

## Experiment- 8

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**Section/Group:** 21-AML9/A

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**Subject Name:** Programming in Java

**Subject Code:** 21CSH-244

**1. Experiment Title/Problem Statement:** Write a program to create client/server socket to establish connection in bi-directional.

**2. Description:** Socket and ServerSocket classes are used for connection-oriented socket programming and DatagramSocket and DatagramPacket classes are used for connectionless socket programming.

The client in socket programming must know two information: IP

- Address of Server
- Port number.

### 3. Steps:

#### START

**Step 1** → Editor (Source code)

**Step 2** → Java Compiler [javac.xxx.java] (Java Bytecode)

**Step 3** → Java xxx

**Step 4** → **Output**

#### STOP

### 4. Code:

- **Server Code:**

```
J MyServer.java X J MyClient.java
J MyServer.java
1  import java.io.*;
2  import java.net.*;
3  public class MyServer {
4      public static void main(String[] args){
5          try{
6              ServerSocket ss=new ServerSocket(6666);
7              Socket s=ss.accept();//establishes connection
8              DataInputStream dis=new DataInputStream(s.getInputStream());
9              String str=(String)dis.readUTF();
10             System.out.println("message= "+str);
11             ss.close();
12         }
13         catch(Exception e){System.out.println(e);}
14     }
15 }
```

- **Client Code:**

```
J MyServer.java J MyClient.java X
J MyClient.java
1  import java.io.*;
2  import java.net.*;
3  public class MyClient {
4      public static void main(String[] args) {
5          try{
6              Socket s=new Socket("localhost",6666);
7              DataOutputStream dout=new DataOutputStream(s.getOutputStream());
8              dout.writeUTF("Hello Server");
9              dout.flush();
10             dout.close();
11             s.close();
12         }
13         catch(Exception e){System.out.println(e);}
14     }
15 }
```

## 5. Result/Output/Writing Summary:

The image shows two side-by-side screenshots of Windows command prompts. The left window shows the compilation and execution of a Java server program. The right window shows the compilation and execution of a Java client program.

```

C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7600-
Copyright (c) 2009 Microsoft Corpor
C:\Users\S0N00>cd\
C:\>cd new
C:\new>javac MyServer.java
C:\new>java MyServer
message= Hello Server
C:\new>

C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7600-
Copyright (c) 2009 Microsoft Corpor
C:\Users\S0N00>cd\
C:\>cd new
C:\new>javac MyClient.java
C:\new>java MyClient
C:\new>
  
```

## 6. Learning outcomes (What I have learnt):

- Learn about Server and Client.
- Learn about connecting Sever and client to socket.
- Learn about arrays and exception handling in java.

## 7. Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.			
2.			
3.			