**3. K-Means :**

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| import matplotlib.pyplot as plt from sklearn.cluster import KMeans  x = [4, 5, 10, 4, 3, 11, 14 , 6, 10, 12] y = [21, 19, 24, 17, 16, 25, 24, 22, 21, 21]  data = list(zip(x, y)) print(data)  inertias = []  for i in range(1,11):     kmeans = KMeans(n\_clusters=i)     kmeans.fit(data)     inertias.append(kmeans.inertia\_)  plt.plot(range(1,11), 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(x, y, c=kmeans.labels\_) plt.show() |

Output :

