For the karate dataset ,

If we use betweeness based clustering,

Number of cluster found is 1

Modularity score is 74.8974358974

Time to complete is 0.0718638896942 seconds

If we use modularity based clustering

Number of cluster found is 4

Modularity score is 82.4102564103

Time to complete is 0.0586040019989 seconds

If we use spectral clustering

Number of cluster found is 3

Modularity score is 64.0256410256

Time to complete is 0.0482380390167 seconds

For the dolphin dataset

If we use betweeness based clustering,

Number of cluster found is 4

Modularity score is 193.962264151

Time to complete is 0.454602956772seconds

If we use modularity based clustering

Number of cluster found is 5

Modularity score is 179.874213836

Time to complete is 0.34588098526 seconds

If we use spectral clustering

Number of cluster found is 3

Modularity score is 136.0

Time to complete is 0.226394891739seconds

Jazz part b :

time to complete was 358.82156992 seconds

number of cluster found is 38

modularity score is 2026.95842451

jazz part c

6 is the num of clusters

1689.54923414 is the modularity score

time to complete was 6.16570997238 seconds

jazz part d

3 is the num of clusters

835.620714807 is the modularity score

time to complete was 4.8189330101 seconds