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Exp5: Implementation of simple network Chatting application

Program: ChatServer.java

```java
import java.io.*;
import java.net.*;

public class ChatServer {
    public static void main(String[] args) throws Exception {
        ServerSocket serverSocket = new ServerSocket(68);
        System.out.println("Server is waiting for a client...");
        Socket socket = serverSocket.accept();
        System.out.println("Client connected!");

        BufferedReader inFromClient = new BufferedReader(new
InputStreamReader(socket.getInputStream()));
        PrintWriter outToClient = new PrintWriter(socket.getOutputStream(), true);
        BufferedReader serverInput = new BufferedReader(new InputStreamReader(System.in));

        Thread readThread = new Thread(() -> {
            String msgFromClient;
            try {
                while ((msgFromClient = inFromClient.readLine()) != null) {
                    System.out.println("Client: " + msgFromClient);
                }
            } catch (IOException e) {
                System.out.println("Client disconnected.");
            }
        });

        Thread writeThread = new Thread(() -> {
            String msgToClient;
            try {
                while ((msgToClient = serverInput.readLine()) != null) {
                    outToClient.println(msgToClient);
                }
            } catch (IOException e) {
                System.out.println("Error writing to client.");
            }
        });

        readThread.start();
```

```java
            writeThread.start();

            readThread.join();
            writeThread.join();

            socket.close();
            serverSocket.close();
        }
    }
}
```

Program: ChatClient.java

```java
import java.io.*;
import java.net.*;

public class ChatClient {
    public static void main(String[] args) throws Exception {
        Socket socket = new Socket("localhost", 68);
        System.out.println("Connected to server!");

        BufferedReader inFromServer = new BufferedReader(new
InputStreamReader(socket.getInputStream()));
        PrintWriter outToServer = new PrintWriter(socket.getOutputStream(), true);
        BufferedReader clientInput = new BufferedReader(new InputStreamReader(System.in));

        Thread readThread = new Thread(() -> {
            String msgFromServer;
            try {
                while ((msgFromServer = inFromServer.readLine()) != null) {
                    System.out.println("Server: " + msgFromServer);
                }
            } catch (IOException e) {
                System.out.println("Server disconnected.");
            }
        });

        Thread writeThread = new Thread(() -> {
            String msgToServer;
            try {
                while ((msgToServer = clientInput.readLine()) != null) {
                    outToServer.println(msgToServer);
                }
            } catch (IOException e) {
                System.out.println("Error writing to server.");
```

```
            }
        });

        readThread.start();
        writeThread.start();

        readThread.join();
        writeThread.join();

        socket.close();
    }
}
```

Output of ChatClient:

Connected to server!

Hi

I am Shivraj

Server: Hi

Server: I am SERVER

Server: How can i assist you ?

I want show the communication between us for Practical purpose

Server: Ok

Thanks ! Bye

Server: Bye

Output of ChatServer:

Server is waiting for a client...

Client connected!

Client: Hi

Client: I am Shivraj

Hi

I am SERVER

How can i assist you ?

Client: I want show the communication between us for Practical purpose

Ok

Client: Thanks ! Bye

Bye