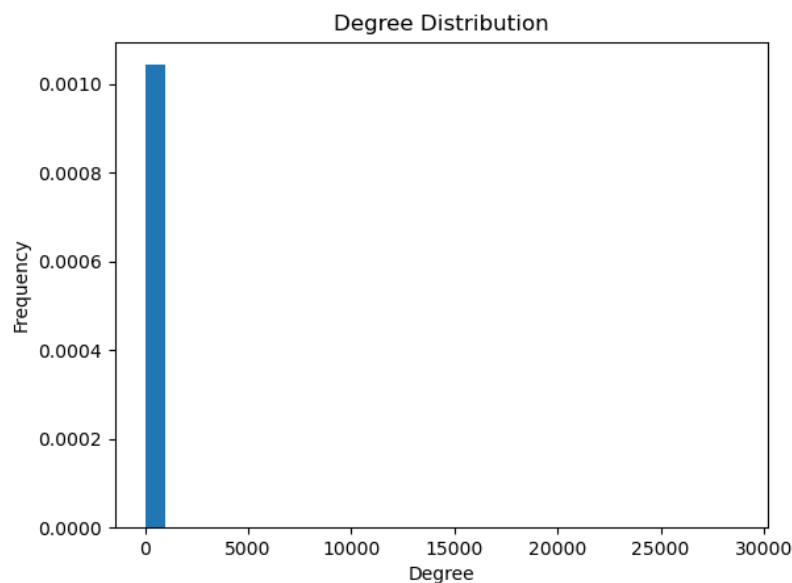


Q7 Social Media Network Analysis

Task 1: Calculate and plot the clustering coefficient and degree distribution of the network.

The coefficient is 0.0808

```
==> Task1
0% | 0/1 [00:00<?, ?it/s]A
Average Clustering Coefficient: 0.08080199296954468
100% | 1/1 [06:14<00:00, 374.21s/it]
```



Task2: Identify the most influential nodes in a network and analyze them. Use centrality metrics such as degree centrality and visualization

Top 10 Influential Nodes: ['1072', '363', '35661', '106', '482709', '663931', '929', '808', '27837', '108624']

```
==> Task2
Top 10 Influential Nodes: ['1072', '363', '35661', '106', '482709', '663931', '929', '808', '27837', '108624']
```

Task3: Identify Isolated Nodes in the network and Recognize Connected Components in the Network

```
==> Task3
Isolated Nodes: []
Number of Connected Components: 3
```

The number of connected components are 3

Task4: Calculate Average shortest path Length of the network

Task5: Calculate the Diameter of the network

Task6: Detect Community Structures in the Network. Please employ community detection algorithms (e.g., Louvain algorithm) to find community structures within the network.