

Question 3A: TCP Server and Client

```
Server:  
import java.io.*;  
import java.net.*;  
public class TCPServer {  
    public static void main(String[] args) throws Exception {  
        try (ServerSocket ss = new ServerSocket(5000)) {  
            try (Socket s = ss.accept();  
                 BufferedReader in = new BufferedReader(new  
InputStreamReader(s.getInputStream()));  
                 PrintWriter out = new PrintWriter(s.getOutputStream(), true)) {  
                String msg = in.readLine();  
                System.out.println("Received: " + msg);  
                out.println(msg.toUpperCase());  
            }  
        }  
    }  
}  
Client:  
import java.io.*;  
import java.net.*;  
public class TCPClient {  
    public static void main(String[] args) throws Exception {  
        try (Socket s = new Socket("127.0.0.1", 5000);  
             BufferedReader in = new BufferedReader(new InputStreamReader(s.getInputStream()));  
             PrintWriter out = new PrintWriter(s.getOutputStream(), true)) {  
            String msg = "Hello from ayush";  
            out.println(msg);  
            System.out.println("Server replied: " + in.readLine());  
        }  
    }  
}
```

Sample Output:

```
Server: Received: Hello from ayush  
Client: Server replied: HELLO FROM AYUSH
```