Server.java

```
import java.net.DatagramPacket;
import java.net.DatagramSocket;
import java.io.*;
class TokenServer{
public staϴc void main(String args[]) throws Excepϴonϴonϴ{
while(true) {
Server sr = new Server();
sr.recPort(8000);
sr.recData();
}
}
}
public class Server {
boolean hasToken = false;
boolean sendData = false;
int recport;

void recPort(int recport) {
this.recport = recport;
}
void recData() throws Excepϴonϴ{
byte bu[] = new byte[256];
DatagramSocket ds;
DatagramPacket dp;
String str;
ds = new DatagramSocket(recport);
dp = new DatagramPacket(bu, bu.length);
ds.receive(dp);
ds.close();
str = new String(dp.getData(), 0, dp.getLength());
System.out.println("The message is " + str);
}
}
```

Token1Client.java

```
import java.io.BufferedReader;
import java.io.InputStreamReader;
import java.net.DatagramPacket;
import java.net.DatagramSocket;
import java.net.InetAddress;
```

```
public class Token1Client {
public staϴc void main(String []args) throws ExcepϴonI
InetAddress lclhost;
BufferedReader br;

String str = "";
TokenClient12 tkcl, tkser;

boolean hasToken;
boolean setSendData;

while(true) {
lclhost = InetAddress.getLocalHost();
tkcl = new TokenClient12(lclhost);
tkser = new TokenClient12(lclhost);
//tkcl.setSendPort(9001);
tkcl.setSendPort(9004);
tkcl.setRecPort(8002);
lclhost = InetAddress.getLocalHost();
tkser.setSendPort(9000);
if(tkcl.hasToken == true) {
System.out.println("Do you want to Enter the Data -> Yes/No");
br = new BufferedReader(new InputStreamReader(System.in));
str = br.readLine();
if(str.equalsIgnoreCase("yes")) {
System.out.println("Ready to Send");
tkser.setSendData = true;
tkser.sendData();
tkser.setSendData = false;
}else if (str.equalsIgnoreCase("no")) {
System.out.println("I'm in else");
tkcl.hasToken = false;

tkcl.sendData();
tkcl.recData();
System.out.println("I'm Leaving");
}
}
else {
System.out.println("Entering Receiving Mode ...");
tkcl.recData();
tkcl.hasToken = true;
}
}
```

```
}
}

class TokenClient12{
InetAddress lclhost;
int sendport, recport;
boolean hasToken = true;
boolean setSendData = false;
TokenClient12 tkcl, tkser;

public TokenClient12(InetAddress lclhost) {
// TODO Auto-generated constructor stub
this.lclhost = lclhost;
}

public void setSendPort(int sendport) {

this.sendport = sendport;
}

public void setRecPort(int recport) {
this.recport = recport;
}

void sendData() throws Excepϴonϴonϴ{
BufferedReader br;
String str = "Token";
DatagramSocket ds;
DatagramPacket dp;
if(setSendData == true) {
System.out.println("sending");
System.out.println("Enter the Data :");
br = new BufferedReader(new InputStreamReader(System.in));
str = "Client One... " + br.readLine();
System.out.println("now sending");
}
ds = new DatagramSocket(sendport);
dp = new DatagramPacket(str.getBytes(), str.length(), lclhost, sendport-1000);
ds.send(dp);
ds.close();
setSendData = false;
hasToken = false;
}
void recData() throws Excepϴonϴonϴonϴ{
```

```
String msgStr;
byte buffer[] = new byte[256];
DatagramPacket dp;
DatagramSocket ds;
ds = new DatagramSocket(recport);
dp = new DatagramPacket(buffer, buffer.length);
ds.receive(dp);
ds.close();
msgStr = new String(dp.getData(), 0, dp.getLength());
System.out.println("The data is " + msgStr);
if(msgStr.equals("Token")) {
hasToken = true;
}
}
}
```

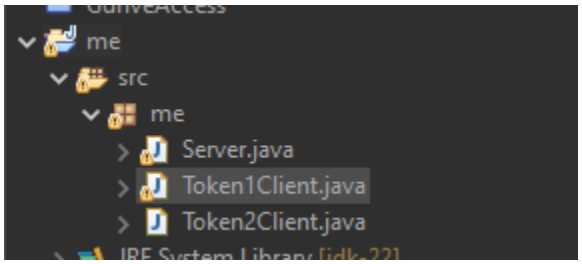
Token2Client.java

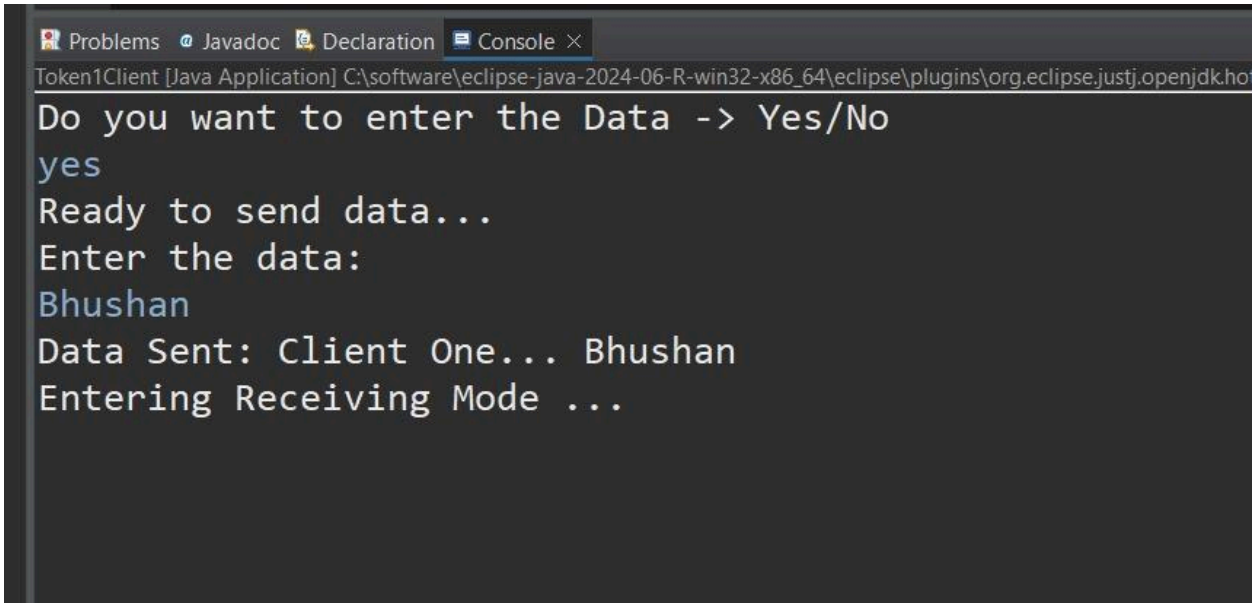
```
import java.io.*;
import java.net.*;

public class Token2Client {
staϴc boolean setSendData ; staϴc boolean hasToken ;
public staϴc void main(String arg[]) throws ExcepϴOn
{
InetAddress lclhost; BufferedReader br;
String str1;
TokenClient21 tkcl;
TokenClient21 ser;

while(true)
{
lclhost=InetAddress.getLocalHost();
tkcl = new TokenClient21(lclhost);
tkcl.setRecPort(8004);
tkcl.setSendPort(9002);
lclhost=InetAddress.getLocalHost();
ser = new TokenClient21(lclhost);
ser.setSendPort(9000);
System.out.println("entering if");
if(hasToken == true)
{
System.out.println("Do you want to enter the Data –> YES/NO");
```

