

Importing Necessary Libraries

In [1]:

```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
from bs4 import BeautifulSoup as bs
import requests
```

Extracting html Page from the url using BeautifulSoup

In [2]:

```
url ='https://en.wikipedia.org/wiki/List_of_largest_companies_by_revenue'
page = requests.get(url)
print(url)
print(page)
```

https://en.wikipedia.org/wiki/List_of_largest_companies_by_revenue (http s://en.wikipedia.org/wiki/List_of_largest_companies_by_revenue) <Response [200]>

Making soup

```
In [3]:
```

```
soup=bs(page.text,'html')
                                       1) Merciaateraccioimae
MonthNames":["","January","February","March","April","May","June","Jul
y", "August"
"September", "October", "November", "December"], "wgRequestId": "a8b20057-b4
70-4541-bcb7-da5807f81490", "wgCanonicalNamespace": "", "wgCanonicalSpecia
lPageName":false,"wgNamespaceNumber":0,"wgPageName":"List_of_largest_co
mpanies_by_revenue", "wgTitle": "List of largest companies by revenue", "w
gCurRevisionId":1171734107, "wgRevisionId":1171734107, "wgArticleId":9974
55, "wgIsArticle":true, "wgIsRedirect":false, "wgAction": "view", "wgUserNam
e":null, "wgUserGroups":["*"], "wgCategories":["Articles with short descr
iption", "Short description is different from Wikidata", "Lists of compan
ies by revenue", "Economy-related lists of superlatives"], "wgPageViewLan
guage":"en","wgPageContentLanguage":"en","wgPageContentModel":"wikitex
t","wgRelevantPageName":"List_of_largest_companies_by_revenue","wgRelev
antArticleId":997455, "wgIsProbablyEditable":true, "wgRelevantPageIsProba
blyEditable":true, "wgRestrictionEdit":[], "wgRestrictionMove":[], "wgVisu
alEditor":{"pageLanguageCode":"en","pageLanguageDir":"ltr",
"pageVariantFallbacks":"en"},"wgMFDisplayWikibaseDescriptions":{"searc
h":true, "watchlist":true, "tagline":false, "nearby":true}, "wgWMESchemaEdi
tAttemptStepOversample":false,"wgWMEPageLength":20000,"wgNoticeProjec
```

Extracting header

```
In [4]:
```

```
# way-1
title =soup.title
print(title)
print(title.text)
```

<title>List of largest companies by revenue - Wikipedia</title> List of largest companies by revenue - Wikipedia

```
In [5]:
```

```
# way-2
h1 =soup.find('h1').getText()
print(h1)
print(h1.strip())
```

List of largest companies by revenue List of largest companies by revenue

```
In [6]:
soup.find_all('p')
Out[6]:
[
 ,
 This list comprises the world's largest companies by <a href="/wiki/Co"> href="/wiki/Co</a>
nsolidation_(business)" title="Consolidation (business)">consolidated</a>
<a href="/wiki/Revenue" title="Revenue">revenue</a>, according to the <a h</pre>
ref="/wiki/Fortune_Global_500" title="Fortune Global 500"><i>Fortune</i> G
lobal 500</a> 2023 rankings and other sources.<sup class="reference" id="c
ite_ref-2"><a href="#cite_note-2">[2]</a></sup> American retail corporatio
n <a href="/wiki/Walmart" title="Walmart">Walmart</a> has been the world's
largest company by revenue since 2014.<sup class="reference" id="cite_ref-
W_1-1"><a href="#cite_note-W-1">[1]</a></sup>
 ,
 The list is limited to the top 50 companies, all of which have annual
revenues exceeding US$130 billion. This list is incomplete, as not all com
panies disclose their information to the media and/or general public.<sup
class="reference" id="cite_ref-3"><a href="#cite_note-3">[3]</a></sup>
 Information in the list relates to the most recent <a href="/wiki/Fisc">href="/wiki/Fisc</a>
al_year" title="Fiscal year">fiscal year</a> (mostly FY 2022 or 2023)
 ]
In [7]:
print(soup.find_all('p', class_ ="mw-empty-elt"))
css_soup = bs('')
css_soup.p['class']
[
]
Out[7]:
['mw-empty-elt']
```

Extracting Table

```
In [8]:
```

```
soup.find_all('table')
Out[8]:
[
Rank
Name
Industry
Revenue
Profit
Employees
Headquarters<sup class="reference" id="cit</pre>
e_ref-4"><a href="#cite_note-4">[note 1]</a></sup>
<a href="/wiki/State-owned enterprise" tit</pre>
In [9]:
#soup.find_all('table', class_ ='wikitable sortable jquery-tablesorter')
table =soup.find_all('table')[0]
print(table)
Rank
Name
Industry
Revenue
Profit
Employees
Headquarters<sup class="reference" id="cite</pre>
ref-4"><a href="#cite_note-4">[note 1]</a></sup>
<a href="/wiki/State-owned_enterprise" titl</pre>
e="State-owned enterprise">State-owned</a>
```

```
In [10]:
```

print(world_table[1:9])

1]', 'State-owned', 'Ref.']

```
table = soup.find all('table', class ='wikitable sortable')[0]
e"><a href="/wiki/Saudi_Arabia" title="Saudi Arabia"><img alt="Saudi Ar
abia" class="mw-file-element" data-file-height="600" data-file-width="9
00" decoding="async" height="15" src="//upload.wikimedia.org/wikipedia/
commons/thumb/0/0d/Flag_of_Saudi_Arabia.svg/23px-Flag_of_Saudi_Arabia.s
vg.png" srcset="//upload.wikimedia.org/wikipedia/commons/thumb/0/0d/Fla
g_of_Saudi_Arabia.svg/35px-Flag_of_Saudi_Arabia.svg.png 1.5x, //upload.
wikimedia.org/wikipedia/commons/thumb/0/0d/Flag_of_Saudi_Arabia.svg/45p
x-Flag_of_Saudi_Arabia.svg.png 2x" width="23"/></a></span></span> Saudi
Arabia
ertical-align: middle; text-align: center;"><span typeof="mw:File"><spa
n title="Yes"><img alt="Yes" class="mw-file-element" data-file-height
="600" data-file-width="600" decoding="async" height="13" src="//uploa
d.wikimedia.org/wikipedia/en/thumb/f/fb/Yes_check.svg/13px-Yes_check.sv
g.png" srcset="//upload.wikimedia.org/wikipedia/en/thumb/f/fb/Yes_chec
k.svg/20px-Yes_check.svg.png 1.5x, //upload.wikimedia.org/wikipedia/en/
thumb/f/fb/Yes_check.svg/26px-Yes_check.svg.png 2x" width="13"/></span>
</span>
<sup class="reference" id="cite_ref-5"><a href="#cite_note-5">[4]</
In [11]:
titles = table.find_all('th')
titles
/ CII SCOPE- LOW /IO
,
19
,
20
,
21
,
22
,
23
,
24
,
25
,
26
,
27
,
In [12]:
world table = [title.text.strip() for title in titles]
```

['Name', 'Industry', 'Revenue', 'Profit', 'Employees', 'Headquarters[note

```
In [13]:
```

```
df = pd.DataFrame(columns =world_table[1:9])
df
```

Out[13]:

Name Industry Revenue Profit Employees Headquarters[note 1] State-owned Ref.

