

```
In [2]: import pandas as pd
import numpy as py
```

```
In [3]: fortune=pd.read_csv(r"C:\Users\nihar\Downloads\fortune1000.csv", index_col="Rank")
fortune
```

Out[3]:

	Company	Sector	Industry	Revenue	Profits	Employees
Rank						
1	Walmart	Retailing	General Merchandisers	482130	14694	2300000
2	Exxon Mobil	Energy	Petroleum Refining	246204	16150	75600
3	Apple	Technology	Computers, Office Equipment	233715	53394	110000
4	Berkshire Hathaway	Financials	Insurance: Property and Casualty (Stock)	210821	24083	331000
5	McKesson	Health Care	Wholesalers: Health Care	181241	1476	70400
...
996	New York Community Bancorp	Financials	Commercial Banks	1902	-47	3448
997	Portland General Electric	Energy	Utilities: Gas and Electric	1898	172	2646
997	Portland General Electric	Energy	Utilities: Gas and Electric	1898	172	2646
999	Wendy's	Hotels, Resturants & Leisure	Food Services	1896	161	21200
1000	Briggs & Stratton	Industrials	Industrial Machinery	1895	46	5480

1000 rows × 6 columns

```
In [9]: sectors=fortune.groupby("Sector")
sectors
```

```
Out[9]: <pandas.core.groupby.generic.DataFrameGroupBy object at 0x000002AFE8D636E0>
```

```
In [10]: len(sectors)
```

```
Out[10]: 21
```

```
In [11]: sectors.size()
```

```
Out[11]: Sector
Aerospace & Defense      20
Apparel                      15
Business Services            51
Chemicals                     30
Energy                        122
Engineering & Construction   26
Financials                   139
Food and Drug Stores        15
Food, Beverages & Tobacco    43
Health Care                  75
Hotels, Restaurants & Leisure 25
Household Products           28
Industrials                   46
Materials                     43
Media                         25
Motor Vehicles & Parts       24
Retailing                     80
Technology                    102
Telecommunications            15
Transportation                36
Wholesalers                  40
dtype: int64
```

```
In [12]: sectors.first()
```

Out[12]:

	Company	Industry	Revenue	Profits	Employees
Sector					
Aerospace & Defense	Boeing	Aerospace and Defense	96114	5176	161400
Apparel	Nike	Apparel	30601	3273	62600
Business Services	ManpowerGroup	Temporary Help	19330	419	27000
Chemicals	Dow Chemical	Chemicals	48778	7685	49495
Energy	Exxon Mobil	Petroleum Refining	246204	16150	75600
Engineering & Construction	Fluor	Engineering, Construction	18114	413	38758
Financials	Berkshire Hathaway	Insurance: Property and Casualty (Stock)	210821	24083	331000
Food and Drug Stores	CVS Health	Food and Drug Stores	153290	5237	199000
Food, Beverages & Tobacco	Archer Daniels Midland	Food Production	67702	1849	32300
Health Care	McKesson	Wholesalers: Health Care	181241	1476	70400
Hotels, Restaurants & Leisure	McDonald's	Food Services	25413	4529	420000
Household Products	Procter & Gamble	Household and Personal Products	78756	7036	110000
Industrials	General Electric	Industrial Machinery	140389	-6126	333000
Materials	Alcoa	Metals	22534	-322	60000
Media	Disney	Entertainment	52465	8382	185000
Motor Vehicles & Parts	General Motors	Motor Vehicles and Parts	152356	9687	215000
Retailing	Walmart	General Merchandisers	482130	14694	2300000
Technology	Apple	Computers, Office Equipment	233715	53394	110000
Telecommunications	AT&T	Telecommunications	146801	13345	281450
Transportation	UPS	Mail, Package, and Freight Delivery	58363	4844	341240
Wholesalers	Sysco	Wholesalers: Food and Grocery	48681	687	51700

In [15]: `sectors.last()`

Out[15]:

	Company	Industry	Revenue	Profits	Employees
Sector					
Aerospace & Defense	Delta Tucker Holdings	Aerospace and Defense	1923	-133	12000
Apparel	Guess	Apparel	2204	82	13500
Business Services	DeVry Education Group	Education	1910	140	11770
Chemicals	H.B. Fuller	Chemicals	2084	87	4425
Energy	Portland General Electric	Utilities: Gas and Electric	1898	172	2646
Engineering & Construction	MDC Holdings	Homebuilders	1909	66	1225
Financials	New York Community Bancorp	Commercial Banks	1902	-47	3448
Food and Drug Stores	Fred's	Food and Drug Stores	2151	-7	7103
Food, Beverages & Tobacco	Alliance One International	Tobacco	2066	-15	6835
Health Care	Providence Service	Health Care: Pharmacy and Other Services	1987	84	9072
Hotels, Restaurants & Leisure	Wendy's	Food Services	1896	161	21200
Household Products	Revlon	Household and Personal Products	1914	56	5700
Industrials	Briggs & Stratton	Industrial Machinery	1895	46	5480
Materials	Schnitzer Steel Industries	Metals	1924	-197	2955
Media	Cenveo	Publishing, Printing	1921	-31	7300
Motor Vehicles & Parts	Allison Transmission Holdings	Motor Vehicles and Parts	1986	182	2700
Retailing	99 Cents Only Stores	Specialty Retailers: Other	1999	-232	18200
Technology	F5 Networks	Network and Other Communications Equipment	1920	365	4178
Telecommunications	Equinix	Telecommunications	2726	188	5042

	Company	Sector	Industry	Revenue	Profits	Employees
Transportation	Roadrunner Transportation Systems	Transportation and Logistics	1995	48	4502	
Wholesalers	BlueLinx Holdings	Wholesalers: Diversified	1917	-12	1600	

In [17]: `sectors.get_group("Energy") #select and extract only one group from a table`

Out[17]:

	Company	Sector	Industry	Revenue	Profits	Employees
Rank						
2	Exxon Mobil	Energy	Petroleum Refining	246204	16150	75600
14	Chevron	Energy	Petroleum Refining	131118	4587	61500
30	Phillips 66	Energy	Petroleum Refining	87169	4227	14000
32	Valero Energy	Energy	Petroleum Refining	81824	3990	10103
42	Marathon Petroleum	Energy	Petroleum Refining	64566	2852	45440
...
981	WPX Energy	Energy	Mining, Crude-Oil Production	1958	-1727	1040
983	Adams Resources & Energy	Energy	Petroleum Refining	1944	-1	809
995	EP Energy	Energy	Mining, Crude-Oil Production	1908	-3748	665
997	Portland General Electric	Energy	Utilities: Gas and Electric	1898	172	2646
997	Portland General Electric	Energy	Utilities: Gas and Electric	1898	172	2646

122 rows × 6 columns

In [18]: `sectors["Profits"].sum()`

```
Out[18]: Sector
Aerospace & Defense      28742
Apparel                      8236
Business Services            28227
Chemicals                     22628
Energy                       -73447
Engineering & Construction   5304
Financials                  260209
Food and Drug Stores        16759
Food, Beverages & Tobacco    51417
Health Care                  106114
Hotels, Restaurants & Leisure 20697
Household Products           14428
Industrials                  20764
Materials                     4428
Media                        24347
Motor Vehicles & Parts       25898
Retailing                     47830
Technology                   180473
Telecommunications            48637
Transportation                44169
Wholesalers                  8233
Name: Profits, dtype: int64
```

```
In [27]: sec_ind=fortune.groupby(["Sector","Industry"])
sec_ind
```

```
Out[27]: <pandas.core.groupby.generic.DataFrameGroupBy object at 0x000001FC351E7260>
```

```
In [28]: sec_ind.size()
```

```
Out[28]: Sector          Industry
Aerospace & Defense  Aerospace and Defense      20
Apparel                 Apparel                      15
Business Services       Advertising, marketing      2
                           Diversified Outsourcing Services 14
                           Education                     3
                           ..
Transportation          Trucking, Truck Leasing      9
Wholesalers              Miscellaneous             1
                           Wholesalers: Diversified     25
                           Wholesalers: Electronics and Office Equipment 8
                           Wholesalers: Food and Grocery      6
Length: 79, dtype: int64
```

```
In [29]: sec_ind.first()
```

Out[29]:

	Sector	Industry	Company	Revenue	Profits	Employees
	Aerospace & Defense	Aerospace and Defense	Boeing	96114	5176	161400
	Apparel	Apparel	Nike	30601	3273	62600
	Business Services	Advertising, marketing	Omnicom Group	15134	1094	74900
		Diversified Outsourcing Services	Aramark	14329	236	216500
		Education	Graham Holdings	2984	-101	11585

	Transportation	Trucking, Truck Leasing	Ryder System	6572	305	33100
	Wholesalers	Miscellaneous	Univar	8982	17	9200
		Wholesalers: Diversified	World Fuel Services	30380	187	4700
		Wholesalers: Electronics and Office Equipment	Ingram Micro	43026	215	27700
		Wholesalers: Food and Grocery	Sysco	48681	687	51700

79 rows × 4 columns

In []: