

```
In [3]: import os
os.listdir()
```

```
Out[3]: ['.ipynb_checkpoints',
'panda_excel.ipynb',
'supermarkets-commas.txt',
'supermarkets-semi-colons.txt',
'supermarkets.csv',
'supermarkets.json',
'supermarkets.xlsx']
```

```
In [5]: import pandas
```

```
In [16]: df1 = pandas.read_csv("supermarkets.csv", header=None)
df1.set_index(0)
```

```
Out[16]:
```

	1	2	3	4	5	6
0						
ID	Address	City	State	Country	Name	Employees
1	3666 21st St	San Francisco	CA 94114	USA	Madeira	8
2	735 Dolores St	San Francisco	CA 94119	USA	Bready Shop	15
3	332 Hill St	San Francisco	California 94114	USA	Super River	25
4	3995 23rd St	San Francisco	CA 94114	USA	Ben's Shop	10
5	1056 Sanchez St	San Francisco	California	USA	Sanchez	12
6	551 Alvarado St	San Francisco	CA 94114	USA	Richvalley	20

```
In [18]: df1 = pandas.read_csv("supermarkets.csv")
df1.set_index("ID")
```

```
Out[18]:
```

	Address	City	State	Country	Name	Employees
ID						
1	3666 21st St	San Francisco	CA 94114	USA	Madeira	8
2	735 Dolores St	San Francisco	CA 94119	USA	Bready Shop	15
3	332 Hill St	San Francisco	California 94114	USA	Super River	25
4	3995 23rd St	San Francisco	CA 94114	USA	Ben's Shop	10
5	1056 Sanchez St	San Francisco	California	USA	Sanchez	12
6	551 Alvarado St	San Francisco	CA 94114	USA	Richvalley	20

```
In [19]: df1.shape
```

```
Out[19]: (6, 7)
```

```
In [22]: df2 = pandas.read_json("supermarkets.json")
df2.set_index("ID")
```

Out[22]:

	Address	City	Country	Employees	Name	State
ID						
1	3666 21st St	San Francisco	USA	8	Madeira	CA 94114
2	735 Dolores St	San Francisco	USA	15	Bready Shop	CA 94119
3	332 Hill St	San Francisco	USA	25	Super River	California 94114
4	3995 23rd St	San Francisco	USA	10	Ben's Shop	CA 94114
5	1056 Sanchez St	San Francisco	USA	12	Sanchez	California
6	551 Alvarado St	San Francisco	USA	20	Richvalley	CA 94114

```
In [25]: df3 = pandas.read_excel("supermarkets.xlsx",sheet_name=0)
df3
```

Out[25]:

	ID	Address	City	State	Country	Supermarket Name	Number of Employees
0	1	3666 21st St	San Francisco	CA 94114	USA	Madeira	8
1	2	735 Dolores St	San Francisco	CA 94119	USA	Bready Shop	15
2	3	332 Hill St	San Francisco	California 94114	USA	Super River	25
3	4	3995 23rd St	San Francisco	CA 94114	USA	Ben's Shop	10
4	5	1056 Sanchez St	San Francisco	California	USA	Sanchez	12
5	6	551 Alvarado St	San Francisco	CA 94114	USA	Richvalley	20

```
In [27]: df4 = pandas.read_csv("supermarkets-commas.txt")
df4
```

Out[27]:

	ID	Address	City	State	Country	Name	Employees
0	1	3666 21st St	San Francisco	CA 94114	USA	Madeira	8
1	2	735 Dolores St	San Francisco	CA 94119	USA	Bready Shop	15
2	3	332 Hill St	San Francisco	California 94114	USA	Super River	25
3	4	3995 23rd St	San Francisco	CA 94114	USA	Ben's Shop	10
4	5	1056 Sanchez St	San Francisco	California	USA	Sanchez	12
5	6	551 Alvarado St	San Francisco	CA 94114	USA	Richvalley	20

```
In [31]: df5 = pandas.read_csv("supermarkets-semi-colons.txt", sep=";")
df5
```

Out[31]:

