Name-Nikhil Joshi **Id**-20711105 **Course**-MCA **Semester**-2 **Campus**-Haldwani

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...");
```

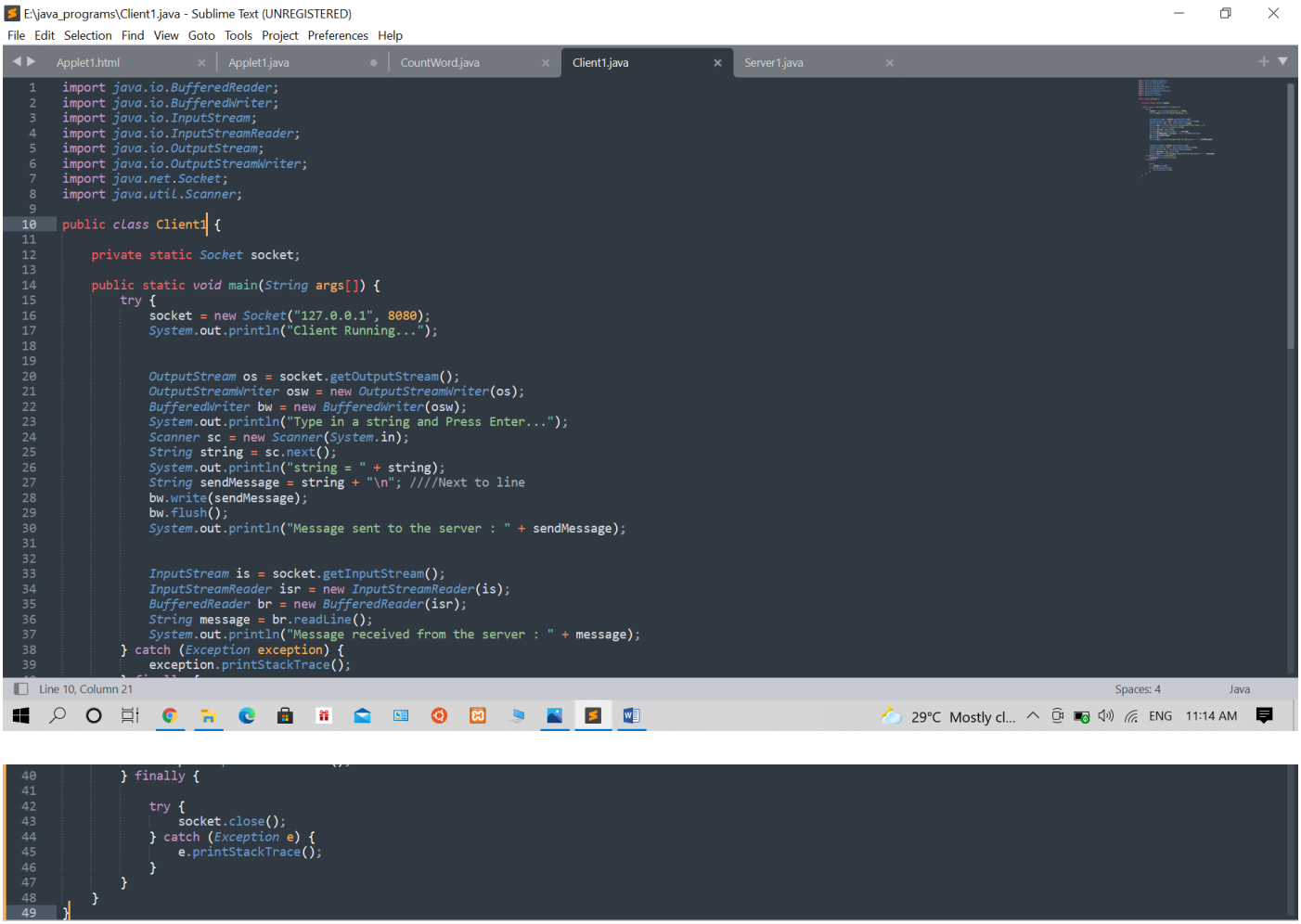
```
    OutputStream os = socket.getOutputStream();
    OutputStreamWriter osw = new OutputStreamWriter(os);
    BufferedWriter bw = new BufferedWriter(osw);
    System.out.println("Type in a string and Press Enter...");
    Scanner sc = new Scanner(System.in);
    String string = sc.next();
    System.out.println("string = " + 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();
```

```
        }
    }
  }
}
```




```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);
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            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();
            }
        }
    }
}
```

Server1.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.ServerSocket;

import java.net.Socket;
```

```
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) {
        }
    }
  }
}
```

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File Edit Selection Find View Goto Tools Project Preferences Help

Applet1.html | Applet1.java | CountWord.java | Client1.java | Server1.java

```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.ServerSocket;
import java.net.Socket;

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) {
                    } 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) {
                }
            }
        }
    }
```

Line 10, Column 24 Spaces: 4 Java

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Output: