_all('div',class_="desc-sec"):
    term.append(i.text.replace('\n',''))

df=pd.DataFrame({'Names':names,'Term':term})
df
```

Out[4]:

	Names	Term
0	Shri Ram Nath Kovind14th President of India	Shri Ram Nath Kovind14th President of India
1	Shri Pranab Mukherjee13th President of India	Shri Pranab Mukherjee13th President of India
2	Smt Pratibha Devisingh Patil12th President of...	Smt Pratibha Devisingh Patil12th President of ...
3	DR. A.P.J. Abdul Kalam11th President of India	DR. A.P.J. Abdul Kalam11th President of India
4	Shri K. R. Narayanan10th President of India	Shri K. R. Narayanan10th President of India
5	Dr Shankar Dayal Sharma9th President of India	Dr Shankar Dayal Sharma9th President of India
6	Shri R Venkataraman8th President of India	Shri R Venkataraman8th President of India
7	Giani Zail Singh7th President of India	Giani Zail Singh7th President of India
8	Shri Neelam Sanjiva Reddy6th President of India	Shri Neelam Sanjiva Reddy6th President of India
9	Dr. Fakhruddin Ali Ahmed5th President of India	Dr. Fakhruddin Ali Ahmed5th President of India
10	Shri Varahagiri Venkata Giri4th President of ...	Shri Varahagiri Venkata Giri4th President of I...
11	Dr. Zakir Husain3rd President of India	Dr. Zakir Husain3rd President of India
12	Dr. Sarvepalli Radhakrishnan2nd President of ...	Dr. Sarvepalli Radhakrishnan2nd President of I...
13	Dr. Rajendra Prasad1st President of India	Dr. Rajendra Prasad1st President of India

In [5]: #

In [6]:

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print('*'*127)
print('                                Data Science')
print('*'*127)

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In [7]:

```
# 3)Write a python program to scrape cricket rankings from icc-cricket.com. You have
# a)Top 10 ODI teams in men’s cricket along with the records for matches, points and
# b)Top 10 ODI Batsmen along with the records of their team and rating.
# c)Top 10 ODI bowlers along with the records of their team and rating.

page_1= requests.get("https://www.icc-cricket.com/rankings/team-rankings/mens/odi")
page_1
```

Out[7]: <Response [200]>

In [8]:

```
soup= BeautifulSoup(page.content)
# a)Top 10 ODI teams in men’s cricket along with the records for matches, points and
teams=[]
```

```
for i in soup.find_all("span",class_="si-fname si-text"):
    teams.append(i.text)
teams
```

Out[8]: []

In [ ]:

In [9]:

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print('***127)
print('
Data Science')
print('***127)
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In [10]:

```
# 4)Write a python program to scrape cricket rankings from icc-cricket.com. You hav
# a)Top 10 ODI teams in women's cricket along with the records for matches, points
# b)Top 10 women's ODI Batting players along with the records of their team and rat
# c)Top 10 women's ODI all-rounder along with the records of their team and rating.
```

In [11]:

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print('***127)
print('
Data Science')
print('***127)
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In [12]:

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# 5)Write a python program to scrape mentioned news details from https://www.cnb.c
# i)Headline
# ii)Time
# iii)News Link
```

```
page= requests.get('https://www.cnb.com/world/?region=world')

soup=BeautifulSoup(page.content)

# i)Headline
headline=[]
for i in soup.find_all('a',class_='LatestNews-headline'):
    headline.append(i.text)

# ii)Time
time=[]
for i in soup.find_all('time',class_='LatestNews-timestamp'):
    time.append(i.text)

# iii)News Link
link=[]
for i in soup.find_all('a',class_='LatestNews-headline'):
    link.append(i['href'])

# DataSet
df=pd.DataFrame({"Headlines":headline,"Time":time,'Link':link})
df
```

Out[12]:

