

Implementation of following program using TCP/IP protocol

tcpClientPrime.java

/*Client program to check prime or not */

```
import java.net.*;
import java.io.*;
class tcpClientPrime
{
    public static void main(String args[])
    {
        try
        {
            Socket cs = new Socket("LocalHost",8001); BufferedReader infu = new BufferedReader(new
            InputStreamReader(System.in));
            System.out.println("Enter a number : ");
            int a = Integer.parseInt(infu.readLine());
            DataOutputStream out = new
            DataOutputStream(cs.getOutputStream());
            out.writeInt(a);
            DataInputStream in = new DataInputStream(cs.getInputStream());
            System.out.println(in.readUTF()); cs.close();
        }
        catch(Exception e)
        {
            System.out.println(e.toString());
        }
    }
}
```

tcpServerPrime.java

/* Server program to check given no is prime or not in response to client request */

```
import java.net.*;
import java.io.*;
class tcpServerPrime
{
    public static void main(String args[])
    {
        try
        {
```

```

ServerSocket ss = new ServerSocket(8001);
System.out.println("Server Started.....");
Socket s = ss.accept();
DataInputStream in = new DataInputStream(s.getInputStream()); int x= in.readInt();
DataOutputStream otc = new DataOutputStream(s.getOutputStream()); int y = x/2;
if(x ==1 || x ==2 || x ==3)
{
otc.writeUTF(x + "is Prime");
System.exit(0);
}
for(int i=2; i<=y; i++)
{
if(x%i != 0)
{
otc.writeUTF(x + " is Prime");
}
else
{
otc.writeUTF(x + " is not Prime");
}
}
}
catch(Exception e)

{
System.out.println(e.toString());
}
}
}

```

Chatclient.java

```

/*Program to implement chat client */
import java.net.*;
import java.io.*;
class Chatclient
{
public static void main(String args[])
{
try
{
Socket s = new Socket("Localhost",8000);
BufferedReader br = new BufferedReader(new InputStreamReader(System.in));
DataOutputStream out = new DataOutputStream(s.getOutputStream());

```

```

BufferedReader in = new BufferedReader(new InputStreamReader(s.getInputStream()));
String msg;
System.out.println("To stop chatting with server type STOP");
System.out.print("Client Says: ");
while((msg = br.readLine()) != null)
{
    out.writeBytes(msg+"\n");
    if(msg.equals("STOP"))
        break;
    System.out.println("Server Says : "+in.readLine());
    System.out.print("Client Says : ");
}
br.close();
in.close();
out.close();
s.close();
}
catch(Exception e)
{
    e.printStackTrace();
}
}
}

```

Chatserver.java

/* Program to implement chat server */

```

import java.net.*;
import java.io.*;
class Chatserver
{
    public static void main(String args[])
    {
        try
        {
            ServerSocket ss = new ServerSocket(8000);
            System.out.println("Waiting for client to connect..");
            Socket s = ss.accept();
            BufferedReader br = new BufferedReader(new InputStreamReader(System.in));
            DataOutputStream out = new DataOutputStream(s.getOutputStream());

```

```
BufferedReader in = new BufferedReader(new InputStreamReader(s.getInputStream()));
String receive, send;
while((receive = in.readLine()) != null)
{
    if(receive.equals("STOP"))
        break;
    System.out.println("Client Says : "+receive);
    System.out.print("Server Says : ");
    send = br.readLine();
    out.writeBytes(send+"\n");
}
br.close();
in.close();
out.close();
s.close();
}
catch(Exception e)
{
    e.printStackTrace();
}
}
```