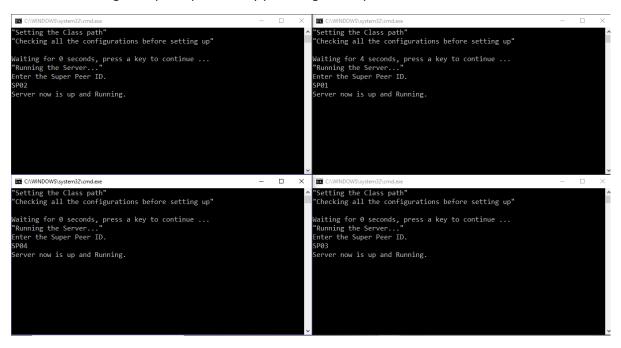
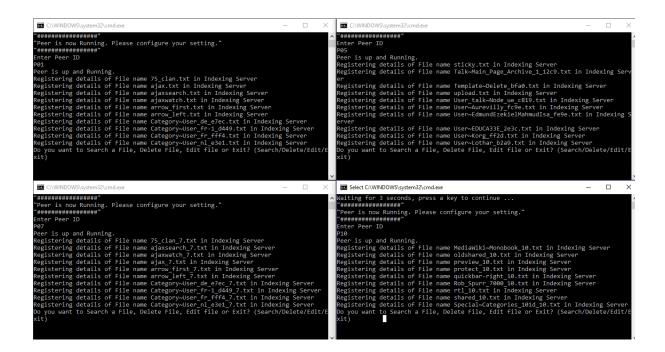
Output file

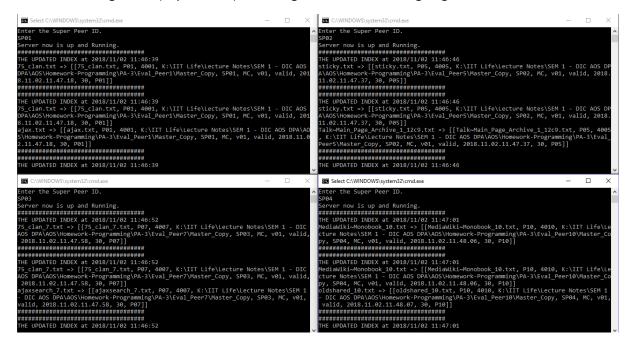
1. Launching Multiple Super Peer by providing its unique ID



2. Running Multiple Leaf Nodes under multiple super peers Here P01 is running under SP01, P05 under SP02, P07 under SP03, and P10 under SP04



3. Indexing Server(Super Peers) while Registration of Peers is going on



4. Each Peer is having 2 directories Master copy and cached Copy

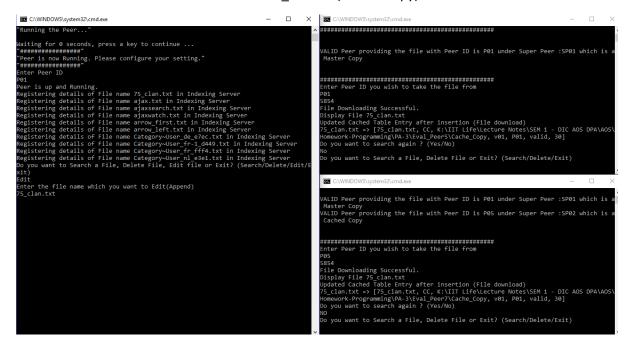
PUSH VERSION

5. Leaf Node 5 and Leaf Node 7 wants to Search and download a file named "75_clan.txt" and update their cached table

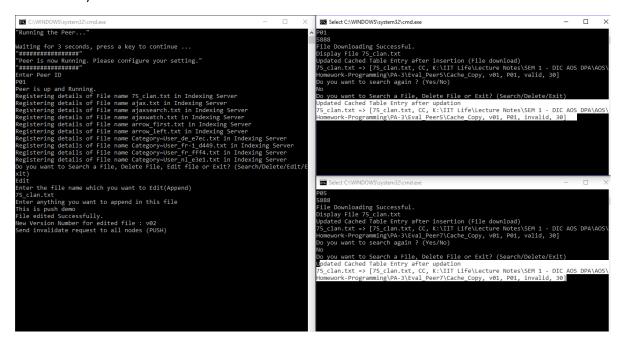
Cached Table contains the details of the downloaded file.

6. Leaf Node P10 wants to search the same file "75_clan.txt".

7. Now Leaf Node P01 wants to edit 75_clan.txt (master copy) file.

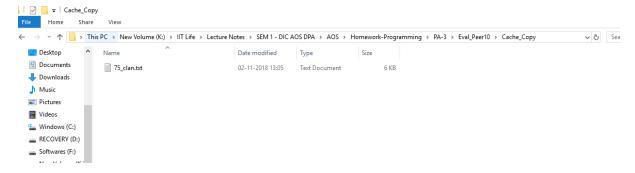


8. Leaf node P01 sends an invalidate message to all cached copies of file 75_clan.txt (P05 and P07)



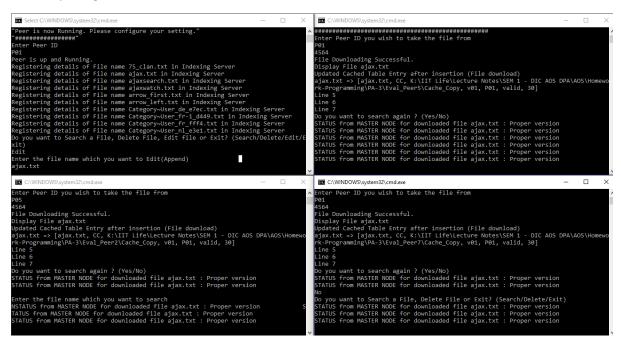
9. Now Leaf Node P10 again searches for same file "75_clan.txt" and downloads the updated version copy (v02) from Master node (P01).

