

Manual and outputs:

1. Compile the java files in case there is any issue due to different versions. Do this by first, navigate to directory PA2, second, run the command javac.
2. Run the main function of this project.

```
PA02 — java MyGnutella.PeerMain — 80x24
Last login: Tue Oct 16 20:14:24 on ttys000
GhaiyurdeMacBook-Pro:~ ghaiyurghairet$ cd /Users/ghaiyurghairet/Desktop/PA02
GhaiyurdeMacBook-Pro:PA02 ghaiyurghairet$ javac -d /Users/ghaiyurghairet/Desktop/PA02 *.java
GhaiyurdeMacBook-Pro:PA02 ghaiyurghairet$ java MyGnutella.PeerMain
*****
***** Gnutella Style P2P System *****
*****
Enter the PeerMain ID(from 1 to 10)
```

3. This would be the first peer. So we enter 1, and then select port number 5100. Afterwards, we need to specify the directory that we use to store the files.

```
PA02 — java MyGnutella.PeerMain — 80x24
Last login: Tue Oct 16 20:14:24 on ttys000
GhaiyurdeMacBook-Pro:~ ghaiyurghairet$ cd /Users/ghaiyurghairet/Desktop/PA02
GhaiyurdeMacBook-Pro:PA02 ghaiyurghairet$ javac -d /Users/ghaiyurghairet/Desktop/PA02 *.java
GhaiyurdeMacBook-Pro:PA02 ghaiyurghairet$ java MyGnutella.PeerMain
*****
***** Gnutella Style P2P System *****
*****
Enter the PeerMain ID(from 1 to 10)
1
Enter the port
5100
Session for peer id: 1 started...
Enter the shared directory
/Users/ghaiyurghairet/Desktop/PA02/Peer1Share
PeerMain 1 acting as server on 127.0.0.1:5100
*****
***** Gnutella Style P2P System *****
*****
1. Search File
2. Exit
*****
Please choose a number from the menu.
```

4. Do the same steps for every rest of the peers, from 2 to 10. (Peer ID 2 to 10, port number 5200 to 6000, directory Peer2Share to Peer10Share)
5. Now select option 1 to download, and pick a file name. The search path is a combination of peer id and hit query counts.

```
Please choose a number from the menu.
1
Please input the file name to search for it:
片 p2.jpg
Message ID for search: Peer1.Search1
Sending query to peerid.1 5100
Sending query to peerid.2 5200
Sending query to peerid.3 5300
Sending query to peerid.4 5400
Sending query to peerid.5 5500
Sending query to peerid.6 5600
Sending query to peerid.7 5700
Sending query to peerid.8 5800
Sending query to peerid.9 5900
*** Search Paths ***
Search Path: 101
Search Path: 102
Search Path: 103
Search Path: 104
Search Path: 105
Search Path: 106
Search Path: 107
Search Path: 108
Search Path: 109
*****
*****
p2.jpg File found in the network at following peers:
--Found at PeerMain2 , running on 127.0.0.1:5200
--Found at PeerMain3 , running on 127.0.0.1:5300
--Found at PeerMain4 , running on 127.0.0.1:5400
--Found at PeerMain6 , running on 127.0.0.1:5600
--Found at PeerMain7 , running on 127.0.0.1:5700
***Download Menu***
1.Download file
2.Exit
```

6. Choose 1 and pick the peer to download the file.

```
***Download Menu***
1.Download file
2.Exit
*****
Please select your next step.
1
Enter PEER ID to connect and download the file
4
Downloading from localhost:5400
"p2.jpg" has been downloaded to path: /Users/ghaiyurghairet/Desktop/PA02/Peer10Share
```