

## **Project P1**

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### **Degree Distribution**

**1.** Tried creating 3 random graphs using NetworkX. None of them depicted power law. - Refer graphs

**2.** Amazon.small – yes it is scale free graph, as lambda values for the top 50% of large K lies between 1.9 and 2.4 - Refer the graph

Amazon.large – yes it is scale free, as lambda values for the top 50% of large K lies between 2 and 2.7 - Refer the graph

dblp.small – yes it is scale free, as lambda values for the top 20% of large K lies between 2 and 2.6 - Refer the graph

dblp.large – yes it is scale free, as lambda values for the top 50% of large K lies between 2 and 2.5 - Refer the graph

Youtube.small – yes it is scale free, as lambda values for the top 50% of large K lies between 2.3 and 3.1 - Refer the graph

Youtube.large – Yes it is scale free, as for very large K values. - Refer the graph

### Closeness centrality

1.

id	closeness
F	0.07142857142857142
C	0.07142857142857142
H	0.06666666666666667
D	0.06666666666666667
B	0.058823529411764705
E	0.058823529411764705
G	0.05555555555555555
A	0.05555555555555555
I	0.047619047619047616
J	0.034482758620689655

2. Machine F and C would be the best as they have the highest closeness to all other nodes.

### Articulation Points

1.

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