**<><>Task 1.1<><>**

The mean of the 5-Dimensional array is: [ 3.88871 3.92225 3.87152 3.8984 3.85267]

**<><>Task 1.2<><>**

The 'Reconstruction Error' is: 113183.433705

**<><>Task 1.3<><>**

Centroids of two clusters after convergence:

[ 4.19821338 4.25983918 4.15755422 4.0951781 4.1408347 ]

[ 3.14419016 3.11016891 3.18345593 3.42504427 3.159481 ]

**<><>Task 1.5<><>**

36534 points are closest to c1.

13466 points are closest to c2.

**<><>Task 1.6<><>**

Reconstruction error is: 63420.4265302

**<><>Task 2.1<><>**

Number of nodes: 61

Number of edges: 540

**<><>Task 2.2<><>**

There are 3 connected components.

There are 40 nodes in the largest connected component.

**<><>Task 2.3<><>**

There are 5 communities.

Community0 nodes = frozenset([769, 747, 708, 774, 840, 713, 719, 856, 772, 805, 800, 869, 745, 810, 811, 880, 753, 819, 823, 697, 890, 828, 830, 703])

Community1 nodes = frozenset([870, 871, 879, 881, 858, 895])

Community2 nodes = frozenset([804, 876, 878, 888, 753, 882, 886, 729, 856, 889, 861, 863])

Community3 nodes = frozenset([867, 872, 873, 874, 877, 776, 885, 887])

Community4 nodes = frozenset([857, 868, 862, 865])