

```
In [24]: import numpy as np
import pandas as pd
```

```
In [25]: company=pd.read_csv('Fortune 500 Companies US.csv',encoding='cp1252')
```

```
In [26]: company.head()
```

Out[26]:

	Rank	Company Name	Number of Employees	Previous Rank	Revenues	Revenue Change	Profits	Profit Change	Assets	Market Value
0	1	Walmart	23,00,000	1.0	\$4,85,873	0.8%	\$13,643.0	-7.2%	\$1,98,825	\$2,18
1	2	Berkshire Hathaway	3,67,700	4.0	\$2,23,604	6.1%	\$24,074.0	0.0%	\$6,20,854	\$4,11
2	3	Apple	1,16,000	3.0	\$2,15,639	-7.7%	\$45,687.0	-14.4%	\$3,21,686	\$7,53
3	4	Exxon Mobil	72,700	2.0	\$2,05,004	-16.7%	\$7,840.0	-51.5%	\$3,30,314	\$3,40
4	5	McKesson	68,000	5.0	\$1,92,487	6.2%	\$2,258.0	53.0%	\$56,563	\$31



```
In [29]: company=company.groupby('Company Name')
```

```
In [31]: company.size().sort_values(ascending=False)
```

Out[31]:

Company Name	
Regions Financial	2
Alcoa	2
Avnet	2
3M	1
Nucor	1
..	
Eli Lilly	1
Edison International	1
Ecolab	1
Eastman Chemical	1
salesforce.com	1
Length: 497, dtype: int64	

```
In [32]: company.first()
```

Out[32]:

	Rank	Number of Employees	Previous Rank	Revenues	Revenue Change	Profits	Profit Change	Assets	Mar Va
Company Name									
3M	94	91,584	93.0	\$30,109	-0.5%	\$5,050.0	4.5%	\$32,906	\$1,14,
A-Mark Precious Metals	395	83,000	426.0	\$6,784	11.8%	\$9.3	31.5%	\$437	\$
ABM Industries	500	1,10,000	485.0	\$5,145	-2.8%	\$57.2	-25.0%	\$2,281	\$2,
ADP	240	57,000	248.0	\$11,668	1.7%	\$1,492.5	2.8%	\$43,670	\$45,
AECOM	161	87,000	156.0	\$17,411	-3.2%	\$96.1	-	\$13,727	\$5,
...	...	...	...	...	...	...	...	...	...
Yum China Holdings	399	4,20,000	NaN	\$6,752	-	\$502.0	-	\$3,727	\$10,
Zimmer Biomet Holdings	352	18,500	431.0	\$7,684	28.1%	\$305.9	108.1%	\$26,684	\$24,
eBay	310	12,600	300.0	\$8,979	-5.4%	\$7,266.0	321.2%	\$23,847	\$36,
iHeartMedia	426	18,700	414.0	\$6,274	0.5%	-\$296.3	-	\$12,862	\$
salesforce.com	326	25,000	386.0	\$8,392	25.9%	\$179.6	-	\$17,585	\$58,

497 rows × 9 columns

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In [33]: company.last()

Out[33]:

	Rank	Number of Employees	Previous Rank	Revenues	Revenue Change	Profits	Profit Change	Assets	Mar Va
Company Name									
3M	94	91,584	93.0	\$30,109	-0.5%	\$5,050.0	4.5%	\$32,906	\$1,14,
A-Mark Precious Metals	395	83,000	426.0	\$6,784	11.8%	\$9.3	31.5%	\$437	\$
ABM Industries	500	1,10,000	485.0	\$5,145	-2.8%	\$57.2	-25.0%	\$2,281	\$2,
ADP	240	57,000	248.0	\$11,668	1.7%	\$1,492.5	2.8%	\$43,670	\$45,
AECOM	161	87,000	156.0	\$17,411	-3.2%	\$96.1	-	\$13,727	\$5,
...	...	...	...	...	...	...	...	...	...
Yum China Holdings	399	4,20,000	NaN	\$6,752	-	\$502.0	-	\$3,727	\$10,
Zimmer Biomet Holdings	352	18,500	431.0	\$7,684	28.1%	\$305.9	108.1%	\$26,684	\$24,
eBay	310	12,600	300.0	\$8,979	-5.4%	\$7,266.0	321.2%	\$23,847	\$36,
iHeartMedia	426	18,700	414.0	\$6,274	0.5%	-\$296.3	-	\$12,862	\$
salesforce.com	326	25,000	386.0	\$8,392	25.9%	\$179.6	-	\$17,585	\$58,

