Verification Test

1. Preparation

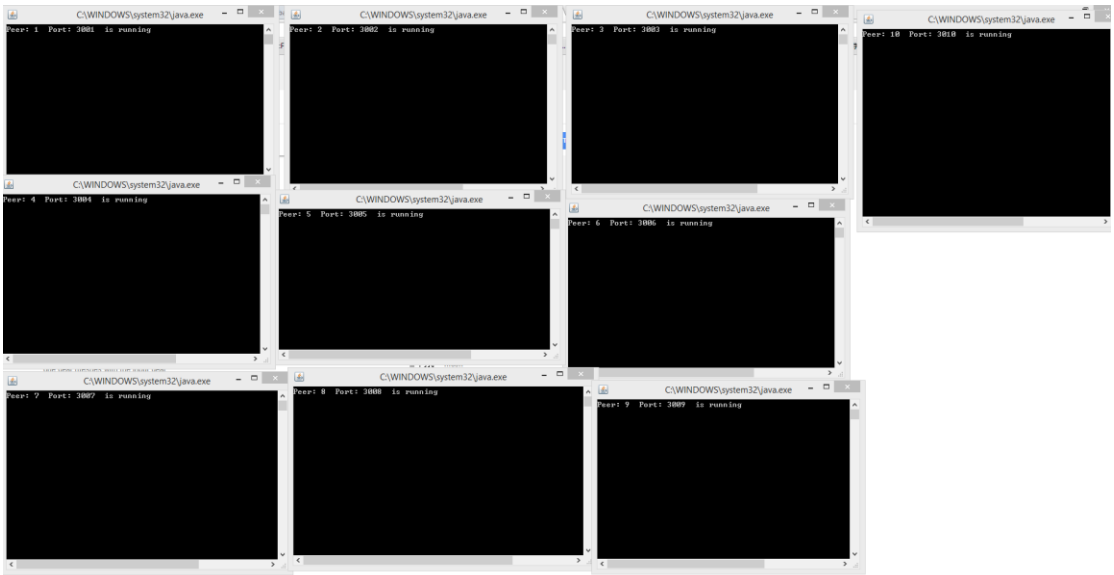
For star typology, enter CS550 PA2\Star, for 2D mesh typology enter CS550 PA2\Grid. You will see the following folders named as peer ids.

Name	Date modified	Type	Size
1	10/19/2014 8:28 PM	File folder	
2	10/19/2014 8:28 PM	File folder	
3	10/19/2014 8:28 PM	File folder	
4	10/19/2014 8:28 PM	File folder	
5	10/19/2014 8:28 PM	File folder	
6	10/19/2014 8:28 PM	File folder	
7	10/19/2014 8:28 PM	File folder	
8	10/19/2014 8:28 PM	File folder	
9	10/19/2014 8:28 PM	File folder	
10	10/19/2014 8:28 PM	File folder	

Then enter each peer's folder one by one, run "start.bat" to start each server.

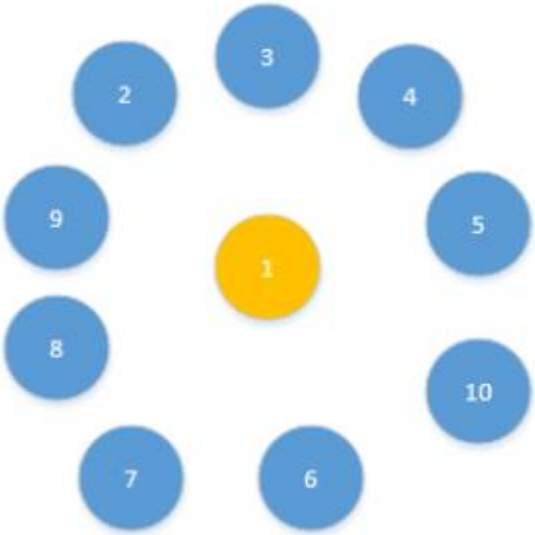
Name	Date modified	Type	Size
bin	10/19/2014 8:28 PM	File folder	
start	10/19/2014 6:03 PM	Windows Batch File	1 KB
startUser	10/19/2014 5:19 PM	Windows Batch File	1 KB

After running all the server, you will see this.



2. Star Topology

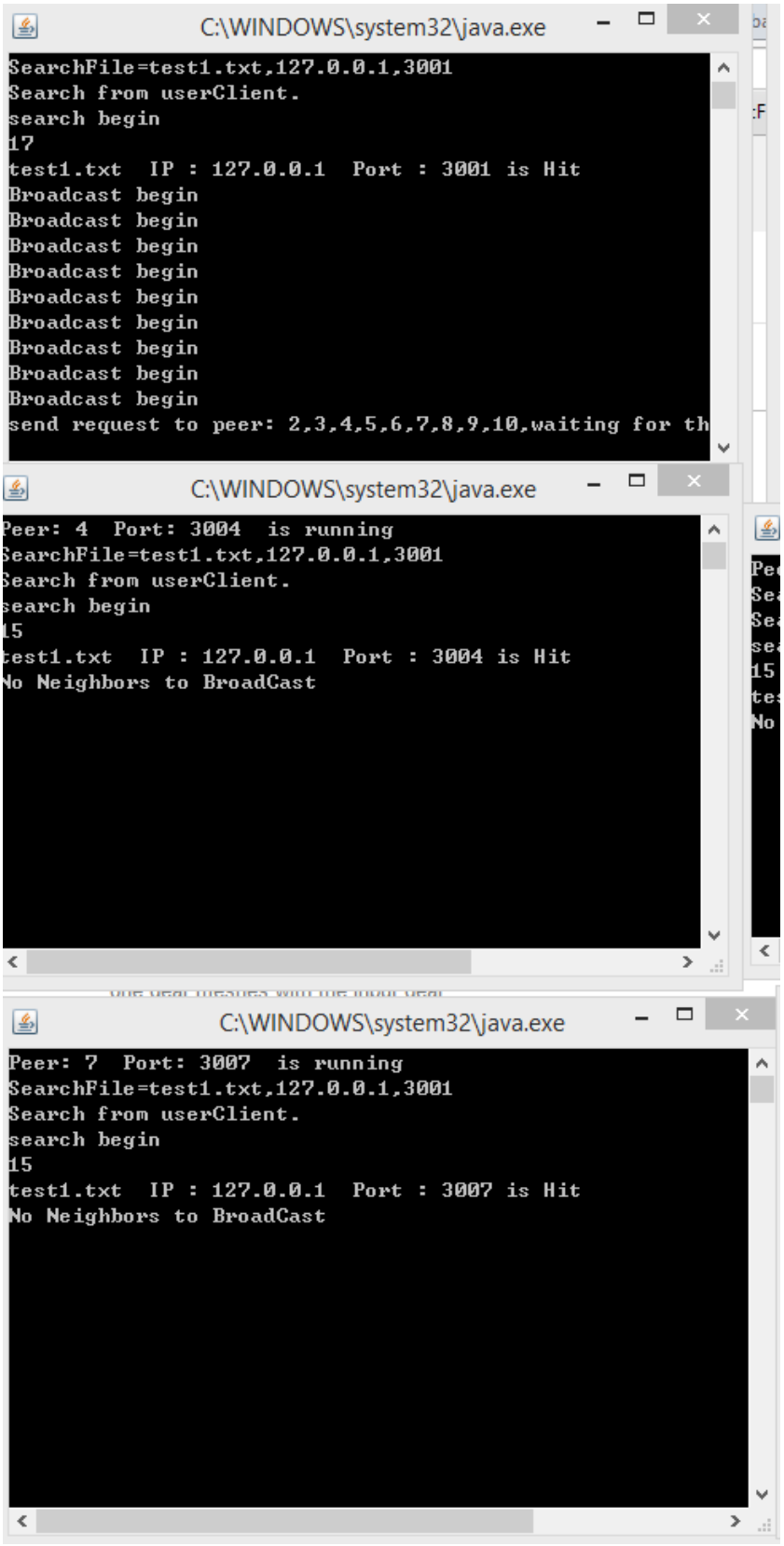
For star topology, we deployed 10 peers. Peer 1 to Peer 10.
We choose Peer1 as a client.

