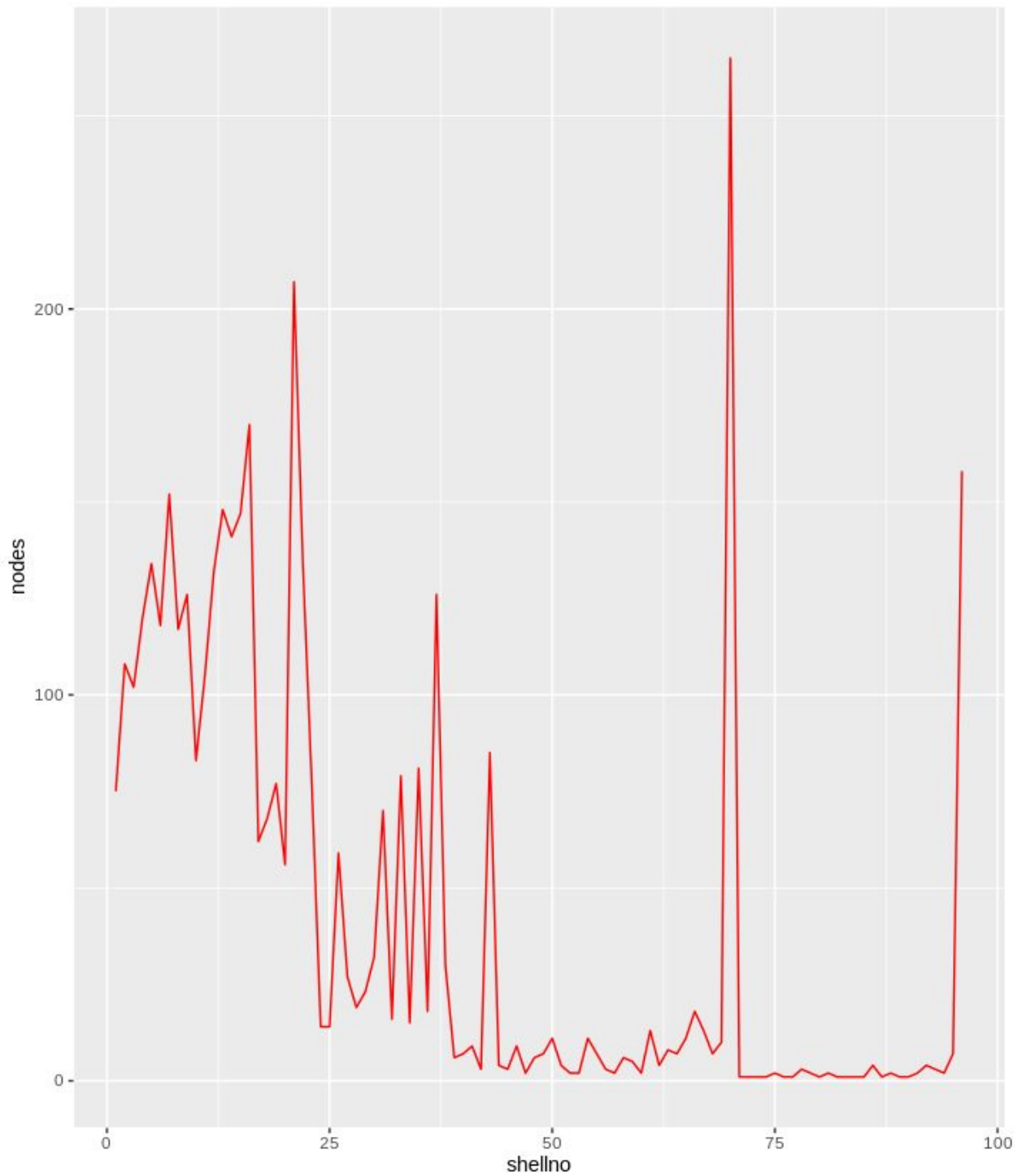PsuedoCores
IMPLEMENTED
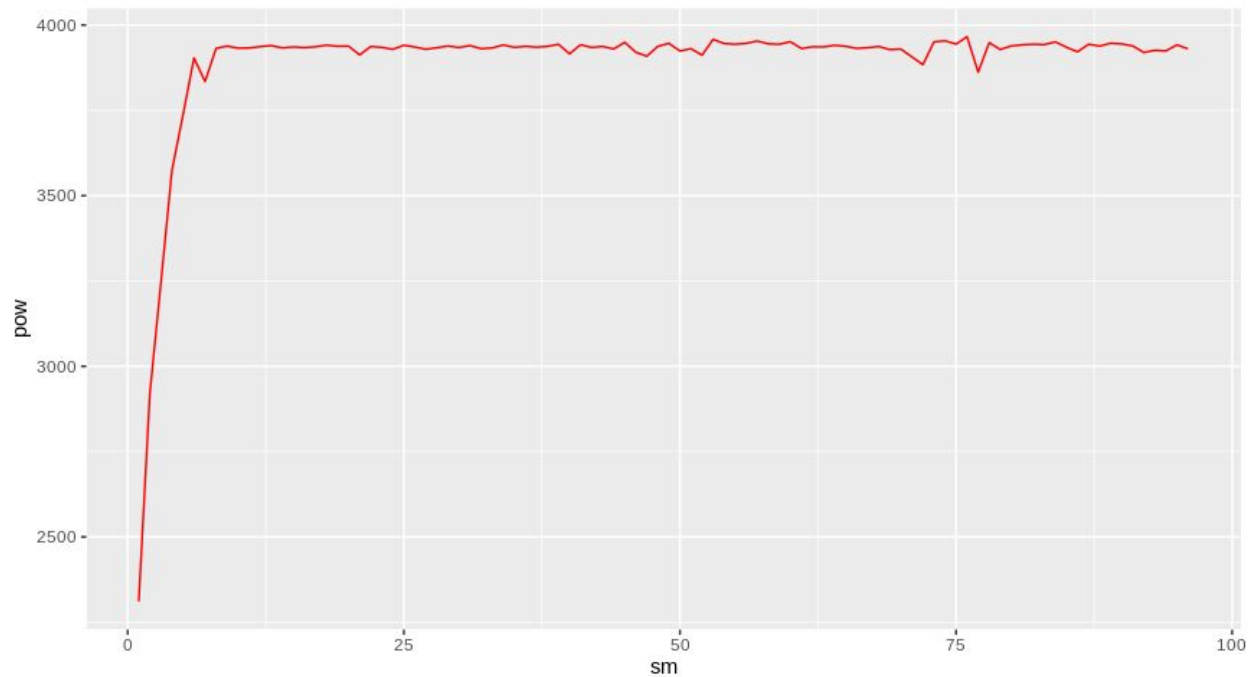1)Implemented cascading power taking shell by shell and also node by node for each shell by taking average.
TWO WAYS

