```
Output File
Server
Input
Output
[valid port number]
Waiting for connection...
[invalid port number]
Port number is larger than maxium/Invalid port number
Client
System Status
Input
Command type
Output
Set up Client
[IP address]
Valid/invalid IP address
Please input server port.
[port number]
Invalid address
Connection refused
[port number]
Invalid IP address
Name or service unknown
Please try other server, bye!
[port number]
Valid IP and Port
Connecting with server. Your IP is [IP:PORT]
Client processing
p2p -h
Valid command
[help document]
[ILLEGAL COMMAND]
Invalid command
Invalid command. Try 'p2p -h' for more help
[COMMAND]
Disconnect
Cannot connect to server. Please try again
ready to connect
Please input host ip address
p2p -r [ FILEPATH]
Valid file path and not exist in server index
This file have been registered successfully.
p2p -r [ FILEPATH]
Invalid file path
Invalid file path in this client. Please check your file path
p2p -r [ FILEPATH]
Registered file
You have registered this file. Before you registered this file, you need cancel
this file from server.
p2p -f [KEYWORK]
Matched files
```

FILENAME IP PATH

```
ip:port path
filename
. . .
p2p -f [KEYWORK]
No matched files
FILENAME IP PATH
P2p -o [IP:PORT PATH]>[SAVEPATH]
Valid path
valid save path
[PATH]>[SAVEPATH] complete
P2p -o [IP:PORT PATH]>[SAVEPATH]
Invalid path
Invalid path in requested peer
P2p -o [IP:PORT PATH]>[SAVEPATH]
Invalid save path
This is a invalid save path. Please input right path.
P2p -q
Valid command
Bye!
Performance Testing
P2p -Rtest
Valid
Test files have been registered.
P2p -Rdownload
Valid
```

Download testing complete.