10. Downloaded file "75_clan.txt" in Leaf Node P10 directory.



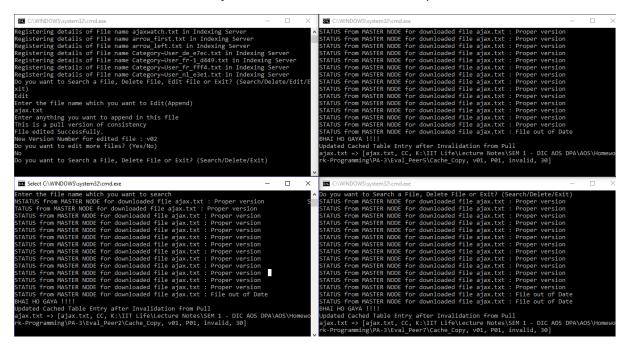
PULL VERSION (Leaf Node)

11. Leaf Node 2, Leaf Node 5, and Leaf Node 7 wants to Search and download a file named "ajax.txt" from Leaf Node 1 and update their cached table. After downloading, they will start polling Leaf node 1 (master node)



12. Leaf node 10 also wants to search "ajax.txt" file and it gets 4 valid copies as of now.

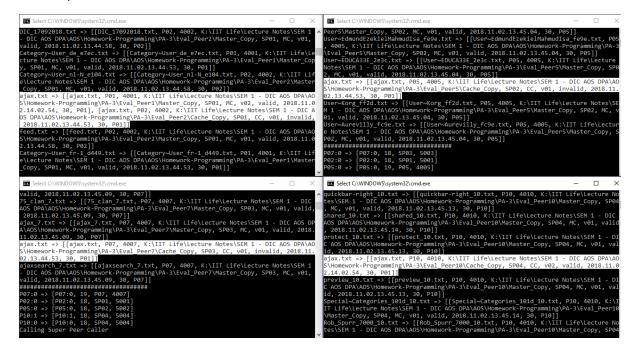
13. Now Leaf node 1 to edit "ajax.txt" file while other leaf nodes poll master node.



14. If Leaf Node 10 selects Leaf node 2, which contains invalid copy, it will throw an error and ask user to select Master node.

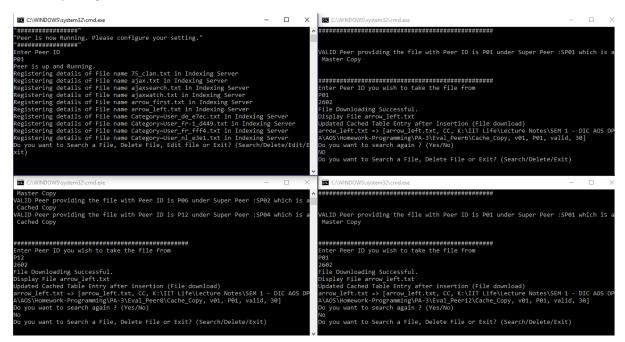
15. Now leaf node 10 will again search the same file and will get only one valid copy, i.e. master node Leaf node 1

16. Meanwhile at their respective Super Peers, Index has been updated and invalidated at super peer as well.

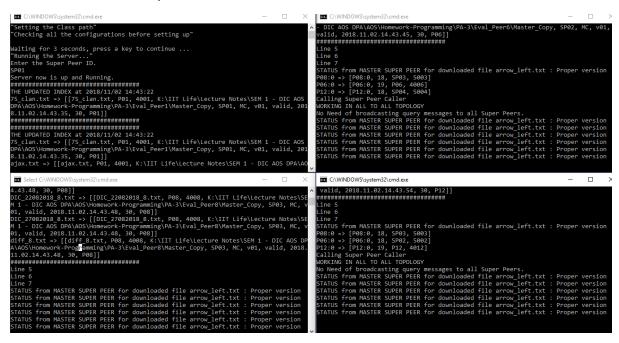


PULL VERSION (Super Peer)

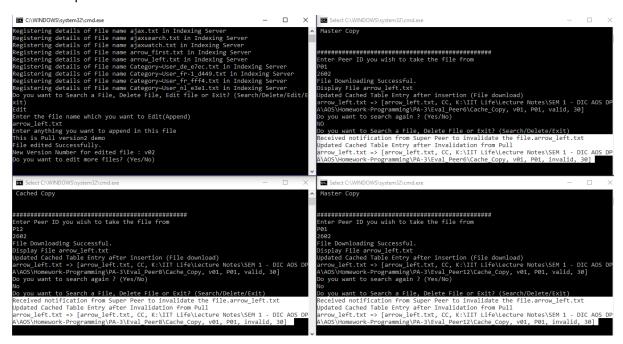
17. Leaf Node 6, Leaf Node 8, and Leaf Node 12 wants to Search and download a file named "ajax.txt" from Leaf Node 1 and update their cached table. After downloading, they will start polling Leaf node 1 (master node)



18. Meanwhile in Super Peers



19. Invalidation notification at Leaf Node 6, Leaf Node 8, and Leaf Node 12 from their respective Super Peers.



20. Invalidation at Super Peer 2, Super Peer 3 and Super Peer 4.

