**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();

}

}

}

1.Write a client program to enter the number and server program to calculate the square, square root, cube and cube root of the entered number using TCP Communication

Create a Word Document ,Paste the code ,Paste the output screenshot ,Keep it in ur Drive  
and upload your all code in your Github Repository later for evaluation