

Name: Benoit Vanasse  
StudentID: 300079464  
Email: [bvana069@uottawa.ca](mailto:bvana069@uottawa.ca)

Testcase 2001

System: Simple Chat                      Phase: 2 to 4  
Server startup check with default arguments  
Severity: 1

Instructions:

1. At the console, enter: `java EchoServer`.

Expected result:

1. The server reports that it is listening for clients by displaying the following message:

Server listening for clients on port 5555

2. The server console awaits for user input.

Cleanup:

Hit CTRL+C to kill the server.

```
C:\Users\Benoit\Documents\GitHub\Lloseng\code\simplechat1>java -classpath ../../code;. ServerConsole
Server listening for connections on port 5555

C:\Users\Benoit\Documents\GitHub\Lloseng\code\simplechat1>
```

Testcase 2002

System: Simple Chat

Phase: 2

Client startup check without a login

Severity: 1

Instructions:

1. At the console, enter: `java ClientConsole`.

Expected result:

1. The client reports it cannot connect without a login by displaying:

ERROR - No login ID specified. Connection aborted.

2. The client terminates.

Cleanup: (if client is still active)

Hit CTRL+C to kill the client.

```
C:\Users\Benoit\Documents\GitHub\Lloseng\code\simplechat1>java -classpath ../../code;. ClientConsole
ERROR - No login ID specified. Connection aborted.
```

```
C:\Users\Benoit\Documents\GitHub\Lloseng\code\simplechat1>_
```

Testcase 2003

System: Simple Chat

Phase: 2

Client startup check with a login and without a server

Severity: 1

Instructions:

1. At the console, enter: `java ClientConsole <loginID>` where loginID is the name you wish to be identified by.

Expected result:

1. The client reports it cannot connect to a server by displaying:

Cannot open connection. Awaiting command.

2. The client waits for user input

Cleanup:

Hit CTRL+C to kill the client.

---

Command Prompt - java -classpath ..\..\code;. ClientConsole Benoit

```
C:\Users\Benoit\Documents\GitHub\Lloeng\code\simplechat1>java -classpath ..\..\code;. ClientConsole Benoit
> Cannot open connection. Awaiting command.
2. The client waits for user input. (written by Benoit in idle Console)
```

Testcase 2004

System: Simple Chat

Phase: 2

Client connection with default arguments

Severity: 1

Instructions:

1. Start a server (Testcase 2001, instruction 1)
2. On a different console on the same computer, start a client (Testcase 2003, instruction 1)

Expected results:

1. The server displays the following messages in sequence:

A new client is attempting to connect to the server.  
Message received #login <loginID> from null.  
<loginID> has logged on.

2. The client displays message:

<loginID> has logged on.

3. The client and the server wait for user input.

Cleanup: (unless proceeding to Testcase 2005)

Hit CTRL+C to kill the client.

Hit CTRL+C to kill the server.

```
C:\Users\Benoit\Documents\GitHub\Lloeng\code\simplechat1>java -classpath ..\..\code;. ServerConsole
Server listening for connections on port 5555
A new client is attempting to connect to the server.
Benoit has logged on.
```

```
Command Prompt - java -classpath ..\..\code;. ClientConsole Benoit
C:\Users\Benoit\Documents\GitHub\Lloeng\code\simplechat1>java -classpath ..\..\code;. ClientConsole Benoit
> Benoit has logged on.
```

Since '#login <loginID>' wasn't a 'message received' needed to be echoed to the clients, I made it such that it didn't echo and that only the '<loginID> has logged on.' was displayed. It is a lot cleaner looking.

Testcase 2005

System: Simple Chat

Phase: 2

Client Data transfer and data echo

Severity: 1

Instructions:

1. Start a server and a client on the same computer and connect using default arguments (Testcase 2004 instructions).
2. Once connected, type in data on the client console and press ENTER.

Expected results:

1. The message is echoed on the client side, but is preceded by the sender's loginID and the greater than symbol(">").
2. The server displays a message similar to the following:

Message received: <user input> from <loginID>

Cleanup: (unless proceeding to Testcase 2006)

Hit CTRL+C to kill the client.

Hit CTRL+C to kill the server.

```
C:\Users\Benoit\Documents\GitHub\Lloseng\code\simplechat1>java -classpath ..\..\code;. ServerConsole
Server listening for connections on port 5555
A new client is attempting to connect to the server.
Benoit has logged on.
Message received: Testcase 2005 from 127.0.0.1 (127.0.0.1)
```

```
Command Prompt - java -classpath ..\..\code;. ClientConsole Benoit
C:\Users\Benoit\Documents\GitHub\Lloseng\code\simplechat1>java -classpath ..\..\code;. ClientConsole Benoit
> Benoit has logged on.
Testcase 2005
> Benoit > Testcase 2005
```

Testcase 2006

System: Simple Chat

Phase: 2

Multiple local connections

Severity: 1

Instructions:

1. Start a server and multiple clients with DIFFERENT loginIDs and connect them to the server using default arguments. (Testcase 2005 instructions).
2. Start typing on all the client consoles AND the server console, pressing ENTER to send each message.

Expected results:

1. All client messages are echoed as in Testcase 2005.
2. All messages from the server console are echoed on the server console and to all clients, but are preceded by "SERVER MESSAGE> ".

Cleanup:

Hit CTRL+C to kill the clients

Hit CTRL+C to kill the servers

```
C:\Users\Benoit\Documents\GitHub\Lloseng\code\simplechat1>java -classpath ..\..\code;. ServerConsole
Server listening for connections on port 5555
A new client is attempting to connect to the server.
Benoit has logged on.
A new client is attempting to connect to the server.
Timothy has logged on.
Testcase 2006 #1
SERVER MSG> Testcase 2006 #1
Message received: Testcase 2006 #2 from 127.0.0.1 (127.0.0.1)
Message received: Testcase 2006 #3 from 127.0.0.1 (127.0.0.1)
```

Command Prompt - java -classpath ..\..\code;. ClientConsole Benoit

```
C:\Users\Benoit\Documents\GitHub\Lloseng\code\simplechat1>java -classpath ..\..\code;. ClientConsole Benoit
> Benoit has logged on.
> Timothy has logged on.
> SERVER MSG> Testcase 2006 #1
Testcase 2006 #2
> Benoit > Testcase 2006 #2
> Timothy > Testcase 2006 #3
```

Command Prompt - java -classpath ..\..\code;. ClientConsole Timothy

```
C:\Users\Benoit\Documents\GitHub\Lloseng\code\simplechat1>java -classpath ..\..\code;. ClientConsole Timothy
> Timothy has logged on.
> SERVER MSG> Testcase 2006 #1
> Benoit > Testcase 2006 #2
Testcase 2006 #3
> Timothy > Testcase 2006 #3
```

Testcase 2007

System: Simple Chat

Phase: 2 and subsequent

Server termination command check

Severity: 1

Instructions:

1. Start a server (Testcase 2001 instruction 1) using default arguments.
2. Type "#quit" into the server's console.

Expected result:

1. The server quits.

Cleanup (If the server is still active):

Hit CTRL+C to kill the server.

```
C:\Users\Benoit\Documents\GitHub\Lloeng\code\simplechat1>java -classpath ../../code;. ServerConsole
Server listening for connections on port 5555
#quit
Server has stopped listening for connections.
C:\Users\Benoit\Documents\GitHub\Lloeng\code\simplechat1>_
```

Testcase 2008  
System: Simple Chat  
Server stop check  
Severity: 2

Instructions:

1. Start a server (Testcase 1001, instruction 1).
2. Connect a client to the server (Testcase 2004).
3. Type "#stop" into the server's console.
4. Type in a message on the client and send it.
5. Attempt to connect other clients.
6. Restart the server.

Expected results:

1. The server displays:

Server has stopped listening for connections.

2. The client displays:

WARNING - Server has stopped listening for connections.

3. Data echoing still works normally.

4. Attempting to connect other clients will hang the console as these new connections are put on backlog until the max backlog (default of 10) is reached.

5. Restarting the server will cause the backlogged clients to connect properly.

Cleanup: (Unless proceeding to Testcase 2008)

Type #quit to kill the server

Hit CTRL+C to kill the client

```
C:\Users\Benoit\Documents\GitHub\Lloeng\code\simplechat1>java -classpath ..\..\code;. ServerConsole
Server listening for connections on port 5555
A new client is attempting to connect to the server.
Benoit has logged on.
#stop
Server has stopped listening for connections.
Message received: 4. Type in a message on the client and send it. from 127.0.0.1 (127.0.0.1)
Message received: 5. ClientConsole Timothy was initiated but no connected has yet been made. Going to restart server now. from 127.0.0.1 (127.0.0.1)
#start
Server listening for connections on port 5555
A new client is attempting to connect to the server.
Timothy has logged on.
Message received: As soon as #start on ServerConsole was done, Timothy logged on. from 127.0.0.1 (127.0.0.1)
```

```
Command Prompt - java -classpath ..\..\code;. ClientConsole Benoit
C:\Users\Benoit\Documents\GitHub\Lloeng\code\simplechat1>java -classpath ..\..\code;. ClientConsole Benoit
> Benoit has logged on.
> WARNING - Server has stopped listening for connections.
4. Type in a message on the client and send it.
> Benoit > 4. Type in a message on the client and send it.
5. ClientConsole Timothy was initiated but no connected has yet been made. Going to restart server now.
> Benoit > 5. ClientConsole Timothy was initiated but no connected has yet been made. Going to restart server now.
> Timothy has logged on.
As soon as #start on ServerConsole was done, Timothy logged on.
> Benoit > As soon as #start on ServerConsole was done, Timothy logged on.
```

```
Command Prompt - java -classpath ..\..\code;. ClientConsole Timothy
C:\Users\Benoit\Documents\GitHub\Lloeng\code\simplechat1>java -classpath ..\..\code;. ClientConsole Timothy
> Timothy has logged on.
> Benoit > As soon as #start on ServerConsole was done, Timothy logged on.
```



Testcase 2009

System: Simple Chat

Phase: 2 and 3

Server close command check

Severity: 2

Instructions:

1. Start a server and connect a client to it. (Testcase 2007 instruction 1)
2. Stop the server using the #stop command.
3. Type "#close" into the server's console.

Expected result:

1. Server displays in sequence:

Server has stopped listening for connections.  
<loginID> has disconnected.

2. The client displays:

WARNING - The server has stopped listening for connections  
SERVER SHUTTING DOWN! DISCONNECTING!  
Abnormal termination of connection.

and then waits for input.

Cleanup: (Unless proceeding to Testcase 2009)

Hit CTRL+C to kill the client.

Hit CTRL+C to kill the server.

```
C:\Users\Benoit\Documents\GitHub\Lloeng\code\simplechat1>java -classpath ..\..\code;. ServerConsole
Server listening for connections on port 5555
A new client is attempting to connect to the server.
Benoit has logged on.
#stop
Server has stopped listening for connections.
#close
Benoit has disconnected.
```

Command Prompt - java -classpath ..\..\code;. ClientConsole Benoit

```
C:\Users\Benoit\Documents\GitHub\Lloeng\code\simplechat1>java -classpath ..\..\code;. ClientConsole Benoit
> Benoit has logged on.
> WARNING - Server has stopped listening for connections.
SERVER SHUTTING DOWN! DISCONNECTING!
Abnormal termination of connection.
```

Testcase 2009

System: Simple Chat

Phase: 2 and subsequent

Server restart

Severity: 1

Instructions:

1. Start a server, connect a client, and close the server. (Testcase 2008)
2. Type "#start" into the server's console.
3. Attempt to connect a client.

Expected result:

1. The server closes, restarts and then displays:

Server listening for connections on port 5555.

2. The client connects normally as described in Testcase 2004.

Cleanup: (Unless proceeding to Testcase 2010)

Hit CTRL+C to kill the client.

Type #quit to kill the server.

```
C:\Users\Benoit\Documents\GitHub\Lloseng\code\simplechat1>java -classpath ..\..\code;. ServerConsole
Server listening for connections on port 5555
A new client is attempting to connect to the server.
Benoit has logged on.
#close
Server has stopped listening for connections.
Benoit has disconnected.
#start
Server listening for connections on port 5555
A new client is attempting to connect to the server.
Benoit has logged on.

C:\Users\Benoit\Documents\GitHub\Lloseng\code\simplechat1>java -classpath ..\..\code;. ClientConsole Benoit
> Benoit has logged on.
SERVER SHUTTING DOWN! DISCONNECTING!
Abnormal termination of connection.
#login
> Benoit has logged on.
_
```

Testcase 2010

System: Simple Chat

Phase: 2 and subsequent

Client termination command check

Severity: 1

Instructions:

1. Start a client (Testcase 2002, instruction 1).

2. Type "#quit" into the client's console.

Expected result:

1. Client terminates.

Cleanup: (If client is still active)

Hit CTRL+C to kill the client.

```
C:\Users\Benoit\Documents\GitHub\Lloseng\code\simplechat1>java -classpath ..\..\code;. ClientConsole Benoit
Cannot open connection. Awaiting command.
#quit
Unexpected error while reading from console!

C:\Users\Benoit\Documents\GitHub\Lloseng\code\simplechat1>
```

The "Unexpected error while reading from console!" comes from the 'catch' in 'accept()'.

I could have removed the 'System.out.println' to be exactly the same but that code was original so I left it.

Testcase 2011

System: Simple Chat

Phase: 2 and subsequent

Client logoff check

Severity: 1

Instructions:

1. Start a server (Testcase 1001, instruction 1), and then connect a single local client to this server.
2. Type "#logoff" into this client's console.

Expected results:

1. Client disconnects and displays

Connection closed. (Under NT, it will display Abnormal termination of connection.)

Cleanup: (Unless proceeding to Testcase 2012)  
Type "#quit" to kill the client.

```
C:\Users\Benoit\Documents\GitHub\Lloeng\code\simplechat1>java -classpath ../../code;. ServerConsole
Server listening for connections on port 5555
A new client is attempting to connect to the server.
Benoit has logged on.
Benoit has disconnected.
```

Select Command Prompt

```
C:\Users\Benoit\Documents\GitHub\Lloeng\code\simplechat1>java -classpath ../../code;. ClientConsole Benoit
> Benoit has logged on.
#logoff
Connection closed.
#quit
Connection closed.

C:\Users\Benoit\Documents\GitHub\Lloeng\code\simplechat1>_
```

Testcase 2012

System: Simple Chat

Phase: 2 and subsequent

Client host and port setup commands check

Severity: 1

Instructions:

1. Start a client but no servers, and attempt to connect using default arguments.

2. At the client's console, type

"#sethost <newhost>"

where <newhost> is the name of a computer on the network

3. At the client's console, type

"#setport 1234".

Expected result:

1. The client displays

Host set to: <newhost>

port set to: 1234.

Cleanup:

Type #quit to kill the client.

CA: Command Prompt

```
C:\Users\Benoit\Documents\GitHub\Lloeng\code\simplechat1>java -classpath ../../code;. ClientConsole Benoit
> Could not send message to server. Awaiting command.
#sethost uOttawa
SYSTEM ::: The new Host has been set to: uOttawa
#setport 1234
SYSTEM ::: The new Port has been set to: 1234
#quit
Connection closed.

C:\Users\Benoit\Documents\GitHub\Lloeng\code\simplechat1>
```

Testcase 2013

System: Simple Chat

Phase: 2 and subsequent

Starting a server on a non-default port

Severity: 1

Instructions:

1. Start a server by typing `java ServerConsole 1234`.

Expected result:

1. The server displays

Server listening for connections on port 1234.

Cleanup (Unless proceeding to Testcase 2014)

Type `#quit` to kill the server.

```
C:\Users\Benoit\Documents\GitHub\Lloseng\code\simplechat1>java -classpath ../../code;. ServerConsole 1234
Server listening for connections on port 1234
#quit
Server has stopped listening for connections.
C:\Users\Benoit\Documents\GitHub\Lloseng\code\simplechat1>
```

Testcase 2014 – Skipped due to not having a second computer.

Testcase 2015 – Skipped due to not having a second computer.

Testcase 2016 – Skipped due to not having a second computer.

Testcase 2018 – Skipped due to not having a second computer and/or other OS.

Testcase 2019 – Skipped due to not having a second computer and/or other OS.

Testcase 2017  
System: Simple Chat Phase: 2 and subsequent  
Client quitting or logging off a server with multiple connections  
Severity: 1

Instructions:

1. Start a server and connect multiple (at least 3) clients.
2. In one client's console, type "#quit".
3. In a second client's console type "#logoff".

Expected results:

1. In both cases, all remaining clients and the server get the following message:

<loginID> has disconnected.

2. The clients display:

Connection Closed. (Exception: NT will display "Abnormal termination of connection." when the logoff command is used.)

```
C:\Users\Benoit\Documents\GitHub\Lloseng\code\simplechat1>java -classpath ../../code;. ServerConsole
Server listening for connections on port 5555
A new client is attempting to connect to the server.
Benoit has logged on.
A new client is attempting to connect to the server.
Timothy has logged on.
A new client is attempting to connect to the server.
Jenny has logged on.
Benoit has disconnected.
Timothy has disconnected.
```

Command Prompt

```
C:\Users\Benoit\Documents\GitHub\Lloseng\code\simplechat1>java -classpath ../../code;. ClientConsole Benoit
> Benoit has logged on.
> Timothy has logged on.
> Jenny has logged on.
#quit
Connection closed.

C:\Users\Benoit\Documents\GitHub\Lloseng\code\simplechat1>
```

Command Prompt - java -classpath ../../code;. ClientConsole Timothy

```
C:\Users\Benoit\Documents\GitHub\Lloseng\code\simplechat1>java -classpath ../../code;. ClientConsole Timothy
> Timothy has logged on.
> Jenny has logged on.
> Benoit has disconnected.
#logoff
Connection closed.
```

Command Prompt - java -classpath ../../code;. ClientConsole Jenny

```
C:\Users\Benoit\Documents\GitHub\Lloseng\code\simplechat1>java -classpath ../../code;. ClientConsole Jenny
> Jenny has logged on.
> Benoit has disconnected.
> Timothy has disconnected.
```