

```
import java.io.*;
public class Leer
{
    public static String dato()
    {
        String sdato="";
        try
        {
            InputStreamReader isr= new InputStreamReader(System.in);
            BufferedReader flujoE = new BufferedReader(isr);
            sdato = flujoE.readLine();
        }
        catch(IOException e)
        {
            System.err.println("Error: "+e.getMessage());
        }
        return sdato;
    }
    public static short datoShort()
    {
        try
        {
            return Short.parseShort(dato());
        }
        catch(NumberFormatException e)
        {
            return Short.MIN_VALUE;
        }
    }
    public static int datoInt()
    {
        try
        {
            return Integer.parseInt(dato());
        }
        catch(NumberFormatException e)
        {
            return Integer.MIN_VALUE;
        }
    }
    public static long datoLong()
    {
        try
        {
            return Long.parseLong(dato());
        }
        catch(NumberFormatException e)
        {
            return Long.MIN_VALUE;
        }
    }
    public static float datoFloat()
    {
        try
        {
            Float f= new Float(dato());
            return f.floatValue();
        }
        catch(NumberFormatException e)
        {
            return 50;
        }
    }
    public static double datoDouble()
    {
        try
        {
            Double d= new Double(dato());
            return d.doubleValue();
        }
        catch(NumberFormatException e)
        {
            return Double.NaN;
        }
    }
}
```

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

class DServidor{
    public static void main(String args[]) throws Exception
    {
        int PUERTO;
        System.out.print("Cual es el puerto");
        PUERTO = Leer.datoInt();
        DatagramSocket serverSocket = new DatagramSocket (PUERTO);
        String sentence="";
        while(!sentence.equalsIgnoreCase("bye"))
        {
            byte[] receiveData = new byte[1024];
            byte[] sendData = new byte[1024];
            DatagramPacket receivePacket
                = new DatagramPacket(receiveData, receiveData.length);

            serverSocket.receive(receivePacket);

            sentence = new String(receivePacket.getData(), 0);
            sentence = sentence.trim();
            System.out.println("El servidor dice: " + sentence);

            InetAddress IPAddress = receivePacket.getAddress();

            int port = receivePacket.getPort();

            System.out.print("Mensaje:");
            String respuesta = Leer.dato();

            respuesta.getBytes(0, respuesta.length(), sendData, 0);
            DatagramPacket sendPacket = new DatagramPacket(sendData, sendData.length,
                IPAddress, port);

            serverSocket.send(sendPacket);
        }
    }
}
```

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

class DCliente{
    public static void main(String args[]) throws Exception
    {

        DataInputStream inFromUser = new DataInputStream(System.in);

        DatagramSocket clientSocket = new DatagramSocket();
        System.out.print("Cual es la direccion del servidor?");
        String iplec = Leer.dato();
        int PUERTO;
        System.out.print("Cual es el puerto");
        PUERTO = Leer.datoInt();
        InetAddress IPAddress = InetAddress.getByByName(iplec);

        String modifiedSentence="";
        String sentence="";
        while (!sentence.equalsIgnoreCase("BYE"))
        {

            byte[] sendData = new byte[1024];
            byte[] receiveData = new byte[1024];
            System.out.print("Mensaje: ");
            sentence = Leer.dato();
            sentence.getBytes(0, sentence.length(), sendData, 0);

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

            clientSocket.send(sendPacket);

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

            clientSocket.receive(receivePacket);

            modifiedSentence = new String(receivePacket.getData(), 0);
            modifiedSentence = modifiedSentence.trim();

            System.out.println("El Cliente dice: " + modifiedSentence);
        }
    }
}
```