	ID	Address	City	State	Country	Name	Employees
0	1	3666 21st St	San Francisco	CA 94114	USA	Madeira	8
1	2	735 Dolores St	San Francisco	CA 94119	USA	Bready Shop	15
2	3	332 Hill St	San Francisco	California 94114	USA	Super River	25
3	4	3995 23rd St	San Francisco	CA 94114	USA	Ben's Shop	10
4	5	1056 Sanchez St	San Francisco	California	USA	Sanchez	12
5	6	551 Alvarado St	San Francisco	CA 94114	USA	Richvalley	20

```
In [30]: pandas.read_csv?
```

```
In [34]: df6 = pandas.read_csv("https://pythonhow.com/supermarkets.csv")
df6
```

Out[34]:

	ID	Address	City	State	Country	Name	Employees
0	1	3666 21st St	San Francisco	CA 94114	USA	Madeira	8
1	2	735 Dolores St	San Francisco	CA 94119	USA	Bready Shop	15
2	3	332 Hill St	San Francisco	California 94114	USA	Super River	25
3	4	3995 23rd St	San Francisco	CA 94114	USA	Ben's Shop	10
4	5	1056 Sanchez St	San Francisco	California	USA	Sanchez	12
5	6	551 Alvarado St	San Francisco	CA 94114	USA	Richvalley	20

```
In [51]: df7 = pandas.read_json("https://pythonhow.com/supermarkets.json")
df7
```

Out[51]:

	Address	City	Country	Employees	ID	Name	State
0	3666 21st St	San Francisco	USA	8	1	Madeira	CA 94114
1	735 Dolores St	San Francisco	USA	15	2	Bready Shop	CA 94119
2	332 Hill St	San Francisco	USA	25	3	Super River	California 94114
3	3995 23rd St	San Francisco	USA	10	4	Ben's Shop	CA 94114
4	1056 Sanchez St	San Francisco	USA	12	5	Sanchez	California
5	551 Alvarado St	San Francisco	USA	20	6	Richvalley	CA 94114

```
In [56]: df7=df7.set_index("Address")
```

```
In [60]: df7.loc["735 Dolores St":"332 Hill St","City":"State"]
```

```
Out[60]:
```

	City	Country	Employees	ID	Name	State
Address						
735 Dolores St	San Francisco	USA	15	2	Bready Shop	CA 94119
332 Hill St	San Francisco	USA	25	3	Super River	California 94114

```
In [61]: df7.loc["735 Dolores St","Country"]
```

```
Out[61]: 'USA'
```

```
In [64]: list(df7.loc[:, "Name"])
```

```
Out[64]: ['Madeira',
          'Bready Shop',
          'Super River',
          'Ben's Shop',
          'Sanchez',
          'Richvalley']
```

```
In [67]: df7
```

```
Out[67]:
```

	City	Country	Employees	ID	Name	State
Address						
3666 21st St	San Francisco	USA	8	1	Madeira	CA 94114
735 Dolores St	San Francisco	USA	15	2	Bready Shop	CA 94119
332 Hill St	San Francisco	USA	25	3	Super River	California 94114
3995 23rd St	San Francisco	USA	10	4	Ben's Shop	CA 94114
1056 Sanchez St	San Francisco	USA	12	5	Sanchez	California
551 Alvarado St	San Francisco	USA	20	6	Richvalley	CA 94114

```
In [74]: df7.iloc[1:6,1:5]
```

```
Out[74]:
```

	Country	Employees	ID	Name
Address				
735 Dolores St	USA	15	2	Bready Shop
332 Hill St	USA	25	3	Super River
3995 23rd St	USA	10	4	Ben's Shop
1056 Sanchez St	USA	12	5	Sanchez
551 Alvarado St	USA	20	6	Richvalley

In [76]: `df7.iloc[3,1:4]`

Out[76]: Country USA
 Employees 10
 ID 4
 Name: 3995 23rd St, dtype: object

In [83]: `df7.iloc[3,4:5]`

Out[83]: Name Ben's Shop
 Name: 3995 23rd St, dtype: object

In [100]: `df7.drop("City",1)`

Out[100]:

	Country	Employees	ID	Name	State
Address					
3666 21st St	USA	8	1	Madeira	CA 94114
735 Dolores St	USA	15	2	Bready Shop	CA 94119
332 Hill St	USA	25	3	Super River	California 94114
3995 23rd St	USA	10	4	Ben's Shop	CA 94114
1056 Sanchez St	USA	12	5	Sanchez	California
551 Alvarado St	USA	20	6	Richvalley	CA 94114

