Assignment No 3 : Client-Server Application

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Course : Computer Engineering

Build a simple client-server system, where you use the client to chat with a server. The protocol between the client and server is as follows.

The server is first started on a known port.

The client program is started (server IP and port are provided on the command line).

The client connects to the server and then asks the user for input. The user types his message on the terminal. The user's input is sent to the server via the connected socket.

The server reads the user's input from the client socket.

The client then reads the reply from the server.

The server must reply to the client.

The client asks the user for the next message to send to the server

Application Code :

Client.java :

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

public class Client {

        public static void main(String args[]) {
                String recmsg;
                String sendmsg;
                Socket client;

                Scanner input = new Scanner(System.in);
                try {
```

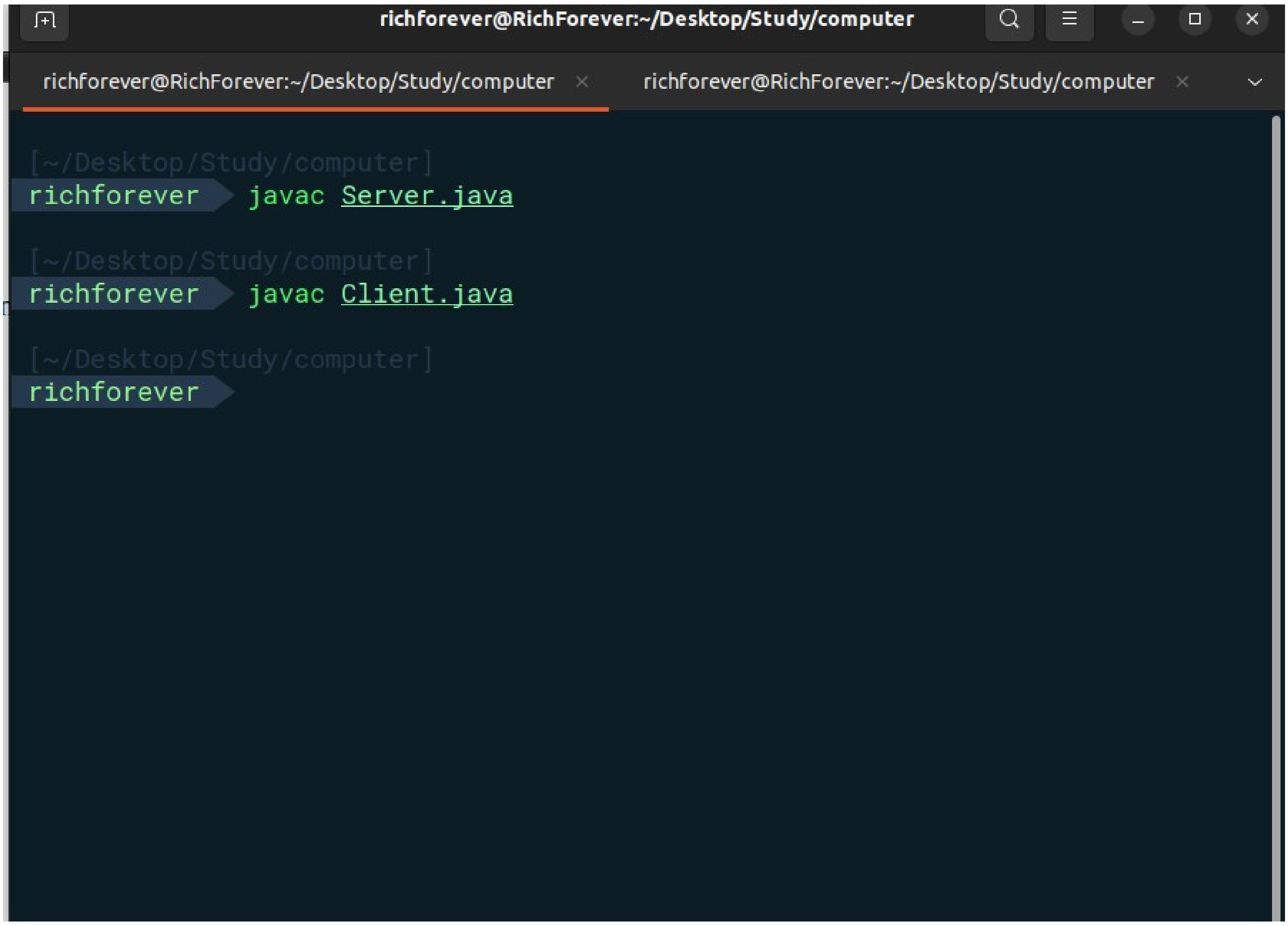
```
			//Making conenction with server
			client = new Socket("localhost", 2225);
			System.out.println("Request sent successfully");
			boolean b = true;

			while (b == true) {

				// server msg receive!
				BufferedReader br = new BufferedReader(new
InputStreamReader(client.getInputStream()));
				recmsg = br.readLine();
				System.out.println(recmsg);