In [14]:

```
column = table.find_all('tr')
for row in column:
    row_data =row.find_all('td')
    each_rows =[data.text.strip() for data in row_data]
    print(each_rows)
```

```
[]
[]
['Walmart', 'Retail', '$611,289', '$11,680', '2,100,000', 'United States',
'', '[1]']
['Saudi Aramco', 'Oil and gas', '$603,651', '$159,069', '70,496', 'Saudi A
rabia', '', '[4]']
['State Grid Corporation of China', 'Electricity', '$530,009', '$8,192',
'870,287', 'China', '', '[5]']
['Amazon.com, Inc.', 'Retail', '$513,983', '-$2,722', '1,541,000', 'United
States', '', '[6]']
['Vitol', 'Commodities', '$505,000', '$15,000', '1,560', 'Switzerland',
'', '[7][8]']
['China National Petroleum Corporation', 'Oil and gas', '$483,019', '$21,0
80', '1,087,049', 'China', '', '[9]']
['China Petrochemical Corporation', 'Oil and gas', '$471,154', '$9,657',
'527,487', 'China', '', '[10]']
['ExxonMobil', 'Oil and gas', '$413,680', '$55,740', '63,000', 'United Sta
tes', '', '[11]']
['Apple Inc.', 'Electronics', '$394,328', '$99,803', '164,000', 'United St
ates', '', '[12]']
['Shell plc', 'Oil and gas', '$386,201', '$20,120', '93,000', 'United King
dom', '', '[13]']
['UnitedHealth Group', 'Healthcare', '$324,162', '$20,120', '400,000', 'Un
ited States', '', '[14]']
['CVS Health', 'Healthcare', '$322,467', '$4,149', '259,500', 'United Stat
es', '', '[15]']
['Trafigura', 'Commodities', '$318,476', '$6,994', '12,347', 'Singapore',
'', '[16]']
['China State Construction Engineering', 'Construction', '$305,885', '$4,2
34', '382,492', 'China', '', '[17]']
['Berkshire Hathaway', 'Financials', '$302,089', '-$22,819', '383,000', 'U
nited States', '', '[18]']
['Volkswagen Group', 'Automotive', '$293,685', '$15,233', '675,805', 'Germ
any', '', '[19]']
['Uniper', 'Electricity', '$288,309', '-$19,961', '7,008', 'Germany', '',
'[20]']
['Alphabet Inc.', 'Information technology', '$282,836', '$59,972', '190,23
4', 'United States', '', '[21]']
['McKesson Corporation', 'Healthcare', '$276,711', '$3,560', '48,000', 'Un
ited States', '', '[22]']
['Toyota', 'Automotive', '$274,491', '$18,110', '375,235', 'Japan', '',
'[23]']
['TotalEnergies', 'Oil and gas', '$263,310', '$20,526', '101,279', 'Franc
e', '', '[24]']
['Glencore', 'Commodities', '$255,984', '$17,320', '81,284', 'Switzerlan
d', '', '[25]']
['BP', 'Oil and gas', '$248,891', '-$2,487', '67,600', 'United Kingdom',
.
'', '[26]']
['Chevron Corporation', 'Oil and gas', '$246,252', '$35,465', '43,846', 'U
nited States', '', '[27]']
['AmerisourceBergen', 'Healthcare', '$238,587', '$1,699', '41,500', 'Unite
d States', '', '[28]']
['Samsung Electronics', 'Electronics', '$234,129', '$42,398', '270,372',
'South Korea', '', '[29]']
['Costco', 'Retail', '$226,954', '$5,844', '304,000', 'United States', '',
'[30]']
['Foxconn', 'Electronics', '$222,535', '$4,751', '767,062', 'Taiwan', '',
'[31]']
['Industrial and Commercial Bank of China', 'Financials', '$214,766', '$5
3,589', '427,587', 'China', '', '[32]']
['China Construction Bank', 'Financials', '$202,753', '$48,145', '376,68
```

```
2', 'China', '', '[33]']
['Microsoft', 'Information technology', '$198,270', '$72,738', '221,000',
'United States', '', '[34]']
['Stellantis', 'Automotive', '$188,888', '$17,669', '272,367', 'Netherland
s', '', '[35]']
['Agricultural Bank of China', 'Financials', '$187,061', '$38,524', '452,2
58', 'China', '', '[36]']
['Ping An Insurance', 'Financials', '$181,566', '$12,454', '344,223', 'Chi
na', '', '[37]']
['Cardinal Health', 'Healthcare', '$181,364', '-$933', '46,035', 'United S
tates', '', '[38]']
['Cigna', 'Healthcare', '$180,516', '$6,668', '70,231', 'United States',
'', '[39]']
['Marathon Petroleum', 'Oil and gas', '$180,012', '$14,516', '17,800', 'Un
ited States', '', '[40]']
['Phillips 66', 'Oil and gas', '$175,702', '$11,024', '13,000', 'United St
ates', '', '[41]']
['Sinochem', 'Chemicals', '$173,834', '-$1', '220,760', 'China', '', '[4
2]']
['China Railway Engineering Corporation', 'Construction', '$171,669', '$2,
035', '314,792', 'China', '', '[43]']
['Valero Energy', 'Oil and gas', '$171,189', '$11,528', '9,743', 'United S
tates', '', '[44]']
['Gazprom', 'Oil and gas', '$167,832', '$17,641', '468,000', 'Russia', '',
'[45]']
['Cargill', 'Conglomerate', '$165,000', '...', '155,000', 'United States',
'', '[46]']
['China National Offshore Oil Corporation', 'Oil and gas', '$164,762', '$1
6,988', '81,775', 'China', '', '[47]']
['China Railway Construction Corporation', 'Construction', '$163,037',
'$1,800', '342,098', 'China', '', '[48]']
['Baowu', 'Steel', '$161,698', '$2,493', '245,675', 'China', '', '[49]']
['Schwarz Gruppe', 'Retail', '$159,800', '...', '575,000', 'Germany', '',
'[50]']
['Mitsubishi Group', 'Conglomerate', '$159,371', '$8,723', '79,706', 'Japa
n', '', '[51]']
['Ford Motor Company', 'Automotive', '$158,057', '-$1,981', '173,000', 'Un
ited States', '', '[52]']
['Mercedes-Benz Group', 'Automotive', '$157,403', '$15,252', '168,797', 'G
ermany', '', '[53]']
```

In [15]:

```
column = table.find_all('tr')
for row in column[2:]:
   row_data =row.find_all('td')
   each_rows =[data.text.strip() for data in row_data]
   print(each_rows)
```

```
['Walmart', 'Retail', '$611,289', '$11,680', '2,100,000', 'United States',
'', '[1]']
['Saudi Aramco', 'Oil and gas', '$603,651', '$159,069', '70,496', 'Saudi A
rabia', '', '[4]']
['State Grid Corporation of China', 'Electricity', '$530,009', '$8,192',
'870,287', 'China', '', '[5]']
['Amazon.com, Inc.', 'Retail', '$513,983', '-$2,722', '1,541,000', 'United
States', '', '[6]']
['Vitol', 'Commodities', '$505,000', '$15,000', '1,560', 'Switzerland',
'', '[7][8]']
['China National Petroleum Corporation', 'Oil and gas', '$483,019', '$21,0
80', '1,087,049', 'China', '', '[9]']
['China Petrochemical Corporation', 'Oil and gas', '$471,154', '$9,657',
'527,487', 'China', '', '[10]']
['ExxonMobil', 'Oil and gas', '$413,680', '$55,740', '63,000', 'United Sta
tes', '', '[11]']
['Apple Inc.', 'Electronics', '$394,328', '$99,803', '164,000', 'United St
ates', '', '[12]']
['Shell plc', 'Oil and gas', '$386,201', '$20,120', '93,000', 'United King
dom', '', '[13]']
['UnitedHealth Group', 'Healthcare', '$324,162', '$20,120', '400,000', 'Un
ited States', '', '[14]']
['CVS Health', 'Healthcare', '$322,467', '$4,149', '259,500', 'United Stat
es', '', '[15]']
['Trafigura', 'Commodities', '$318,476', '$6,994', '12,347', 'Singapore',
'', '[16]']
['China State Construction Engineering', 'Construction', '$305,885', '$4,2
34', '382,492', 'China', '', '[17]']
['Berkshire Hathaway', 'Financials', '$302,089', '-$22,819', '383,000', 'U
nited States', '', '[18]']
['Volkswagen Group', 'Automotive', '$293,685', '$15,233', '675,805', 'Germ
any', '', '[19]']
['Uniper', 'Electricity', '$288,309', '-$19,961', '7,008', 'Germany', '',
'[20]']
['Alphabet Inc.', 'Information technology', '$282,836', '$59,972', '190,23
4', 'United States', '', '[21]']
['McKesson Corporation', 'Healthcare', '$276,711', '$3,560', '48,000', 'Un
ited States', '', '[22]']
['Toyota', 'Automotive', '$274,491', '$18,110', '375,235', 'Japan', '',
'[23]']
['TotalEnergies', 'Oil and gas', '$263,310', '$20,526', '101,279', 'Franc
e', '', '[24]']
['Glencore', 'Commodities', '$255,984', '$17,320', '81,284', 'Switzerlan
d', '', '[25]']
['BP', 'Oil and
      'Oil and gas', '$248,891', '-$2,487', '67,600', 'United Kingdom',
'', '[26]']
['Chevron Corporation', 'Oil and gas', '$246,252', '$35,465', '43,846', 'U
nited States', '', '[27]']
['AmerisourceBergen', 'Healthcare', '$238,587', '$1,699', '41,500', 'Unite
d States', '', '[28]']
['Samsung Electronics', 'Electronics', '$234,129', '$42,398', '270,372',
'South Korea', '', '[29]']
['Costco', 'Retail', '$226,954', '$5,844', '304,000', 'United States', '',
'[30]']
['Foxconn', 'Electronics', '$222,535', '$4,751', '767,062', 'Taiwan', '',
'[31]']
['Industrial and Commercial Bank of China', 'Financials', '$214,766', '$5
3,589', '427,587', 'China', '', '[32]']
['China Construction Bank', 'Financials', '$202,753', '$48,145', '376,68
2', 'China', '', '[33]']
['Microsoft', 'Information technology', '$198,270', '$72,738', '221,000',
```

```
'United States', '', '[34]']
['Stellantis', 'Automotive', '$188,888', '$17,669', '272,367', 'Netherland
s', '', '[35]']
['Agricultural Bank of China', 'Financials', '$187,061', '$38,524', '452,2
58', 'China', '', '[36]']
['Ping An Insurance', 'Financials', '$181,566', '$12,454', '344,223', 'Chi
na', '', '[37]']
['Cardinal Health', 'Healthcare', '$181,364', '-$933', '46,035', 'United S
tates', '', '[38]']
['Cigna', 'Healthcare', '$180,516', '$6,668', '70,231', 'United States',
'', '[39]']
['Marathon Petroleum', 'Oil and gas', '$180,012', '$14,516', '17,800', 'Un
ited States', '', '[40]']
['Phillips 66', 'Oil and gas', '$175,702', '$11,024', '13,000', 'United St
ates', '', '[41]']
['Sinochem', 'Chemicals', '$173,834', '-$1', '220,760', 'China', '', '[4
2]']
['China Railway Engineering Corporation', 'Construction', '$171,669', '$2,
035', '314,792', 'China', '', '[43]']
['Valero Energy', 'Oil and gas', '$171,189', '$11,528', '9,743', 'United S
tates', '', '[44]']
['Gazprom', 'Oil and gas', '$167,832', '$17,641', '468,000', 'Russia', '',
'[45]']
['Cargill', 'Conglomerate', '$165,000', '...', '155,000', 'United States',
'', '[46]']
['China National Offshore Oil Corporation', 'Oil and gas', '$164,762', '$1
6,988', '81,775', 'China', '', '[47]']
['China Railway Construction Corporation', 'Construction', '$163,037',
'$1,800', '342,098', 'China', '', '[48]']
['Baowu', 'Steel', '$161,698', '$2,493', '245,675', 'China', '', '[49]']
['Schwarz Gruppe', 'Retail', '$159,800', '...', '575,000', 'Germany', '',
'[50]']
['Mitsubishi Group', 'Conglomerate', '$159,371', '$8,723', '79,706', 'Japa
n', '', '[51]']
['Ford Motor Company', 'Automotive', '$158,057', '-$1,981', '173,000', 'Un
ited States', '', '[52]']
['Mercedes-Benz Group', 'Automotive', '$157,403', '$15,252', '168,797', 'G
ermany', '', '[53]']
```

```
In [16]:
```

```
column = table.find_all('tr')
for row in column[2:]:
    row_data =row.find_all('td')
    each_rows =[data.text.strip() for data in row_data]
    #print(each_rows)
    length = len(df)
    df.loc[length] =each_rows
df
```

