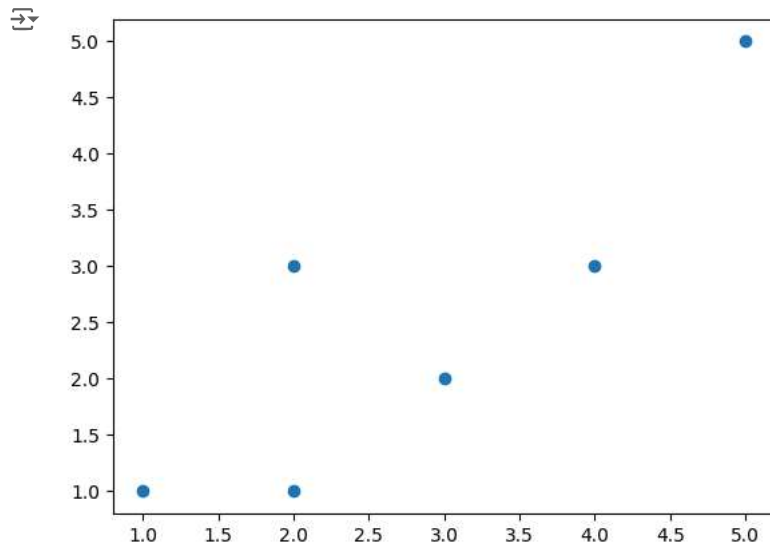


```
import matplotlib.pyplot as plt
```

```
x1=[1, 2, 2, 3, 4, 5]  
x2=[1, 1, 3, 2, 3, 5]
```

```
plt.scatter(x1, x2)  
plt.show()
```

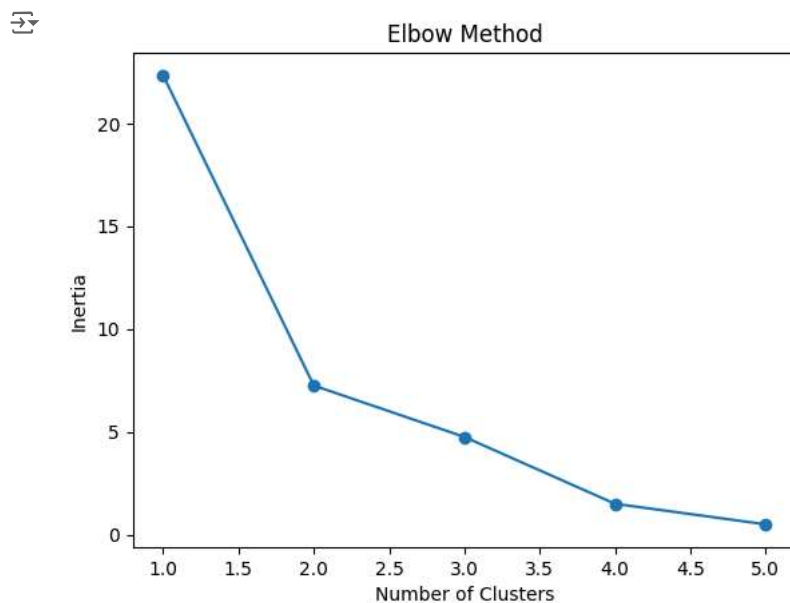


```
from sklearn.cluster import KMeans
```

```
data=list(zip(x1, x2))  
inertias=[]
```

```
for i in range(1, 6):  
    kmeans=KMeans(n_clusters=i)  
    kmeans.fit(data)  
    inertias.append(kmeans.inertia_)
```

```
plt.plot(range(1, 6), inertias, marker='o')  
plt.title('Elbow Method')  
plt.xlabel('Number of Clusters')  
plt.ylabel('Inertia')  
plt.show()
```



```
kmeans=KMeans(n_clusters=2)  
kmeans.fit(data)
```

```
plt.scatter(x1, x2, c=kmeans.labels_)  
plt.show()
```

