

PART 1 OF REPORT: CSC3002F

assignment 1

kpntha001
mrxale005
esrnat001

1. Design

The idea initially was to create a chat application as in implement a chat group and have more features later on as we progress.

The very first thing we created was a ServerSocket that was bound to a port and waiting for connection from a client.

As shown on the System sequence diagram, once the client starts (assuming that the server has already started) the Client requests a connection and when accepted, could send decide to send a message to the server.

The application uses TCP transport protocols instead of UDP protocols, the communication is connection - based and not connectionless. So before a client could send information (even to the server) a connection must be established. this is done to ensure the integrity of the data exchanged between the client-server-client.

2. Functionality & Features

The app is based in the terminal, due to time constraints and lack of planning we were unable to get on designing a GUI.

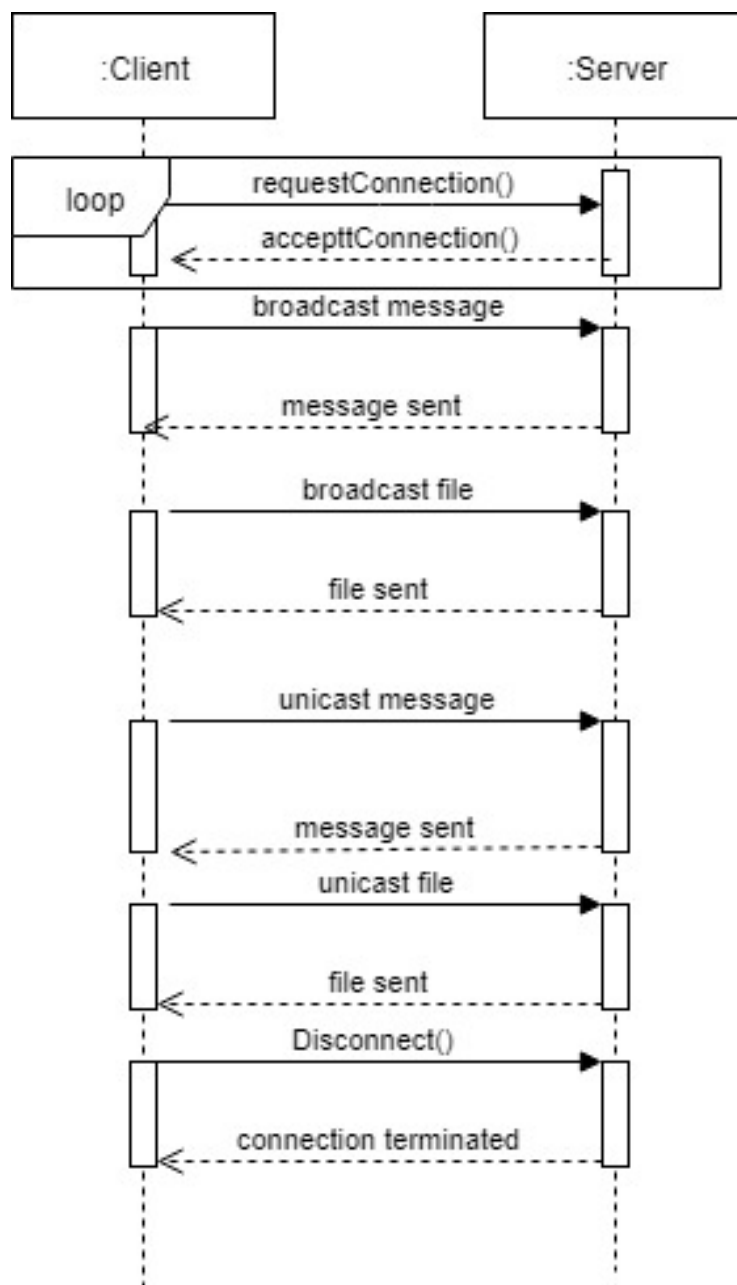
in the chat message, a few commands are used to send messages to individual members of the group or to everyone in the group.

broadcast message: send message to everyone in the group for group chat or to one person if there is one to one connection.

private message: send messages to one person in a group, or an individual if one person is connected.

broadcast file: send files to everyone in the group.

private file: send files to one person in a group.



Nathan

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Terminal
File Edit View Search Terminal Help
kpntha001@sl-dual-150:~$ cd Documents/NetworksAss1-master/
kpntha001@sl-dual-150:~/Documents/NetworksAss1-master$ cd ..
kpntha001@sl-dual-150:~/.local/share/Trash/files$ cd
kpntha001@sl-dual-150:~$ cd Documents/
kpntha001@sl-dual-150:~/Documents$ cd NetworksAss1-master/
kpntha001@sl-dual-150:~/Documents/NetworksAss1-master$ make client
java -cp bin// Client
Picked up _JAVA_OPTIONS: -Xms512m -Xmx4096m
Enter [name of folder] [port number] [ip address]
Thabo 12000 196.42.64.196
Please enter command as a string
What is your name:
Thabo
Message sent
Please enter command as a string
broadcast message "KPNTHA001, thabo is here again"
Message sent
Please enter command as a string
@client 3:hllo, Nathan here ESRNAT001
broadcast file "proj1.Rmd"
Message sent
Please enter command as a string
broadcast file "../proj1.Rmd"
Message sent
Please enter command as a string

```

.196
address

```

1. java
Thabos-Computer:NetworksAss1 thabokopane$ git reset --hard HEAD
HEAD is now at cf79638 i tried to add names, worked partially
Thabos-Computer:NetworksAss1 thabokopane$ make
/usr/bin/javac -g -d bin/ -cp bin/./lib/junit-4.12.jar:./lib/junit-4.12.jar src/*.java
Thabos-Computer:NetworksAss1 thabokopane$ make run
java -cp bin// Server
waiting for clients
12000
Client client1 connected
Client client2 connected
client1 broadcast message
Exception in thread "Thread-1" java.lang.StringIndexOutOfBoundsException: String
index out of range: 53
    at java.lang.String.charAt(String.java:658)
    at Server$ClientThread.content(Server.java:292)
    at Server$ClientThread.run(Server.java:145)
    at java.lang.Thread.run(Thread.java:748)
Client client3 connected
I/O exception
client3 broadcast message
I/O exception
client1 broadcast file
client1 broadcast file

```

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    at java.io.ObjectInputStream$BlockDataInputStream.peekByte(ObjectInputStream.java:2954)
    at java.io.ObjectInputStream.readObject0(ObjectInputStream.java:1535)
    at java.io.ObjectInputStream.readObject(ObjectInputStream.java:428)
    at Client$ServerThread.run(Client.java:85)
    at java.lang.Thread.run(Thread.java:748)

broadcast message "ESRNAT001, Nathan is here ma peeps"
Message sent
Please enter command as a string
^Cmake: *** [client] Error 130

Thabos-Computer:NetworksAss1 thabokopane$ make client
java -cp bin// Client
Enter [name of folder] [port number] [ip address]
Nathan 12000 localhost
Please enter command as a string
What is your name:
Thabo
Message sent
Please enter command as a string
broadcast message "hlllo, Nathan here ESRNAT001"
Message sent
Please enter command as a string

```