	Name	Industry	Revenue	Profit	Employees	Headquarters[note 1]	Sta own
0	Walmart	Retail	\$611,289	\$11,680	2,100,000	United States	
1	Saudi Aramco	Oil and gas	\$603,651	\$159,069	70,496	Saudi Arabia	
2	State Grid Corporation of China	Electricity	\$530,009	\$8,192	870,287	China	
3	Amazon.com, Inc.	Retail	\$513,983	-\$2,722	1,541,000	United States	
4	Vitol	Commodities	\$505,000	\$15,000	1,560	Switzerland	
5	China National Petroleum Corporation	Oil and gas	\$483,019	\$21,080	1,087,049	China	
6	China Petrochemical Corporation	Oil and gas	\$471,154	\$9,657	527,487	China	
7	ExxonMobil	Oil and gas	\$413,680	\$55,740	63,000	United States	
8	Apple Inc.	Electronics	\$394,328	\$99,803	164,000	United States	
9	Shell plc	Oil and gas	\$386,201	\$20,120	93,000	United Kingdom	
10	UnitedHealth Group	Healthcare	\$324,162	\$20,120	400,000	United States	
11	CVS Health	Healthcare	\$322,467	\$4,149	259,500	United States	
12	Trafigura	Commodities	\$318,476	\$6,994	12,347	Singapore	
13	China State Construction Engineering	Construction	\$305,885	\$4,234	382,492	China	
14	Berkshire Hathaway	Financials	\$302,089	- \$22,819	383,000	United States	
15	Volkswagen Group	Automotive	\$293,685	\$15,233	675,805	Germany	
16	Uniper	Electricity	\$288,309	- \$19,961	7,008	Germany	
17	Alphabet Inc.	Information technology	\$282,836	\$59,972	190,234	United States	
18	McKesson Corporation	Healthcare	\$276,711	\$3,560	48,000	United States	
19	Toyota	Automotive	\$274,491	\$18,110	375,235	Japan	
20	TotalEnergies	Oil and gas	\$263,310	\$20,526	101,279	France	
21	Glencore	Commodities	\$255,984	\$17,320	81,284	Switzerland	
22	BP	Oil and gas	\$248,891	-\$2,487	67,600	United Kingdom	
23	Chevron Corporation	Oil and gas	\$246,252	\$35,465	43,846	United States	
24	AmerisourceBergen	Healthcare	\$238,587	\$1,699	41,500	United States	
25	Samsung Electronics	Electronics	\$234,129	\$42,398	270,372	South Korea	
26	Costco	Retail	\$226,954	\$5,844	304,000	United States	
27	Foxconn	Electronics	\$222,535	\$4,751	767,062	Taiwan	