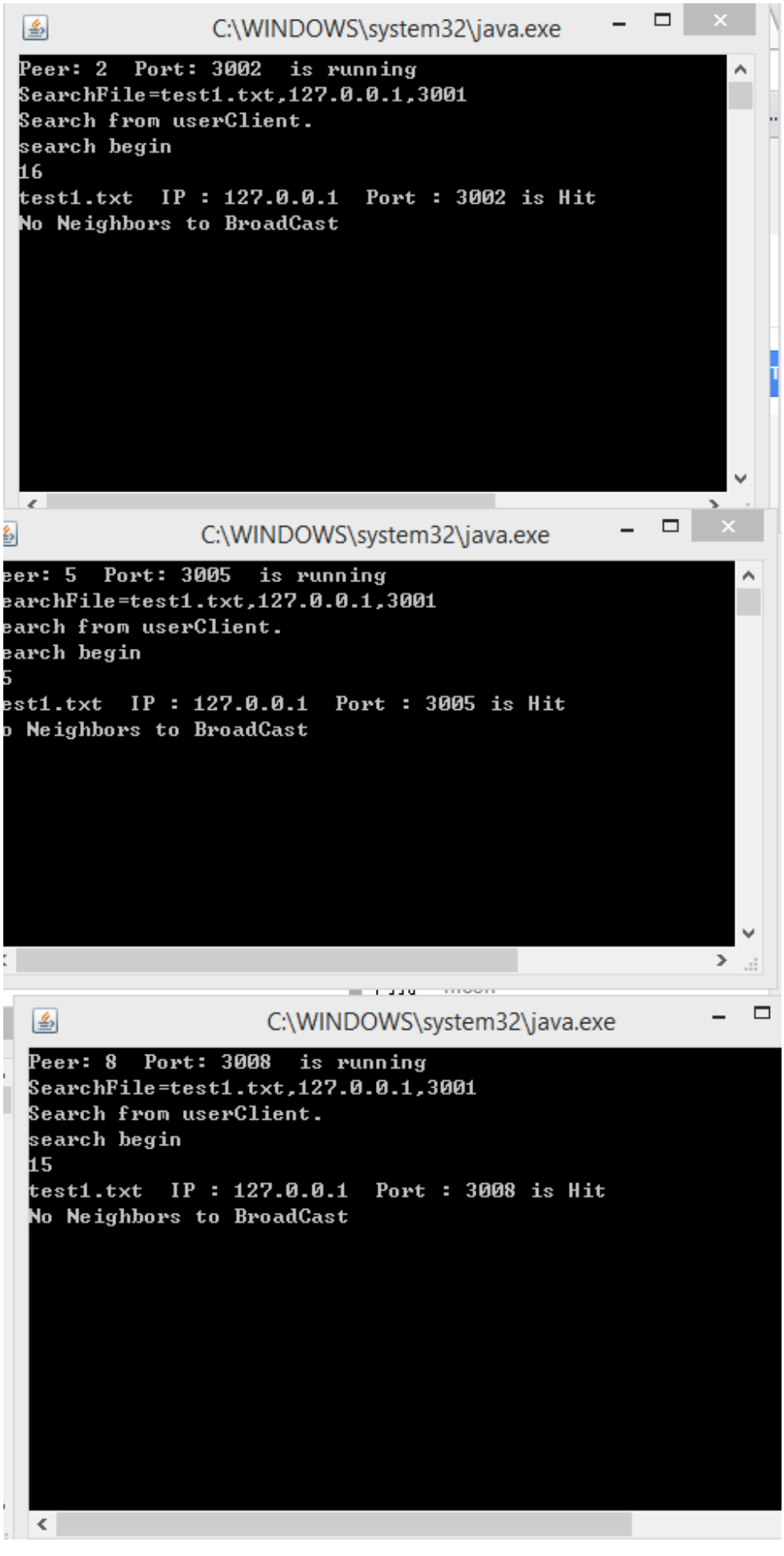


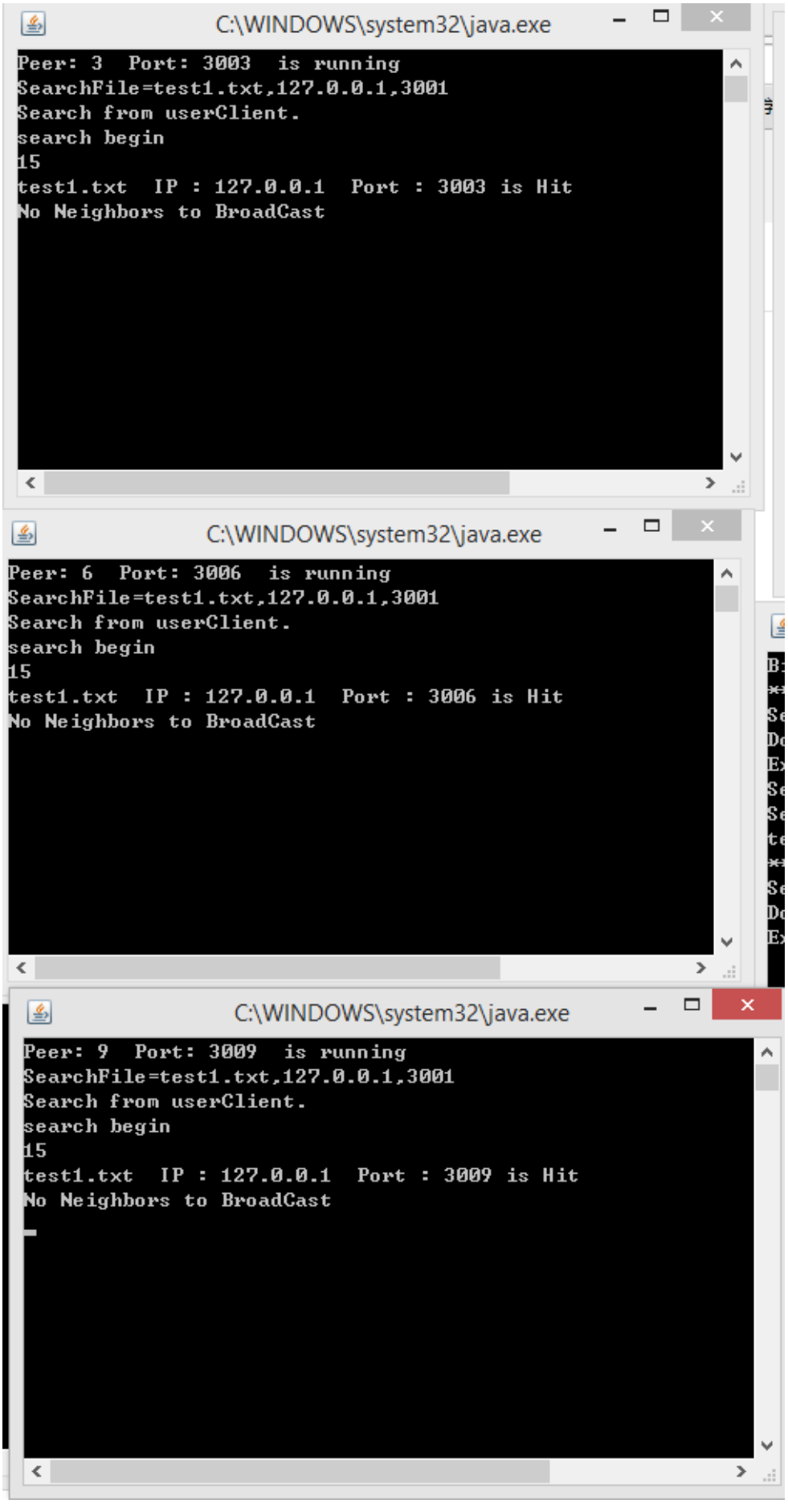
Search a file

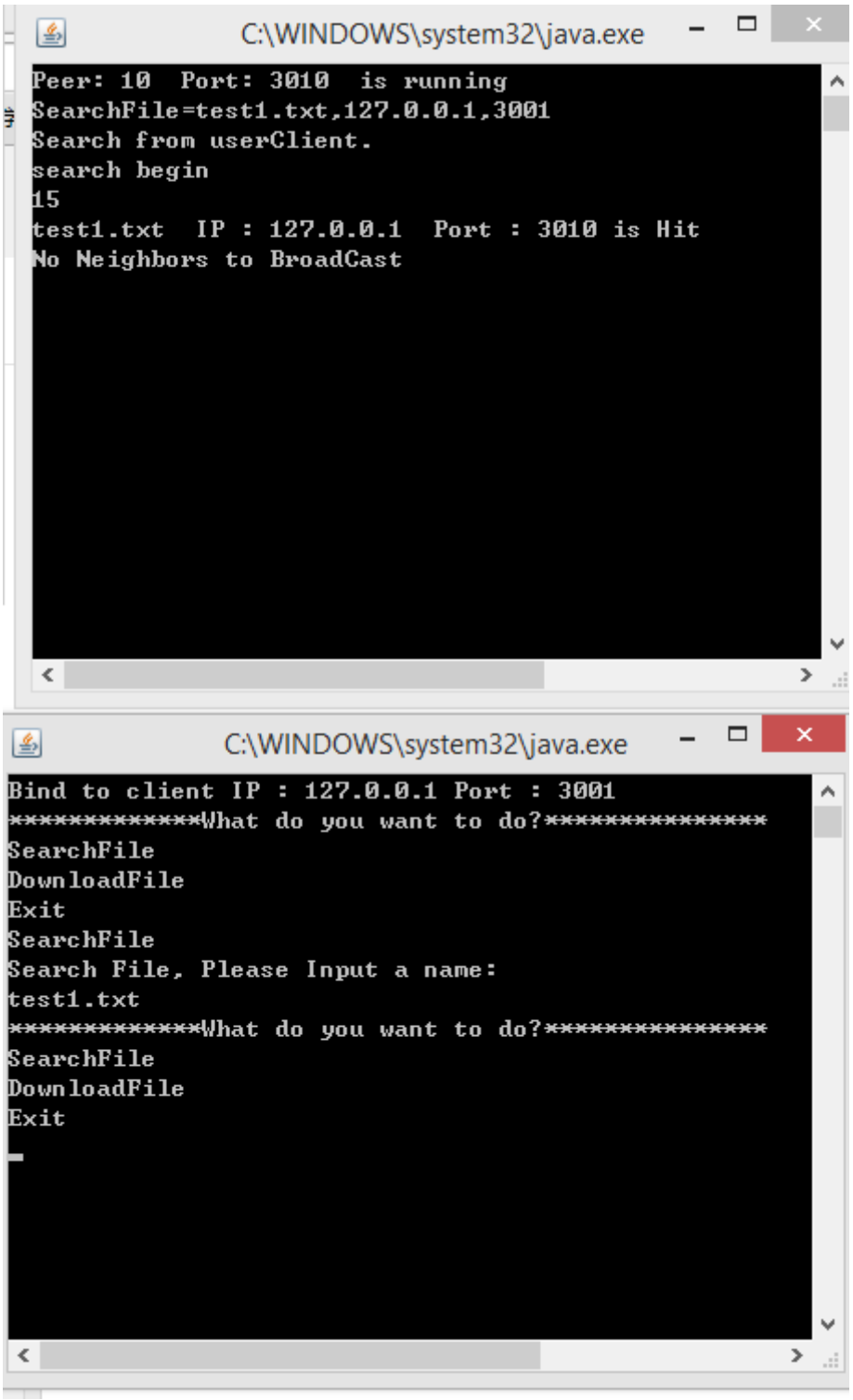
Type “SearchFile” at client prompt, then type file name.

For example, type “test1.txt”(All peers have this file). The search result will show as below.




C:\WINDOWS\system32\java.exe
Peer: 2 Port: 3002 is running
SearchFile=test1.txt,127.0.0.1,3001
Search from userClient.
search begin
16
test1.txt IP : 127.0.0.1 Port : 3002 is Hit
No Neighbors to BroadCast
C:\WINDOWS\system32\java.exe
eer: 5 Port: 3005 is running
earchFile=test1.txt,127.0.0.1,3001
earch from userClient.
earch begin
5
est1.txt IP : 127.0.0.1 Port : 3005 is Hit
o Neighbors to BroadCast
C:\WINDOWS\system32\java.exe
Peer: 8 Port: 3008 is running
SearchFile=test1.txt,127.0.0.1,3001
Search from userClient.
search begin
15
test1.txt IP : 127.0.0.1 Port : 3008 is Hit
No Neighbors to BroadCast

