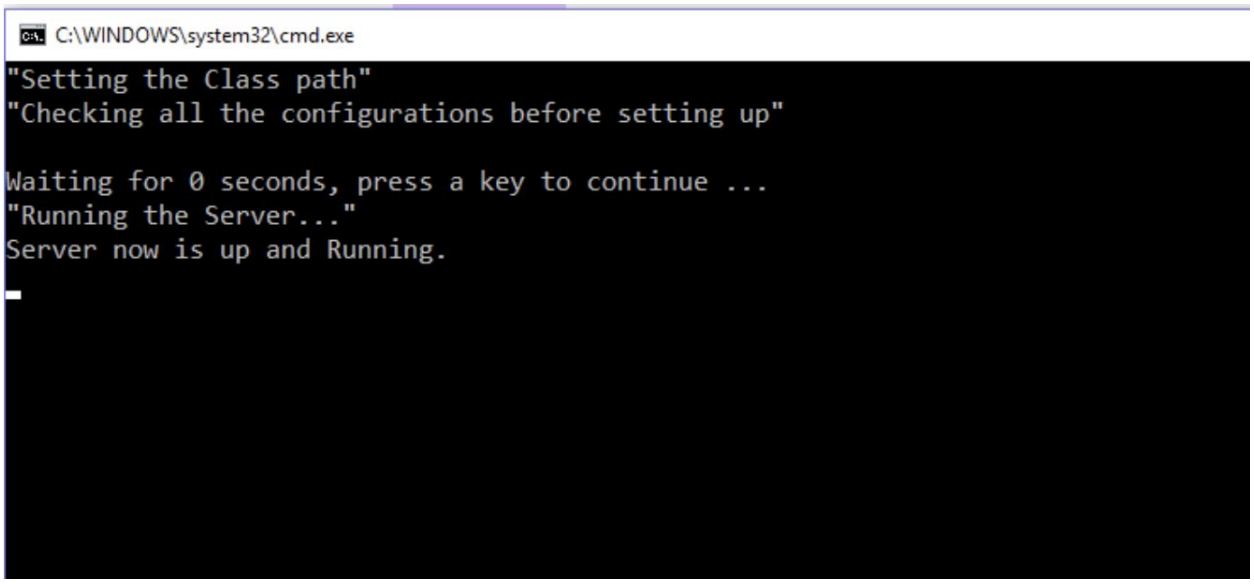
Manual

This document lists the steps needed to run out program. Screenshots have been attached for reference.
We have three files that need to be run for the program namely :
run_server.bat, run_peer.test, run_test.bat.
These bat files will run only when you have the corresponding ".jar" files present ("File_Transfer_P2P.jar" and "javax.ws.rs-api-2.0.jar")

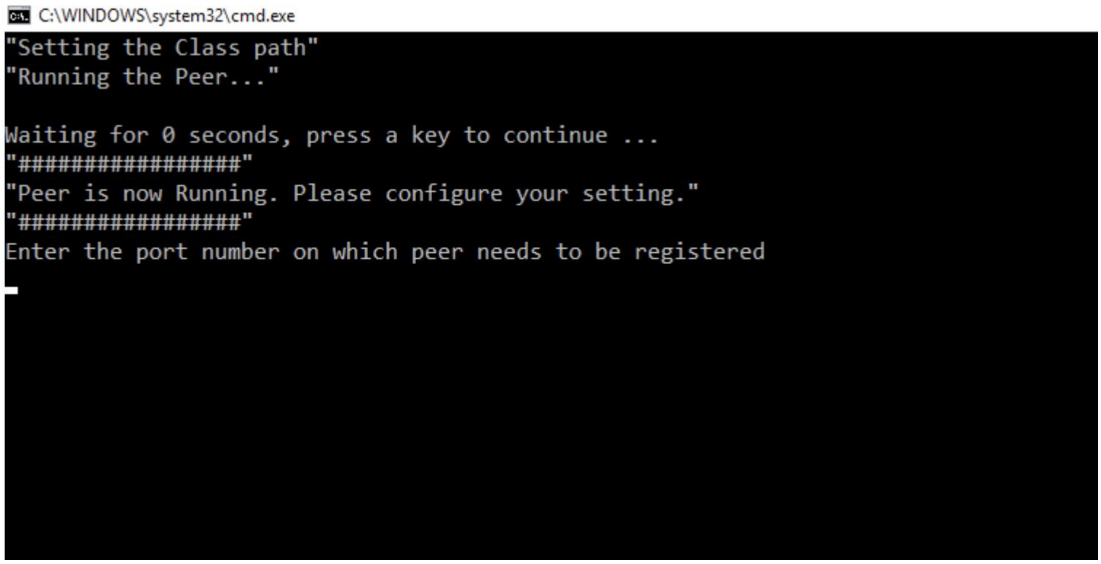
Step 1

Open the run_server.bat file.
We will get a message in the command prompt stating that the server is up and running.
The server will now listen at the port 3455.



