**Practical 1.3**

**Aim:**

Write a java program using java.net library. Client will take 2 numbers from user and sends it to Server. Server will add them and reply addition of those numbers. Client will display the result on its own output screen. (TCP Protocol)

**PROGRAM CODE:**

**TCP Client:**

**import** java**.**io**.\*;**

**import** java**.**net**.\*;**

public class AddClient **{**

public static void main**(**String**[]** args**)** **throws** IOException **{**

String serverHostname **=** **new** String **(**"127.0.0.1"**);**

**if** **(**args**.**length **>** 0**)**

serverHostname **=** args**[**0**];**

System**.**out**.**println **(**"Attemping to connect to host " **+**

serverHostname **+** " on port 10007."**);**

System**.**out**.**println**(**"E\_no=130050131524"**);**

Socket echoSocket **=** **null;**

PrintWriter out **=** **null;**

BufferedReader in **=** **null;**

**try** **{**

// echoSocket = new Socket("taranis", 7);

echoSocket **=** **new** Socket**(**serverHostname**,** 10007**);**

out **=** **new** PrintWriter**(**echoSocket**.**getOutputStream**(),** **true);**

in **=** **new** BufferedReader**(new** InputStreamReader**(**

echoSocket**.**getInputStream**()));**

**}** **catch** **(**UnknownHostException e**)** **{**

System**.**err**.**println**(**"Don't know about host: " **+** serverHostname**);**

System**.**exit**(**1**);**

**}** **catch** **(**IOException e**)** **{**

System**.**err**.**println**(**"Couldn't get I/O for " **+** "the connection to: " **+** serverHostname**);**

System**.**exit**(**1**);**

**}**

BufferedReader stdIn **=** **new** BufferedReader**(new** InputStreamReader**(**System**.**in**));**

String userInput**;**

int i**=**1**;**

System**.**out**.**print **(**"input: \n"**);**

**while** **(**i**<=**2**)** **{**

userInput **=** stdIn**.**readLine**();**

out**.**println**(**userInput**);**

i**++;**

**}**

System**.**out**.**println**(**"Answer: " **+** in**.**readLine**());**

out**.**close**();**

in**.**close**();**

stdIn**.**close**();**

echoSocket**.**close**();**

**}**

**}**

**TCP Server:**

**import** java**.**net**.\*;**

**import** java**.**io**.\*;**

public class AddServer**{**

public static void main**(**String**[]** args**)** **throws** IOException **{**

ServerSocket serverSocket **=** **null;**

**try** **{**

serverSocket **=** **new** ServerSocket**(**10007**);**

**}**

**catch** **(**IOException e**)** **{**

System**.**err**.**println**(**"Could not listen on port: 10007."**);**

System**.**exit**(**1**);**

**}**

Socket clientSocket **=** **null;**

System**.**out**.**println **(**"Waiting for connection....."**);**

**try** **{**

clientSocket **=** serverSocket**.**accept**();**

**}**

**catch** **(**IOException e**)**

**{**

System**.**err**.**println**(**"Accept failed."**);**

System**.**exit**(**1**);**

**}**

System**.**out**.**println **(**"Connection successful"**);**

System**.**out**.**println **(**"Waiting for input....."**);**

System**.**out**.**println**(**"E\_no=130050131524"**);**

PrintWriter out **=** **new** PrintWriter**(**clientSocket**.**getOutputStream**(),** **true);**

BufferedReader in **=** **new** BufferedReader**(new** InputStreamReader**(**clientSocket**.**getInputStream**()));**

String inputLine**;**

int**[]** a**=new** int**[**2**];**

int i**=**0;

**while** **((**inputLine **=** in**.**readLine**())** **!=** **null)** **{**

a**[**i**]=**Integer**.**parseInt**(**inputLine**);**

**if(**i**==**1**){**

out**.**println**(**""**+(**a**[**0**]+**a**[**1**]));**

**}**

i**++;**

**}**

out**.**close**();**

in**.**close**();**

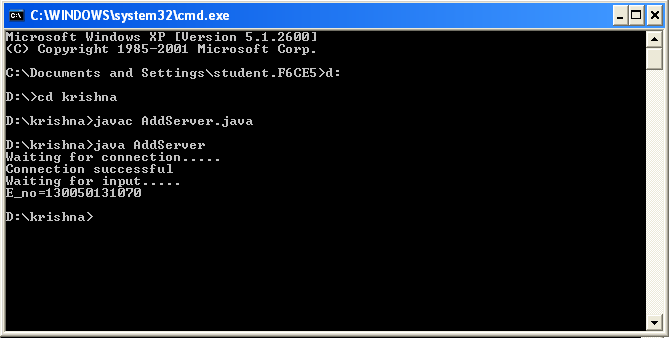
clientSocket**.**close**();**

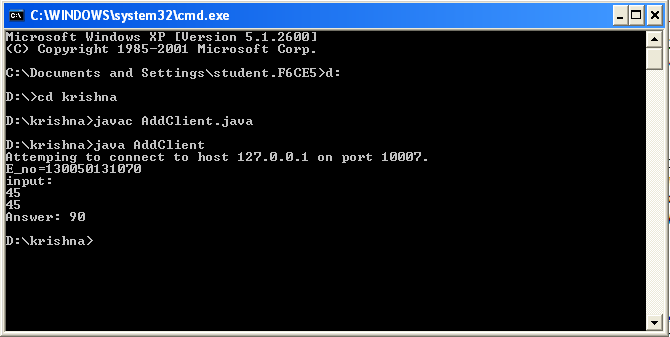
serverSocket**.**close**();**

**}**

**}**

**Input Output:**

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