TP 1 - Solution

Partie 1 :

```java
import java.net.* ;
import java.io.* ;
public class Process1 {
    public static void main (String args[]) {
        try {
            DatagramSocket ds = new DatagramSocket();
            //Send
            InetAddress AdrP1 = InetAddress.getByName("127.0.0.1");
            String s = "Hello, I am Processus 1";
            byte[] m = s.getBytes();
            DatagramPacket dp = new DatagramPacket(m, m.length, AdrP1, 8000);
            ds.send(dp);
            System.out.println ("Message sent.");
            ds.close();
        }
        catch (UnknownHostException e) { }
          catch (SocketException ee) { }
          catch (IOException eee) { }
    }
}
```

```java
import java.net.* ;
import java.io.* ;
public class Process2 {
    public static void main (String args[]) {
        try {
            DatagramSocket ds= new DatagramSocket(8000);
            //Receive
            byte[] tampon = new byte[1000];
            DatagramPacket dp = new DatagramPacket(tampon, tampon.length);
            System.out.println ("Receiver Start :");
            ds.receive(dp);
            String s = new String(dp.getData());
            System.out.println(s);
            ds.close();
        }
        catch (SocketException e) { }
```

```java
            catch (IOException ee) { }
    }
}



```

Partie 2 :

```java
import java.net.* ;
import java.io.* ;
public class Process1 {
    public static void main (String args[]) {
        try {
            DatagramSocket ds = new DatagramSocket(7000);
            //Send
            InetAddress AdrP11 = InetAddress.getByName("127.0.0.1");
            String s = "Hello, I am Process 1";
            byte[] m1 = s.getBytes();
            DatagramPacket dp = new DatagramPacket(m1, m1.length, AdrP11, 8000);
            ds.send(dp);
            System.out.println ("Message sent :");
            //Receive
            byte[] tampon = new byte[1000];
            DatagramPacket dp1 = new DatagramPacket(tampon, tampon.length);
            System.out.println ("Receiver Start :");
            ds.receive(dp1);
            String s1 = new String(dp1.getData());
            System.out.println(s1);
            ds.close();
        }
        catch (UnknownHostException e) { }
            catch (SocketException ee) { }
            catch (IOException eee) { }
    }
}

import java.net.* ;
import java.io.* ;
public class Process2 {
    public static void main (String args[]) {
        try {
            DatagramSocket ds= new DatagramSocket(8000);
            //Receive
            byte[] tampon = new byte[1000];
            DatagramPacket dp = new DatagramPacket(tampon, tampon.length);
            System.out.println ("Receiver Start :");
            ds.receive(dp);
            String s = new String(dp.getData());
            System.out.println(s);
            //Send
```

```java
            InetAddress AdrP22 = InetAddress.getByName("127.0.0.1");
            String s1 = "Hello, I am Process 2";
            byte[] m2 = s1.getBytes();
            DatagramPacket dp1 = new DatagramPacket(m2, m2.length, AdrP22, 7000);
            ds.send(dp1);
            System.out.println ("Message sent :");
            ds.close();
        }
      catch (UnknownHostException e) { }
        catch (SocketException ee) { }
        catch (IOException eee) { }
    }
}
```

Partie 3 :

```java
import java.net.* ;
import java.io.* ;
public class Process1 {
    public static void main (String args[]) {
        try {
            int i=1;
            while (true){
                DatagramSocket ds = new DatagramSocket();
                InetAddress AdrP1 = InetAddress.getByName("127.0.0.1");
                String s = String.valueOf(i);
                byte[] m = s.getBytes();
                DatagramPacket dp = new DatagramPacket(m, m.length, AdrP1, 8000);
                ds.send(dp);
                System.out.println (i+" Sent");
                i=i+1;
                ds.close();
            }
        }
      catch (UnknownHostException e) { }
      catch (SocketException ee) { }
      catch (IOException eee) { }
    }
}

import java.net.* ;
import java.io.* ;
public class Process2 {
    public static void main (String args[]) {
        try {
            while (true){
                DatagramSocket ds= new DatagramSocket(8000);
                byte[] tampon = new byte[1000];
                DatagramPacket dp = new DatagramPacket(tampon, tampon.length);
```

```java
        System.out.println ("Receiver Start :");
        ds.receive(dp);
        String i = new String(dp.getData());
        System.out.println(i+" Received");
        ds.close();
      }
    }
    catch (SocketException e) { }
    catch (IOException ee) { }
  }
}
```