

Write a program using TCP socket for wired network for following

a. Calculator

Client Side

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

public class ClientCal {

    public static void main(String[] args) throws IOException {

        // fetching address of localhost

        InetAddress addr = InetAddress.getLocalHost();

        Scanner inp = new Scanner(System.in);

        // establishing socket connection

        Socket sock = new Socket(addr, 6666);

        // to send and receive data through streams

        DataInputStream inpStrm = new DataInputStream(sock.getInputStream());

        DataOutputStream outpStrm = new DataOutputStream(sock.getOutputStream());

        try {

            while (true) {

                System.out.println("Type 1 for Addition");

                System.out.println("Type 2 for Subtraction");

                System.out.println("Type 3 for Multiplication");

                System.out.println("Type 4 for Division");

                System.out.println("Enter your choice: ");

                int oprtr = inp.nextInt();

                // Type 0 for cut the connection

                if (oprtr == 0) {

                    break;

                }

                // sending the operator for operation
```

```

        outpStrm.writeInt(oprtr);

        // reading result from server
        String res = inpStrm.readUTF();

        System.out.println("Your Result for the given operation = " + res);
    }
}

// to handle exception
catch(Exception exp) {
    System.out.println(exp);
}
}
}

```

Server Side

```

import java.io.*;
import java.net.*;
import java.util.*;

public class ServeCalc {

    public static void main(String args[]) throws IOException {

        // establishing the socket connection
        ServerSocket Serve = new ServerSocket(6666);
        Socket sock = Serve.accept();

        // to send and receive data through streams
        DataInputStream inpStrm = new DataInputStream(sock.getInputStream());
        DataOutputStream outpStrm = new DataOutputStream(sock.getOutputStream());

        try {
            while (true) {
                // reading input from client
                int oprtr = inpStrm.readInt();

                System.out.println("Client has requested for " + oprtr + " operation");
            }
        }
    }
}

```

```

int res = 0;

int data1 = 15;

int data2 = 5;

switch(optr) {

    case 1 :

        res = data1 + data2;

        outpStrm.writeUTF(Integer.toString(res));

        break;

    case 2 :

        res = data1 - data2;

        outpStrm.writeUTF(Integer.toString(res));

        break;

    case 3 :

        res = data1 * data2;

        outpStrm.writeUTF(Integer.toString(res));

        break;

    case 4 :

        res = data1 / data2;

        outpStrm.writeUTF(Integer.toString(res));

        break;

    default :

        outpStrm.writeUTF(" You have given invalid choice! ");

        break;

}

System.out.println("Result sent to the client...");

}

}

// to handle exception

catch(Exception exp) {

    System.out.println(exp);

}

```

}

}