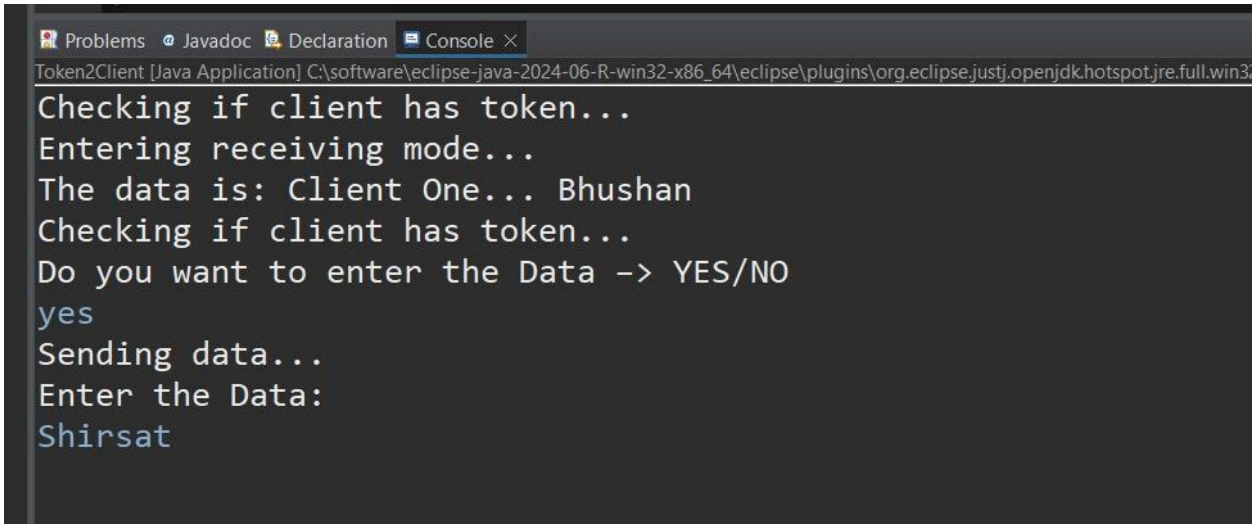
```
br=new BufferedReader(new InputStreamReader(System.in));
str1=br.readLine();
if(str1.equalsIgnoreCase("yes"))
{
System.out.println("ignorecase");
ser.setSendData = true;
ser.sendData();
}
else if(str1.equalsIgnoreCase("no"))
{
tkcl.sendData();
tkcl.hasToken=false; tkcl.sendData(); tkcl.recData();
hasToken=false;
}

}
else
{
System.out.println("entering recieving mode");
tkcl.recData();
hasToken=true;
}
}
}
}
class TokenClient21
{
InetAddress lclhost;
int sendport,recport;
boolean setSendData = false;
boolean hasToken = false;
TokenClient21 tkcl;
TokenClient21 ser;
TokenClient21(InetAddress lclhost)
{
this.lclhost = lclhost;
}
void setSendPort(int sendport)
{
this.sendport = sendport;
}
void setRecPort(int recport)

{
```