	Name	Industry	Revenue	Profit	Employees	Headquarters[note 1]	Sta owr
28	Industrial and Commercial Bank of China	Financials	\$214,766	\$53,589	427,587	China	
29	China Construction Bank	Financials	\$202,753	\$48,145	376,682	China	
30	Microsoft	Information technology	\$198,270	\$72,738	221,000	United States	
31	Stellantis	Automotive	\$188,888	\$17,669	272,367	Netherlands	
32	Agricultural Bank of China	Financials	\$187,061	\$38,524	452,258	China	
33	Ping An Insurance	Financials	\$181,566	\$12,454	344,223	China	
34	Cardinal Health	Healthcare	\$181,364	-\$933	46,035	United States	
35	Cigna	Healthcare	\$180,516	\$6,668	70,231	United States	
36	Marathon Petroleum	Oil and gas	\$180,012	\$14,516	17,800	United States	
37	Phillips 66	Oil and gas	\$175,702	\$11,024	13,000	United States	
38	Sinochem	Chemicals	\$173,834	-\$1	220,760	China	
39	China Railway Engineering Corporation	Construction	\$171,669	\$2,035	314,792	China	
40	Valero Energy	Oil and gas	\$171,189	\$11,528	9,743	United States	
41	Gazprom	Oil and gas	\$167,832	\$17,641	468,000	Russia	
42	Cargill	Conglomerate	\$165,000		155,000	United States	
43	China National Offshore Oil Corporation	Oil and gas	\$164,762	\$16,988	81,775	China	
44	China Railway Construction Corporation	Construction	\$163,037	\$1,800	342,098	China	
45	Baowu	Steel	\$161,698	\$2,493	245,675	China	
46	Schwarz Gruppe	Retail	\$159,800		575,000	Germany	
47	Mitsubishi Group	Conglomerate	\$159,371	\$8,723	79,706	Japan	
48	Ford Motor Company	Automotive	\$158,057	-\$1,981	173,000	United States	
49	Mercedes-Benz Group	Automotive	\$157,403	\$15,252	168,797	Germany	

Saving File to csv format

In [17]:

df.to_csv(r'WorldCompanies.csv')

In []: