

**CS550 Advanced Operating Systems
Programming Assignment 3**

Manual

Submitted by:
Chiranjeevi Ankamreddy
A20359837

The assignment is done in Java and run through ANT build file. ANT is used to automate the execution of the program.

Here are three Main Classes to be executed.

PA3

- PeerServer1.java
- IndexingServer.java
- PeerClient.java

EVALUATION

- EvaluationPeerClient.java
- EvaluationIndexingserver.java
- EvaluationServer1.java

Execution:

The program is run through ANT build file in the project CS550PA3/build/ folder.

To execute the program in Linux systems.

First Open terminal and navigate to the build directory containing build.xml

and run the command **ant -buildfile build.xml**

you are prompted on terminal with "BUILD SUCCESSFUL".

To execute the three programs follow:

1. Executing PeerServer1

PeerServer1 program can be executed with Replication:

Here, Assign the port in the server side code(Peerserver1.java). There are 8 servers, The ports of each server are 2222,3333,4444,5555,6666,7777,8888,9999. It essentially executes the PeerServer1.java program

After Executing the Peerserver1.java, it will create a thread for each peer.

```
chiru@chiru: ~/Desktop
chiru@chiru:~$ cd Desktop
chiru@chiru:~/Desktop$ javac PeerServer1.java
Note: PeerServer1.java uses or overrides a deprecated API.
Note: Recompile with -Xlint:deprecation for details.
chiru@chiru:~/Desktop$ java PeerServer1
Enter The port of the server:
6666
```

2. Executing IndexingServer

IndexingServer program can be executed with Replication:

Here, Assign the port in the server side code(Indexingserver.java).There are 8 servers, The ports of each server are 2222,3333,4444,5555,6666,7777,8888,9999.It essentially executes the IndexingServer.java program

After Executing the Indexingserver.java,it will create a thread for each peer.

```
chiru@chiru: ~/Desktop
chiru@chiru:~$ cd Desktop
chiru@chiru:~/Desktop$ javac IndexingServer.java
Note: IndexingServer.java uses or overrides a deprecated API.
Note: Recompile with -Xlint:deprecation for details.
chiru@chiru:~/Desktop$ java IndexingServer
Enter The port of the server:
5555
Server started
Thread created for peer
java.lang.NumberFormatException: null
Server started
Thread created for peer
```

3. Executing PeerClient

To run the PeerClient program first navigate to the build directory in the project folder and then run the command “ant runPeerClient” . It builds the PeerClient.jar source files and prompts

```
chiru@chiru: ~/Desktop
chiru@chiru:~/Desktop$ java PeerClient
Enter key to connect server:
asdfg
connecting to the server 3
127.0.0.1
5555
Peer1 Intitialized

Hash Table Operations

1. Register
2. Search & Download
Enter the Choice:

```

For Register operation :

- ❖ Enter 1
you're prompted to give key (Keys are Strings).__

```

Enter key to connect server:
asdfg
connecting to the server 3
127.0.0.1
5555
Peer1 Intitialized

Hash Table Operations

1. Register
2. Search & Download
Enter the Choice:

```

For Search and Download Operation :

- ❖ Enter 2
you're prompted to give key (Keys are Strings).__

```
Hash Table Operations

1. Register
2. Search & Download
Enter the Choice:
2
Enter filename to be search:
cts.txt
Value = 127.0.0.1 5555 cts.txt
127.0.0.1
5555
cts.txt
```

For Download:

- ❖ Enter 2
you're prompted to give key (Keys are Strings).

```
chiru@chiru: ~/Desktop
chiru@chiru:~/Desktop$ java PeerClient
Enter key to connect server:
asdfg
connecting to the server 3
127.0.0.1
5555
Peer1 Intialized
Hash Table Operations
1. Register
2. Search & Download
Enter the Choice:
1
Register:
Enter The file name
cts.txt
Success
Peer1 sending file....
Sending...
Do you want to continue (Type y or n)
y
Hash Table Operations
1. Register
2. Search & Download
Enter the Choice:
2
Enter filename to be search:
cts.txt
Value = 127.0.0.1 5555 cts.txt
127.0.0.1
5555
cts.txt
connecting
file downloaded
-----
```

For exit :

❖ Enter n

3 Executing Evaluation

To evaluate the performance, first execute PeerServer using the command mentioned above and then

run command `ant - runEvaluation`. It builds the Evaluation.jar (EvaluationPeerserver1.java) source files.

And execute IndexingServer using the command mentioned above and then run command `ant - runEvaluation`. It builds the Evaluation.jar (EvaluationIndexingserver.java) source files.

And run the each client side program as shown below:

Run the EvaluationPeerClient.java