				// Client msg sending to server!
				PrintWriter pw = new PrintWriter(client.getOutputStream(),
true);
				// pw.println(args[0]);
				System.out.print("Cient: ");
				sendmsg = input.nextLine();
				pw.println("Client: " + sendmsg);

				if (sendmsg.equals("exit")) {
					b = false;
					client.close();
				}
			}
		} catch (Exception ex) {
			System.out.println(ex);
		}
	}

}
```

Server.java

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

public class Server {

    public static void main(String args[]) {
        ServerSocket client;
        Socket socket;
        // CommThread ct;
        Scanner input = new Scanner(System.in);
        String sendmsg;
        String recmsg;
        int requests = 0;
        try {

            //Waiting for client
            System.out.println("Waiting for client request");
            client = new ServerSocket(2225);
            socket = client.accept();
            //accept and Now connected with client!
            System.out.println("New client is pop up!");

            //True bcz server always remain open for clients
            while (true) {

                //Server msg Send to client
                System.out.print("Server: ");
                sendmsg = input.nextLine();
                PrintStream ps = new
PrintStream(socket.getOutputStream());
                ps.println("Server: " + sendmsg);

                // client msg receive that he/she send!
                BufferedReader br = new BufferedReader(new
InputStreamReader(socket.getInputStream()));
                recmsg = br.readLine();
                System.out.println(recmsg);

                // System.out.println("Accepted Request# "+requests);
                // ct=new CommThread(client);
                // ct.start();
```

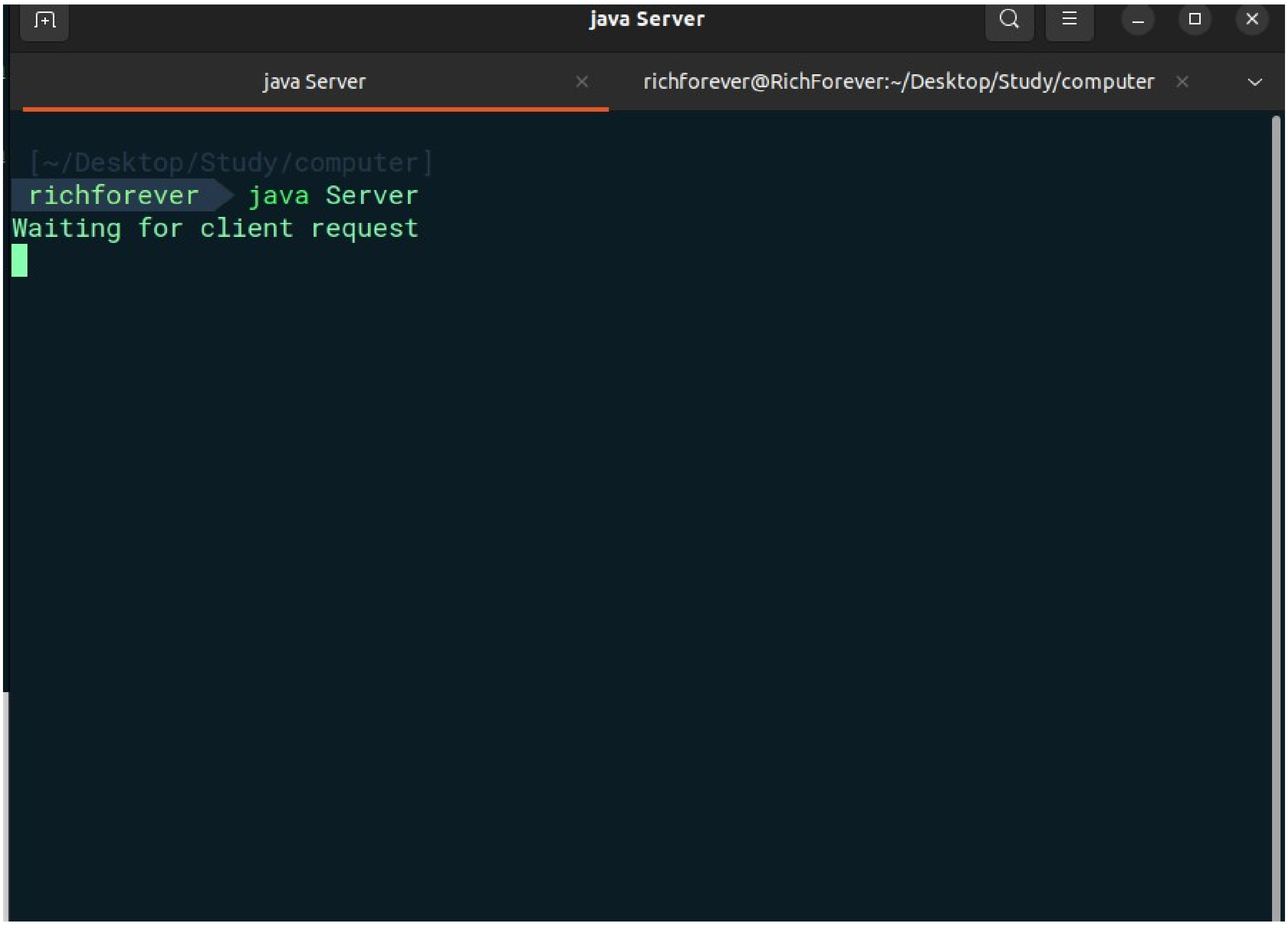
```
                        }
                } catch (Exception e) {
                        System.out.println(e);
                }
        }
}
```

Application Screenshots :



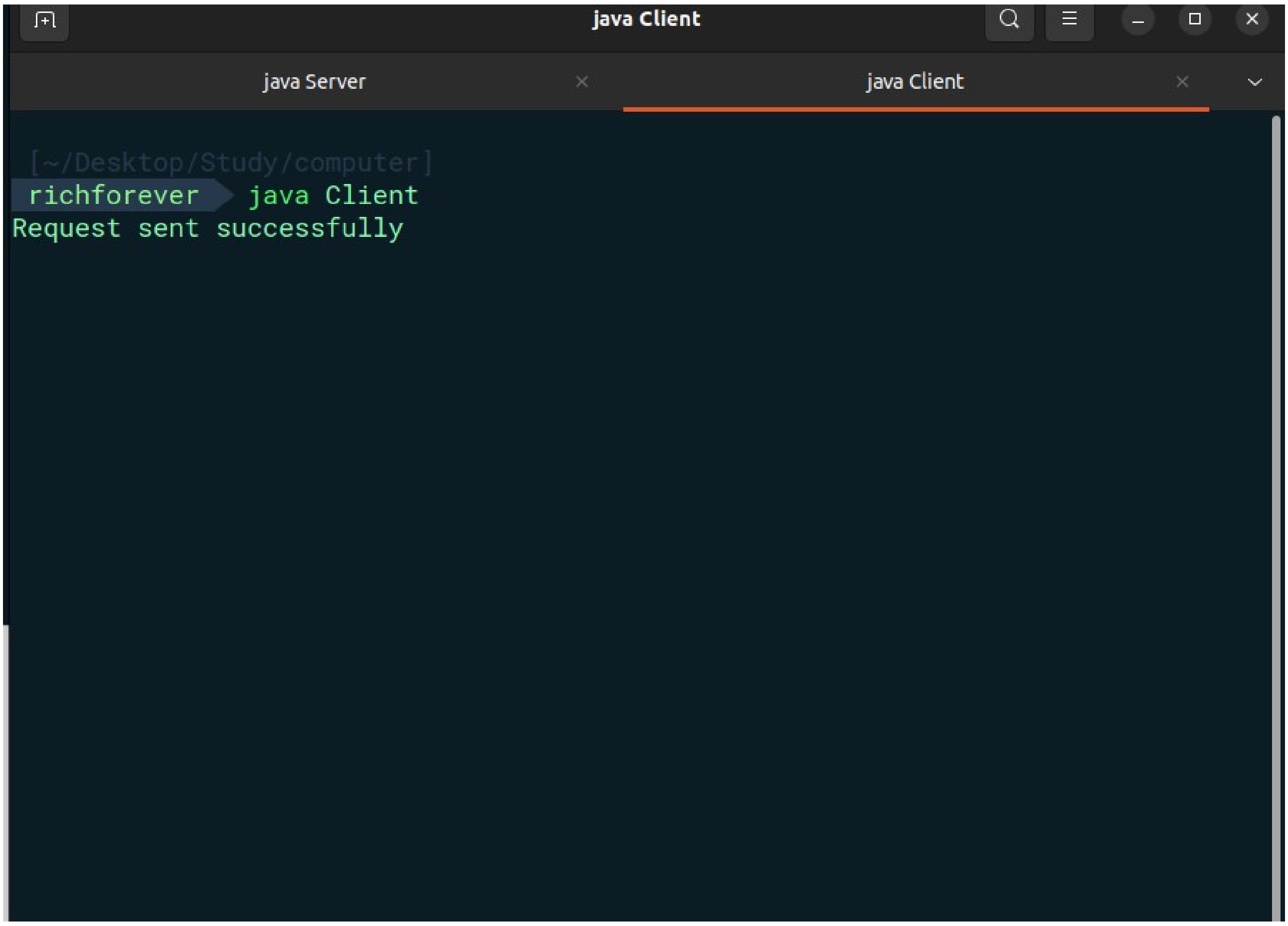
richforever@RichForever:~/Desktop/Study/computer
richforever@RichForever:~/Desktop/Study/computer
richforever@RichForever:~/Desktop/Study/computer

```
[~/Desktop/Study/computer]
richforever  javac Server.java

[~/Desktop/Study/computer]
richforever  javac Client.java

[~/Desktop/Study/computer]
richforever
```



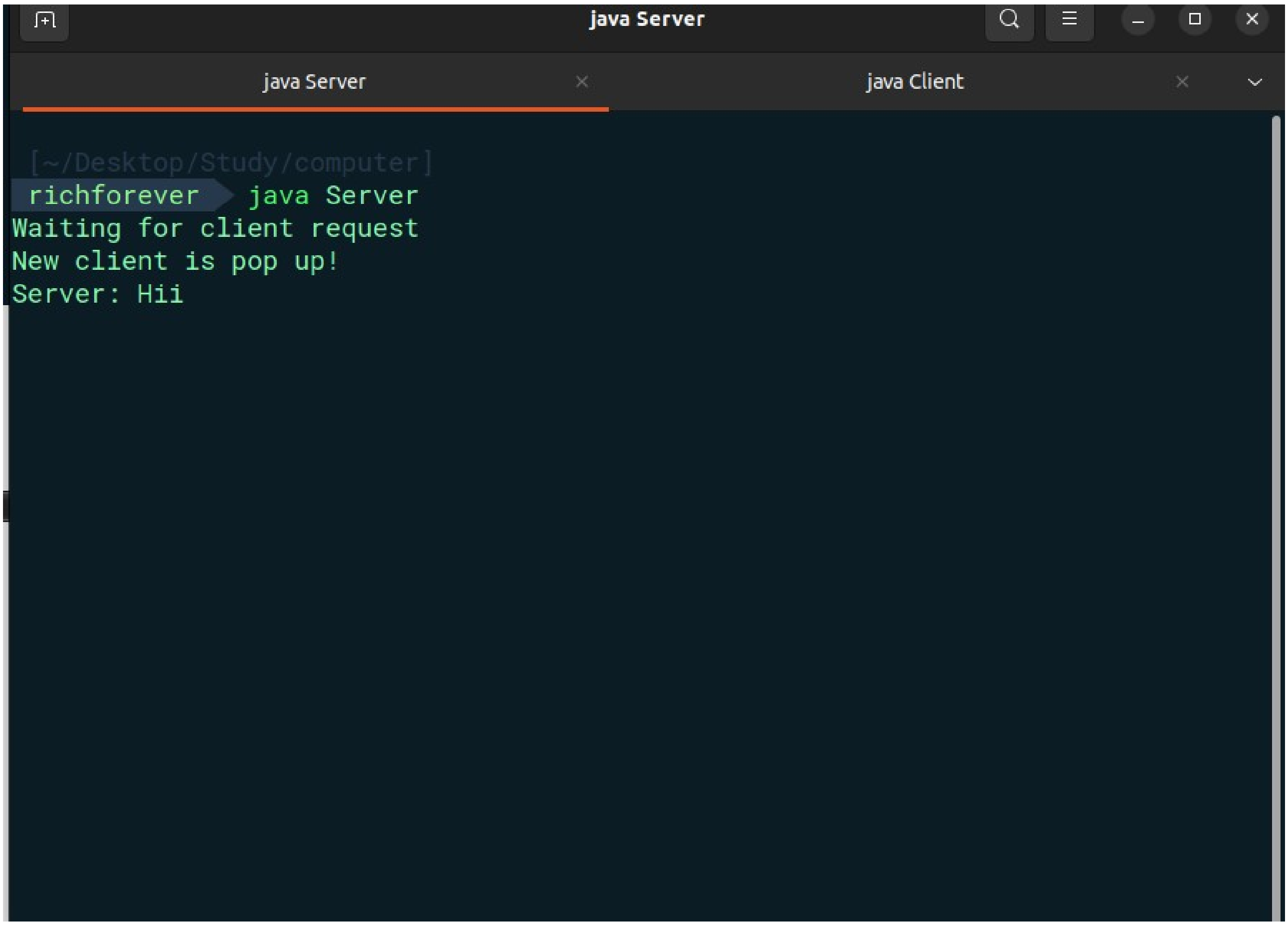
```
 [~/Desktop/Study/computer]
 richforever  java Server
Waiting for client request
```

.



