In [62]:
```
import pandas as pd
import seaborn as sns
import numpy as np
```

In [48]:
```
df = sns.load_dataset("iris")
print(df.shape)
```

```
(150, 5)
```

In [49]:
```
df.head()
```

Out[49]:

	sepal_length	sepal_width	petal_length	petal_width	species
0	5.1	3.5	1.4	0.2	setosa
1	4.9	3.0	1.4	0.2	setosa
2	4.7	3.2	1.3	0.2	setosa
3	4.6	3.1	1.5	0.2	setosa
4	5.0	3.6	1.4	0.2	setosa

In [50]:
```
df.columns
```

Out[50]:
```
Index(['sepal_length', 'sepal_width', 'petal_length', 'petal_width',
       'species'],
      dtype='object')
```

In [51]:
```
df[0:10]
```

Out[51]:

	sepal_length	sepal_width	petal_length	petal_width	species
0	5.1	3.5	1.4	0.2	setosa
1	4.9	3.0	1.4	0.2	setosa
2	4.7	3.2	1.3	0.2	setosa
3	4.6	3.1	1.5	0.2	setosa
4	5.0	3.6	1.4	0.2	setosa
5	5.4	3.9	1.7	0.4	setosa
6	4.6	3.4	1.4	0.3	setosa
7	5.0	3.4	1.5	0.2	setosa
8	4.4	2.9	1.4	0.2	setosa
9	4.9	3.1	1.5	0.1	setosa

In [52]:
```
df.info()

df.describe()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 150 entries, 0 to 149
Data columns (total 5 columns):
sepal_length    150 non-null float64
sepal_width     150 non-null float64
petal_length    150 non-null float64
petal_width     150 non-null float64
species         150 non-null object
dtypes: float64(4), object(1)
memory usage: 6.0+ KB
```

Out[52]:

	sepal_length	sepal_width	petal_length	petal_width
count	150.000000	150.000000	150.000000	150.000000
mean	5.843333	3.057333	3.758000	1.199333
std	0.828066	0.435866	1.765298	0.762238
min	4.300000	2.000000	1.000000	0.100000
25%	5.100000	2.800000	1.600000	0.300000
50%	5.800000	3.000000	4.350000	1.300000
75%	6.400000	3.300000	5.100000	1.800000
max	7.900000	4.400000	6.900000	2.500000

In [53]:
```
a=df.loc[1]
print(a)
type(a)
```

```
sepal_length       4.9
sepal_width          3
petal_length       1.4
petal_width        0.2
species         setosa
Name: 1, dtype: object
```

Out[53]:
```
pandas.core.series.Series
```

In [54]:
```
a=df.iloc[1]
print(a)
print(type(a))
```

```
sepal_length       4.9
sepal_width          3
petal_length       1.4
petal_width        0.2
species         setosa
Name: 1, dtype: object
<class 'pandas.core.series.Series'>
```

In [55]:
```
df.head()
```

Out[55]:

	sepal_length	sepal_width	petal_length	petal_width	species
0	5.1	3.5	1.4	0.2	setosa
1	4.9	3.0	1.4	0.2	setosa
2	4.7	3.2	1.3	0.2	setosa
3	4.6	3.1	1.5	0.2	setosa
4	5.0	3.6	1.4	0.2	setosa

In [56]:
```
df.columns
```

Out[56]:
```
Index(['sepal_length', 'sepal_width', 'petal_length', 'petal_width',
       'species'],
      dtype='object')
```

In [60]:
```
# df=df.drop("sepal_length",1)
df.head()
df.drop(0,0)
```

Out[60]:

	sepal_width	petal_length	petal_width	species
1	3.0	1.4	0.2	setosa
2	3.2	1.3	0.2	setosa
3	3.1	1.5	0.2	setosa
4	3.6	1.4	0.2	setosa
5	3.9	1.7	0.4	setosa
...	...	...	...	...
145	3.0	5.2	2.3	virginica
146	2.5	5.0	1.9	virginica
147	3.0	5.2	2.0	virginica
148	3.4	5.4	2.3	virginica
149	3.0	5.1	1.8	virginica

