

## TP3

### UDP-Client-Java

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

class UDPClient {
    public static void main(String args[]) throws Exception
    {
        try {
            String serverHostname = new String ("127.0.0.1");

            if (args.length > 0)
                serverHostname = args[0];

            BufferedReader inFromUser =
                new BufferedReader(new InputStreamReader(System.in));

            DatagramSocket clientSocket = new DatagramSocket();

            InetAddress IPAddress = InetAddress.getByName(serverHostname);
            System.out.println ("Attempting to connect to " + IPAddress +
                " via UDP port 9876");

            byte[] sendData = new byte[1024];
            byte[] receiveData = new byte[1024];

            System.out.print("Enter Message: ");
            String sentence = inFromUser.readLine();
            sendData = sentence.getBytes();

            System.out.println ("Sending data to " + sendData.length +
                " bytes to server.");
            DatagramPacket sendPacket =
                new DatagramPacket(sendData, sendData.length, IPAddress, 9876);

            clientSocket.send(sendPacket);

            DatagramPacket receivePacket =
                new DatagramPacket(receiveData, receiveData.length);

            System.out.println ("Waiting for return packet");
            clientSocket.setSoTimeout(10000);
```

```

try {
    clientSocket.receive(receivePacket);
    String modifiedSentence =
        new String(receivePacket.getData());

    InetAddress returnIPAddress = receivePacket.getAddress();

    int port = receivePacket.getPort();

    System.out.println ("From server at: " + returnIPAddress +
        ":" + port);
    System.out.println("Message: " + modifiedSentence);

}
catch (SocketTimeoutException ste)
{
    System.out.println ("Timeout Occurred: Packet assumed lost");
}

clientSocket.close();
}
catch (UnknownHostException ex) {
    System.err.println(ex);
}
catch (IOException ex) {
    System.err.println(ex);
}
}
}

```

### UDP-Serveur-Java

```

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

class UDPServer {
    public static void main(String args[]) throws Exception
    {
        try
        {
            DatagramSocket serverSocket = new DatagramSocket(9876);

            byte[] receiveData = new byte[1024];
            byte[] sendData = new byte[1024];

```

```

while(true)
{
    receiveData = new byte[1024];

    DatagramPacket receivePacket =
        new DatagramPacket(receiveData, receiveData.length);

    System.out.println ("Waiting for datagram packet");

    serverSocket.receive(receivePacket);

    String sentence = new String(receivePacket.getData());

    InetAddress IPAddress = receivePacket.getAddress();

    int port = receivePacket.getPort();

    System.out.println ("From: " + IPAddress + ":" + port);
    System.out.println ("Message: " + sentence);

    String capitalizedSentence = sentence.toUpperCase();

    sendData = capitalizedSentence.getBytes();

    DatagramPacket sendPacket =
        new DatagramPacket(sendData, sendData.length, IPAddress,
            port);

    serverSocket.send(sendPacket);

}

}
catch (SocketException ex) {
    System.out.println("UDP Port 9876 is occupied.");
    System.exit(1);
}

}
}

```

Tester ces 2 programmes et mentionner en commentant les traitements réalisés