Manual for Programming Assignment #1

Prerequisite

1. You must have Ant installed in you system for compiling
2. Have java version 1.7 or after 1.7 for compiling and running application

Project Directory Structure

To navigating to project Directory: Open terminal then go to project directory using command “cd” in terminal.

Project Directory typically is like below
src :: contains the source code of server
conf :: contains property file and information regarding server port
dist:: contains the compiled jar file (dir created after compile)
bin :: contains compiled files (dir created after compile)
build.xml :: For compiling project using ant

Compiling Server Code

We need Ant for compiling and creating jar file of source code::
Type command “ant” inside the folder server directory named as “CentralIndexServer”. It will automatically pick the build.xml file and compile the code and create a jar file named like “CentralIndexServer-20150914.jar” in “dist” directory of current project folder
Your compiled jar file will have class file

Configuring Server

Once you have successfully created jar file. There is a conf directory in server folder. Inside that folder we have a properties that is used for configuring the port no of server i.e It tells the server to run on which port of machine
By default server port is set to 9000
If you want to change the default port then go to “conf” directory of the project directory and open file “CentralIndexServer.properties”. Change the property server.port=9000 present in file “CentralIndexServer.properties” to server.port={yourport} like server.port=8085

Running server

Once you have created jar of your project and changed the port no of server if needed.
There is a “dist” directory inside server folder created during compilation of code, where you will see your compiled jar file.
To run the server all you need to do is go to you server folder and type the below command and server will run.

java -jar dist/{yourjarfile}.jar
For example
java -jar dist/CentralIndexServer-20150914.jar

Compiling Peer Code

We need Ant for compiling and creating jar file of source code
Type command “ant” inside the peer directory named as “Peer”. It will automatically pick the build.xml file and compile the code and create a jar file named like “Peer2PeerApp-20150918.jar” in “dist” directory of current project folder
Your compiled jar file will have class file

Configuring Peer

Once you have successfully created jar file. There is a conf directory in Peer folder. Inside that folder we have a properties file that is used for configuring connection to index server
Properties are:
indexserver.address=127.0.0.1 (default server Ip Address)
indexserver.port=9000(Default Server running port No)
localserver.port=9001(Default peer Port no used for File transfer)

Indexserver.address and indexserver.port are changed according to the server running Ip address and port no of server.
localserver.port is changed for each peer, So make sure that localserver.port for each peer is different when running multiple peer.

Like for Peer1 our Properties file should be like
indexserver.address=127.0.0.1 (server Ip Address)
indexserver.port=9000(Server running port No)
localserver.port=9001 (Peer1 localport)

Like for Peer2 our Properties file should be like
indexserver.address=127.0.0.1 (server Ip Address)
indexserver.port=9000(Server running port No)
localserver.port=9002 (Peer2 localport)

Like for Peer3 our Properties file should be like
indexserver.address=127.0.0.1 (server Ip Address)
indexserver.port=9000(Server running port No)
localserver.port=9003 (Peer3 localport)

As we can see above that for all the peers connecting to same server IP 127.0.0.1 and port no 9000 i.e running port of server.
But localserver.port is changing for all peers as peer1 has 9001 portno, peer2 has 9002 port no and peer 3 has 9003 port no.

Running peer

Once you have created jar of your project and changed the port no of server if needed.
There is a “dist” directory inside Peer project folder that is created during compilation of code, where you will see your compiled jar file.
To run the server all you need to do is go to you Peer folder and type the below command and peer will run. It will pick the Properties file form “conf” directory of Peer folder

java -jar dist/{yourjarfile}.jar
For example
java -jar dist/ Peer2PeerApp-20150918.jar

For running multiple Peer all you need to do is change the properties of localserver.port present in conf directory of Peer folder and type the below command in different terminal

java -jar dist/{yourjarfile}.jar
For example
java -jar dist/ Peer2PeerApp-20150918.jar