       a) TAKING WHOLE SHELL NODE AS INFECTED

b) TAKING NODE BY NODE OF SHELL AS INFECTED AND AVERAGING OUT

2) Implemented bucket algo

3) Implemented shell based hill climbing and degree based hill climbing

TWO WAYS

    a) First use the algo stated in the paper and when got stuck just came out of the running loop for that initial node and saved that it is not possible to core node from that initial node.
        So in this case sometimes i get number of steps to reach the core node but at times i stored not possible(NA) to reach the core
        REFER File 1 for code

    b) Used the algo in paper but whenever I got stuck, I picked up any random node from the graph . And this always converges . Same when applied to degree based algo it converges to same number of steps .
        REFER File 2 code

3)Implemented Leakage power of shells
    a) Used maxjump = max(V(g)$core[neighbors(g,j)]) - V(g)$core[j])>0
           maxjump = 0
    b) Then average for each shell
        Refer code file for details

FUTURE WORK LEFT

1) Including std deviation plot also in cascading power.

2) Implement algo using dfs.

3) implement bound on number of iteration and checking in which cases we reached core.

4) DFS comparison with teleportation.

5) use leakage power to make hill climb algo such that probability to moving to that shell proportional to leakage power of that shell.

6) plot density of shell and leakage power , no of nodes and leakage power.