Advanced Operating Systems
Programming Project 3- Test Documentation

Name:Manisha Nalla
R11471258

--- **Case-1:**

Running Central Index Server

Central Server.java acts as a Napster central indexing server. It maintains the log of all the peers that register with it and their contents.

Central Indexing Server

This screenshot shows central Indexing server has been created successfully

Test Result: Pass

Case-2: Registering peers on Index server

 ThreadMainClass.java acts as a client. When a client is connected to Central Indexing Server it will register all its files with the indexing server. The server then builds the index for the peer.

When client gets the peerId then all the file will automatically register using register method.

This register method consists of two parameters. One is peerid and other is filename.

Peer-1:

disci.hpcc.ttu.edu - PuTTY

```
login as: manalla
manalla@disci.hpcc.ttu.edu's password:
Last login: Fri Mar 31 19:04:35 2017 from 192.58.125.4
Use of Texas Tech computers and networks requires prior authorization.
Your use of these systems may be monitored by automated and/or manual
security testing procedures. Unauthorized use of these systems is
prohibited and abuse is subject to immediate termination of the account
or service and University disciplinary procedure and/or criminal
prosecution.

If you have questions concerning this notification screen, please
contact IT Help Central at 742-HELP (4357).
-bash-4.1$ java MainThread 8022
Error: Could not find or load main class MainThread
-bash-4.1$ cd pkgfinal/
-bash-4.1$ java MainThread 8022
Successfully Registered to Napster server
Enter PeerID:
1
Select an option
1.Search
2.exit
1
Enter the File name to search
```

Registering peer1 to the Napster Central Server

Peer-2:

```
disci.hpcc.ttu.edu - PuTTY

login as: manalla
manalla@disci.hpcc.ttu.edu's password:
Last login: Fri Mar 31 19:08:42 2017 from 192.58.125.4
Use of Texas Tech computers and networks requires prior authorization.
Your use of these systems may be monitored by automated and/or manual
security testing procedures. Unauthorized use of these systems is
prohibited and abuse is subject to immediate termination of the account
or service and University disciplinary procedure and/or criminal
prosecution.

If you have questions concerning this notification screen, please
contact IT Help Central at 742-HELP (4357).
-bash-4.1$ java MainThread 8033
Error: Could not find or load main class MainThread
-bash-4.1$ cd pkgfinal/
-bash-4.1$ java MainThread 8033
Successfully Registered to Napster server
Enter PeerID:
2
Select an option
1.Search
2.exit
1
Enter the File name to search
```

Registering peer-2 to the Napster Central Server

Peer-3:


```
disci.hpcc.ttu.edu - PuTTY

login as: manalla
manalla@disci.hpcc.ttu.edu's password:
Last login: Fri Mar 31 19:11:56 2017 from 192.58.125.4
Use of Texas Tech computers and networks requires prior authorization.
Your use of these systems may be monitored by automated and/or manual
security testing procedures. Unauthorized use of these systems is
prohibited and abuse is subject to immediate termination of the account
or service and University disciplinary procedure and/or criminal
prosecution.

If you have questions concerning this notification screen, please
contact IT Help Central at 742-HELP (4357).
-bash-4.1$ cd pkgfinal/
-bash-4.1$ java MainThread 8333
Successfully Registered to Napster server
Enter PeerID:
3
Select an option
1.Search
2.exit
1
Enter the File name to search
```

Registering peer-3 with the Napster Central Server.

Test Result: Pass

Case-3: Search for File

Each peer can search files when connected to index server and returns all the matching peers to the requestor.

i. List of files that are assigned to each peer before transfer(before execution of obtain method):

```
login as: manalla
manalla@disci.hpcc.ttu.edu's password:
Last login: Fri Mar 31 19:13:18 2017 from 192.58.125.4
Use of Texas Tech computers and networks requires prior authorization.
Your use of these systems may be monitored by automated and/or manual
security testing procedures. Unauthorized use of these systems is
prohibited and abuse is subject to immediate termination of the account
or service and University disciplinary procedure and/or criminal
prosecution.

If you have questions concerning this notification screen, please
contact IT Help Central at 742-HELP (4357).
-bash-4.1$ ls
cs5332_omp  Hello      HelloImpl.java  pkgfinal        RMIServer.java
example     HelloImpl  Hello.java      RMIClient.java  titan.wiki
-bash-4.1$ cd pkgfinal/
-bash-4.1$ ls
CentralServer.class     ClientThread.java  Server.class
CentralServer.java      MainThread.class   Server_Interface.class
Client.class            MainThread.java    Server_Interface.java
Client_Interface.class  Makefile           Server.java
Client_Interface.java   Peer_1             ServerThread.class
Client.java             Peer_2             ServerThread.java
ClientThread.class      Peer_3
-bash-4.1$ cd Peer_3
-bash-4.1$ ls
file10.txt  file13.txt  file14.txt  file16.txt  file18.txt  file20.txt  file2.txt  file5.txt  file6.txt  file9.txt
-bash-4.1$ cd ..
-bash-4.1$ cd Peer_1
-bash-4.1$ ls
file11.txt  file12.txt  file14.txt  file15.txt  file16.txt  file1.txt  file3.txt  file6.txt  file7.txt  file8.txt
-bash-4.1$ cd ..
-bash-4.1$ cd Peer_2
-bash-4.1$ ls
file11.txt  file13.txt  file14.txt  file17.txt  file18.txt  file19.txt  file20.txt  file21.txt  file2.txt  file3.txt
-bash-4.1$
```

ii. Searching for a particular file from one of the peer :
- Here we are searching for file11.txt from peer-3
- As we have already connected to peer-3 as shown above and selected the option to search. Now we have to enter the file name that we want to search.
- In the figure below we are searching file11.txt is present in both the peers
- It returns peer-1 and peer-2

```
login as: manalla
manalla@disci.hpcc.ttu.edu's password:
Last login: Fri Mar 31 19:11:56 2017 from 192.58.125.4
Use of Texas Tech computers and networks requires prior authorization.
Your use of these systems may be monitored by automated and/or manual
security testing procedures. Unauthorized use of these systems is
prohibited and abuse is subject to immediate termination of the account
or service and University disciplinary procedure and/or criminal
prosecution.

If you have questions concerning this notification screen, please
contact IT Help Central at 742-HELP (4357).
-bash-4.1$ cd pkgfinal/
-bash-4.1$ java MainThread 8333
Successfully Registered to Napster server
Enter PeerID:
3
Select an option
1.Search
2.exit
1
Enter the File name to search
file11.txt
File:file11.txt is found on:
1
2
Enter the peer you want to connect:
```

Test Result: pass

Case-4: - Obtaining(Downloading) Files

    i.   Selecting a Peer from List of returned Peers

- Now peer-3 selects 1 in order to retrieve file from peer-1
- File is then successfully transferred to peer-3

disci.hpcc.ttu.edu - PuTTY

```
login as: manalla
manalla@disci.hpcc.ttu.edu's password:
Last login: Fri Mar 31 19:11:56 2017 from 192.58.125.4
Use of Texas Tech computers and networks requires prior authorization.
Your use of these systems may be monitored by automated and/or manual
security testing procedures. Unauthorized use of these systems is
prohibited and abuse is subject to immediate termination of the account
or service and University disciplinary procedure and/or criminal
prosecution.

If you have questions concerning this notification screen, please
contact IT Help Central at 742-HELP (4357).
-bash-4.1$ cd pkgfinal/
-bash-4.1$ java MainThread 8333
Successfully Registered to Napster server
Enter PeerID:
3
Select an option
1.Search
2.exit
1
Enter the File name to search
file11.txt
File:file11.txt is found on:
1
2
Enter the peer you want to connect:
1
Successfully Connected
8022
File Transfer Sucessfull
-bash-4.1$
```

ii.   List of files in the peer after downloading

Peer-3 now contains File11.txt in its list of files as shown in the figure below

```
login as: manalla
manalla@disci.hpcc.ttu.edu's password:
Last login: Fri Mar 31 19:11:56 2017 from 192.58.125.4
Use of Texas Tech computers and networks requires prior authorization.
Your use of these systems may be monitored by automated and/or manual
security testing procedures. Unauthorized use of these systems is
prohibited and abuse is subject to immediate termination of the account
or service and University disciplinary procedure and/or criminal
prosecution.

If you have questions concerning this notification screen, please
contact IT Help Central at 742-HELP (4357).
-bash-4.1$ cd pkgfinal/
-bash-4.1$ java MainThread 8333
Successfully Registered to Napster server
Enter PeerID:
3
Select an option
1.Search
2.exit
1
Enter the File name to search
file11.txt
File:file11.txt is found on:
1
2
Enter the peer you want to connect:
1
Successfully Connected
8022
File Transfer Sucessfull
-bash-4.1$ cd Peer_3
-bash-4.1$ ls
file10.txt  file11.txt  file13.txt  file14.txt  file16.txt  file18.txt  file20.txt  file2.txt  file5.txt  file6.txt  file9.txt
-bash-4.1$ 
```

 Test Result: Pass

Case-5:- Calculating Average Response time