

AOS Project 3 - Napster-style peer-to-peer (P2P) file sharing system

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EXECUTION OF THE PROJECT:

Below is the screenshot of the available java files present in the directory along with the Makefile

```
disci:/PROJ_3_KiranPatrudu_Gopalasetty_CS5352$ ls
Client.java  FileInfo.java  Makefile  MyMain.java  peer_to_peer  ServerDownload.java  Server.java
disci:/PROJ_3_KiranPatrudu_Gopalasetty_CS5352$
```

Server:

We Start our execution by executing the Server –

```
disci:/PROJ_3_KiranPatrudu_Gopalasetty_CS5352$ javac MyMain.java
disci:/PROJ_3_KiranPatrudu_Gopalasetty_CS5352$ java MyMain
Please enter your Choice ::
1. To run the Server
2. To run the Client
1
Server started!!

Waiting for the Client to be connected ..

```

Now Server will open its Socket and waits for the Clients to get connected

Client:

We will register 3 clients(Peers) on to the Server as per the project requirement

For Client1 -

```
disci:/PROJ_3_KiranPatrudu_Gopalasetty_CS5352$ make
java MyMain
Please enter your Choice ::
1. To run the Server
2. To run the Client
2
Welcome to the Client ::

Enter the directory that contain the files -->

```

For Client2 -

```
disci:/PROJ_3_KiranPatrudu_Gopalasetty_CS5352$ make
java MyMain
Please enter your Choice ::
1. To run the Server
2. To run the Client
2
Welcome to the Client ::

Enter the directory that contain the files -->
```

For Client3 -

```
disci:/PROJ_3_KiranPatrudu_Gopalasetty_CS5352$ make
java MyMain
Please enter your Choice ::
1. To run the Server
2. To run the Client
2
Welcome to the Client ::

Enter the directory that contain the files -->
```

Now, we will enter the directory of the files for each client along with the port number and the peerid

For Client1 –

```
Welcome to the Client ::

Enter the directory that contain the files -->
E:\TTU_CS\Spring - 2017\Advanced Operating Systems\Programming Projects\Programming Project 3\PROJ_3_KiranPatrudu_Gopalasetty_CS5352\peer_to_peer\Client1
Enter the port number on which the peer should act as server ::
1231
Connection has been established with the client
Enter the peerid for this directory ::
1
```

For Client2 –

```
Enter the directory that contain the files -->
E:\TTU_CS\Spring - 2017\Advanced Operating Systems\Programming Projects\Programming Project 3\PROJ_3_KiranPatrudu_Gopalasetty_CS5352\peer_to_peer\Client2
Enter the port number on which the peer should act as server ::
1232
Connection has been established with the client
Enter the peerid for this directory ::
2
```

For Client3 –

```
Enter the directory that contain the files -->
E:\TTU_CS\Spring - 2017\Advanced Operating Systems\Programming Projects\Programming Project 3\PROJ_3_KiranPatrudu_Gopalasetty_CS5352\peer_to_peer\Client3
Enter the port number on which the peer should act as server ::
1233
Connection has been established with the client
Enter the peerid for this directory ::
3
```

Once all the clients have registered on to the server, the total available filenames at each of the clients will be registered in the Server –

```
All the available files from the given directory have been recieved to the Server!  
Total number of files available in the Server that are received from all the connected clients: 15  
All the available files from the given directory have been recieved to the Server!  
Total number of files available in the Server that are received from all the connected clients: 27  
All the available files from the given directory have been recieved to the Server!  
Total number of files available in the Server that are received from all the connected clients: 37
```

For Searching the Files and Downloading it to the desired folder:

Go to the desired Client (Say suppose, Client 2) to where you want to download the file to.

Give the name of the desired file that you want to download from the list of the files available in the Server along with corresponding port number and the peerid–

```
Enter the desired file name that you want to download from the list of the files available in the Server ::  
3.7  
Waiting for the reply from Server...!!  
Enter the respective port number of the above peer id :  
1233  
Enter the desired peer id from which you want to download the file from :  
3
```

At the Server end –

```
Total number of files available in the Server that are received from all the connected clients: 37  
Searching for the file name...!!!
```

Once the file gets downloaded –

```
Requested file - 3.7, has been downloaded to your desired directory E:\TTU_CS\Spring - 2017\Advanced Operating Systems\Programming Projects\Programming Project 3\PROJ_3_KiranPatrudu_Gopalasetty_CS5352\peer_to_peer\Client2  
Display file 3.7
```

« Advanced Operating Systems » Programming Projects » Programming Project 3 » PROJ_3_KiranPatrudu_Gopalasetty_CS5352 » peer_to_peer » Client2				
	<input type="checkbox"/> Name	Date modified	Type	Size
ss	2.1	3/15/2016 10:44 AM	Text Document	1 KB
	2.2	2/25/2012 2:37 PM	Text Document	4 KB
ids	2.3	2/25/2012 2:37 PM	Text Document	6 KB
nts	2.4	2/25/2012 2:37 PM	Text Document	5 KB
	2.5	3/15/2016 10:44 AM	Text Document	1 KB
iming Project 3	2.6	2/25/2012 2:37 PM	Text Document	5 KB
KiranPatrudu_Gopalasetty_	2.7	2/25/2012 2:37 PM	Text Document	5 KB
	2.8	2/25/2012 2:37 PM	Text Document	6 KB
	2.9	2/25/2012 2:37 PM	Text Document	6 KB
	2.10	2/25/2012 2:37 PM	Text Document	4 KB
	2.11	2/25/2012 2:37 PM	Text Document	4 KB
nts	2.12	3/15/2016 10:44 AM	Text Document	1 KB
ids	<input checked="" type="checkbox"/> 3.7	3/31/2017 10:04 PM	7 File	0 KB

PERFORMANCE EVALUATION:

The performance is evaluated using the timestamp which is calculated against registering the files on to the Server and Downloading the desired file to the Client.

Below are the various test results for which the timestamp is calculated –

- 9 Files: 0.08 Milliseconds
- 15 Files: 0.1 Milliseconds
- 30 Files: 0.7 Milliseconds
- 90 Files: 1 Millisecond
- 270 Files: 3 Milliseconds
- 810 Files: 5 Milliseconds

