```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
from sklearn.cluster import KMeans


data = pd.read_csv('Iris.csv')
data.head()
```

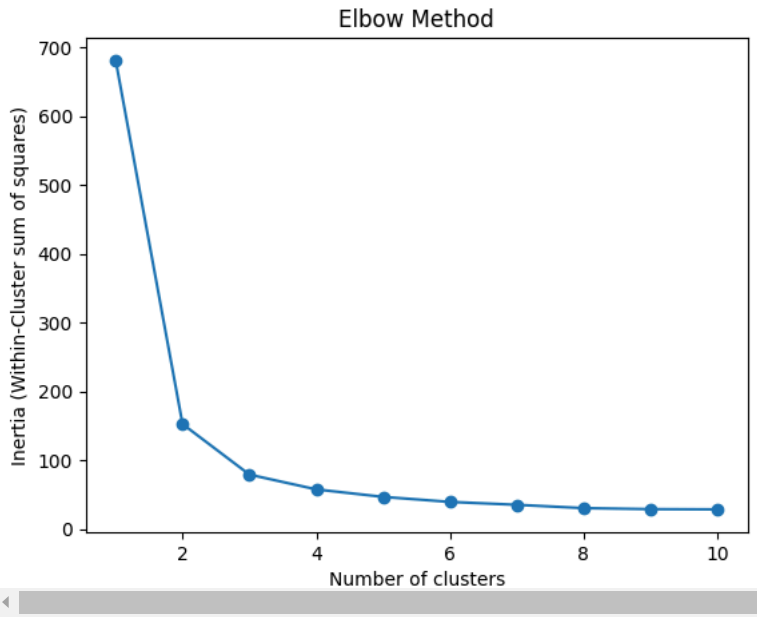
	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm	Class Label
0	1	5.1	3.5	1.4	0.2	Iris-setosa
1	2	4.9	3.0	1.4	0.2	Iris-setosa
2	3	4.7	3.2	1.3	0.2	Iris-setosa
3	4	4.6	3.1	1.5	0.2	Iris-setosa
4	5	5.0	3.6	1.4	0.2	Iris-setosa

Next steps: Generate code with `data` | View recommended plots | New interactive sheet

```
X = data.iloc[:,[1,2,3,4]]


inertia = []

for i in range(1,11):
    kmeans = KMeans(n_clusters=i,random_state=42)
    kmeans.fit(X)
    inertia.append(kmeans.inertia_)

print(inertia)
```

```
[680.8243999999996, 152.36870647733915, 78.94506582597728, 57.44028021295475, 46.535582051282034, 39.251830892636775, 35.0427599524
```

```
plt.plot(range(1,11), inertia, marker = 'o')
plt.xlabel('Number of clusters')
plt.ylabel('Inertia (Within-Cluster sum of squares)')
plt.title('Elbow Method')
plt.show()
```



Start coding or generate with AI.