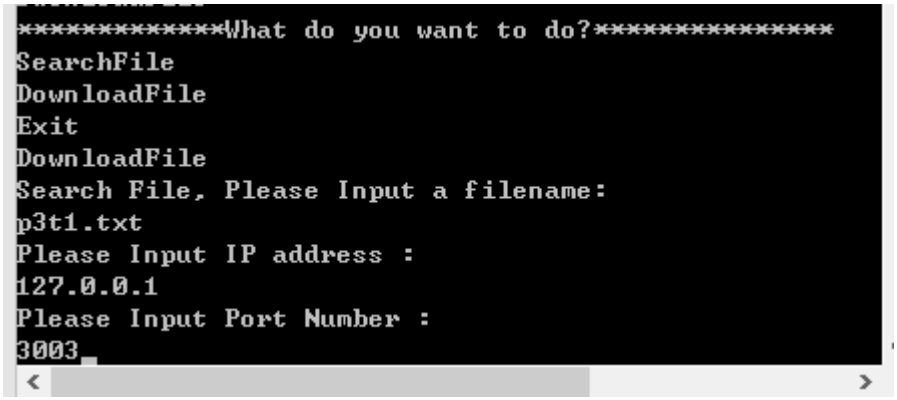

C:\WINDOWS\system32\java.exe
Peer: 3 Port: 3003 is running
SearchFile=test1.txt,127.0.0.1,3001
Search from userClient.
search begin
15
test1.txt IP : 127.0.0.1 Port : 3003 is Hit
No Neighbors to BroadCast
C:\WINDOWS\system32\java.exe
Peer: 6 Port: 3006 is running
SearchFile=test1.txt,127.0.0.1,3001
Search from userClient.
search begin
15
test1.txt IP : 127.0.0.1 Port : 3006 is Hit
No Neighbors to BroadCast
C:\WINDOWS\system32\java.exe
Peer: 9 Port: 3009 is running
SearchFile=test1.txt,127.0.0.1,3001
Search from userClient.
search begin
15
test1.txt IP : 127.0.0.1 Port : 3009 is Hit
No Neighbors to BroadCast



In the window of Peer 1 we can see the massage has been broadcasted to all its neighbors in multithread behavior: from peer 2 to peer 10. Then we can see each searching results hit or miss. For this file, all peers return hit.

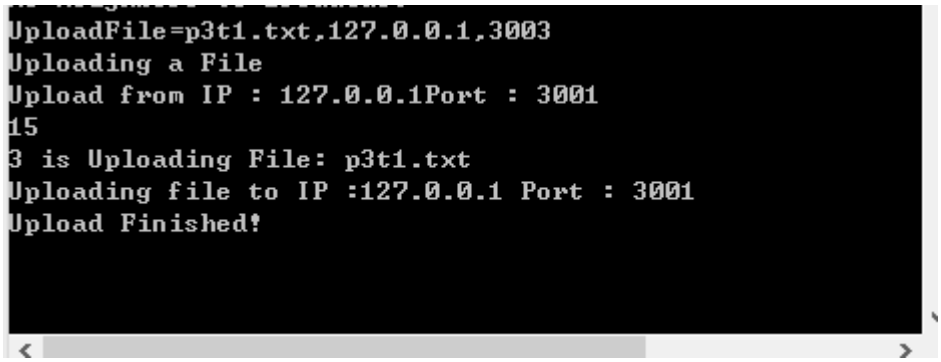
Download a file

To download a file, simply type “DownloadFile” at the client prompt. Then input the file name, the ip address and the port number. For example, download “p3t1.txt” from peer3.

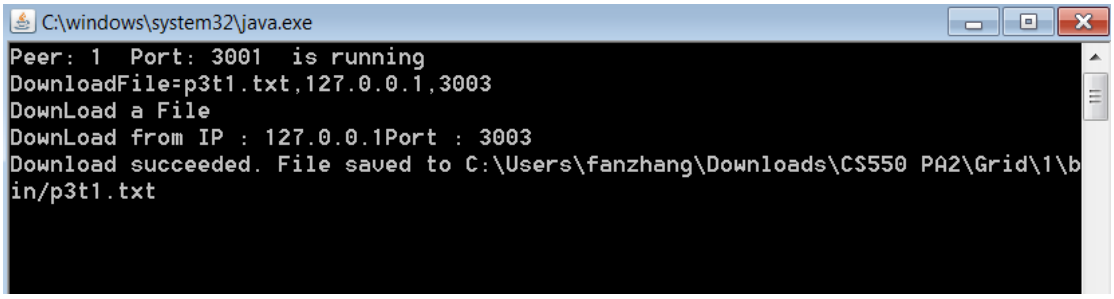


Then the output will be:

Peer3 server upload the file:



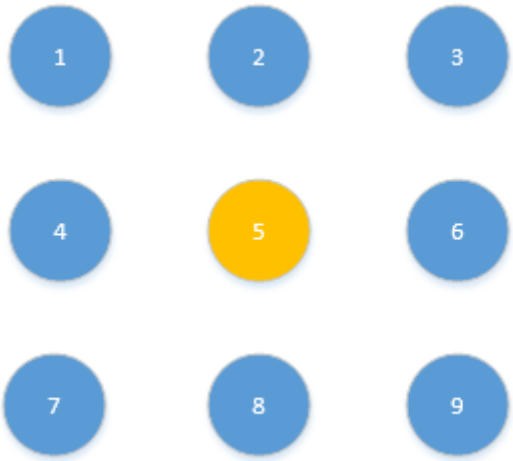
Peer1 server download the file:



We can find p3t1.txt was downloaded and in the Peer1’s folder.