	Headlines	Time	Link
0	Use these 5 'core concerns' to get the raise o...	6 Min Ago	<a href="https://www.cnbc.com/2024/01/29/use-these-5-co...">https://www.cnbc.com/2024/01/29/use-these-5-co...</a>
1	Starbucks olive oil-infused Oleato drinks to l...	15 Min Ago	<a href="https://www.cnbc.com/2024/01/29/starbucks-olea...">https://www.cnbc.com/2024/01/29/starbucks-olea...</a>
2	Stocks making biggest moves midday: Dollar Tre...	32 Min Ago	<a href="https://www.cnbc.com/2024/01/29/stocks-making-...">https://www.cnbc.com/2024/01/29/stocks-making-...</a>
3	What to expect when tech behemoth Apple report...	51 Min Ago	<a href="https://www.cnbc.com/2024/01/29/what-to-expect...">https://www.cnbc.com/2024/01/29/what-to-expect...</a>
4	Trump lashes out at financial monitor in busin...	51 Min Ago	<a href="https://www.cnbc.com/2024/01/29/trump-attacks-...">https://www.cnbc.com/2024/01/29/trump-attacks-...</a>
5	BlackRock upgrades U.S. stocks to overweight, ...	54 Min Ago	<a href="https://www.cnbc.com/2024/01/29/blackrock-upgr...">https://www.cnbc.com/2024/01/29/blackrock-upgr...</a>
6	The stock market rally is showing signs of exh...	2 Hours Ago	<a href="https://www.cnbc.com/2024/01/29/the-stock-mark...">https://www.cnbc.com/2024/01/29/the-stock-mark...</a>
7	A lower-cost way to get long this 'Magnificent...	2 Hours Ago	<a href="https://www.cnbc.com/2024/01/29/a-lower-cost-w...">https://www.cnbc.com/2024/01/29/a-lower-cost-w...</a>
8	Hungary accuses EU of blackmail over Ukraine a...	2 Hours Ago	<a href="https://www.cnbc.com/2024/01/29/hungary-accuse...">https://www.cnbc.com/2024/01/29/hungary-accuse...</a>
9	Apple analysts are starting to get a bit worri...	2 Hours Ago	<a href="https://www.cnbc.com/2024/01/29/apple-analysts...">https://www.cnbc.com/2024/01/29/apple-analysts...</a>
10	White House announces new federal investments ...	3 Hours Ago	<a href="https://www.cnbc.com/2024/01/29/white-house-an...">https://www.cnbc.com/2024/01/29/white-house-an...</a>
11	When it comes to cover letters, 'less is more,...	3 Hours Ago	<a href="https://www.cnbc.com/2024/01/29/less-is-more-o...">https://www.cnbc.com/2024/01/29/less-is-more-o...</a>
12	Forget about a soft landing, there may be 'no ...	3 Hours Ago	<a href="https://www.cnbc.com/2024/01/29/soft-landing-o...">https://www.cnbc.com/2024/01/29/soft-landing-o...</a>
13	The 15 most expensive U.S. neighborhoods, base...	3 Hours Ago	<a href="https://www.cnbc.com/2024/01/29/most-expensive...">https://www.cnbc.com/2024/01/29/most-expensive...</a>
14	Jim Cramer's top 10 things to watch in the sto...	3 Hours Ago	<a href="https://www.cnbc.com/2024/01/29/jim-cramers-to...">https://www.cnbc.com/2024/01/29/jim-cramers-to...</a>
15	We're calling up a health care stock from our ...	3 Hours Ago	<a href="https://www.cnbc.com/2024/01/29/were-calling-u...">https://www.cnbc.com/2024/01/29/were-calling-u...</a>
16	One of 2024's 'best jobs' can pay over \$200,00...	4 Hours Ago	<a href="https://www.cnbc.com/2024/01/29/loan-office-ea...">https://www.cnbc.com/2024/01/29/loan-office-ea...</a>
17	Loud budgeting is mentally and financially 'he...	4 Hours Ago	<a href="https://www.cnbc.com/2024/01/29/loud-budgeting...">https://www.cnbc.com/2024/01/29/loud-budgeting...</a>
18	The top 3 things bosses should get rid of in 2...	4 Hours Ago	<a href="https://www.cnbc.com/2024/01/29/owl-labs-ceo-t...">https://www.cnbc.com/2024/01/29/owl-labs-ceo-t...</a>
19	Having too many choices can paralyze investors...	4 Hours Ago	<a href="https://www.cnbc.com/2024/01/29/what-choice-ov...">https://www.cnbc.com/2024/01/29/what-choice-ov...</a>
20	Amazon terminates iRobot deal, Roomba maker to...	4 Hours Ago	<a href="https://www.cnbc.com/2024/01/29/amazon-termina...">https://www.cnbc.com/2024/01/29/amazon-termina...</a>
21	Goldman Sachs says the soft landing for the ec...	4 Hours Ago	<a href="https://www.cnbc.com/2024/01/29/goldman-sachs-...">https://www.cnbc.com/2024/01/29/goldman-sachs-...</a>
22	Activists are eyeing tech stocks ahead of expe...	4 Hours Ago	<a href="https://www.cnbc.com/2024/01/29/activists-eyei...">https://www.cnbc.com/2024/01/29/activists-eyei...</a>