497 rows × 9 columns

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In [36]: company.groups

```
Out[36]: {'3M': [93], 'A-Mark Precious Metals': [394], 'ABM Industries': [499], 'ADP': [239], 'AECOM': [160], 'AES': [193], 'AGCO': [369], 'AIG': [54], 'AK Steel Holding': [440], 'AT&T': [8], 'AbbVie': [110], 'Abbott Laboratories': [134], 'Activision Blizzard': [405], 'Adobe Systems': [442], 'Advance Auto Parts': [291], 'Aetna': [42], 'Aflac': [125], 'Air Products & Chemicals': [293], 'Airgas': [488], 'Alaska Air Group': [437], 'Albertsons Cos.': [48], 'Alcoa': [227, 299], 'Alleghany': [427], 'Alliance Data Systems': [377], 'Allstate': [83], 'Ally Financial': [285], 'Alphabet': [26], 'Altria Group': [147], 'AmTrust Financial Services': [474], 'Amazon.com': [11], 'Ameren': [430], 'American Airlines Group': [66], 'American Electric Power': [166], 'American Express': [85], 'American Family Insurance Group': [314], 'American Financial Group': [410], 'American Tower': [448], 'Ameriprise Financial': [238], 'AmerisourceBergen': [10], 'Amgen': [122], 'Amphenol': [423], 'Anadarko Petroleum': [343], 'Anixter International': [358], 'Anthem': [28], 'Apache': [487], 'Apple': [2], 'Applied Materials': [264], 'Aramark': [191], 'Archer Daniels Midland': [44], 'Arrow Electronics': [117], 'Arthur J. Gallagher': [461], 'Asbury Automotive Group': [409], 'Ascena Retail Group': [383], 'Assurant': [360], 'Auto-Owners Insurance': [397], 'AutoNation': [128], 'AutoZone': [269], 'Autoliv': [282], 'Avery Dennison': [429], 'Avis Budget Group': [318], 'Avnet': [107, 108], 'Avon Products': [443], 'BB&T Corp.': [244], 'Baker Hughes': [284], 'Ball': [305], 'Bank of America Corp.': [25], 'Bank of New York Mellon Corp.': [176], 'Baxter International': [280], 'Becton Dickinson': [224], 'Bed Bath & Beyond': [232], 'Berkshire Hathaway': [1], 'Berry Global Group': [412], 'Best Buy': [71], 'Big Lots': [494], 'Biogen': [247], 'BlackRock': [254], 'Boeing': [23], 'Booz Allen Hamilton Holding': [480], 'BorgWarner': [304], 'Boston Scientific': [326], 'Bristol-Myers Squibb': [146], 'Builders FirstSource': [420], 'Burlington Stores': [462], 'C.H. Robinson Worldwide': [211], 'CBRE Group': [213], 'CBS': [192], 'CDW': [198], 'CH2M Hill': [493], 'CHS': [92], 'CMS Energy': [418], 'CST Brands': [306], 'CSX': [256], 'CVS Health': [6], 'CalAtlantic Group': [414], 'Calpine': [399], 'Campbell Soup': [338], 'Capital One Financial': [99], 'CarMax': [173], 'Cardinal Health': [14], 'Casey's General Stores': [422], ...}
```

In [40]:

```
-----
KeyError                                Traceback (most recent call last)
Cell In[40], line 1
----> 1 company.get_group('Apparel')

File ~\.conda\envs\CampusX\lib\site-packages\pandas\core\groupby\groupby.py:817, in BaseGroupBy.get_group(self, name, obj)
    815 inds = self._get_index(name)
    816 if not len(inds):
--> 817     raise KeyError(name)
    819 return obj._take_with_is_copy(inds, axis=self.axis)

KeyError: 'Apparel'
```

In [42]: company.sum()

```
C:\Users\SHANTANU GARAIN\AppData\Local\Temp\ipykernel_32472\3725003042.py:1: FutureWarning: The default value of numeric_only in DataFrameGroupBy.sum is deprecated. In a future version, numeric_only will default to False. Either specify numeric_only or select only columns which should be valid for the function.
  company.sum()
```

Out[42]:

	Rank	Previous Rank
Company Name		
3M	94	93.0
A-Mark Precious Metals	395	426.0
ABM Industries	500	485.0
ADP	240	248.0
AECOM	161	156.0
...	...	...
Yum China Holdings	399	0.0
Zimmer Biomet Holdings	352	431.0
eBay	310	300.0
iHeartMedia	426	414.0
salesforce.com	326	386.0

497 rows × 2 columns

In [43]:

```
company.mean()
```

C:\Users\SHANTANU GARAIN\AppData\Local\Temp\ipykernel\_32472\454767896.py:1: Future Warning: The default value of numeric\_only in DataFrameGroupBy.mean is deprecated. In a future version, numeric\_only will default to False. Either specify numeric\_only or select only columns which should be valid for the function.

```
company.mean()
```

Out[43]:

	Rank	Previous Rank
Company Name		
3M	94.0	93.0
A-Mark Precious Metals	395.0	426.0
ABM Industries	500.0	485.0
ADP	240.0	248.0
AECOM	161.0	156.0
...	...	...
Yum China Holdings	399.0	NaN
Zimmer Biomet Holdings	352.0	431.0
eBay	310.0	300.0
iHeartMedia	426.0	414.0
salesforce.com	326.0	386.0

497 rows × 2 columns

In [ ]: