**CN PROJECT 3**

**Description:**

As part of this project, a very simplified version of online chat programming was implemented.

Two threads will be created by the chat program: a main thread (which doubles as the reading thread) and a writing thread. First the main thread will take the port number. At first , it creates a new thread – it can be called a writing thread. A port number will be taken from the keyboard by this thread, which will then connect to that port. A message is read from the keyboard and then written to the connection (socket) in a loop when the connection has been successfully established. The file will be transmitted across the connection if the message is "transfer filename" after the message has been written. This is followed by the creation of a ServerSocket, printing of the used port, and listening on the socket for new connections (i.e., the accept method). The connection Socket is established when a new connection from a different user comes. As a result of listening to the connection socket, the main thread will change into the so-called reading thread. Attempts will be made by this thread to read messages from the connection socket and print them on the screen. If the message is "transfer filename," the file is read and locally stored.

**Files**

Chat.java

**How to run:**

For this we will need two consoles running.

**On first terminal**

In the first terminal, first run javac chat.java

Then run java Chat

**On second terminal**

Run java Chat

**Program demo**

After that in both the terminals-

* Enter the user name
* The user will input the username
* After this the program it will prompt- Enter the port number to assign them :
* The port number given by user is printed on each terminals
* Then it prompts user to Enter the target port number on which the user wants to connect
* After this both the users(Alice and Bob let’s say) are connected to the writing thread and at the same time being the reading thread.
* On both the terminals messages typed on the terminals would show the other terminals.
* If the message starts with transfer then the file would be copied locally with a prefix “new\_”.

**Screenshots:**