	Headlines	Time	Link
23	'I don't want to spend': How TikTok's 'loud bu...	4 Hours Ago	https://www.cnn.com/2024/01/29/how-a-tiktok-c...
24	Monday's top analyst calls: Nvidia, Netflix, A...	4 Hours Ago	https://www.cnn.com/2024/01/29/top-stocks-to-...
25	Stocks making the biggest moves premarket: iRo...	5 Hours Ago	https://www.cnn.com/2024/01/29/stocks-making-...
26	Biden faces demands to strike Iran after death...	5 Hours Ago	https://www.cnn.com/2024/01/29/lawmakers-dema...
27	World's largest cruise ship sets sail from Mia...	5 Hours Ago	https://www.cnn.com/2024/01/29/icon-of-the-se...
28	5 things to know before the stock market opens...	5 Hours Ago	https://www.cnn.com/2024/01/29/5-things-to-kn...
29	FanDuel parent Flutter lists on NYSE, challeng...	5 Hours Ago	https://www.cnn.com/2024/01/29/fanduel-parent...

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In [13]: print('*'*127)
print('                                Data Science')
print('*'*127)

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In [14]: # 6)Write a python program to scrape the details of most downloaded articles from A
# https://www.journals.elsevier.com/artificial-intelligence/most-downloaded-article
# below mentioned details and make data frame-
# i)Paper Title
# ii)Authors
# iii)Published Date
# iv)Paper URL

page=requests.get('https://www.journals.elsevier.com/artificial-intelligence/most-c

soup=BeautifulSoup(page.content)
# i)Paper Title

titles=[]

for i in soup.find_all('a',class_="sc-5smygv-0 fIXTHm"):
    titles.append(i.text)

# ii)Authors

authors=[]

for i in soup.find_all('span',class_="sc-1w3fpd7-0 dnCnA0"):
    authors.append(i.text)

# iii)Published Date

dates=[]

for i in soup.find_all('span',class_="sc-1thf9ly-2 dvggWt"):
    dates.append(i.text)
```

```
# iv) Paper URL
url=[]
for i in soup.find_all('a',class_="sc-5smygv-0 fIXTHm"):
    url.append(i['href'])
url

