Experiment- 8

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Section/Group: 21-AML9/A
Semester: 3rd
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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:**

MyServer.java

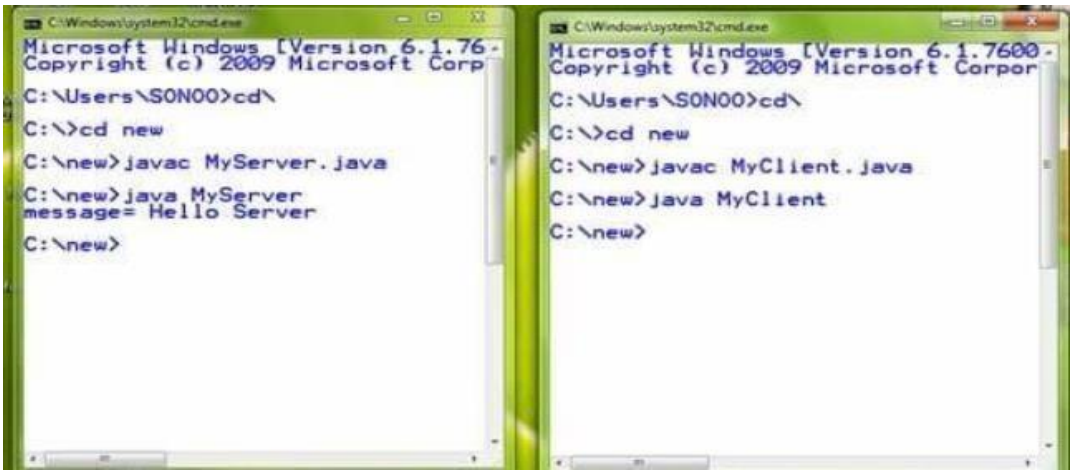
```java
import java.io.*;
import java.net.*;
public class MyServer {
    public static void main(String[] args){
        try{
            ServerSocket ss=new ServerSocket(6666);
            Socket s=ss.accept();//establishes connection
            DataInputStream dis=new DataInputStream(s.getInputStream());
            String  str=(String)dis.readUTF();
            System.out.println("message= "+str);
            ss.close();
        }
        catch(Exception e){System.out.println(e);}
    }
}
```

- **Client Code:**

MyClient.java

```java
import java.io.*;
import java.net.*;
public class MyClient {
    public static void main(String[] args) {
        try{
            Socket s=new Socket("localhost",6666);
            DataOutputStream dout=new DataOutputStream(s.getOutputStream());
            dout.writeUTF("Hello Server");
            dout.flush();
            dout.close();
            s.close();
        }
        catch(Exception e){System.out.println(e);}
    }
}
```

5. Result/Output/Writing Summary:



6. Learning outcomes (What I have learnt):

a. Learn about Server and Client.

b. Learn about connecting Sever and client to socket.

c. 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.			