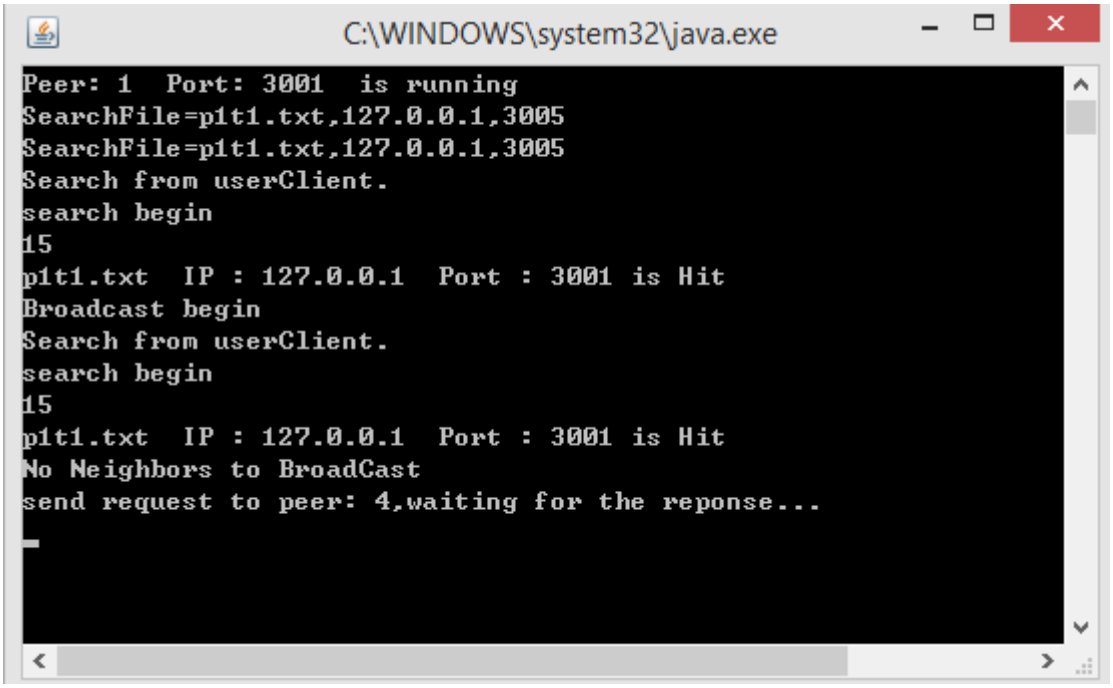
3. 2D-mesh Topology

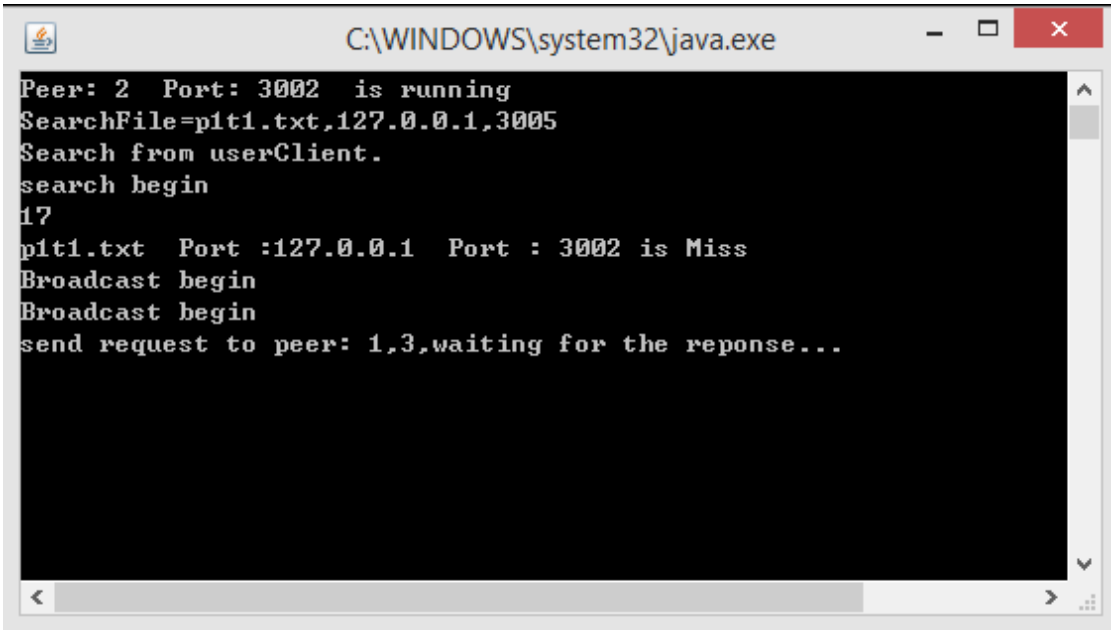
For 2D-mesh topology, we deployed 9 peers, Peer1 to Peer 9.
We choose Peer 5 as a client.

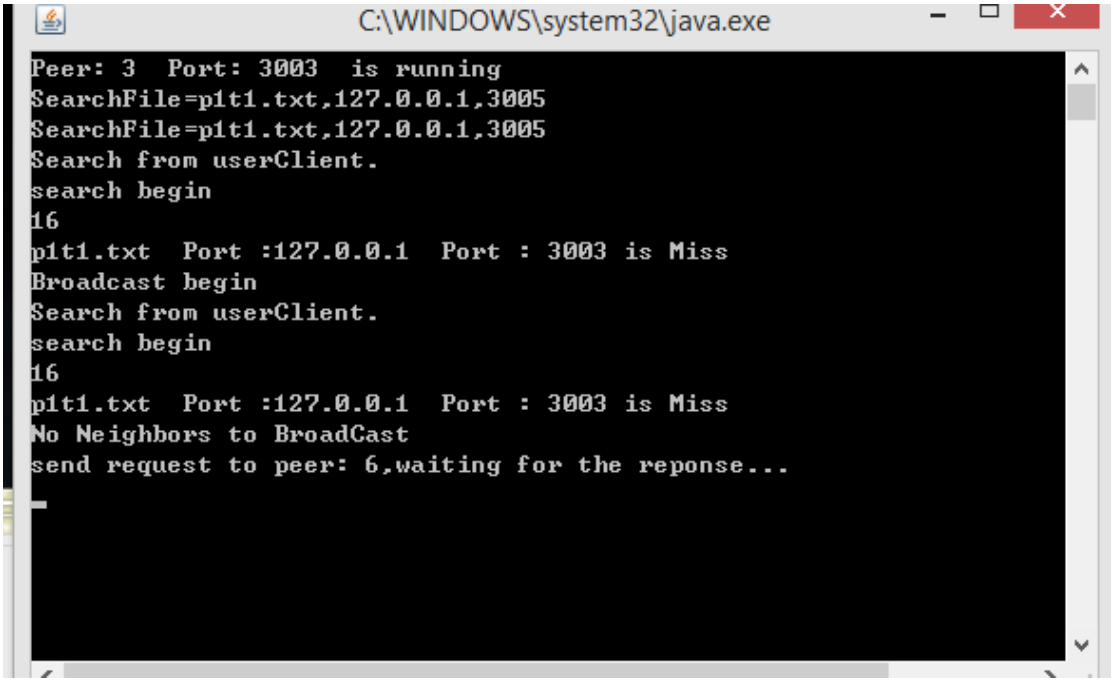


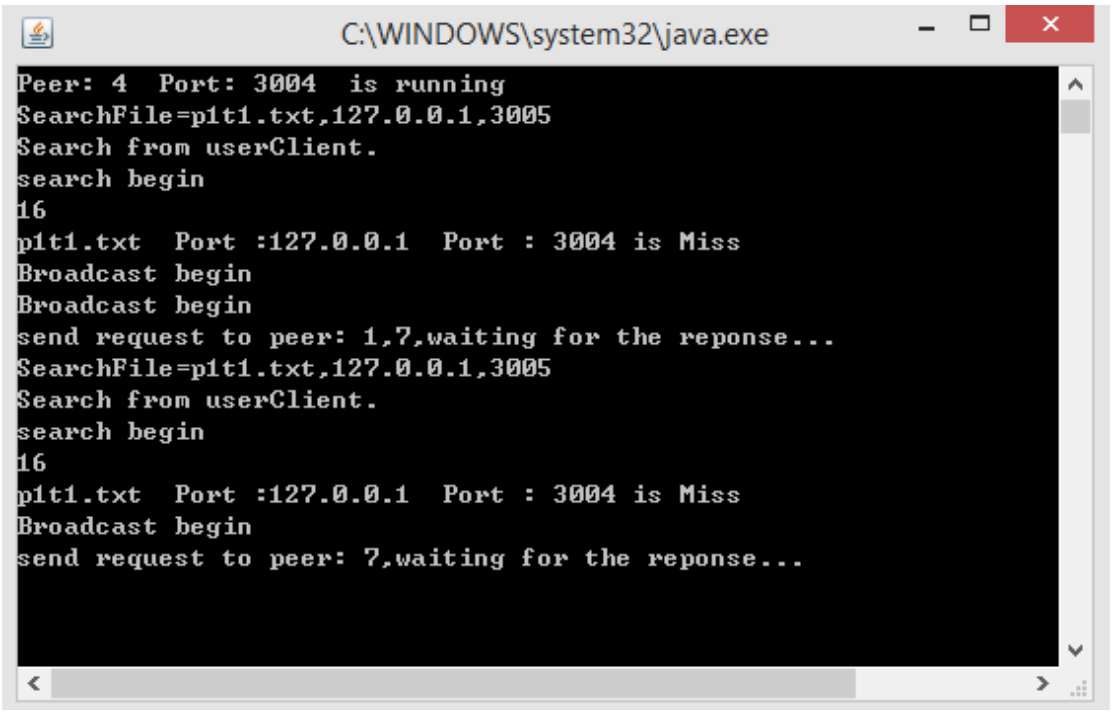
Search a file

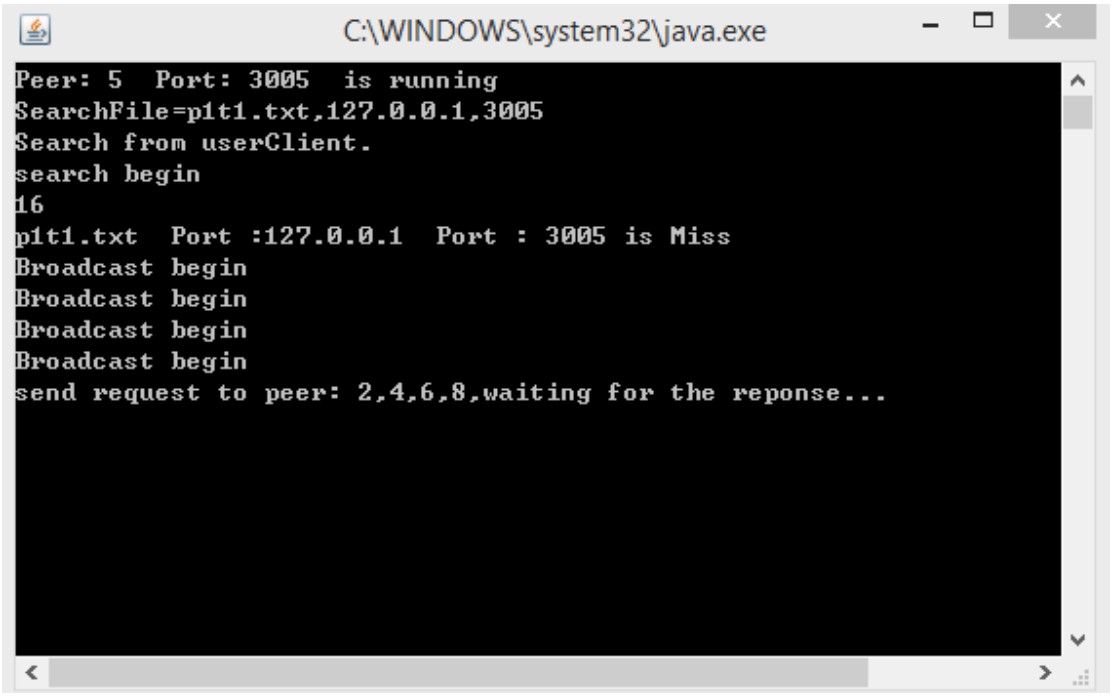
Type “SearchFile” at client prompt, then type file name. For example, type “p1t1.txt”(Peer1 has this file). The search result will show as below.

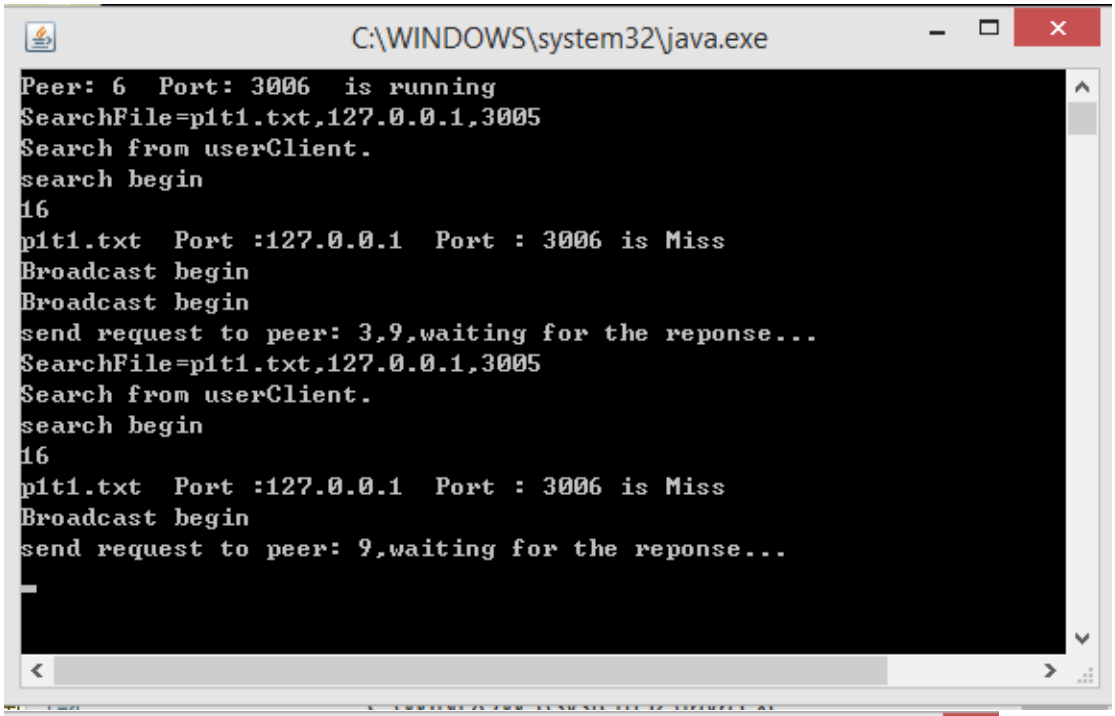


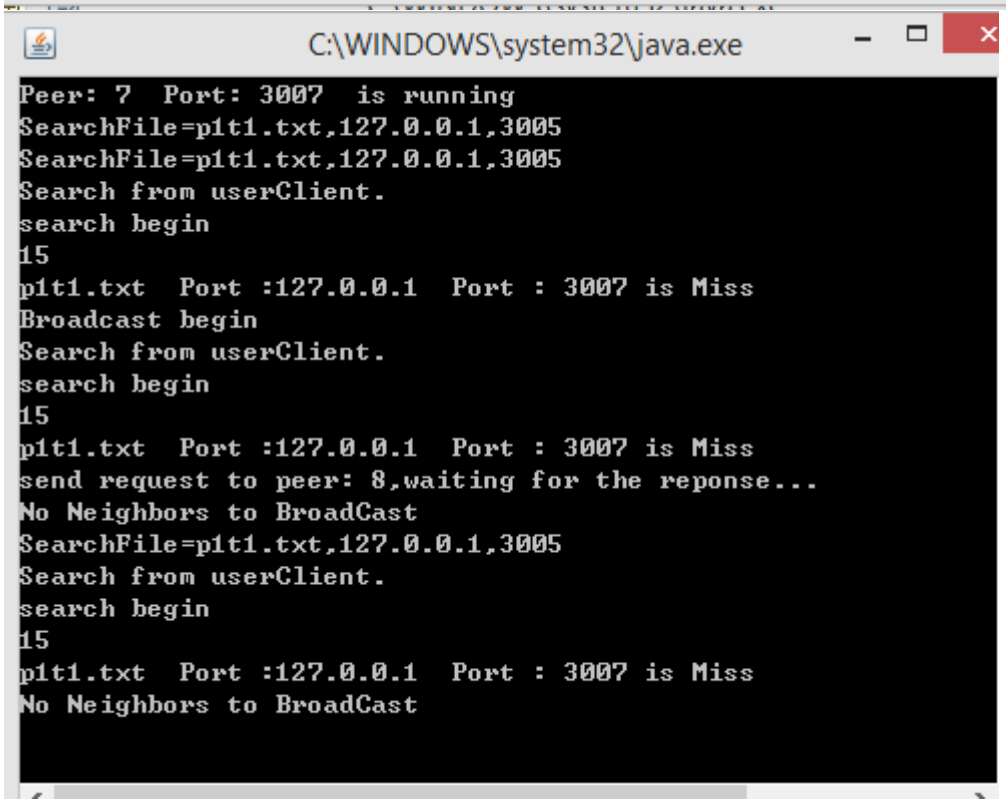

C:\WINDOWS\system32\java.exe
Peer: 2 Port: 3002 is running
SearchFile=p1t1.txt,127.0.0.1,3005
Search from userClient.
search begin
17
p1t1.txt Port :127.0.0.1 Port : 3002 is Miss
Broadcast begin
Broadcast begin
send request to peer: 1,3,waiting for the reponse...

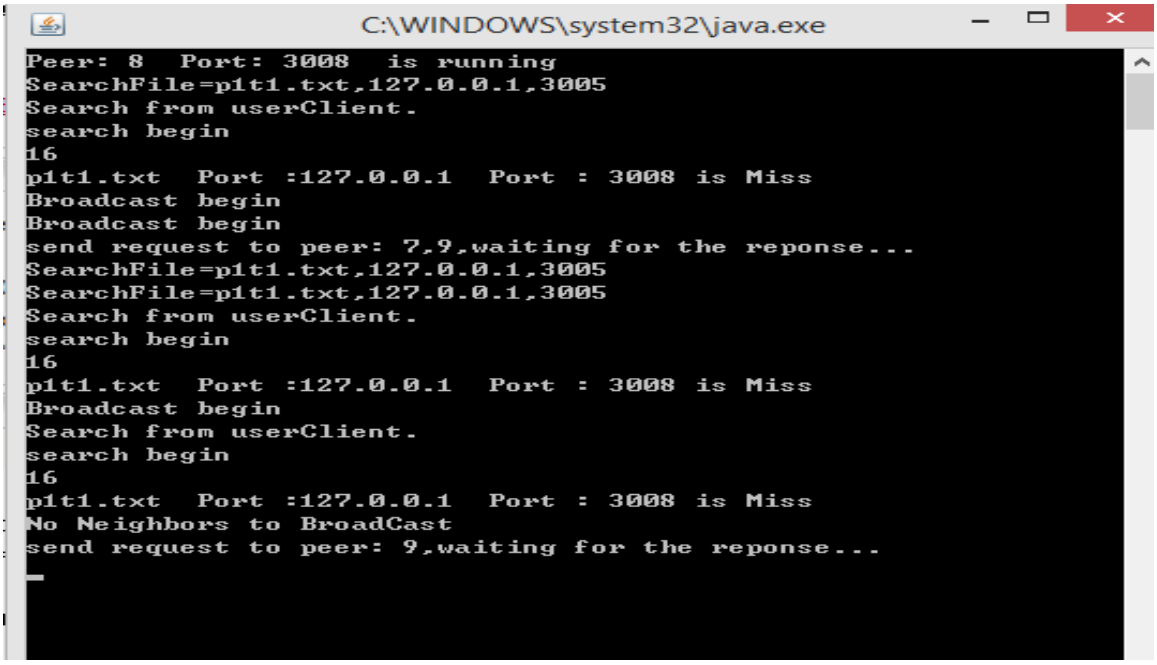

C:\WINDOWS\system32\java.exe
Peer: 3 Port: 3003 is running
SearchFile=p1t1.txt,127.0.0.1,3005
SearchFile=p1t1.txt,127.0.0.1,3005
Search from userClient.
search begin
16
p1t1.txt Port :127.0.0.1 Port : 3003 is Miss
Broadcast begin
Search from userClient.
search begin
16
p1t1.txt Port :127.0.0.1 Port : 3003 is Miss
No Neighbors to BroadCast
send request to peer: 6,waiting for the reponse...

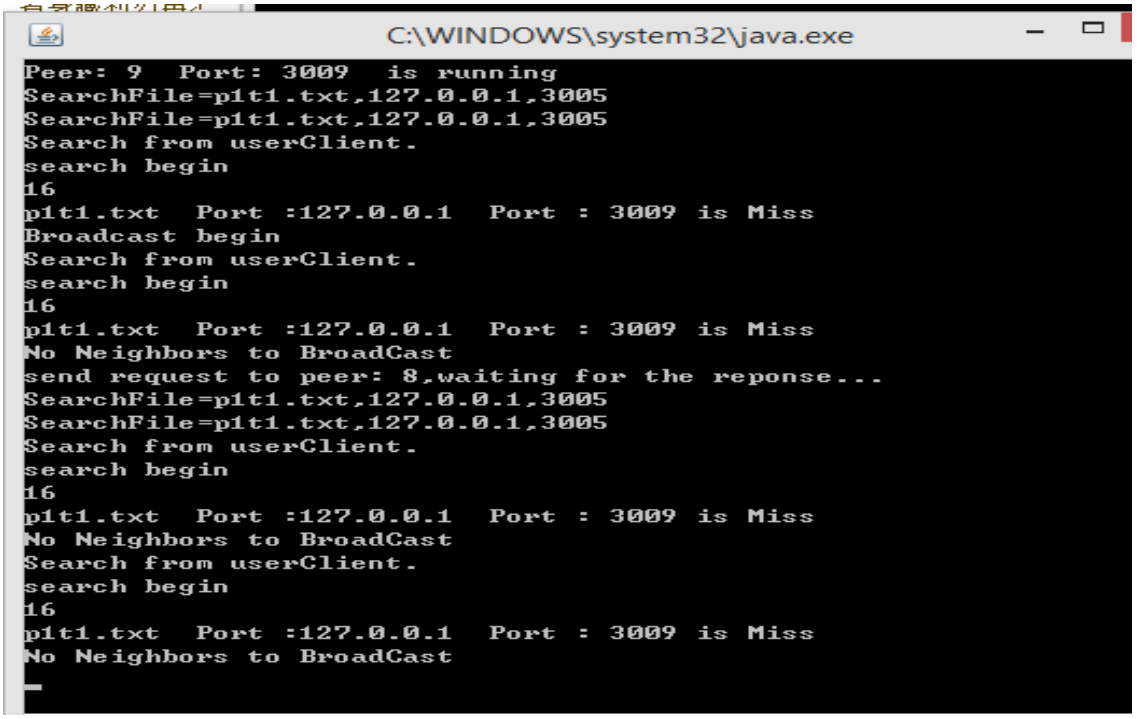

C:\WINDOWS\system32\java.exe
Peer: 4 Port: 3004 is running
SearchFile=p1t1.txt,127.0.0.1,3005
Search from userClient.
search begin
16
p1t1.txt Port :127.0.0.1 Port : 3004 is Miss
Broadcast begin
Broadcast begin
send request to peer: 1,7,waiting for the reponse...
SearchFile=p1t1.txt,127.0.0.1,3005
Search from userClient.
search begin
16
p1t1.txt Port :127.0.0.1 Port : 3004 is Miss
Broadcast begin
send request to peer: 7,waiting for the reponse...


