

TP2 : Asynchrone Java Socket (Non- blocking communication)

1. Ecrire le code suivant et analyser la(es) déférence(s) entre la classe *NonBlocCom* et la classe *TCPServer* de TP1

```
import java.io.BufferedReader;
import java.io.DataOutputStream;
import java.io.InputStreamReader;
import java.net.InetSocketAddress;
import java.nio.ByteBuffer;
import java.nio.channels.ServerSocketChannel;
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import java.net.InetSocketAddress;
import java.nio.ByteBuffer;
import java.nio.channels.ServerSocketChannel;
import java.nio.channels.SocketChannel;

public class NonBlocCom{
    public static void main (String [] argv)
        throws Exception
    {
        String clientSentence, capitalizedSentence;
        int port = 12345;
        if (argv.length > 0) {
            port = Integer.parseInt (argv [0]);
        }
        ServerSocketChannel ssc = ServerSocketChannel.open();
        ssc.socket().bind (new InetSocketAddress (port));
        System.out.println ("Local adress is " + ssc.getLocalAddress());
        ssc.configureBlocking (false);
        while (true) {
            System.out.println ("Waiting for connections");
            SocketChannel sc = ssc.accept();
            if (sc == null) {
                // no connections, snooze a while
                Thread.sleep (4000);
            } else {
                System.out.println ("Incoming connection from: " + sc.socket().getRemoteSocketAddress());
                BufferedReader inFromClient = new BufferedReader(new InputStreamReader(sc.socket().getInputStream()));
                clientSentence = inFromClient.readLine();
                capitalizedSentence = clientSentence.toUpperCase() + '\n';
                DataOutputStream outToClient = new DataOutputStream(sc.socket().getOutputStream());
                outToClient.writeBytes(capitalizedSentence);
                sc.close();}}}}}
```

2. Réécrire le code de la classe *TCPClient* (TP1) pour qu'il soit non bloquant.

Références utiles

- ✓ Jakob Jenkov, Java NIO Tutorial : <http://tutorials.jenkov.com/java-nio/index.html>
- ✓ Ron Hitchens Java™ NIO Publisher: O'Reilly, 2002.