CS 765 Assignment 3

Team

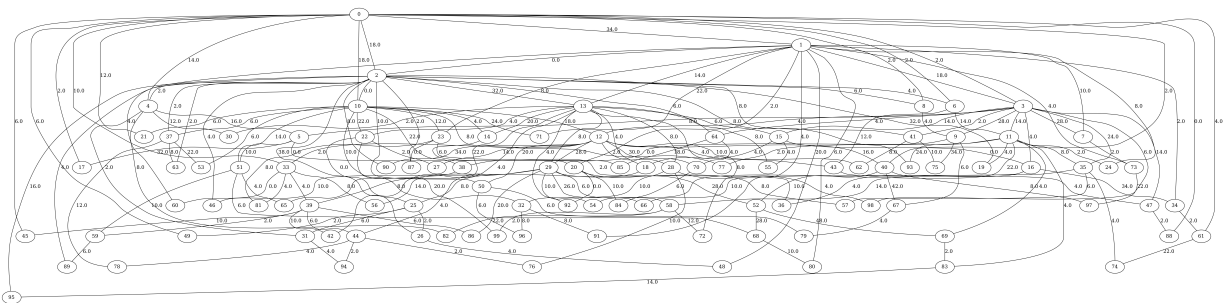| Aa Name	≔ Roll Number
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The graph generated essentially uses the Barabasi-Albert Algorithm to get a scale free-graph.

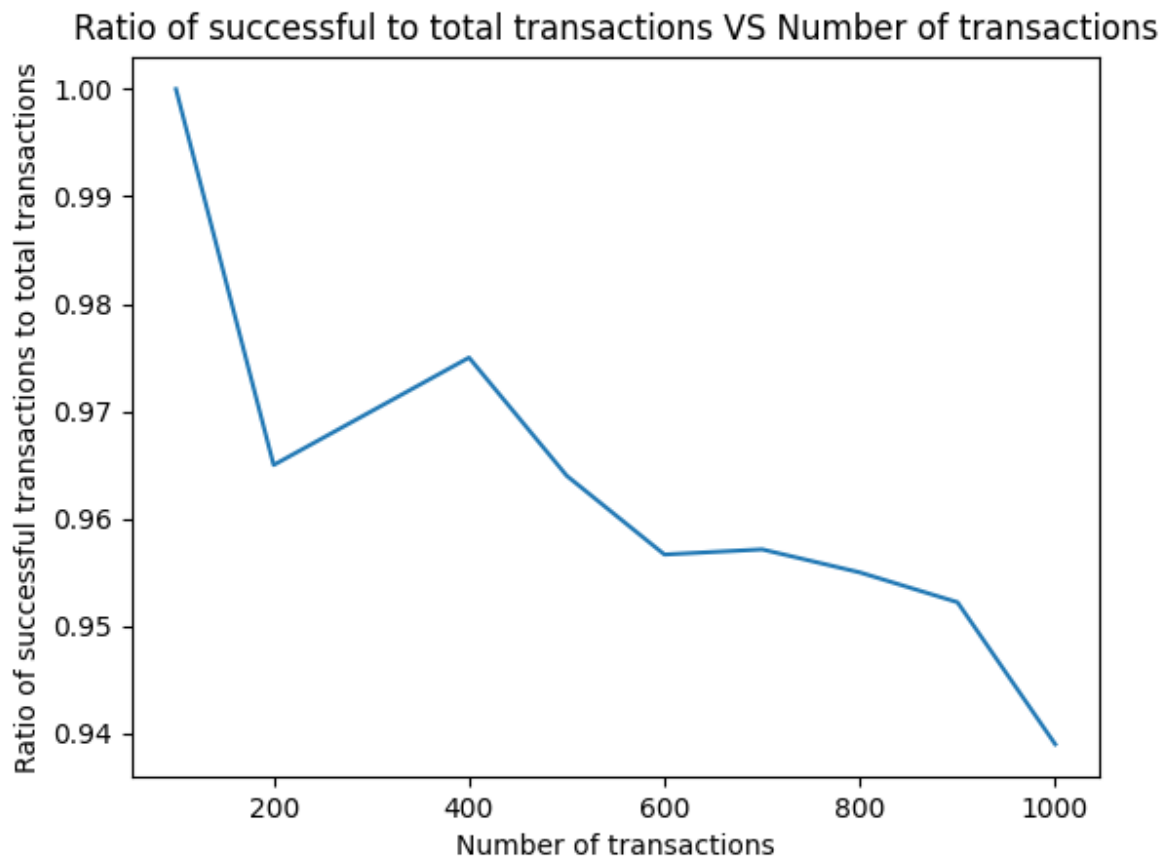A scale-free graph follows the power law of distribution.

Parameters set for the Barabasi-Albert algorithm:

1. Number of initial nodes = 2

2. m = 2

As we observe in this case very few users have a lot of accounts, but a lot of users have 2 accounts, as suggested by m = 2.

Network Generated

Ratio of successful to total transactions VS Number of transactions

Now, the ratio of successful to total transactions Vs. the number of transactions comes to be 1 at the beginning, and this drops down to 0.94 as we see further transactions.

The drop in successful transactions happens due to the fact that some of the accounts lose balance with the increase in total transactions.