df=pd.DataFrame({'Paper_Title':titles,'Authors':authors,'Published_Date':dates,'Pap
df
```

Out[14]:

	Paper_Title	Authors	Published_Date	Paper_URL
0	Reward is enough	David Silver, Satinder Singh, Doina Precup, Ri...	October 2021	<a href="https://www.sciencedirect.com/science/article/...">https://www.sciencedirect.com/science/article/...</a>
1	Explanation in artificial intelligence: Insigh...	Tim Miller	February 2019	<a href="https://www.sciencedirect.com/science/article/...">https://www.sciencedirect.com/science/article/...</a>
2	Creativity and artificial intelligence	Margaret A. Boden	August 1998	<a href="https://www.sciencedirect.com/science/article/...">https://www.sciencedirect.com/science/article/...</a>
3	Conflict-based search for optimal multi-agent ...	Guni Sharon, Roni Stern, Ariel Felner, Nathan ...	February 2015	<a href="https://www.sciencedirect.com/science/article/...">https://www.sciencedirect.com/science/article/...</a>
4	Knowledge graphs as tools for explainable mach...	Ilaria Tiddi, Stefan Schlobach	January 2022	<a href="https://www.sciencedirect.com/science/article/...">https://www.sciencedirect.com/science/article/...</a>
5	Law and logic: A review from an argumentation ...	Henry Prakken, Giovanni Sartor	October 2015	<a href="https://www.sciencedirect.com/science/article/...">https://www.sciencedirect.com/science/article/...</a>
6	Between MDPs and semi-MDPs: A framework for te...	Richard S. Sutton, Doina Precup, Satinder Singh	August 1999	<a href="https://www.sciencedirect.com/science/article/...">https://www.sciencedirect.com/science/article/...</a>
7	Explaining individual predictions when feature...	Kjersti Aas, Martin Jullum, Anders Løland	September 2021	<a href="https://www.sciencedirect.com/science/article/...">https://www.sciencedirect.com/science/article/...</a>
8	Multiple object tracking: A literature review	Wenhan Luo, Junliang Xing and 4 more	April 2021	<a href="https://www.sciencedirect.com/science/article/...">https://www.sciencedirect.com/science/article/...</a>
9	A survey of inverse reinforcement learning: Ch...	Saurabh Arora, Prashant Doshi	August 2021	<a href="https://www.sciencedirect.com/science/article/...">https://www.sciencedirect.com/science/article/...</a>
10	Evaluating XAI: A comparison of rule-based and...	Jasper van der Waa, Elisabeth Nieuwburg, Anita...	February 2021	<a href="https://www.sciencedirect.com/science/article/...">https://www.sciencedirect.com/science/article/...</a>
11	Explainable AI tools for legal reasoning about...	Joe Collenette, Katie Atkinson, Trevor Bench-C...	April 2023	<a href="https://www.sciencedirect.com/science/article/...">https://www.sciencedirect.com/science/article/...</a>
12	Hard choices in artificial	Roel Dobbe, Thomas	November 2021	<a href="https://www.sciencedirect.com/science/article/...">https://www.sciencedirect.com/science/article/...</a>

	Paper_Title	Authors	Published_Date	Paper_URL
	intelligence	Krendl Gilbert, Yonatan Mintz		
13	Assessing the communication gap between AI mod...	Oskar Wysocki, Jessica Katharine Davies and 5 ...	March 2023	<a href="https://www.sciencedirect.com/science/article/...">https://www.sciencedirect.com/science/article/...</a>
14	Explaining black-box classifiers using post-ho...	Eoin M. Kenny, Courtney Ford, Molly Quinn, Mar...	May 2021	<a href="https://www.sciencedirect.com/science/article/...">https://www.sciencedirect.com/science/article/...</a>
15	The Hanabi challenge: A new frontier for AI re...	Nolan Bard, Jakob N. Foerster and 13 more	March 2020	<a href="https://www.sciencedirect.com/science/article/...">https://www.sciencedirect.com/science/article/...</a>
16	Wrappers for feature subset selection	Ron Kohavi, George H. John	December 1997	<a href="https://www.sciencedirect.com/science/article/...">https://www.sciencedirect.com/science/article/...</a>
17	Artificial cognition for social human-robot in...	Séverin Lemaignan, Mathieu Warnier and 3 more	June 2017	<a href="https://www.sciencedirect.com/science/article/...">https://www.sciencedirect.com/science/article/...</a>
18	A review of possible effects of cognitive bias...	Tomáš Kliegr, Štěpán Bahník, Johannes Färnkranz	June 2021	<a href="https://www.sciencedirect.com/science/article/...">https://www.sciencedirect.com/science/article/...</a>
19	The multifaceted impact of Ada Lovelace in the...	Luigia Carlucci Aiello	June 2016	<a href="https://www.sciencedirect.com/science/article/...">https://www.sciencedirect.com/science/article/...</a>
20	Robot ethics: Mapping the issues for a mechani...	Patrick Lin, Keith Abney, George Bekey	April 2011	<a href="https://www.sciencedirect.com/science/article/...">https://www.sciencedirect.com/science/article/...</a>
21	Reward (Mis)design for autonomous driving	W. Bradley Knox, Alessandro Allievi and 3 more	March 2023	<a href="https://www.sciencedirect.com/science/article/...">https://www.sciencedirect.com/science/article/...</a>
22	Planning and acting in partially observable st...	Leslie Pack Kaelbling, Michael L. Littman, Ant...	May 1998	<a href="https://www.sciencedirect.com/science/article/...">https://www.sciencedirect.com/science/article/...</a>
23	What do we want from Explainable Artificial In...	Markus Langer, Daniel Oster and 6 more	July 2021	<a href="https://www.sciencedirect.com/science/article/...">https://www.sciencedirect.com/science/article/...</a>



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In [15]: print('*'*127)
          print('                Data Science')
          print('*'*127)
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```
In [21]: # 7)Write a python program to scrape mentioned details from dineout.co.in and make
          # i)Restaurant name
          # ii)Cuisine
          # iii)Location
          # iv)Ratings
          # v)Image URL

          page = requests.get('https://www.dineout.co.in/delhi-restaurants/buffet-special')
          soup=BeautifulSoup(page.content)

          # i)Restaurant name

          Restaurant=[]
          for i in soup.find_all('div',class_="restnt-info cursor"):
              Restaurant.append(i.text)

          # ii)Cuisine

          # Cuisine=[]
          # for i in soup.find_all('span', class_="double-line-ellipsis"):
          #     Cuisine.append(i.text)
          # Cuisine

          div_1=soup.find_all('div',class_="detail-info")

          div_1

          cui=[]

          for i in div_1:

              new= i.find('a')

              for j in new:

                  cui.append(j.text)

          # iii)Location

          locations=[]
          for i in soup.find_all('div',class_="restnt-loc ellipsis"):
              locations.append(i.text)

          # iv)Ratings
          ratings=[] #empty list for store the titles
          for i in soup.find_all('div',class_="restnt-rating rating-4"):
              ratings.append(i.text)

          # v)Image URL
          images=[] #empty list for store the titles
          for i in soup.find_all('img',class_="no-img"):
              images.append(i['data-src'])
```

```
df=pd.DataFrame({'Restaurant_Name':Restaurant,'Locations':locations,'Cuisines':cui,
df
```