In [87]: `df7`

Out[87]:

	City	Country	Employees	ID	Name	State
Address						
3666 21st St	San Francisco	USA	8	1	Madeira	CA 94114
735 Dolores St	San Francisco	USA	15	2	Bready Shop	CA 94119
332 Hill St	San Francisco	USA	25	3	Super River	California 94114
3995 23rd St	San Francisco	USA	10	4	Ben's Shop	CA 94114
1056 Sanchez St	San Francisco	USA	12	5	Sanchez	California
551 Alvarado St	San Francisco	USA	20	6	Richvalley	CA 94114

```
In [88]: df7.drop("332 Hill St",0)
```

Out[88]:

	City	Country	Employees	ID	Name	State
Address						
3666 21st St	San Francisco	USA	8	1	Madeira	CA 94114
735 Dolores St	San Francisco	USA	15	2	Bready Shop	CA 94119
3995 23rd St	San Francisco	USA	10	4	Ben's Shop	CA 94114
1056 Sanchez St	San Francisco	USA	12	5	Sanchez	California
551 Alvarado St	San Francisco	USA	20	6	Richvalley	CA 94114

```
In [90]: df7
```

Out[90]:

	City	Country	Employees	ID	Name	State
Address						
3666 21st St	San Francisco	USA	8	1	Madeira	CA 94114
735 Dolores St	San Francisco	USA	15	2	Bready Shop	CA 94119
332 Hill St	San Francisco	USA	25	3	Super River	California 94114
3995 23rd St	San Francisco	USA	10	4	Ben's Shop	CA 94114
1056 Sanchez St	San Francisco	USA	12	5	Sanchez	California
551 Alvarado St	San Francisco	USA	20	6	Richvalley	CA 94114

```
In [94]: df7.drop(df7.index[0:3],0)
```

Out[94]:

	City	Country	Employees	ID	Name	State
Address						
3995 23rd St	San Francisco	USA	10	4	Ben's Shop	CA 94114
1056 Sanchez St	San Francisco	USA	12	5	Sanchez	California
551 Alvarado St	San Francisco	USA	20	6	Richvalley	CA 94114

```
In [97]: df7.drop(df7.columns[0:3],1)
```

```
Out[97]:
```

	ID	Name	State
Address			
3666 21st St	1	Madeira	CA 94114
735 Dolores St	2	Bready Shop	CA 94119
332 Hill St	3	Super River	California 94114
3995 23rd St	4	Ben's Shop	CA 94114
1056 Sanchez St	5	Sanchez	California
551 Alvarado St	6	Richvalley	CA 94114

```
In [101]: df7.index
```

```
Out[101]: Index(['3666 21st St', '735 Dolores St', '332 Hill St', '3995 23rd St',
                '1056 Sanchez St', '551 Alvarado St'],
                dtype='object', name='Address')
```

```
In [105]: df7.columns
```

```
Out[105]: Index(['City', 'Country', 'Employees', 'ID', 'Name', 'State'], dtype='object')
```

```
In [106]: len(df7.index)
```

```
Out[106]: 6
```

```
In [107]: df7["Continent"] = df7.shape[0]*["North America"] # add a new column
```

```
In [108]: df7
```

```
Out[108]:
```

	City	Country	Employees	ID	Name	State	Continent
Address							
3666 21st St	San Francisco	USA	8	1	Madeira	CA 94114	North America
735 Dolores St	San Francisco	USA	15	2	Bready Shop	CA 94119	North America
332 Hill St	San Francisco	USA	25	3	Super River	California 94114	North America
3995 23rd St	San Francisco	USA	10	4	Ben's Shop	CA 94114	North America
1056 Sanchez St	San Francisco	USA	12	5	Sanchez	California	North America
551 Alvarado St	San Francisco	USA	20	6	Richvalley	CA 94114	North America

```
In [109]: df7.shape # get row column number
```

```
Out[109]: (6, 7)
```

```
In [115]: df7.shape[0] # row number
```

```
Out[115]: 6
```

```
In [116]: df7.shape[1] # column number
```

```
Out[116]: 7
```

```
In [118]: df7.shape[0]*["North America"] # satırlarda north america geçen
```

```
Out[118]: ['North America',
'North America',
'North America',
'North America',
'North America',
'North America']
```

```
In [119]: df7["Continent"]=df7["Country"]+", "+"North America"
df7
```

```
Out[119]:
```

