

EX.NO:3a: APPLICATIONS USING TCP SOCKETS:ECHO CLIENT AND ECHO SERVER-MUTHUKUMAR-9006

PROGRAM:

ECHO SERVER:

```
import java.io.*;
import java.net.*;

public class eserver{

    private final static int PORT = 8080;

    public static void main(String[] args) {

        try (ServerSocket serverSocket = new ServerSocket(PORT)) {

            System.out.println("Listening on port " + PORT);

            while (true) {

                try (Socket socket = serverSocket.accept();

                    InputStreamReader isr = new InputStreamReader(socket.getInputStream());

                    BufferedReader in = new BufferedReader(isr);

                    PrintWriter out = new PrintWriter(socket.getOutputStream(), true)) {

                    System.out.println("Connection accepted");

                    String line;

                    while ((line = in.readLine()) != null) {

                        System.out.println("Server received: " + line + ". Sending to client");

                        out.println(line);

                        if (line.equals("Bye")) {

                            break; }}

                    } catch (IOException e) {

                        System.err.println("Error handling client: " + e.getMessage());}}

            } catch (IOException e) {

                System.err.println("Could not listen on port " + PORT + ": " + e.getMessage());}

        }}
```

ECHO CLIENT:

```
import java.io.*;
```

```

import java.net.*;

public class eclient{

    private final static String HOSTNAME = "localhost";

    private final static int PORT = 8080;

    public static void main(String[] args) {

        try (Socket clientSocket = new Socket(HOSTNAME, PORT);

            InputStreamReader isr = new InputStreamReader(clientSocket.getInputStream());

            BufferedReader in = new BufferedReader(isr);

            PrintWriter out = new PrintWriter(clientSocket.getOutputStream(), true)) {

            System.out.println("Connected to " + HOSTNAME + " on port " + PORT);

            String data = "Hello\nBye";

            System.out.println("Sending to server:\n" + data);

            out.println(data);

            String line;

            while ((line = in.readLine()) != null) {

                System.out.println("Client received: " + line);

            }

        } catch (IOException e) {

            System.err.println("IOException: " + e.getMessage());

        }

    }
}

```

OUTPUT:

SERVER:

E:\JAVA>javac eserver.java

E:\JAVA>java eserver

Listening on port 8080

Connection accepted

Server received: Hello. Sending to client

Server received: Bye. Sending to client

CLIENT:

```
E:\JAVA>javac eclient.java
```

```
E:\JAVA>java eclient
```

```
Connected to localhost on port 8080
```

```
Sending to server:
```

```
Hello
```

```
Bye
```

```
Client received: Hello
```

```
Client received: Bye
```