1, Index server starts

First index server

```
xqy@ubuntu: ~/Desktop/server1/build/classes
builds
    [javac] Warning: DeCentralizedIndexingServer.java modified in the future.
    [javac] Warning: IndexServerHelper.java modified in the future.
    [javac] Warning: Peer.java modified in the future.
    [javac] Warning: PeerClient.java modified in the future.
    [javac] Warning: PeerServer.java modified in the future.
    [javac] Compiling 10 source files to /home/xqy/Desktop/server1/build/classes

BUILD SUCCESSFUL
Total time: 12 seconds
xqy@ubuntu:~/Desktop/server1$ ls
build  build.xml  src
xqy@ubuntu:~/Desktop/server1$ cd build
xqy@ubuntu:~/Desktop/server1/build$ ls
classes
xqy@ubuntu:~/Desktop/server1/build$ cd classes
xqy@ubuntu:~/Desktop/server1/build/classes$ ls
DeCentralizedIndexingServer.class  Peer.class          test
helper                             PeerClient.class
IndexServerHelper.class            PeerServer.class
xqy@ubuntu:~/Desktop/server1/build/classes$ java DeCentralizedIndexingServer 800
0
Index server is listening 8000
```

Second index server

```
xqy@ubuntu:~/Desktop/server2/build/cla  xqy@ubuntu: ~/Desktop/server1/build/classes
    [javac] /home/xqy/Desktop/server2/bui builds
was not set, defaulting to build.sysclass    [javac] Warning: DeCentralizedIndexingServer.java modified in the future.
builds                                       [javac] Warning: IndexServerHelper.java modified in the future.
    [javac] Warning: DeCentralizedIndexing   [javac] Warning: Peer.java modified in the future.
    [javac] Warning: IndexServerHelper.ja    [javac] Warning: PeerClient.java modified in the future.
    [javac] Warning: Peer.java modified i    [javac] Warning: PeerServer.java modified in the future.
    [javac] Warning: PeerClient.java modi    [javac] Compiling 10 source files to /home/xqy/Desktop/server1/classes
    [javac] Warning: PeerServer.java modi
    [javac] Compiling 10 source files to  BUILD SUCCESSFUL
                                            Total time: 12 seconds
BUILD SUCCESSFUL                            xqy@ubuntu:~/Desktop/server1$ ls
Total time: 10 seconds                      build  build.xml  src
xqy@ubuntu:~/Desktop/server2$ cd build/cl xqy@ubuntu:~/Desktop/server1$ cd build
xqy@ubuntu:~/Desktop/server2/build/classe xqy@ubuntu:~/Desktop/server1/build$ ls
config.txt                 helper classes
config.txt~                IndexS xqy@ubuntu:~/Desktop/server1/build$ cd classes
DeCentralizedIndexingServer.class  Peer.c xqy@ubuntu:~/Desktop/server1/build/classes$ ls
xqy@ubuntu:~/Desktop/server2/build/classe DeCentralizedIndexingServer.class  Peer.class      test
1                                          helper                      PeerClient.class
Error: Could not find or load main class  IndexServerHelper.class         PeerServer.class
xqy@ubuntu:~/Desktop/server2/build/classe xqy@ubuntu:~/Desktop/server1/build/classes$ java DeCentralizedIndexingServer 80
1                                          0
Index server is listening 8001             Index server is listening 8000
^[
```

2, Peer start and registry

```
xqy@ubuntu: ~/Desktop/server1/build/classes
xqy@ubuntu:~$ cd Desktop/server1/build/classes
xqy@ubuntu:~/Desktop/server1/build/classes$ java Peer 5001 directory
Peerserver is listening 5001
Input file name please:
1.txt
Connecting to 8000
```

```
😣⊖⊙  xqy@ubuntu: ~/Desktop/server1/build/classes
xqy@ubuntu:~/Desktop/server1/build/classes$ java DeCentralizedIndexingServer
Index server is listening 8000
Index server is listening 8000
Receive: registry 5000 1.txt 2.txt 3.txt
Registry success...
Index server is listening 8000
```

3, Input file name you want to download

```
xqy@ubuntu:~$ cd Desktop/server1/build/classes
xqy@ubuntu:~/Desktop/server1/build/classes$ java Peer 5001 directory
Peerserver is listening 5001
Input file name please:
1.txt
Connecting to 8000
```
4, Output available file peer

```
😣⊖⊙  xqy@ubuntu: ~/Desktop/server1/build/classes
        at PeerClient.dealUserInput(Unknown Source)
        at PeerClient.run(Unknown Source)
Input file name please:
1.txt
Connecting to 8000
File server avalible: [NetAddress{address='127.0.0.1', port=5000}, NetAddress{ad
dress='127.0.0.1', port=5001}, NetAddress{address='127.0.0.1', port=5002}]
Input the sequence of the file server(0, 1, 2...):1
Input file name please:
```

5, choose a peer and finish downloading
    0 means the first peer, 1 means second....

6, Finished downloading

7, Multi peers hold the same file

8 index server shows

```
xqy@ubuntu: ~/Desktop/server1/build/classes

xqy@ubuntu:~/Desktop/server1/build/classes$ java DeCentralizedIndexingServer
Index server is listening 8000
Index server is listening 8000
Receive: registry 5000 1.txt 2.txt 3.txt
Registry success...
Index server is listening 8000
Receive: search 1.txt
Reply: 0 127.0.0.1-5000
Index server is listening 8000
Receive: registry 5001 1.txt 2.txt 3.txt
Registry success...
Index server is listening 8000
Receive: search 1.txt
Reply: 0 127.0.0.1-5000 127.0.0.1-5001
Index server is listening 8000
Receive: registry 5002 1.txt 2.txt 3.txt
Registry success...
Index server is listening 8000
Receive: search 1.txt
Reply: 0 127.0.0.1-5000 127.0.0.1-5001 127.0.0.1-5002
Index server is listening 8000
Receive: search 1.txt
Reply: 0 127.0.0.1-5000 127.0.0.1-5001 127.0.0.1-5002
Index server is listening 8000
```