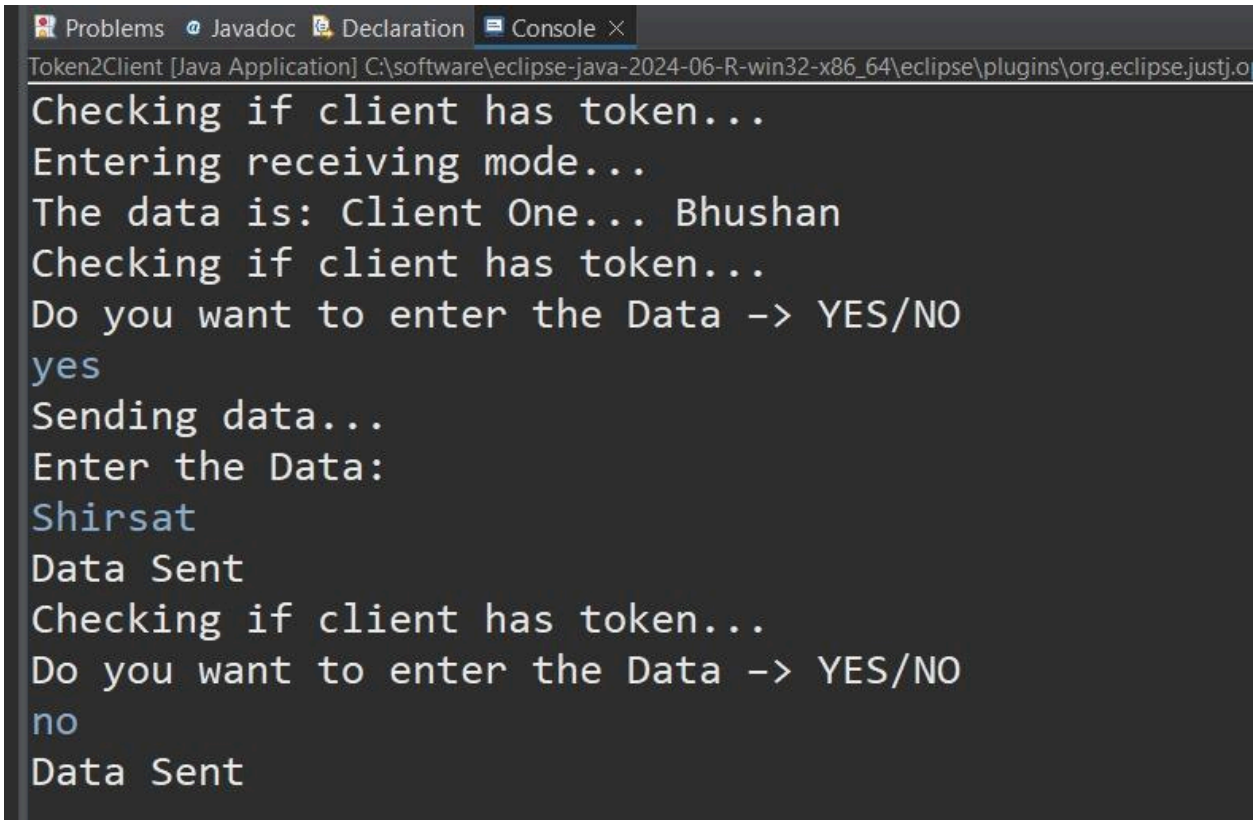
```
this.recport = recport;
}
void sendData() throws ExcepϴonExcepϴon
{
System.out.println("case");
BufferedReader br;
String str="Token";
DatagramSocket ds;
DatagramPacket dp;
if(setSendData == true)
{
System.out.println("Enter the Data");
br=new BufferedReader(new InputStreamReader(System.in));
str ="ClientTwo....." + br.readLine();
}
ds = new DatagramSocket(sendport);
dp = new DatagramPacket(str.getBytes(),str.length(),lclhost,sendport-1000);
ds.send(dp);
ds.close();
System.out.println("Data Sent");
setSendData = false; hasToken = false;
}
@SuppressWarnings("resource")
void recData()throws ExcepϴonExcepϴon
{
String msgstr;

byte buffer[] = new byte[256];
DatagramSocket ds;
DatagramPacket dp;
ds = new DatagramSocket(recport);
ds = new DatagramSocket(4000);
dp = new DatagramPacket(buffer,buffer.length);
ds.receive(dp);
ds.close();
msgstr = new String(dp.getData(),0,dp.getLength());
System.out.println("The data is "+msgstr);
if(msgstr.equals("Token"))
{
hasToken = true;
}
}
}
```

Output :
Folder Structure :






Problems
Javadoc
Declaration
Console
Token2Client [Java Application] C:\software\eclipse-java-2024-06-R-win32-x86_64\eclipse\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win3
Checking if client has token...
Entering receiving mode...
The data is: Client One... Bhushan
Checking if client has token...
Do you want to enter the Data -> YES/NO
yes
Sending data...
Enter the Data:
Shirsat


Problems
Javadoc
Declaration
Console
Token2Client [Java Application] C:\software\eclipse-java-2024-06-R-win32-x86_64\eclipse\plugins\org.eclipse.justj.o
Checking if client has token...
Entering receiving mode...
The data is: Client One... Bhushan
Checking if client has token...
Do you want to enter the Data -> YES/NO
yes
Sending data...
Enter the Data:
Shirsat
Data Sent
Checking if client has token...
Do you want to enter the Data -> YES/NO
no
Data Sent