Simple Chat

TCPServer.java

```
import java.net.*;
import java.io.*;
import java.util.Scanner;
public class TCPServer{
        public static void main(String [] args) throws IOException{
            ServerSocket ss = new ServerSocket(1025);
            Socket s = ss.accept();
             DataInputStream dis = new DataInputStream(s.getInputStream());
             DataOutputStream dos = new DataOutputStream(s.getOutputStream());
              Scanner scan = new Scanner(System.in);
             String msg = "";
             while(true){
                String input = dis.readUTF();
                   if(input.equals("bye"))
                   break;
                System.out.println(""+input);
                System.out.print("\t\t");
                msg = scan.nextLine();
                dos.writeUTF(msg);
             }
      ss.close();
   }
}
```

TCPClient.java

```
import java.net.*;
import java.io.*;
import java.util.Scanner;
public class TCPClient{
        public static void main(String [] args) throws IOException{
                    InetAddress ip = InetAddress.getLocalHost();
                    int port = 1025;
                   Socket s = new Socket(ip, port);
                    Scanner scan = new Scanner(System.in);
                    DataInputStream dis = new DataInputStream(s.getInputStream());
                    DataOutputStream dos = new DataOutputStream(s.getOutputStream());
                   String msg="";
                  while(true){
                     System.out.print("\t\t");
                    msg = scan.nextLine();
                   if(msg.equals("bye"))
                    break;
                   dos.writeUTF(msg);
                   String input = dis.readUTF();
                   System.out.println(""+input);
           }
             s.close();
        }
}
```

File Transfer

serverfile.java

```
import java.io.*;
import java.net.*;
import java.util.Scanner;
public class serverfile
{
      public static void main(String[] args) throws Exception {
            ServerSocket server=new ServerSocket(8000);
            System.out.println("Server started");
            System.out.println("Waiting for a client ...");
            Socket socket = server.accept();

            System.out.println("Client has joined sharing ");
            DataInputStream readInput = new DataInputStream(socket.getInputStream());
            DataOutputStream writeOutput = new
DataOutputStream(socket.getOutputStream());

           Scanner sc = new Scanner(System.in);
           // get Stream socket input
          String lines=readInput.readUTF();

          //write to files
            FileWriter myWriter = new FileWriter("./RecdFile");
           myWriter.write(lines);
           myWriter.close();
```

```
        server.close();
        socket.close();
        writeOutput.close();
        readInput.close();
        sc.close();
    }
}
```

Clientfile.java

```
import java.io.*;
import java.net.Socket;
import java.util.Scanner;
public class clientfile {
        public static void main(String arg[]) throws Exception {
                System.out.println("Connecting...");
                Socket socket=new Socket("localhost",8000);
                DataInputStream readInput = new DataInputStream(socket.getInputStream());
       DataOutputStream writeOutput = new DataOutputStream(socket.getOutputStream());

Scanner sc=new Scanner(System.in);
System.out.println("Start transfering now");
String transfer="";

// read file
BufferedReader reader;
try
 {
reader = new BufferedReader(new FileReader("C:\\Users\\hp\\Desktop\\prajakta.txt"));
String line = reader.readLine();
while (line != null) {
```

```
transfer=transfer+line+"\n";
line = reader.readLine();
}
reader.close();
} catch (Exception e) {
e.printStackTrace();
}

//write to stream output
writeOutput.writeUTF(transfer);
System.out.println("Transfer complete..Closing connection");

// close connection
socket.close();

readInput.close();
writeOutput.close();
sc.close();
}
}
```

CalculatorClient.java

```
import java.io.*;
import java.net.*;
import java.util.Scanner;
public class CalculatorClient
 {
        public static void main(String[] args) throws IOException
         {
```

```
            InetAddress ip = InetAddress.getLocalHost();
            int port = 4444;
             Scanner sc = new Scanner(System.in);

           // Step 1: Open the socket connection.
              Socket s = new Socket(ip, port);

           // Step 2: Communication-get the input and output stream
DataInputStream dis = new DataInputStream(s.getInputStream());
DataOutputStream dos = new DataOutputStream(s.getOutputStream());
            while (true)
          {
              // Enter the equation in the form- "operand1 operation operand2"
                System.out.print("Enter the equation in the form: ");
                System.out.println("'operand operator operand'");
                 String inp = sc.nextLine();
                 if (inp.equals("bye"))
                 break;
                // send the equation to server
                 dos.writeUTF(inp);
                 // wait till request is processed and sent back to client
                  String ans = dis.readUTF();
                  System.out.println("Answer=" + ans);
           }
      }
}
```

CalculatorServer.java

```
import java.io.*;
import java.net.*;
import java.util.Scanner;
 public class CalculatorServer
    {
         public static void main(String args[]) throws IOException
        {
           // Step 1: Establish the socket connection.
           ServerSocket ss = new ServerSocket(4444);
           Socket s = ss.accept();

           // Step 2: Processing the request.
DataInputStream dis = new DataInputStream(s.getInputStream());
DataOutputStream dos = new DataOutputStream(s.getOutputStream());
           while (true)
           {
              // wait for input
                String input = dis.readUTF();
                  if(input.equals("bye"))
                  break;
                 System.out.println("Equation received: " + input);
                 int result;
// Use StringTokenizer to break the equation into operand and

// operation
StringTokenizer st = new StringTokenizer(input);
int oprnd1 = Integer.parseInt(st.nextToken());
```

```
String operation = st.nextToken();
int oprnd2 = Integer.parseInt(st.nextToken());

// perform the required operation.
        if (operation.equals("+"))  {
                result = oprnd1 + oprnd2;
         }
         else if (operation.equals("-"))  {
                result = oprnd1 - oprnd2;
          }
         else if (operation.equals("*"))  {
                result = oprnd1 * oprnd2;
           }
        else  {
           result = oprnd1 / oprnd2;
       }

System.out.println("Sending the result...");
// send the result back to the client.
dos.writeUTF(Integer.toString(result));
     }
   }
}
```