Out[21]:

	Restaurant_Name	Locations	Cuisines	Ratings	
0	Castle BarbequeConnaught Place, Central Delhi	Connaught Place, Central Delhi	Chinese	4	https://im1.dineout.co.in/images/uploads/
1	Cafe KnoshThe Leela Ambience Convention Hotel,...	The Leela Ambience Convention Hotel,Shahdara, ...	Italian	4.3	https://im1.dineout.co.in/images/uploads/
2	India GrillHilton Garden Inn,Saket, South Delhi	Hilton Garden Inn,Saket, South Delhi	North Indian	3.9	https://im1.dineout.co.in/images/uploads/
3	The Barbeque CompanyGardens Galleria,Sector 38...	Gardens Galleria,Sector 38A, Noida	North Indian	3.9	https://im1.dineout.co.in/images/uploads/
4	Delhi BarbequeTaurus Sarovar Portico,Mahipalpu...	Taurus Sarovar Portico,Mahipalpur, South Delhi	North Indian	3.7	https://im1.dineout.co.in/images/uploads/
5	The Monarch - Bar Be Que VillageIndirapuram Ha...	Indirapuram Habitat Centre,Indirapuram, Ghaziabad	North Indian	3.8	https://im1.dineout.co.in/images/uploads/
6	The Barbeque TimesM2K Corporate Park,Sector 51...	M2K Corporate Park,Sector 51, Gurgaon	North Indian	4.1	https://im1.dineout.co.in/images/uploads/



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In [ ]:
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In [ ]:
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