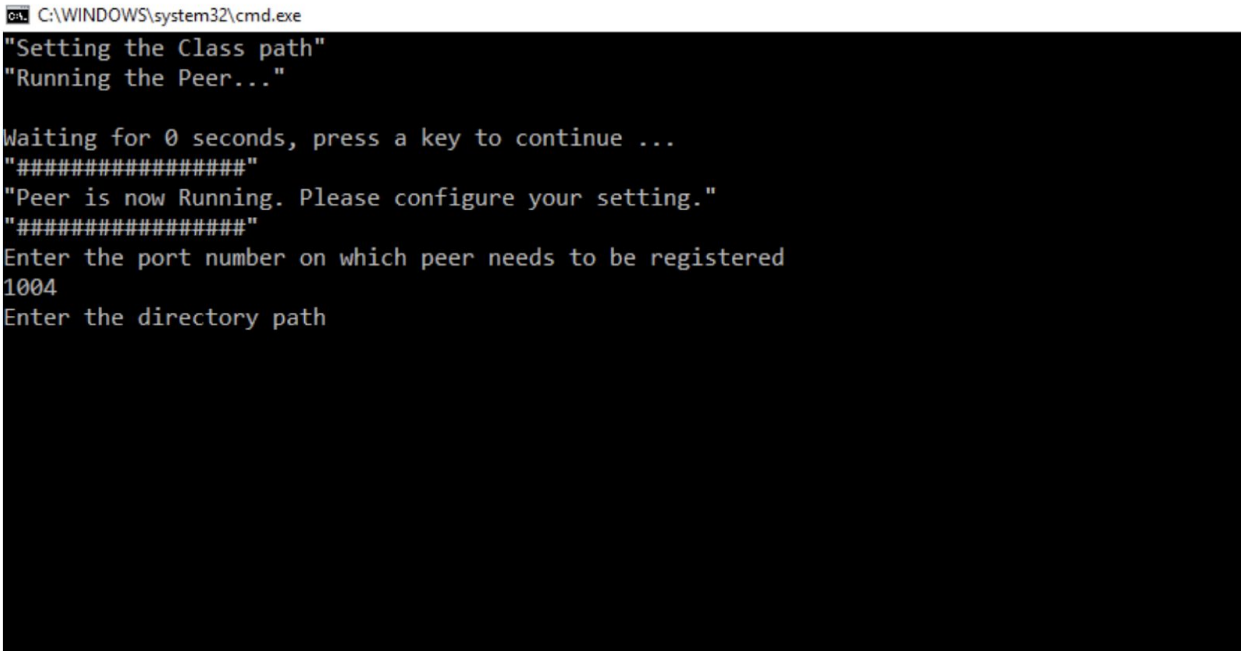
Step 2

Once the server is up and running you can leave it as it is.
Now run the run_peer.bat. Once it opens, a message will be displayed that the Peer is now running.
A prompt will request the user to enter the Port No. at which the peer needs to be registered.(Enter a different port no. for each Peer)



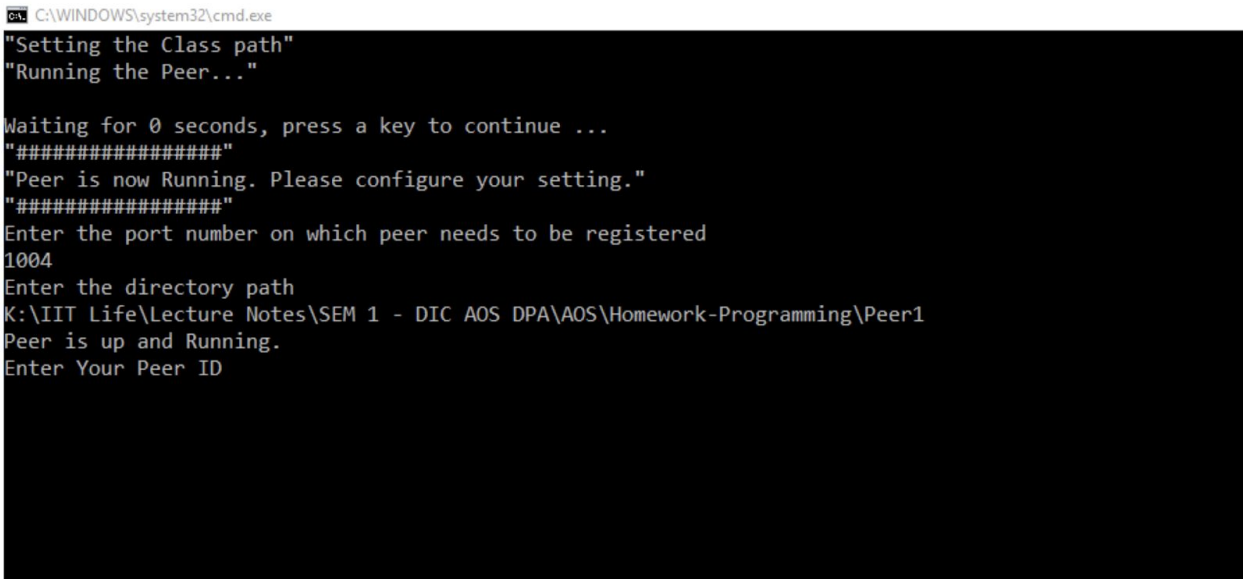
Step 3

Enter the port number at which you want your peer to be registered.
Once done the prompt will request for the directory path where the files of the peer are stored.



Step 4

Enter the directory path where the files are stored for that particular peer.
The path should look something like this :
K:\IIT Life\Lecture Notes\SEM 1 - DIC AOS DPA\AOS\Homework-Programming\Peer1
Once you enter this, the screen will now prompt for the Peer ID.

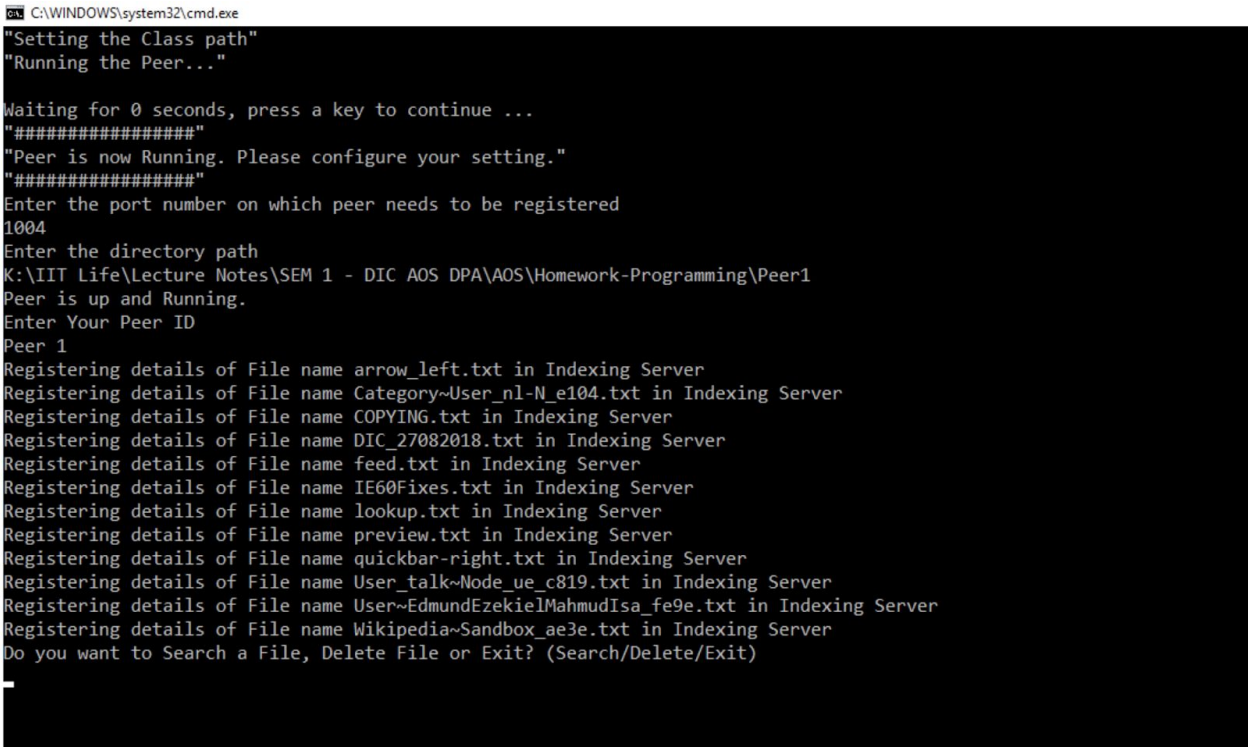


Step 5

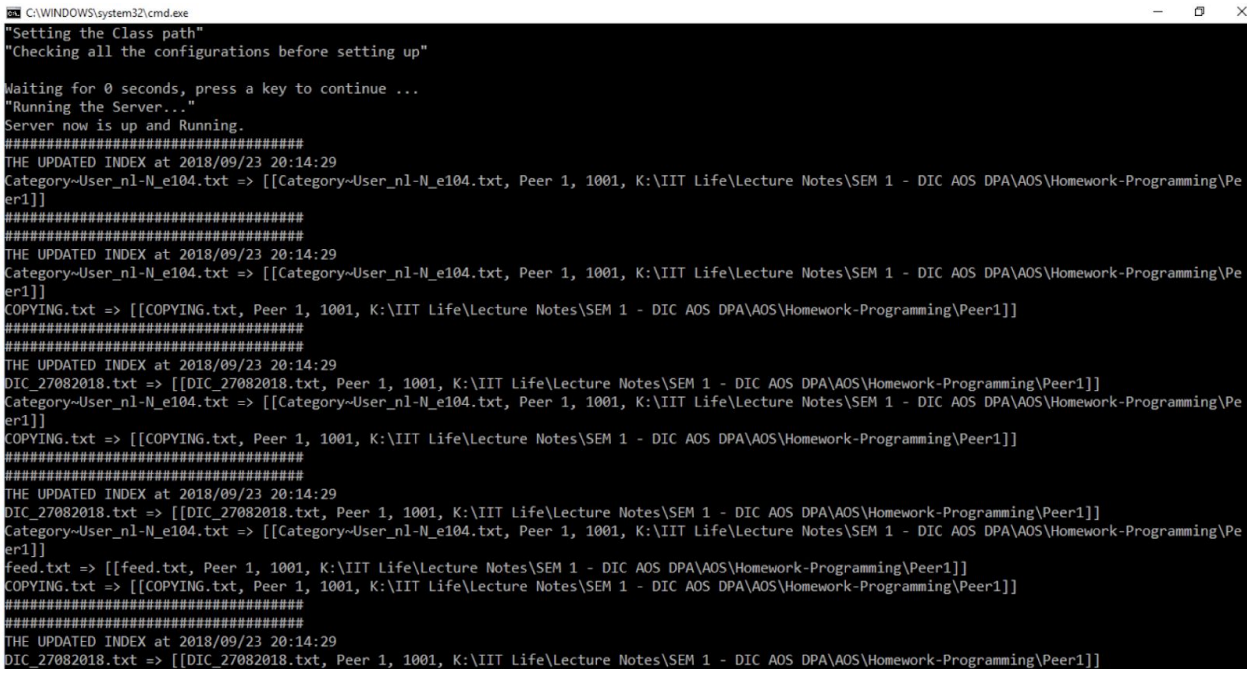
Enter Peer ID.