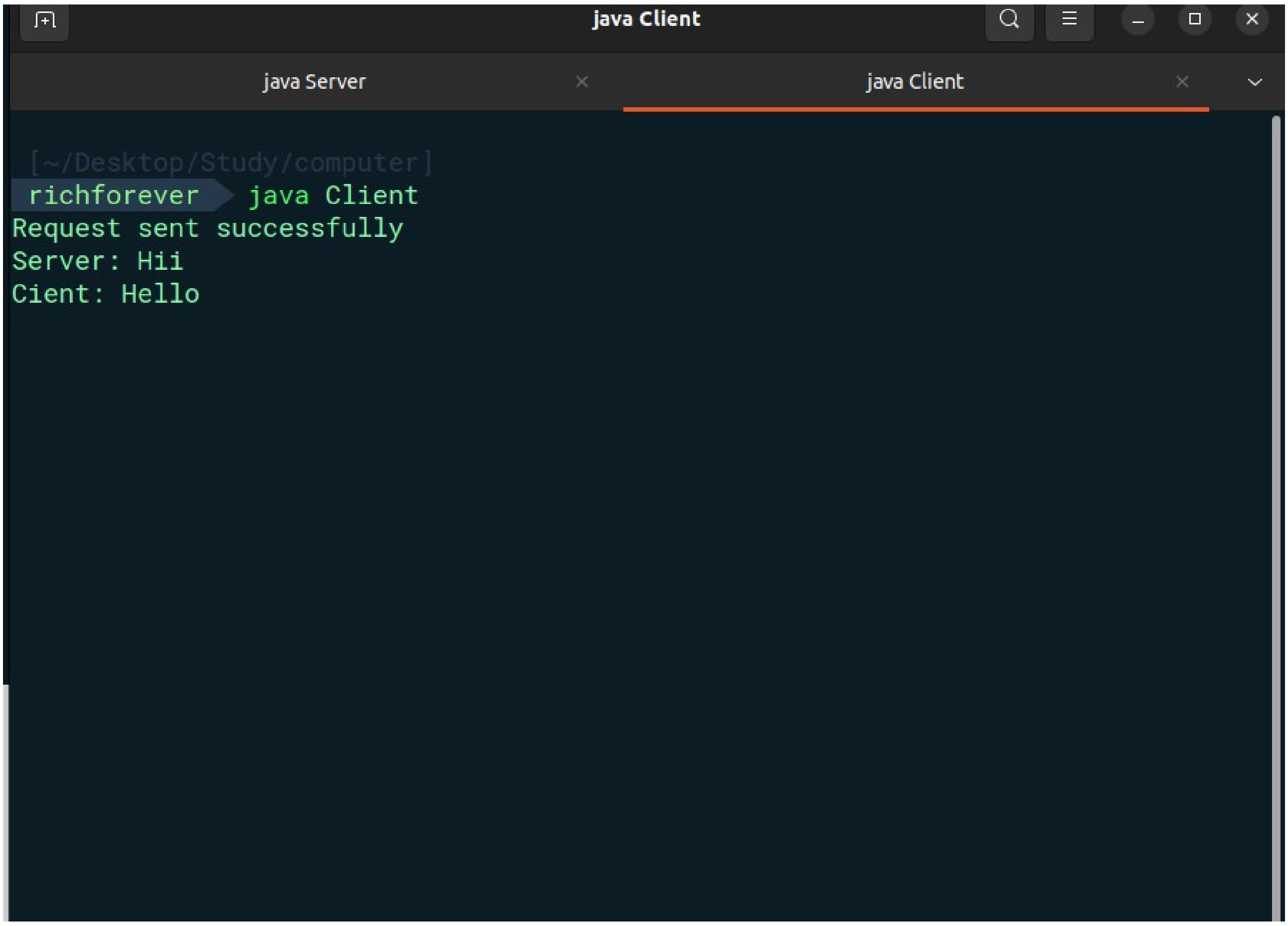
```
 [~/Desktop/Study/computer]
 richforever  java Client
Request sent successfully
```

.



```
[~/Desktop/Study/computer]
 richforever  java Server
Waiting for client request
New client is pop up!
Server: Hii
```

.



```
[~/Desktop/Study/computer]
 richforever  java Client
Request sent successfully
Server: Hii
Cient: Hello
```