C:\WINDOWS\system32\java.exe
Peer: 5 Port: 3005 is running
SearchFile=p1t1.txt,127.0.0.1,3005
Search from userClient.
search begin
16
p1t1.txt Port :127.0.0.1 Port : 3005 is Miss
Broadcast begin
Broadcast begin
Broadcast begin
Broadcast begin
send request to peer: 2,4,6,8,waiting for the reponse...


C:\WINDOWS\system32\java.exe
Peer: 6 Port: 3006 is running
SearchFile=p1t1.txt,127.0.0.1,3005
Search from userClient.
search begin
16
p1t1.txt Port :127.0.0.1 Port : 3006 is Miss
Broadcast begin
Broadcast begin
send request to peer: 3,9,waiting for the reponse...
SearchFile=p1t1.txt,127.0.0.1,3005
Search from userClient.
search begin
16
p1t1.txt Port :127.0.0.1 Port : 3006 is Miss
Broadcast begin
send request to peer: 9,waiting for the reponse...


C:\WINDOWS\system32\java.exe
Peer: 7 Port: 3007 is running
SearchFile=p1t1.txt,127.0.0.1,3005
SearchFile=p1t1.txt,127.0.0.1,3005
Search from userClient.
search begin
15
p1t1.txt Port :127.0.0.1 Port : 3007 is Miss
Broadcast begin
Search from userClient.
search begin
15
p1t1.txt Port :127.0.0.1 Port : 3007 is Miss
send request to peer: 8,waiting for the reponse...
No Neighbors to BroadCast
SearchFile=p1t1.txt,127.0.0.1,3005
Search from userClient.
search begin
15
p1t1.txt Port :127.0.0.1 Port : 3007 is Miss
No Neighbors to BroadCast





From these outputs, we can see that our client server Peer 5 first broadcast the search message to its neighbor 2, 4, 6, 8.

Then peer 2 sent the message to 1, 3

Peer 1 sent the message to 4

Peer 3 sent the message to 6

Peer 4 sent the message to 7

Peer 6 sent the message to 9

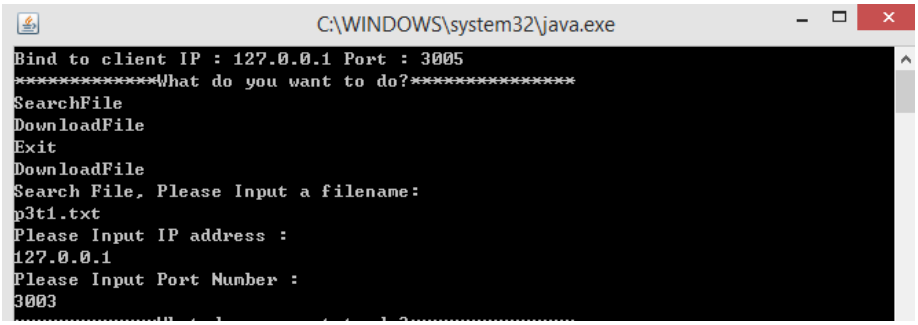
Peer 7 sent the message to 8

Peer 8 sent the message to 9

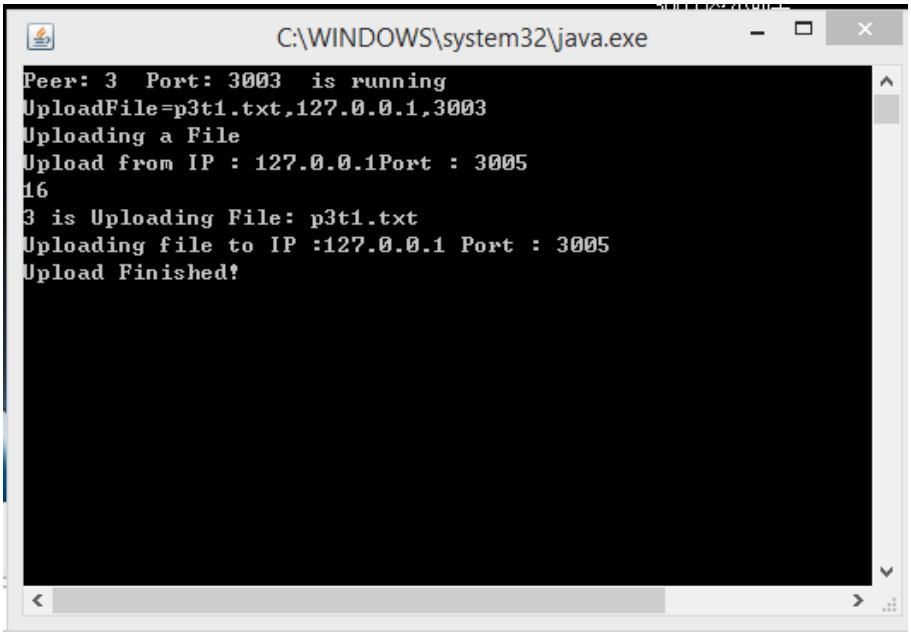
After the search, only peer 1 get the hit since the file is in peer1.

Download a file

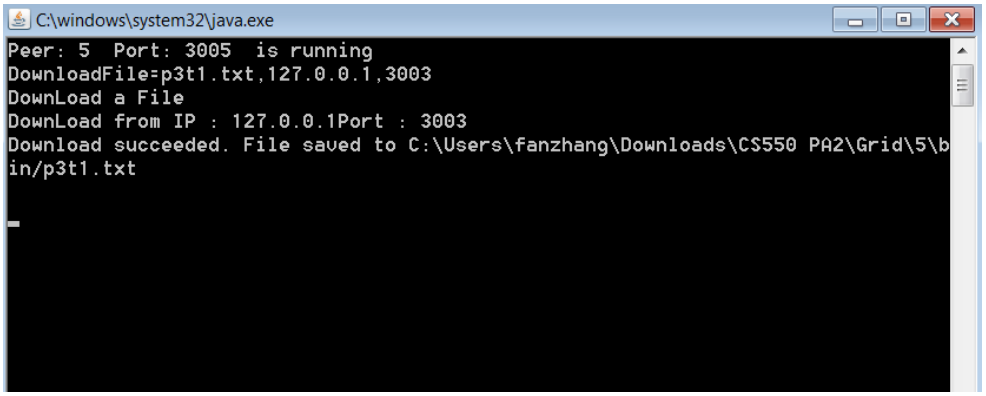
To download a file, simply type “DownloadFile” at the client prompt. Then input the file name, the ip address and the port number. For example, download “p3t1.txt” from peer3 to peer 5.



The Peer 3 will upload the file:



Then the peer 5 successfully download the file



We can find that p3t1.txt was downloaded and in the Peer5’s folder.