

MAWLANA BHASHANI SCIENCE AND TECHNOLOGY UNIVERSITY



DEPARTMENT OF ICT

Lab Report No : 03

Course Code : ICT-3208

Course Title : Network Planning and Designing Lab

Lab Report Name : Socket Programming Lab

<i>Submitted by</i>	<i>Submitted to</i>
Name: Md. Samim Hossain ID : IT-17033 Session : 2016-2017 3rd Year 2 nd Semester	Nazrul Islam Assistant Professor, Department of ICT, MBSTU Santosh, Tangail-1902

Date of Submission : 23rd September, 2020

Socket Programming:

Socket and ServerSocket classes are used for connection-oriented socket programming and DatagramSocket and DatagramPacket classes are used for connection-less socket programming.

Socket connections normally run between two different computers on a Local Area Network(LAN) or across the internet, but they can also be used for interprocess communication on a single computer.

The client in socket programming must know two information:

- 1.IP Address of Server, and
- 2.Port number.

ClientSide Source code :

```
package socket;
import java.io.IOException;
import java.io.OutputStreamWriter;
import java.io.PrintWriter;
import java.net.Socket;
public class SocketClient {
    public static void main(String[] args) throws IOException {
        String ip = "localhost";
        int port = 8090;
        Socket socket = new Socket(ip, port);
        String msg = "Samim Hossain";
        System.out.println("Hello server, "+msg);
        OutputStreamWriter os = new
OutputStreamWriter(socket.getOutputStream());
        PrintWriter out = new PrintWriter(os);
        os.write(msg);
        os.flush();
    }
}
```

Output:



```
Run: SocketServer x SocketClient x
/usr/lib/jvm/java-1.11.0-openjdk-amd64/bin/java -javaagent:/home/smmhossain/Downloads/ideaIC-2020.1.4/idea-IC-201.8743.12/lib/idea_rt.jar=39679:/hor
Hello server, Samim Hossain
Process finished with exit code 0
```

ServerSide Source code:

```
package socket;
import java.io.BufferedReader;
```

```

import java.io.InputStreamReader;
import java.net.ServerSocket;
import java.net.Socket;
public class SocketServer {
    public static void main(String[] args) throws Exception{
        System.out.println("Server is started");
        ServerSocket serverSocket = new ServerSocket(8090);
        System.out.println("Server is waiting for client");
        Socket socket = serverSocket.accept();
        System.out.println("Client connected");
        BufferedReader br = new BufferedReader(new
InputStreamReader(socket.getInputStream()));
        String str = br.readLine();
        System.out.println("Client Data : "+str);
    }
}

```

Output:



```

Run: SocketServer x SocketClient x <11>
/usr/lib/jvm/java-1.11.0-openjdk-amd64/bin/java -javaagent:/home/smmhossain/Downloads/ideaIC-2020.1.4/idea-IC-201.8743.12/lib/idea_rt.jar=41295:/ho
Server is started
Server is waiting for client
Client connected
Client Data : Samim Hossain
Process finished with exit code 0

```