This ID is a unique name for the peer at the Index Server. Although we have used names here, alternatively IP addresses can also be used.

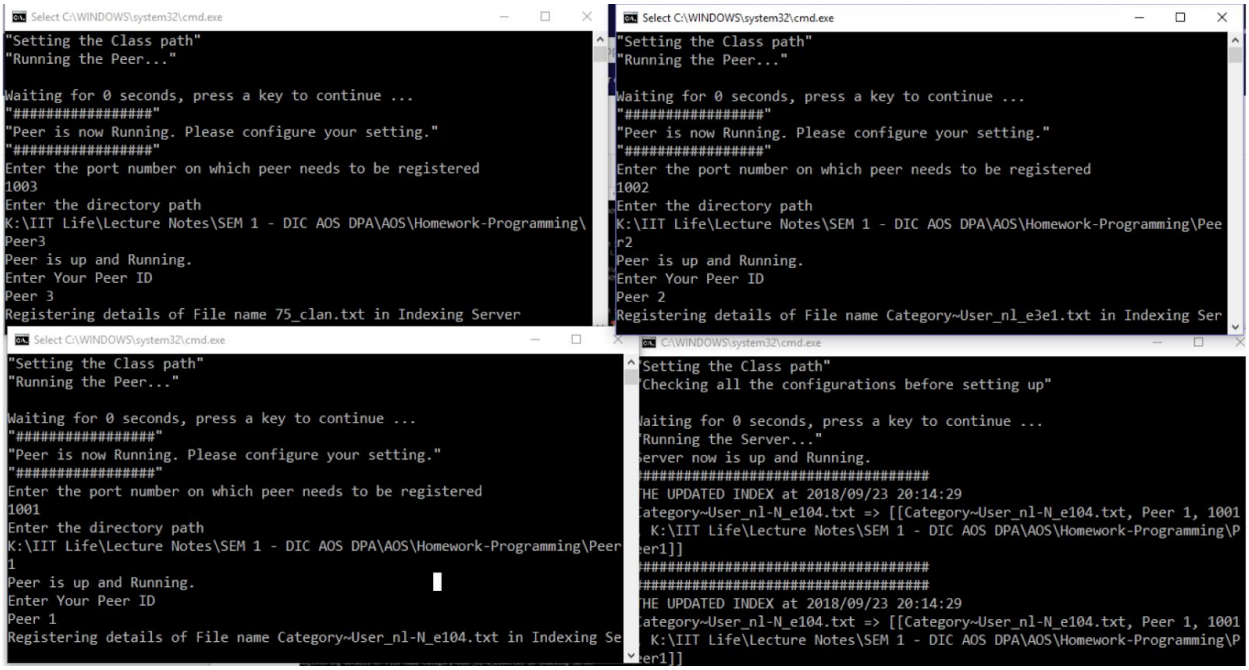
Once this is done, the peer will register itself along with it's files on the index server and you will now be able to see a prompt for the operation you want to perform(search, delete or exit).



After the peers are registered, the server screen will look like this :



Repeat the steps 2 to 5 for all the remaining peers before proceeding, to the next step. A screenshot has been attached showing 3 registered peers and 1 server.



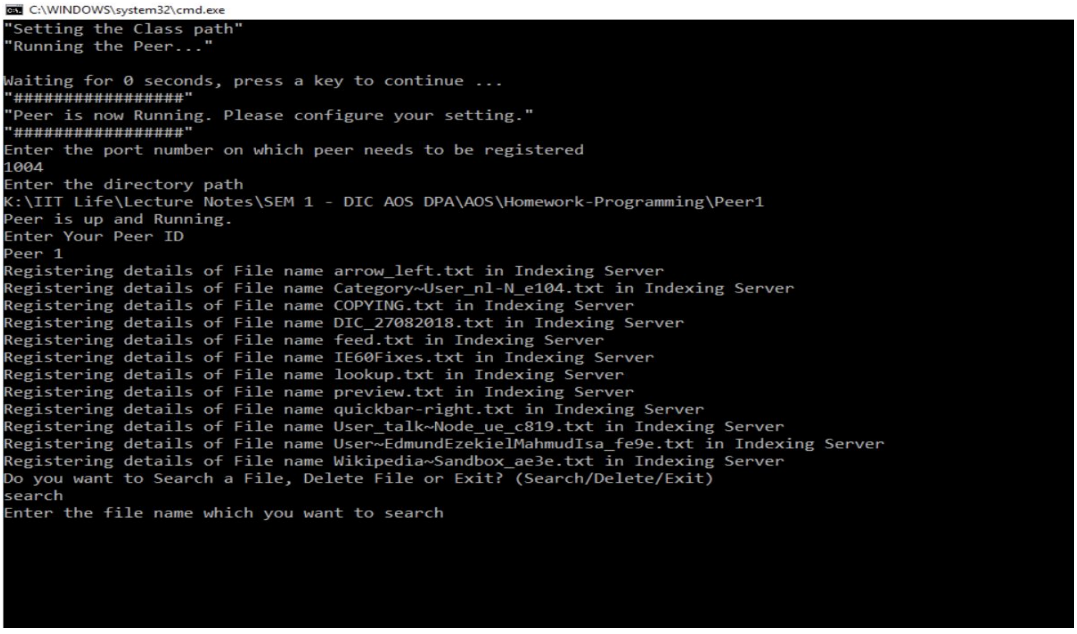
Note : While performing anything in Step 6 keep all the tabs(servers and corresponding peers) shown above open all the time.

Step 6

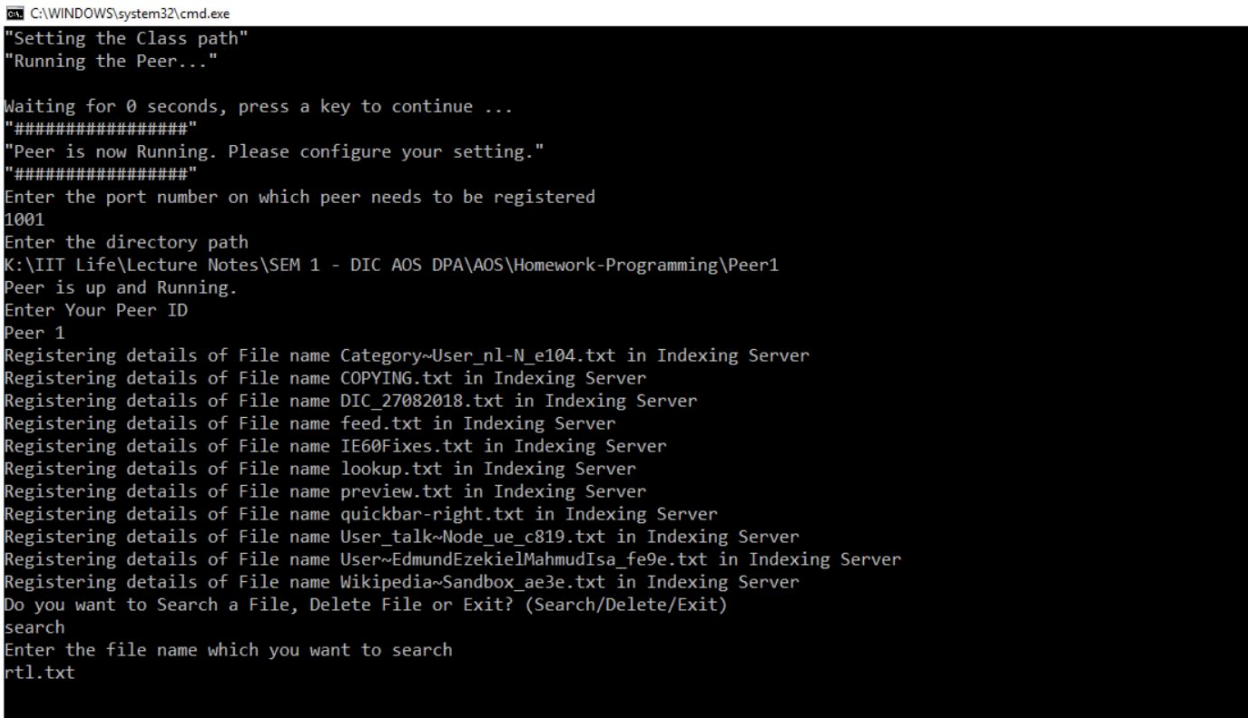
The prompt in any peer will now ask if you want to search or delete a file or exit the program.

Search File

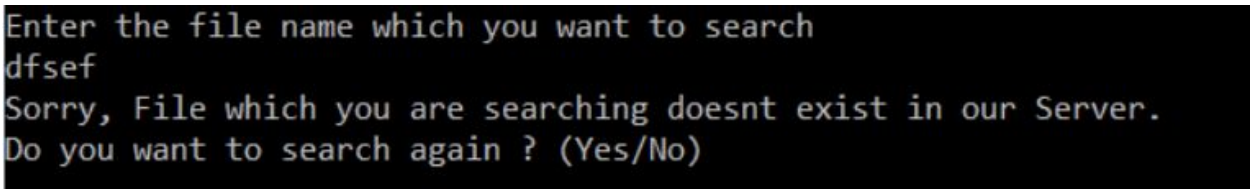
If you want to search for the file, first type search in the prompt of the peer where you want to search. For ex: If you want to search file using Peer 1 type search in the first peer's tab.
The entry is not case sensitive.
After this, the prompt will request for the file name you want to search.



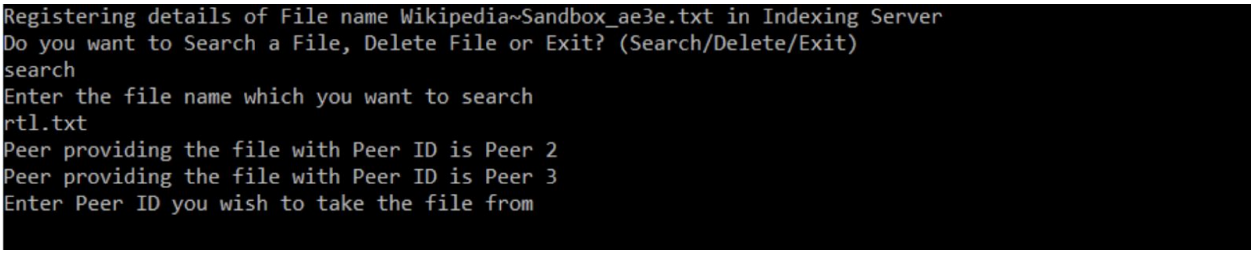
We search for the file “rtl.txt” as an example.
The file is located at Peer 2 and we are searching the file from Peer 1.



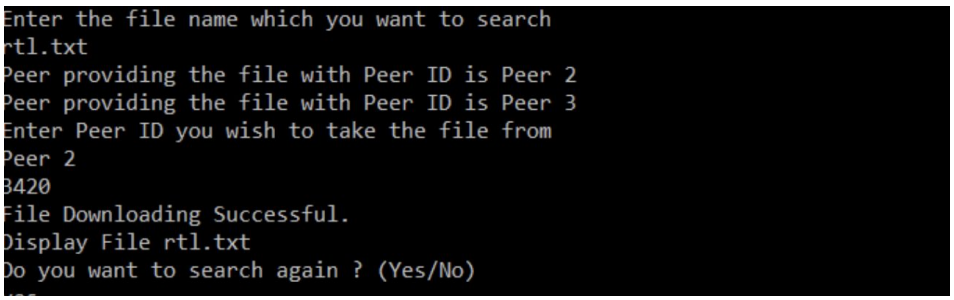
If the file is not available :
It will show the message that the file doesn’t exist in our server as shown below.



If the file is found it will display the message as follows :

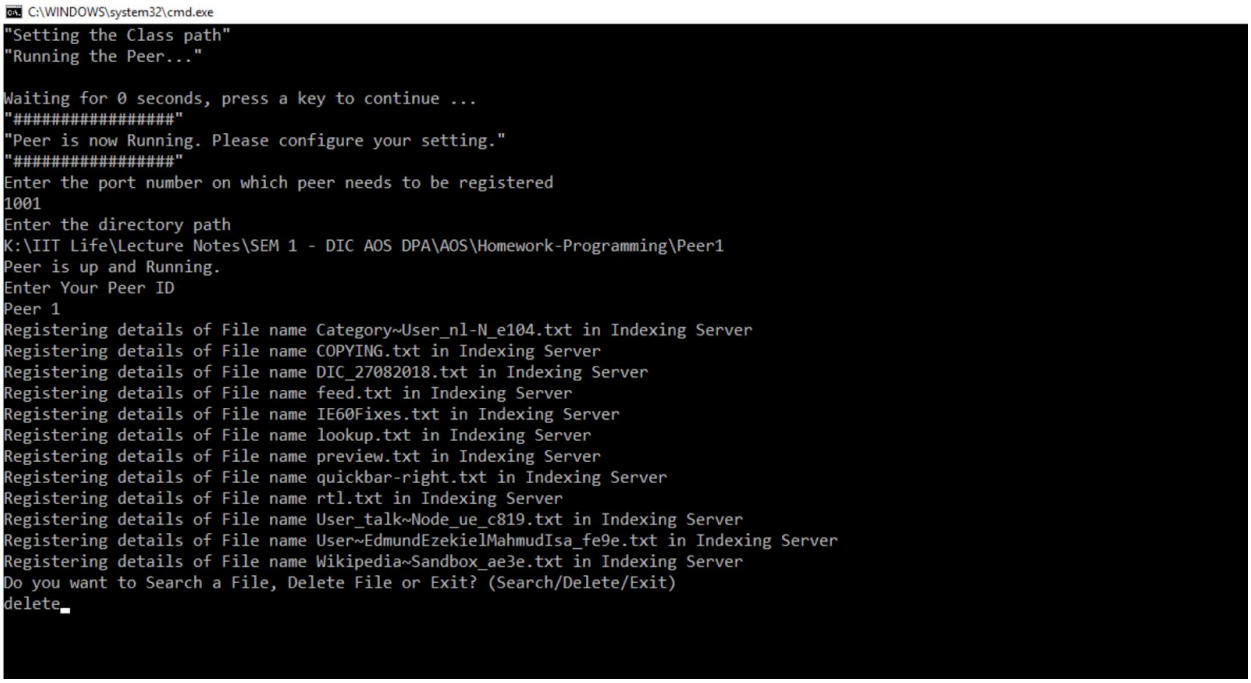


The prompt will now ask you to enter the Peer ID from where you wish to download the file.
Enter the Peer ID and download the desired File.
The screen will display the message shown below.

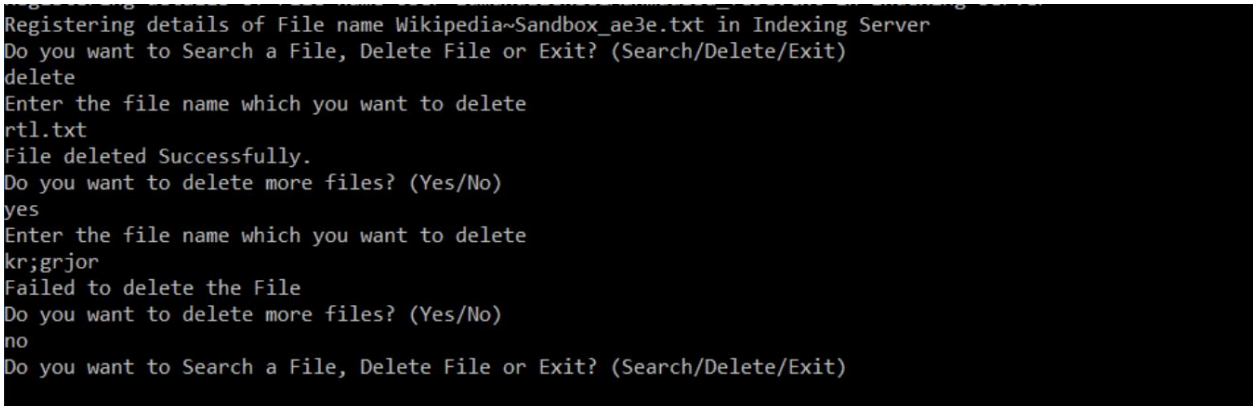


Delete File

To delete a file,we type delete in the prompt received at Step 6 or once you are done searching and downloading a file.



The prompt will then ask for the filename of the file you want to delete.
The file will be deleted if present and the prompt will show a message showing that the deletion was successful and ask if you want to delete more files.
If the file is not found, a message will be displayed saying “Failed to delete file”.
The prompt will return to asking if you want to delete more files.
Once you type “no” into the prompt it will return to the prompt at step 6.



Exit

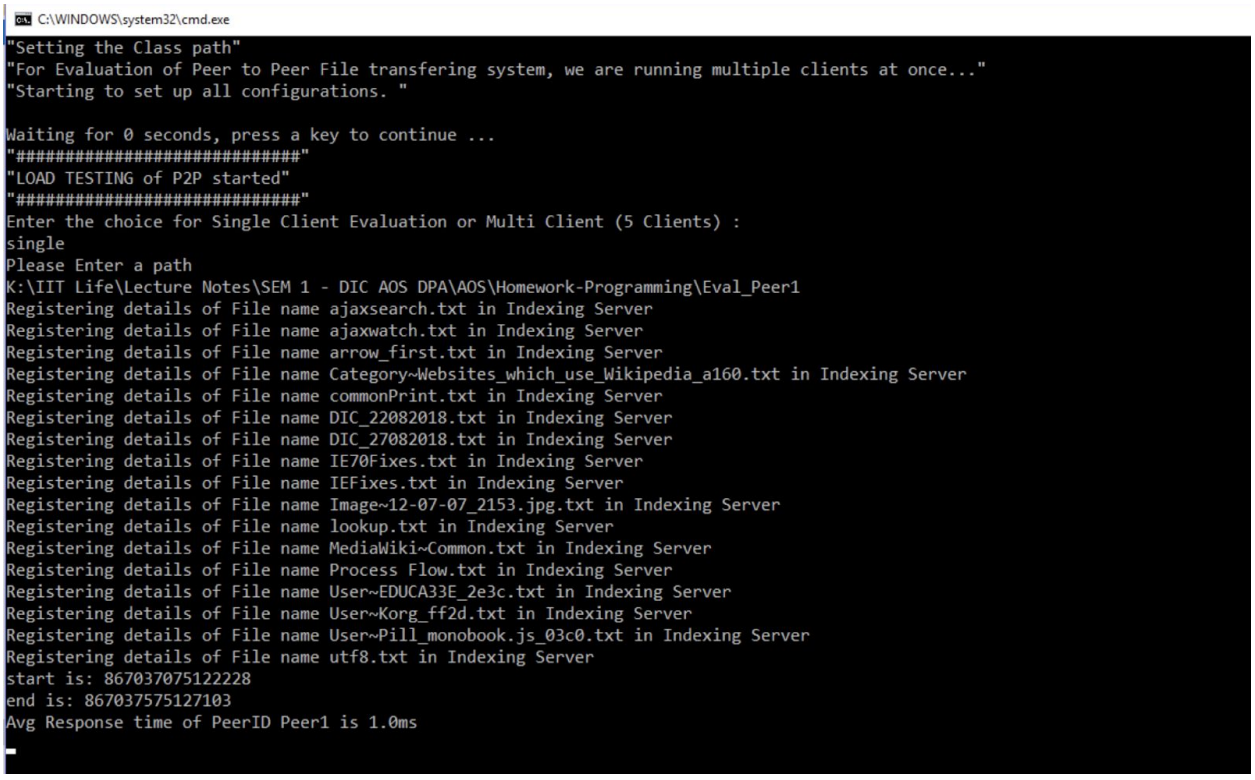
To exit the screen, you just need to type exit and press enter. The screen will close off, thus shutting down the peer.

Step 7

We need to test the implementation in terms of average response time. To do this we run the run_test.bat file.
On opening this, a prompt will ask if you want to perform Single Client Evaluation or Multi Client Evaluation.
Single client evaluation option will measure the average response time of a single peer that sends 500 consecutive requests to the server. Multi client evaluation will also measure the average response time but for multiple peers (max 5 for our implementation) for 500 consecutive requests.
We have 5 folders ready for this purpose named “Eval_PeerID” where PeerID is Peer1, Peer2 and so on.
For ex : the folder name for Peer 1 is “Eval_Peer1”

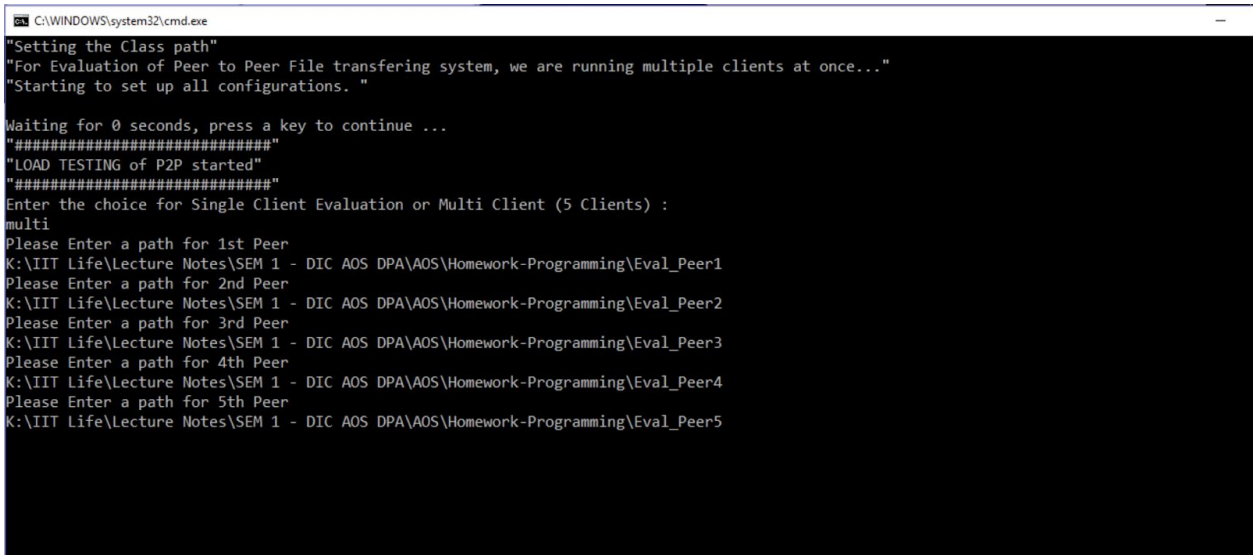
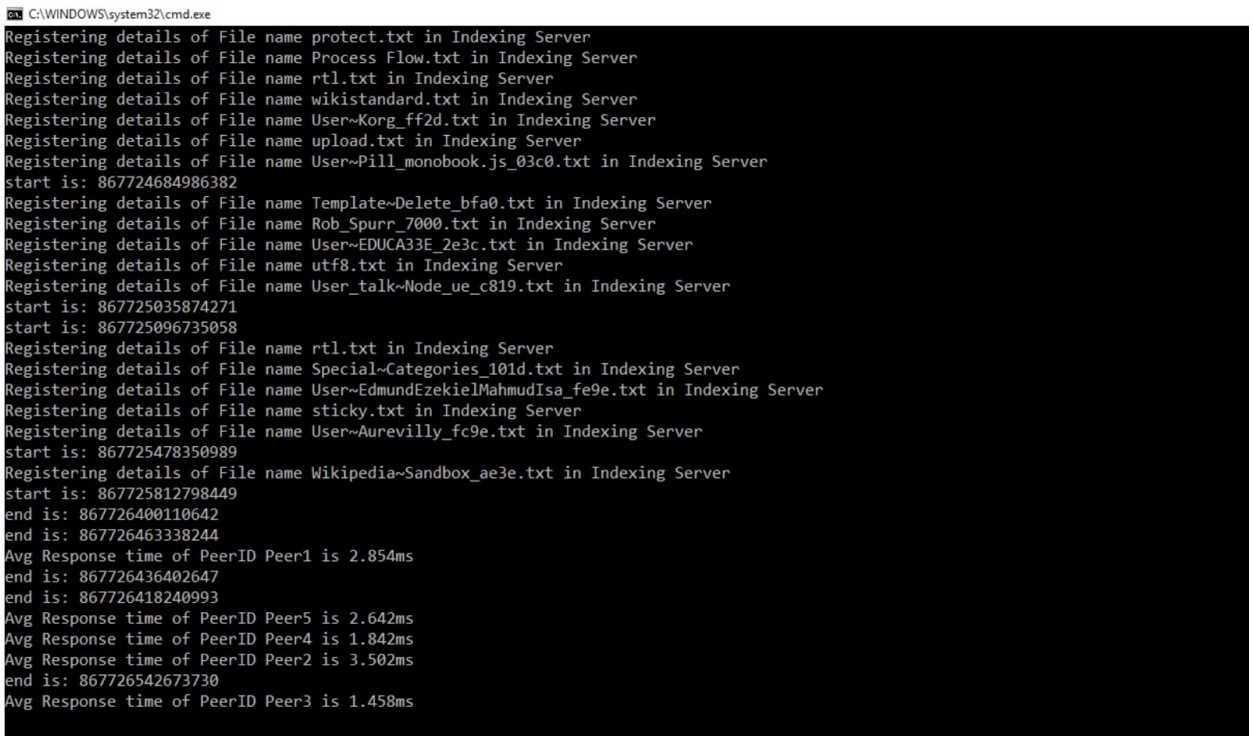
Single Client Evaluation

To perform this evaluation, type single into the prompt and press enter.
The prompt will then ask for the path. You need to enter the path of any of the “Eval_PeerID” folders into the prompt to perform the evaluation.
Once you enter the path, the bat file will evaluate the same and return the average response time as shown below :



Multi-Peer Evaluation

Here, you perform the evaluation for 5 clients sending 500 sequential requests each.
You need to type multi in the prompt and press enter.
The prompt will then ask for the paths of all the folders Eval_Peer1 through Eval_Peer5.



Once you enter all the paths as shown above, the bat file will evaluate all folders for average response time and display the results as show below.