

Java End Term Practical

Q3. Write a program where client sends a string and server returns the reverse of the string Using TCP/IP Socket Programming.

Source Code

Client1.java

```
import java.io.BufferedReader;

import java.io.BufferedWriter;

import java.io.InputStream;

import java.io.InputStreamReader;

import java.io.OutputStream;

import java.io.OutputStreamWriter;

import java.net.Socket;

import java.util.Scanner;


public class Client1 {

    private static Socket socket;


    public static void main(String args[]) {

        try {

            socket = new Socket("127.0.0.1", 8080);

            System.out.println("Client Running...");
```

```
OutputStream os = socket.getOutputStream();

OutputStreamWriter osw = new OutputStreamWriter(os);

BufferedWriter bw = new BufferedWriter(osw);

System.out.println("Type in a string and Press Enter...");

Scanner sc = new Scanner(System.in);

String string = sc.next();

System.out.println("string = " + string);

String sendMessage = string + "\n"; ///Next to line

bw.write(sendMessage);

bw.flush();

System.out.println("Message sent to the server : " + sendMessage);
```

```
InputStream is = socket.getInputStream();

InputStreamReader isr = new InputStreamReader(is);

BufferedReader br = new BufferedReader(isr);

String message = br.readLine();

System.out.println("Message received from the server : " + message);

} catch (Exception exception) {

    exception.printStackTrace();

} finally {

    try {

        socket.close();

    } catch (Exception e) {

        e.printStackTrace();

    }

}
```



```
public class Server1 {

    private static Socket socket;

    public static void main(String[] args) {

        try {

            ServerSocket serverSocket = new ServerSocket(8080);

            System.out.println("Server Running...");

            while (true) {

                socket = serverSocket.accept();

                InputStream is = socket.getInputStream();

                InputStreamReader isr = new InputStreamReader(is);

                BufferedReader br = new BufferedReader(isr);

                String string = br.readLine();

                System.out.println("Message received from client is " + string);

                try {

                    StringBuilder input = new StringBuilder();

                    input.append(string);

                    input = input.reverse();
```

```

        string = input + "\n";

        for (int i = 0; i < input.length(); i++) {

            System.out.println(input.charAt(i));

        }

    } catch (Exception e) {

        string = "Please send a proper text message\n";

    }

    OutputStream os = socket.getOutputStream();

    OutputStreamWriter osw = new OutputStreamWriter(os);

    BufferedWriter bw = new BufferedWriter(osw);

    bw.write(string);

    System.out.println("Message sent to the client is " + string);

    bw.flush();

}

} catch (Exception e) {

    e.printStackTrace();

} finally {

    try {

        socket.close();

    } catch (Exception e) {

    }

}

}

}

```

E:\java_programs\Server1.java - Sublime Text (UNREGISTERED)

File Edit Selection Find View Goto Tools Project Preferences Help

Applet1.html x Applet1.java x CountWord.java x Client1.java x Server1.java x

```
1 import java.io.BufferedReader;
2 import java.io.BufferedWriter;
3 import java.io.InputStream;
4 import java.io.InputStreamReader;
5 import java.io.OutputStream;
6 import java.io.OutputStreamWriter;
7 import java.net.ServerSocket;
8 import java.net.Socket;
9
10 public class Server1 {
11
12     private static Socket socket;
13
14     public static void main(String[] args) {
15         try {
16             ServerSocket serverSocket = new ServerSocket(8080);
17             System.out.println("Server Running...");
18
19             while (true) {
20
21                 socket = serverSocket.accept();
22                 InputStream is = socket.getInputStream();
23                 InputStreamReader isr = new InputStreamReader(is);
24                 BufferedReader br = new BufferedReader(isr);
25                 String string = br.readLine();
26                 System.out.println("Message received from client is " + string);
27
28                 try {
29
30                     StringBuilder input = new StringBuilder();
31
32                     input.append(string);
33
34                     input = input.reverse();
35                     string = input + "\n";
36                     for (int i = 0; i < input.length(); i++) {
37                         System.out.println(input.charAt(i));
38                     }
39                 } catch (Exception e) {
40
41                 }
42
43                 OutputStream os = socket.getOutputStream();
44                 OutputStreamWriter osw = new OutputStreamWriter(os);
45                 BufferedWriter bw = new BufferedWriter(osw);
46                 bw.write(string);
47                 System.out.println("Message sent to the client is " + string);
48                 bw.flush();
49             }
50         } catch (Exception e) {
51             e.printStackTrace();
52         } finally {
53             try {
54                 socket.close();
55             } catch (Exception e) {
56
57             }
58         }
59     }
60 }
```

Line 10, Column 24

Spaces: 4 Java

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```
39 }
40 } catch (Exception e) {
41     string = "Please send a proper text message\n";
42 }
43
44 OutputStream os = socket.getOutputStream();
45 OutputStreamWriter osw = new OutputStreamWriter(os);
46 BufferedWriter bw = new BufferedWriter(osw);
47 bw.write(string);
48 System.out.println("Message sent to the client is " + string);
49 bw.flush();
50 }
51 } catch (Exception e) {
52     e.printStackTrace();
53 } finally {
54     try {
55         socket.close();
56     } catch (Exception e) {
57
58     }
59 }
60 }
```

Output:

C:\Windows\System32\cmd.exe - java Server1

Microsoft Windows [Version 10.0.19043.1151]
(c) Microsoft Corporation. All rights reserved.

E:\java>java Server1
Server Running...
Message received from client is NikhilHello
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Message sent to the client is olleHlihkiW

C:\Windows\System32\cmd.exe

Microsoft Windows [Version 10.0.19043.1151]
(c) Microsoft Corporation. All rights reserved.

E:\java>java Client1
Client Running...
Type in a string and Press Enter...
NikhilHello
string = NikhilHello
Message sent to the server : NikhilHello
Message received from the server : olleHlihkiW
E:\java>

