```
import numpy as np
import pandas as pd
```

```
data = pd.read_csv("Iris_dataset.csv", delimiter=',')
```

```
data
```

	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm	Species
0	1	5.1	3.5	1.4	0.2	Iris-setosa
1	2	4.9	3.0	1.4	0.2	Iris-setosa
2	3	4.7	3.2	1.3	0.2	Iris-setosa
3	4	4.6	3.1	1.5	0.2	Iris-setosa
4	5	5.0	3.6	1.4	0.2	Iris-setosa
...	...	...	...	...	...	...
145	146	6.7	3.0	5.2	2.3	Iris-virginica
146	147	6.3	2.5	5.0	1.9	Iris-virginica
147	148	6.5	3.0	5.2	2.0	Iris-virginica
148	149	6.2	3.4	5.4	2.3	Iris-virginica
149	150	5.9	3.0	5.1	1.8	Iris-virginica

150 rows × 6 columns

```
data.describe()
```

	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm
count	150.000000	150.000000	150.000000	150.000000	150.000000
mean	75.500000	5.843333	3.054000	3.758667	1.198667
std	43.445368	0.828066	0.433594	1.764420	0.763161
min	1.000000	4.300000	2.000000	1.000000	0.100000
25%	38.250000	5.100000	2.800000	1.600000	0.300000
50%	75.500000	5.800000	3.000000	4.350000	1.300000
75%	112.750000	6.400000	3.300000	5.100000	1.800000
max	150.000000	7.900000	4.400000	6.900000	2.500000

```
Iris_setosa=data[data["Species"]=="Iris-setosa"]
print(Iris_setosa.PetalLengthCm.mode())
Iris_setosa.describe()
```

```
0    1.5
dtype: float64
```

	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm
count	50.00000	50.00000	50.000000	50.000000	50.00000
mean	25.50000	5.00600	3.418000	1.464000	0.24400
std	14.57738	0.35249	0.381024	0.173511	0.10721
min	1.00000	4.30000	2.300000	1.000000	0.10000
25%	13.25000	4.80000	3.125000	1.400000	0.20000
50%	25.50000	5.00000	3.400000	1.500000	0.20000
75%	37.75000	5.20000	3.675000	1.575000	0.30000
max	50.00000	5.80000	4.400000	1.900000	0.60000

```
Iris_versicolor=data[data["Species"]=="Iris-versicolor"]
Iris_virginica=data[data["Species"]=="Iris-virginica"]
```

```
print(Iris_versicolor.SepalLengthCm.mode())
Iris_versicolor.describe()
```

```
0    5.5
1    5.6
2    5.7
dtype: float64
```

	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm
count	50.00000	50.000000	50.000000	50.000000	50.000000
mean	75.50000	5.936000	2.770000	4.260000	1.326000
std	14.57738	0.516171	0.313798	0.469911	0.197753
min	51.00000	4.900000	2.000000	3.000000	1.000000
25%	63.25000	5.600000	2.525000	4.000000	1.200000
50%	75.50000	5.900000	2.800000	4.350000	1.300000
75%	87.75000	6.300000	3.000000	4.600000	1.500000
max	100.00000	7.000000	3.400000	5.100000	1.800000

```
print(Iris_virginica.PetalLengthCm.mode())
Iris_virginica.describe()
```

```
0    5.1
dtype: float64
```

	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm
count	50.00000	50.00000	50.000000	50.000000	50.00000
mean	125.50000	6.58800	2.974000	5.552000	2.02600
std	14.57738	0.63588	0.322497	0.551895	0.27465
min	101.00000	4.90000	2.200000	4.500000	1.40000

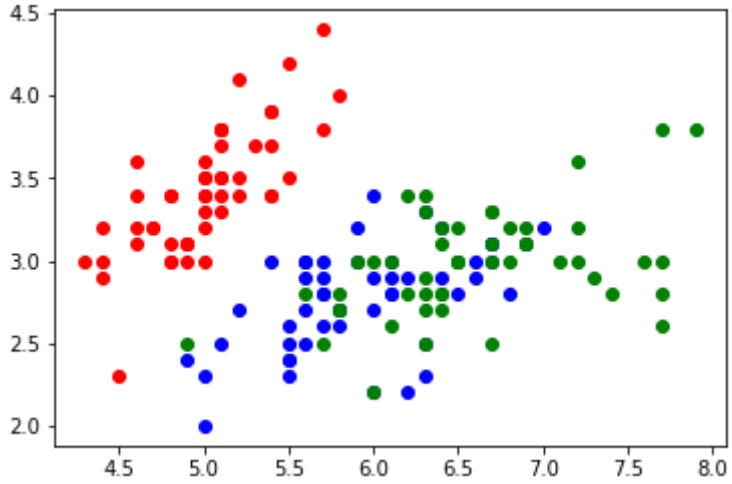
```
import matplotlib.pyplot as plt
```

50%	125.50000	6.50000	3.000000	5.550000	2.00000

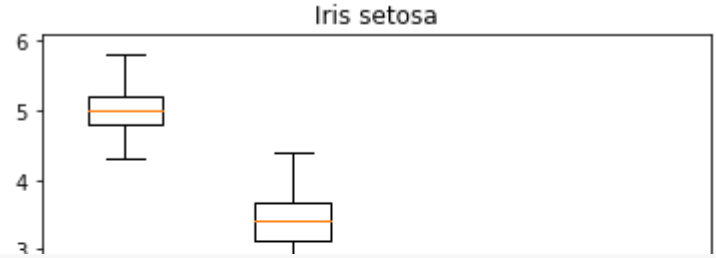
```
SepalLengthCm_s = Iris_setosa['SepalLengthCm']
SepalLengthCm_vc = Iris_versicolor['SepalLengthCm']
SepalLengthCm_vg = Iris_virginica['SepalLengthCm']
SepalWidthCm_s = Iris_setosa['SepalWidthCm']
SepalWidthCm_vc = Iris_versicolor['SepalWidthCm']
SepalWidthCm_vg = Iris_virginica['SepalWidthCm']
```

```
plt.scatter(SepalLengthCm_s, SepalWidthCm_s, color='red')
plt.scatter(SepalLengthCm_vc, SepalWidthCm_vc, color='blue')
plt.scatter(SepalLengthCm_vg, SepalWidthCm_vg, color='green')
```

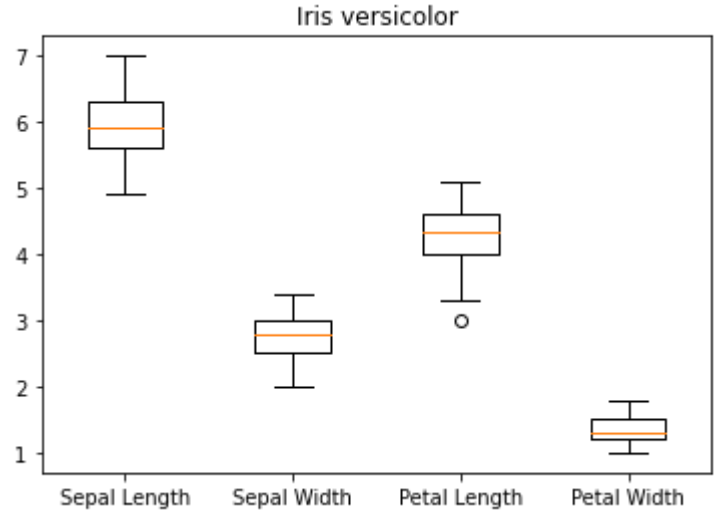
```
<matplotlib.collections.PathCollection at 0x7f22f00acd30>
```



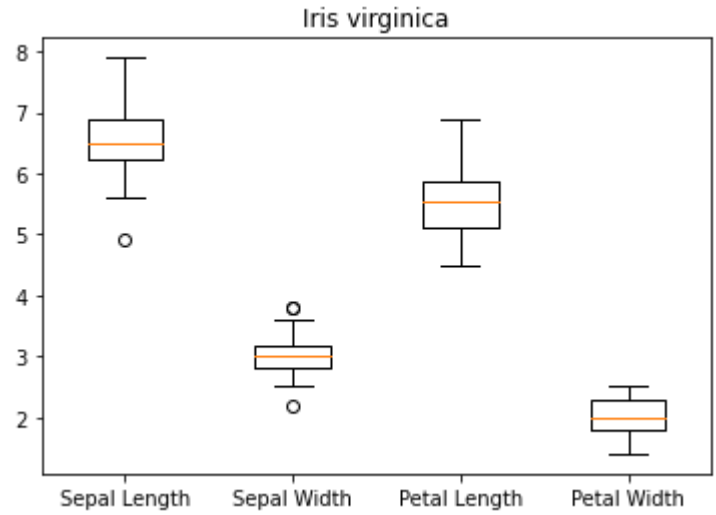

```
plt.boxplot([Iris_setosa.SepalLengthCm, Iris_setosa.SepalWidthCm, Iris_setosa.Peta
plt.title("Iris setosa")
plt.xticks([1, 2, 3, 4], ['Sepal Length', 'Sepal Width', 'Petal Length', 'Petal Wi
print()
```




```
plt.boxplot([Iris_versicolor.SepalLengthCm, Iris_versicolor.SepalWidthCm, Iris_vers
plt.title("Iris versicolor")
plt.xticks([1, 2, 3, 4], ['Sepal Length', 'Sepal Width', 'Petal Length', 'Petal Wi
print()
```

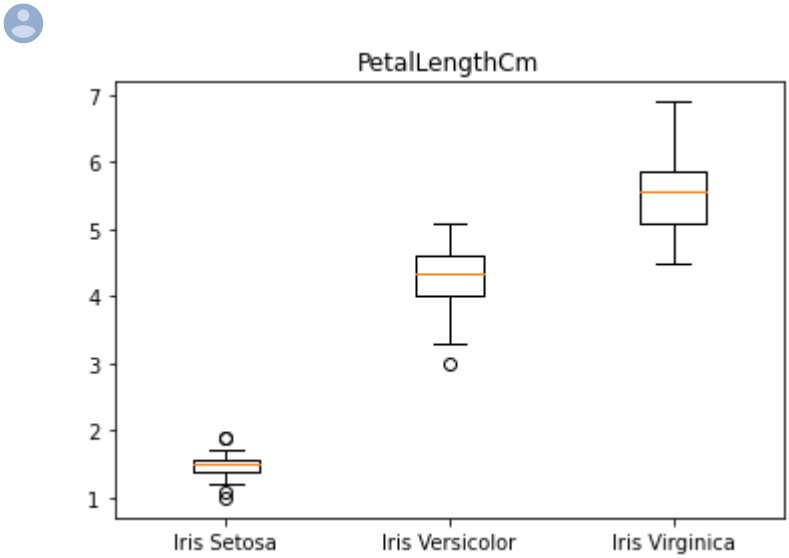



```
plt.boxplot([Iris_virginica.SepalLengthCm, Iris_virginica.SepalWidthCm, Iris_virgi
plt.title("Iris virginica")
plt.xticks([1, 2, 3, 4], ['Sepal Length', 'Sepal Width', 'Petal Length', 'Petal Wi
print()
```




```
plt.boxplot([Iris_setosa.PetalLengthCm, Iris_versicolor.PetalLengthCm, Iris_virgin
plt.title("PetalLengthCm")
plt.xticks([1, 2, 3], ['Iris Setosa', 'Iris Versicolor', 'Iris Virginica'])
```

```
print()
```




```
print(Iris_setosa.PetalLengthCm.mode())
print(Iris_versicolor.PetalLengthCm.mode())
print(Iris_virginica.PetalLengthCm.mode())
```

```
0    1.5
dtype: float64
0    4.5
dtype: float64
0    5.1
dtype: float64
```