149 rows × 4 columns

In [69]:
```
df['beauty_number'] = np.random.random(size=len(df))*10
```

In [70]:
```
df
```

Out[70]:

	sepal_width	petal_length	petal_width	species	beauty_number
0	3.5	1.4	0.2	setosa	6.525121
1	3.0	1.4	0.2	setosa	6.902773
2	3.2	1.3	0.2	setosa	6.048944
3	3.1	1.5	0.2	setosa	9.758891
4	3.6	1.4	0.2	setosa	8.521344
...	...	...	...	...	...
145	3.0	5.2	2.3	virginica	1.823778
146	2.5	5.0	1.9	virginica	3.003906
147	3.0	5.2	2.0	virginica	1.789814
148	3.4	5.4	2.3	virginica	6.429127
149	3.0	5.1	1.8	virginica	5.064191

150 rows × 5 columns

In [77]:
```
df["Rank"]=df['beauty_number'].rank(ascending=False)
```

In [78]:
```
df
```

Out[78]:

	sepal_width	petal_length	petal_width	species	beauty_number	Rank
0	3.5	1.4	0.2	setosa	6.525121	56.0
1	3.0	1.4	0.2	setosa	6.902773	50.0
2	3.2	1.3	0.2	setosa	6.048944	60.0
3	3.1	1.5	0.2	setosa	9.758891	3.0
4	3.6	1.4	0.2	setosa	8.521344	25.0
...	...	...	...	...	...	...
145	3.0	5.2	2.3	virginica	1.823778	120.0
146	2.5	5.0	1.9	virginica	3.003906	107.0
147	3.0	5.2	2.0	virginica	1.789814	121.0
148	3.4	5.4	2.3	virginica	6.429127	57.0
149	3.0	5.1	1.8	virginica	5.064191	75.0

150 rows × 6 columns

In [80]:
```
df.sort_index()
```

Out[80]:

	sepal_width	petal_length	petal_width	species	beauty_number	Rank
0	3.5	1.4	0.2	setosa	6.525121	56.0
1	3.0	1.4	0.2	setosa	6.902773	50.0
2	3.2	1.3	0.2	setosa	6.048944	60.0
3	3.1	1.5	0.2	setosa	9.758891	3.0
4	3.6	1.4	0.2	setosa	8.521344	25.0
...	...	...	...	...	...	...
145	3.0	5.2	2.3	virginica	1.823778	120.0
146	2.5	5.0	1.9	virginica	3.003906	107.0
147	3.0	5.2	2.0	virginica	1.789814	121.0
148	3.4	5.4	2.3	virginica	6.429127	57.0
149	3.0	5.1	1.8	virginica	5.064191	75.0

150 rows × 6 columns

In [85]:
```
df.sort_values(['beauty_number'],ascending=False)
```

Out[85]:

	sepal_width	petal_length	petal_width	species	beauty_number	Rank
117	3.8	6.7	2.2	virginica	9.974948	1.0
26	3.4	1.6	0.4	setosa	9.794500	2.0
3	3.1	1.5	0.2	setosa	9.758891	3.0
13	3.0	1.1	0.1	setosa	9.757050	4.0
66	3.0	4.5	1.5	versicolor	9.665169	5.0
...	...	...	...	...	...	...
69	2.5	3.9	1.1	versicolor	0.089029	146.0
10	3.7	1.5	0.2	setosa	0.047417	147.0
105	3.0	6.6	2.1	virginica	0.046824	148.0
128	2.8	5.6	2.1	virginica	0.036544	149.0
48	3.7	1.5	0.2	setosa	0.005386	150.0

150 rows × 6 columns

In [86]:
```
df.head(10)
```

Out[86]:

	sepal_width	petal_length	petal_width	species	beauty_number	Rank
0	3.5	1.4	0.2	setosa	6.525121	56.0
1	3.0	1.4	0.2	setosa	6.902773	50.0
2	3.2	1.3	0.2	setosa	6.048944	60.0
3	3.1	1.5	0.2	setosa	9.758891	3.0
4	3.6	1.4	0.2	setosa	8.521344	25.0
5	3.9	1.7	0.4	setosa	2.303155	116.0
6	3.4	1.4	0.3	setosa	4.929013	79.0
7	3.4	1.5	0.2	setosa	5.101442	74.0
8	2.9	1.4	0.2	setosa	3.467244	101.0
9	3.1	1.5	0.1	setosa	2.500412	112.0