

CS 550 Programming Assignment2  
Gnutella-Style P2P File Sharing System  
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Group# 17

## Manual

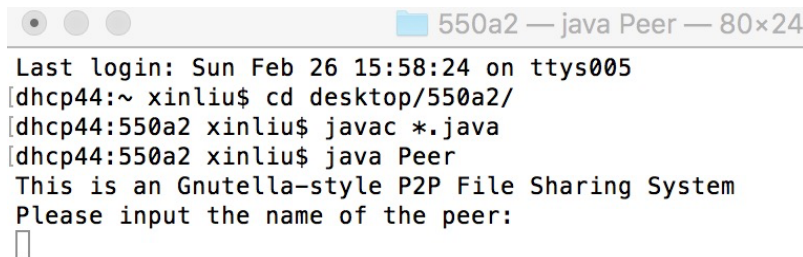
This document illustrated how to run this program, and detailed using of the system. This program is developed in Mac OS, and running in java environment. To launch this program, just open the terminal and change the directory to the path of the source code folder.

1. `javac *.java`: —This command is used to compile the code. If there are no `.class` files in the source code folder, you should type this command first to run the program.
2. `java Peer`: —This command is used to set up the peers in the network.
3. `rm *.class`: —This command is used to remove all the `.class` files in the folder. You may type this command when you finished using this system.
4. press control+C to exit the program

Following is a detailed instruction of how to using this Gnutella-style P2P file sharing system.

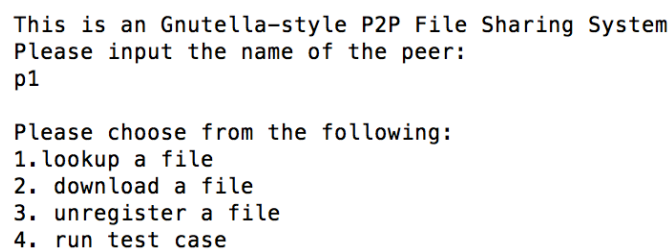
### 1. Setting up the Peer

In order to set up a peer, you may open the terminal, and using command 2. Following is the picture of starting a peer and the welcome windows of a peer.



```
550a2 — java Peer — 80x24
Last login: Sun Feb 26 15:58:24 on ttys005
[dhcp44:~ xinliu$ cd desktop/550a2/
[dhcp44:550a2 xinliu$ javac *.java
[dhcp44:550a2 xinliu$ java Peer
This is an Gnutella-style P2P File Sharing System
Please input the name of the peer:
█
```

User will be asked to input the name of the peer, however, users only allowed to input the peer which listed on the config file. The config file is stored as “config.properties” in the source code folder. After user input the peer’s name, there will be the function select menu which is shown in the following.



```
This is an Gnutella-style P2P File Sharing System
Please input the name of the peer:
p1

Please choose from the following:
1.lookup a file
2. download a file
3. unregister a file
4. run test case
```

For now, the setting up process is finished. There are 10 peers list in the config file, input different peer name can start different peer.

## 2. Look up a file

In order to searching a file in other peer, you should start all the peers in the network. Otherwise, there may exists network connection errors. In order to start all the peers, you should open ten terminals and following step 1 to start each of them.

User can press 1, then input the file's name he/she want to search. Then if some peer contains this file, the result will shown. Following is the picture of this step.

```
Please choose from the following:
1.lookup a file
2. download a file
3. unregister a file
4. run test case
1
please input the file name you want to lookup
f1.txt
Gonna search the file f1.txt
Found this file, the result is following:
1 : name is :p4 , IP address is : localhost, Port number is :6681
```

## 3. Download a file

User can press 2 to download a file from other peer. Then all the peers which contains this file will be listed. User can input the index of the result to choose one peer to download the file. The files download from other peer will store in the download folder. Following is the picture of this step.

```
Please choose from the following:
1.lookup a file
2. download a file
3. unregister a file
4. run test case
2
please input the file name you want to download
f2.txt
Found this file in the following peer, choose one you want to download(enter the index):
1 : name is :p3 , IP address is : localhost, Port number is :6680
2 : name is :p4 , IP address is : localhost, Port number is :6681
1
download success. file stored in download folder!
```

#### 4. Delete a file

User can press 3 to stop sharing a file to other peer (unregister this file). User will be asked to input the file's name. Also, user will be asked whether he/she want to delete the file in the local folder or not. Following is the picture of this step.

```
Please choose from the following:
```

- 1.lookup a file
  - 2. download a file
  - 3. unregister a file
  - 4. run test case
- ```
3
```

```
Input the file name you want to unregister
```

```
test8.txt
```

```
do you want to delete the local file as well? if yes, please input 1, if no, please input 0
```

```
0
```

```
File :test8.txt is unregistered!
```

After deleting, you can check the local folder or searching this file to ensure that this file was deleted successfully.

#### 5. Running test case

User can press 4 to run the test cases of this program. In this program, test case is to look up a file for 200 times. And the time costs by this process will be list on the screen. To test the time needed when multiple peer were searching a file, you may choose 4 in multiple peer.

Following is the picture of running test. Here the time is ms.

```
This is an Gnutella-style P2P File Sharing System
```

```
Please input the name of the peer:
```

```
p1
```

```
Please choose from the following:
```

- 1.lookup a file
  - 2. download a file
  - 3. unregister a file
  - 4. run test case
- ```
4
```

```
Total Time cost by searching one file 200 times costs: 1181ms
```

```
Average time cost by searching 200 times is:5ms
```