

# PandasIndex02

November 17, 2016

```
In [1]: import pandas as pd
```

```
In [2]: drinks = pd.read_csv('http://bit.ly/drinksbycountry')
```

```
In [3]: drinks.head()
```

```
Out[3]:
```

	country	beer_servings	spirit_servings	wine_servings	\
0	Afghanistan	0	0	0	
1	Albania	89	132	54	
2	Algeria	25	0	14	
3	Andorra	245	138	312	
4	Angola	217	57	45	

  

	total_litres_of_pure_alcohol	continent
0	0.0	Asia
1	4.9	Europe
2	0.7	Africa
3	12.4	Europe
4	5.9	Africa

```
In [4]: drinks.continent.head()
```

```
Out[4]:
```

0	Asia
1	Europe
2	Africa
3	Europe
4	Africa

Name: continent, dtype: object

```
In [5]: drinks.set_index('country', inplace=True)
drinks.head()
```

```
Out[5]:
```

	beer_servings	spirit_servings	wine_servings	\
country				
Afghanistan	0	0	0	
Albania	89	132	54	
Algeria	25	0	14	
Andorra	245	138	312	
Angola	217	57	45	

	total_litres_of_pure_alcohol	continent
country		
Afghanistan	0.0	Asia
Albania	4.9	Europe
Algeria	0.7	Africa
Andorra	12.4	Europe
Angola	5.9	Africa

```
In [6]: # index is attached to each row, as it was set as 'country'
# this is typically where 0... would be
drinks.continent.head()
```

```
Out[6]: country
Afghanistan      Asia
Albania          Europe
Algeria          Africa
Andorra          Europe
Angola           Africa
Name: continent, dtype: object
```

```
In [8]: drinks.continent.value_counts()
```

```
Out[8]: Africa          53
Europe          45
Asia            44
North America    23
Oceania          16
South America    12
Name: continent, dtype: int64
```

```
In [9]: drinks.continent.value_counts().index
```

```
Out[9]: Index(['Africa', 'Europe', 'Asia', 'North America', 'Oceania',
              'South America'],
              dtype='object')
```

```
In [10]: drinks.continent.value_counts().values
```

```
Out[10]: array([53, 45, 44, 23, 16, 12])
```

```
In [11]: # find index and show me the value
drinks.continent.value_counts()['Africa']
```

```
Out[11]: 53
```

```
In [12]: drinks.continent.value_counts().sort_values()
```

```
Out[12]: South America    12
         Oceania         16
         North America   23
         Asia            44
         Europe          45
         Africa          53
         Name: continent, dtype: int64
```

```
In [13]: # sort index
         drinks.continent.value_counts().sort_index()
```

```
Out[13]: Africa          53
         Asia            44
         Europe          45
         North America   23
         Oceania         16
         South America   12
         Name: continent, dtype: int64
```

```
In [14]: people = pd.Series([3000000, 85000], index=['Albania', 'Andorra'], name='p')
```

```
In [15]: people
```

```
Out[15]: Albania    3000000
         Andorra     85000
         Name: population, dtype: int64
```

```
In [16]: drinks.beer_servings * people
```

```
Out[16]: Afghanistan      NaN
         Albania           267000000.0
         Algeria           NaN
         Andorra           20825000.0
         Angola            NaN
         Antigua & Barbuda  NaN
         Argentina         NaN
         Armenia           NaN
         Australia         NaN
         Austria           NaN
         Azerbaijan        NaN
         Bahamas           NaN
         Bahrain           NaN
         Bangladesh        NaN
         Barbados          NaN
         Belarus           NaN
         Belgium           NaN
         Belize            NaN
         Benin             NaN
         Bhutan            NaN
```

Bolivia	NaN
Bosnia-Herzegovina	NaN
Botswana	NaN
Brazil	NaN
Brunei	NaN
Bulgaria	NaN
Burkina Faso	NaN
Burundi	NaN
Cabo Verde	NaN
Cambodia	NaN
...	
Sudan	NaN
Suriname	NaN
Swaziland	NaN
Sweden	NaN
Switzerland	NaN
Syria	NaN
Tajikistan	NaN
Tanzania	NaN
Thailand	NaN
Timor-Leste	NaN
Togo	NaN
Tonga	NaN
Trinidad & Tobago	NaN
Tunisia	NaN
Turkey	NaN
Turkmenistan	NaN
Tuvalu	NaN
USA	NaN
Uganda	NaN
Ukraine	NaN
United Arab Emirates	NaN
United Kingdom	NaN
Uruguay	NaN
Uzbekistan	NaN
Vanuatu	NaN
Venezuela	NaN
Vietnam	NaN
Yemen	NaN
Zambia	NaN
Zimbabwe	NaN
dtype: float64	

```
In [17]: # concat rows on top of rows or columns next to columns
pd.concat([drinks, people], axis=1).head()
```

```
Out[17]:
```

	beer_servings	spirit_servings	wine_servings	\
Afghanistan	0	0	0	

Albania	89	132	54
Algeria	25	0	14
Andorra	245	138	312
Angola	217	57	45

	total_litres_of_pure_alcohol	continent	population
Afghanistan	0.0	Asia	NaN
Albania	4.9	Europe	3000000.0
Algeria	0.7	Africa	NaN
Andorra	12.4	Europe	85000.0
Angola	5.9	Africa	NaN

In [ ]: