

# Connection.java

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

class Connection extends Thread { // extenda Thread
    DataInputStream in;
    DataOutputStream out;
    Socket clientSocket;
    public Connection(Socket aClientSocket) {
        try {
            clientSocket = aClientSocket;
            in = new DataInputStream(clientSocket.getInputStream());
            out = new DataOutputStream(clientSocket.getOutputStream());
        } catch (IOException e) { System.out.println("Connection:" + e.getMessage()); }
    }

    public void run() { // breyta í run
        try { // an echo server
            String data = in.readUTF(); // read a line of data from the stream
            Long data_int = Long.parseLong(data);
            long fib_res = fibo(data_int); // kalla á fibo
            data = Long.toString(fib_res);
            out.writeUTF(data);
        } catch (EOFException e) { System.out.println("EOF:" + e.getMessage()); }
        } catch (IOException e) { System.out.println("readline:" + e.getMessage()); }
        } finally {
            try {
                clientSocket.close();
            } catch (IOException e) { /* close failed */
            }
        }
    }

    public long fibo(long n) {
        if (n == 0) {
            return 0;
        }
        if (n == 1) {
            return 1;
        }
        return fibo(n - 1) + fibo(n - 2);
    }
}
```

# ConnectionOrientedClient.java

```

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

public class ConnectionOrientedClient {
    public static void main(String args[]) {
        // args[0]: message contents, args[1]: destination hostname
        Socket aSocket = null;
        try {
            int serverPort = 7896;
            aSocket = new Socket(args[1], serverPort);
            DataInputStream in = new DataInputStream(aSocket.getInputStream());
            DataOutputStream out = new DataOutputStream(aSocket.getOutputStream());
            out.writeUTF(args[0]); // UTF is a string encoding
            String data = in.readUTF(); // read a line of data from the stream
            System.out.println("Received: " + data);
        } catch (UnknownHostException e) { System.out.println("Socket:" +
e.getMessage());
        } catch (EOFException e) { System.out.println("EOF:" + e.getMessage());
        } catch (IOException e) { System.out.println("readline:" + e.getMessage());
        } finally {
            if (aSocket != null)
                try {
                    aSocket.close();
                } catch (IOException e) { System.out.println("close:" + e.getMessage());
                }
        }
    }
}

```

## ConnectionOrientedServer.java

```

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

public class ConnectionOrientedServer {
    public static void main(String args[]) {
        try {
            int serverPort = 7896; // the server port
            ServerSocket listenSocket = new ServerSocket(serverPort);
            while (true) {
                Socket clientSocket = listenSocket.accept();
                Connection c = new Connection(clientSocket); // Handle request
                c.start();
            }
        } catch (IOException e) {
            System.out.println("Listen socket:" + e.getMessage());
        }
    }
}

```

