

Government Engineering College, Thrissur

CS334 – Network Programming Lab

Documentation -

Exam –

File server to send 400MB+ movie file

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Submitted By

Kowsik Nandagopan D

Roll No 31

TCR18CS031

GECT CSE S6

AIM

Design and implement a small socket programming application to transfer a large movie file (larger than 400MB) from the server and play at the client?

Prerequisite

- Code is provided in the **Server.java** and **Client.java** (Tested and verified on Ubuntu 20.04)

```
javac Server.java  
java Server
```

```
javac Client.java  
java Client
```

- **Note: Server.java searches for “send” folder and Client.java searches for “receive” folder. Make sure file to be sent exists inside “send” folder. Files will be received in “receive” folder**
- Server.java program sends file to every client connected to server socket. To stop transmission/server use CTRL + C

ALGORITHM

Server.java

- Accept client and run a thread for each client
- Accept file name and check whether exists. If exists, go to next step else alert client file does not exists and close thread.
- Read the file requested by the client and send. Each file must be buffered (here 32Kb).

Client.java

- Accept file name and send it to server.
- Receive file size and PID (Process ID)
- Receive buffered data and append it to file receive previously. Calculate percentage if possible
- After successfully receiving the file exit.

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Output / Screenshots

Initial compilation and execution

Server.java

Client.java

```
hp@hp ~/Documents/S6/Network Lab/Exam <master*>
$ javac Server.java && java Server
Server socket created
Client1 Connected
|
```

```
hp@hp ~/Documents/S6/Network Lab/Exam <master*>
$ javac Client.java && java Client
Client socket created
Enter file name (with MIME type): cap.mkv|
```

I have combined both compilation and execution command using && operator in terminal

Initial Send Folder and receive folder

```
send
|-- cap.mkv
|-- test.png
|-- test.txt
```

```
receive
|-- test.png
```

Sending File

```
hp@hp ~/Documents/S6/Network Lab/Exam <master*>
$ javac Server.java && java Server
Server socket created
Client1 Connected
Requested file cap.mkv of size 416346518 bytes
|
```

```
99.62%
99.64%
99.65%
99.67%
99.69%
99.70%
99.72%
99.73%
99.75%
99.76%
99.78%
99.80%
99.81%
99.83%
99.84%
99.86%
99.87%
99.89%
99.91%
99.92%
99.94%
99.95%
99.97%
99.99%
100.00%
```

Client Exit ...

```
hp@hp ~/Documents/S6/Network Lab/Exam <master*>
$
```

Receive Folder after receiving file from server

```
receive
|-- cap.mkv
|-- test.png
```