In [159]:

```
1 df
```

17	Belize	263	114	8	6.8	North America
18	Benin	34	4	13	1.1	Africa
19	Bhutan	23	0	0	0.4	Asia
20	Bolivia	167	41	8	3.8	South America
21	Bosnia-Herzegovina	76	173	8	4.6	Europe
22	Botswana	173	35	35	5.4	Africa
23	Brazil	245	145	16	7.2	South America
24	Brunei	31	2	1	0.6	Asia
25	Bulgaria	231	252	94	10.3	Europe
26	Burkina Faso	25	7	7	4.3	Africa
27	Burundi	88	0	0	6.3	Africa

In [ ]:

```
1
```

In [158]:

```
1 df.groupby('continent').beer_servings.agg(['count','min','max','mean'])
```

Out[158]:

continent	count	min	max	mean
Africa	53	0	376	61.471698
Asia	44	0	247	37.045455
Europe	45	0	361	193.777778
North America	23	1	285	145.434783
Oceania	16	0	306	89.687500
South America	12	93	333	175.083333

In [160]:

```
1 df.groupby('continent').wine_servings.agg(['count','min','max','mean'])
```

Out[160]:

continent	count	min	max	mean
Africa	53	0	233	16.264151
Asia	44	0	123	9.068182
Europe	45	0	370	142.222222
North America	23	1	100	24.521739
Oceania	16	0	212	35.625000
South America	12	1	221	62.416667

In [161]:

```
1 df
```

Out[161]:

	country	beer_servings	spirit_servings	wine_servings	total_litres_of_pure_alcohol	continent
0	Afghanistan	0	0	0	0.0	Asia
1	Albania	89	132	54	4.9	Europe
2	Algeria	25	0	14	0.7	Africa
3	Andorra	245	138	312	12.4	Europe
4	Angola	217	57	45	5.9	Africa
5	Antigua & Barbuda	102	128	45	4.9	North America
6	Argentina	193	25	221	8.3	South America
7	Armenia	21	179	11	3.8	Europe
8	Australia	261	72	212	10.4	Oceania
9	Austria	279	75	191	9.7	Europe

In [162]:

```
1 df.groupby('continent').total_litres_of_pure_alcohol.agg('sum')
```

Out[162]:

```
continent
Africa           159.4
Asia              95.5
Europe           387.8
North America    137.9
Oceania           54.1
South America     75.7
Name: total_litres_of_pure_alcohol, dtype: float64
```

In [ ]:

```
1
```

string handling

In [163]:

```
1 val = "a,b,steve"
```

In [165]:

```
1 res = val.split(',')
```

In [166]:

```
1 res
```

Out[166]:

```
['a', 'b', 'steve']
```

In [167]:

```
1 ' '.join(res)
```

Out[167]:

```
'a b steve'
```

In [169]:

```
1 ''.join(res)
```

Out[169]:

```
'absteve'
```

In [ ]:

```
1
```

In [176]:

```
1 txt = """
2     dave@gmail.com
3     steve@google.com
4     rob@gmail.com
5     ryan@yahoo.com
6     "apple"
7     "mango"
8 """
```

In [171]:

```
1 txt
```

Out[171]:

```
'\n    dave@gmail.com\n    steve@google.com\n    rob@gmail.com\n    ry
an@yahoo.com.\n'
```

In [172]:

```
1 import re
```

In [173]:

```
1 pattern = r'[a-zA-Z]+@[a-zA-Z]+[.com]+'
```

In [174]:

```
1 regex = re.compile(pattern)
```

In [177]:

```
1 regex.findall(txt)
```

Out[177]:

```
['dave@gmail.com', 'steve@google.com', 'rob@gmail.com', 'ryan@yahoo.co
m']
```

In [ ]:

```
1
```

In [178]:

```
1 data = {
2     "Punit":"punit@yahoo.com",
3     "raj":"raj@gmail.com",
4     "steve":"steve@gmail.com"
5 }
```

In [179]:

```
1 data
```

Out[179]:

```
{'Punit': 'punit@yahoo.com',
 'raj': 'raj@gmail.com',
 'steve': 'steve@gmail.com'}
```

In [180]:

```
1 data = pd.Series(data)
```

In [181]:

```
1 data
```

Out[181]:

```
Punit    punit@yahoo.com
raj        raj@gmail.com
steve    steve@gmail.com
dtype: object
```

In [182]:

```
1 data.str.contains('gmail')
```

Out[182]:

```
Punit    False
raj       True
steve     True
dtype: bool
```

In [183]:

```
1 data.str.endswith('com')
```

Out[183]:

```
Punit    True
raj      True
steve    True
dtype: bool
```

In [184]:

```
1 data.str.len()
```

Out[184]:

```
Punit    15
raj      13
steve    15
dtype: int64
```

In [185]:

```
1 data.str.split('@')
```

Out[185]:

```
Punit    [punit, yahoo.com]
raj        [raj, gmail.com]
steve    [steve, gmail.com]
dtype: object
```

In [ ]:

```
1
```

In [ ]:

```
1
```