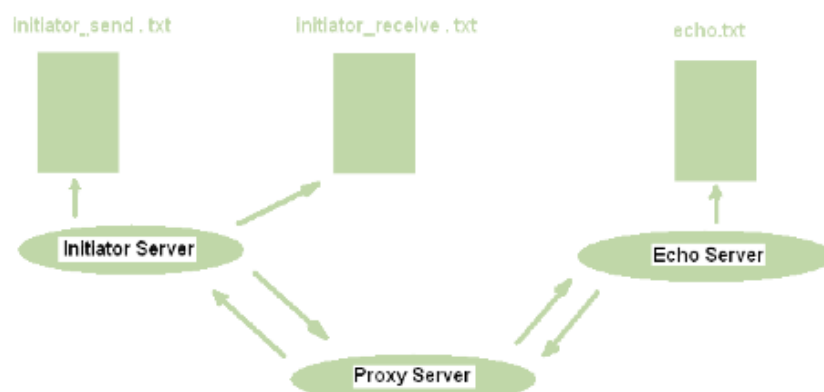# Proxy, Initiator and Echo Servers

Initiator Server

The Initiator Server should be provided as a console application. The Initiator Server gets Proxy Server's IP/Port, sender and receiver threads count (max 3 for each one) as a command line arguments. It initiates numbers starting from 0 and writes these numbers in the initiator_send.txt (one number per line) when the command **start** is entered from the console. After, the Initiator Server sends these numbers to the Proxy server. It also receives numbers from the Proxy Server and writes these numbers in the initiator_receive.txt (one number per line) (pic. 1). It must suspend when the **stop** command is entered and must shutdown when the **exit** command is entered.

Echo Server

The Echo Server should be provided as a console application. The Echo Server gets Proxy Server's IP/Port , sender and receiver threads count (max 3 for each one) as a command line arguments. It begins to receive the numbers from the Proxy and writes these numbers in the echo_send.txt (one number per line)(pic. 1) when command **start** is entered from the console. After, the Echo Server sends these numbers to the Proxy server. It must shutdown when the **exit** command is entered.

Proxy Server

The Proxy Server should be provided as a console application and must provide communication between the Initiator Server and the Echo Server as mentioned above (pic. 1). Also it must have **start** and **exit** commands.

Test scenario

We have only one use case:

1. **start** Proxy Server
2. **start** Echo Server
3. **start** Initiator Server

After ~ 10 minutes

4. **stop** Initiator Server. The Proxy Server must show that the Initiator Server is suspended (For example, it may print the message in the console that the Initiation Server has stopped!).

5. **start** Initiator Server (After the Initiation Server has stopped! Message). The Proxy Server must show that the Initiator Server is started.

After ~ 10 minutes

6. **exit** Initiator Server . Proxy Server must show that the Initiator Server has exited (For example, it may print the message in the console that the Initiation Server has exited.). Initiator Server exists after receiving all the numbers from the Proxy Server. After that it must print the message in the console about the successful finish.

7. **exit** Proxy Server and **exit** Echo Server

At the end of the test:
Numbers should be written in the sorted form in all the files.

P.S. We expect to see efficient but readable code with clean abstractions.