	City	Country	Employees	ID	Name	State	Continent
Address							
3666 21st St	San Francisco	USA	8	1	Madeira	CA 94114	USA,North America
735 Dolores St	San Francisco	USA	15	2	Bready Shop	CA 94119	USA,North America
332 Hill St	San Francisco	USA	25	3	Super River	California 94114	USA,North America
3995 23rd St	San Francisco	USA	10	4	Ben's Shop	CA 94114	USA,North America
1056 Sanchez St	San Francisco	USA	12	5	Sanchez	California	USA,North America
551 Alvarado St	San Francisco	USA	20	6	Richvalley	CA 94114	USA,North America

```
In [121]: df7_t = df7.T # df7_t değişkenine df7 deki değerler T yardımı ile aktarılır
```


In [122]: df7_t

Out[122]:

Address	3666 21st St	735 Dolores St	332 Hill St	3995 23rd St	1056 Sanchez St	551 Alvarado St
City	San Francisco	San Francisco	San Francisco	San Francisco	San Francisco	San Francisco
Country	USA	USA	USA	USA	USA	USA
Employees	8	15	25	10	12	20
ID	1	2	3	4	5	6
Name	Madeira	Bready Shop	Super River	Ben's Shop	Sanchez	Richvalley
State	CA 94114	CA 94119	California 94114	CA 94114	California	CA 94114
Continent	USA,North America	USA,North America	USA,North America	USA,North America	USA,North America	USA,North America

In [123]: df7_t["My Address"] = ["My City", "My Country", 10, 7, "My Name", "My State", "My Continent"]

In [124]: df7_t

Out[124]:

Address	3666 21st St	735 Dolores St	332 Hill St	3995 23rd St	1056 Sanchez St	551 Alvarado St	My Address
City	San Francisco	San Francisco	San Francisco	San Francisco	San Francisco	San Francisco	My City
Country	USA	USA	USA	USA	USA	USA	My Country
Employees	8	15	25	10	12	20	10
ID	1	2	3	4	5	6	7
Name	Madeira	Bready Shop	Super River	Ben's Shop	Sanchez	Richvalley	My Name
State	CA 94114	CA 94119	California 94114	CA 94114	California	CA 94114	My State
Continent	USA,North America	USA,North America	USA,North America	USA,North America	USA,North America	USA,North America	My Continent

In [126]: df7=df7_t.T # this is a tric

In [127]:

df7

Out[127]:

	City	Country	Employees	ID	Name	State	Continent
Address							
3666 21st St	San Francisco	USA	8	1	Madeira	CA 94114	USA,North America
735 Dolores St	San Francisco	USA	15	2	Bready Shop	CA 94119	USA,North America
332 Hill St	San Francisco	USA	25	3	Super River	California 94114	USA,North America
3995 23rd St	San Francisco	USA	10	4	Ben's Shop	CA 94114	USA,North America
1056 Sanchez St	San Francisco	USA	12	5	Sanchez	California	USA,North America
551 Alvarado St	San Francisco	USA	20	6	Richvalley	CA 94114	USA,North America
My Address	My City	My Country	10	7	My Name	My State	My Continent

In []:

Update a row

In [128]:

df7_t["3666 21st St"] = ["My City","My Country", 10, 7, "My Name", "My State", "My Continent"]
df7=df7_t.T
df7

Out[128]:

	City	Country	Employees	ID	Name	State	Continent
Address							
3666 21st St	My City	My Country	10	7	My Name	My State	My Continent
735 Dolores St	San Francisco	USA	15	2	Bready Shop	CA 94119	USA,North America
332 Hill St	San Francisco	USA	25	3	Super River	California 94114	USA,North America
3995 23rd St	San Francisco	USA	10	4	Ben's Shop	CA 94114	USA,North America
1056 Sanchez St	San Francisco	USA	12	5	Sanchez	California	USA,North America
551 Alvarado St	San Francisco	USA	20	6	Richvalley	CA 94114	USA,North America
My Address	My City	My Country	10	7	My Name	My State	My Continent

In []:

In []:

In []:

In []: df7.set_index?