

Manual to run the application

For Client/Server

- 1) Copy the folder DHT on peer machine. (You have to copy this folder on 8 different location)
- 2) Open the folder DHT
- 3) Open the config.properties file and update below three lines with Own Downloading Port, Own IP Address and Own listening port respectively.

Example-

peer= 1110

ip = 127.0.0.1

port=1111

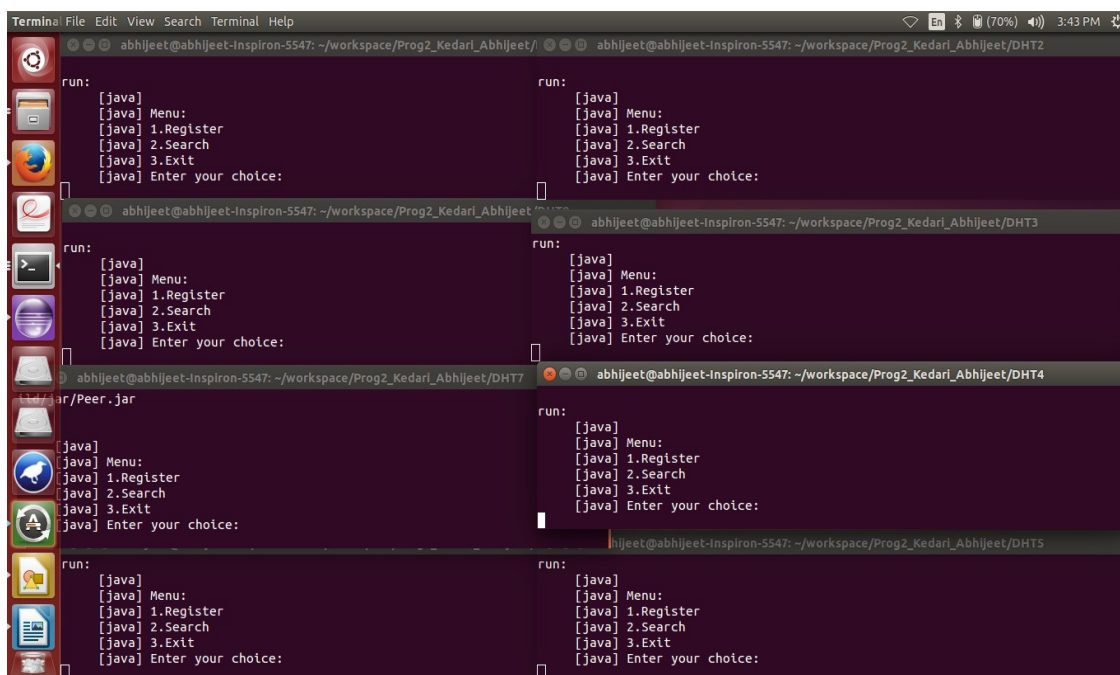
Similarly update other entries like (relicationPort0,ip0,port0), (relicationPort1,ip1,port1), (relicationPort2, ip2,port2), (relicationPort3,ip3,port3),(relicationPort4,ip4,port4), (relicationPort5,ip5,port5),(relicationPort6,ip6,port6),(relicationPort7,ip7,port7), (relicationPort8,ip8,port8) with peer IP and Peer port from 1 to 8th.

Note that peer, ip and port we entered initially (in step 3) should be one of the (relicationPort0, ip0, port0) to (relicationPort8,ip8,port8).

peerSourcefolderUrl - This is a location from where files get register on server.

replicationFactor- This is number of replicas you want to create while registering.

- 4) Open the terminal and navigate inside DHT folder (you have to open 8 instances of terminal on same machine or different machine , depends on where you are executing code).
- 5) Type the command **ant** (on all terminal)



How to Test the application

On client as a Peer side:

1. Press “1” to Register the files on Server Hash Table
 - 1.1 After pressing “1” peer will register all the files from location mentioned in config.properties file.
 - 1.2 Depends on Number of replica mentioned in parameter called **replicationFactor** copies will get created and stored on other peers in distributed environment.
 - 1.3 Acknowledge message will get printed on peer side with list of files registered.
2. Press “2” to Get the address of file from Server Hash Table
 - 2.1 After pressing “2” peer will ask you enter the file name (that is Key).
 - 2.2 After entering the Key, Hash function will calculate the server who could contain that key.
 - 2.3 If Key is present on that server then it will return values associated with that Key.
 - 2.4 If not then it will simply return the “No value associated with key ”
 - 2.5 If Server holding that Hash Table is down then Hash value will get from next available Hash table depends on replication mentioned in config.properties file.
 - 2.6 If you get successful result and choose the server which is not down , file will get download on client machine at location specified in config.properties file.