

**Prog 8. Using TCP/IP sockets, write a client – server program to make the client send the file name and to make the server send back the contents of the requested file if present.**

Soln:

### **TCP Client**

**At client side:**

```
/*TCPClient*/

import java.net.*;

import java.io.*;

public class TCPClient

{

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

        Socket sock=new Socket("127.0.0.1",4000);

        System.out.println("Enter the filename");

        BufferedReader keyRead=new BufferedReader(new InputStreamReader(System.in));

        String fname=keyRead.readLine();

        OutputStream ostream=sock.getOutputStream();

        PrintWriter pwrite=new PrintWriter(ostream,true);

        pwrite.println(fname);

        InputStream istream=sock.getInputStream();

        BufferedReader socketRead=new BufferedReader(new InputStreamReader(istream));

        String str;

        while((str=socketRead.readLine())!=null)

        {

            System.out.println(str);

        }

        pwrite.close();

        socketRead.close();

    }

}
```

```
keyRead.close();
```

```
}
```

```
}
```

## **TCP Server**

### **At server side:**

```
/* TCPServer */
```

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

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

```
public class TCPServer
```

```
{
```

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

```
ServerSocket sersock=new ServerSocket(4000);
```

```
System.out.println("Server ready for Connection");
```

```
Socket sock=sersock.accept();
```

```
System.out.println("Connection is Successful and waiting for chatting");
```

```
InputStream istream=sock.getInputStream();
```

```
BufferedReader fileRead=new BufferedReader(new InputStreamReader(istream));
```

```
String fname=fileRead.readLine();
```

```
BufferedReader contentRead=new BufferedReader(new FileReader(fname));
```

```
OutputStream ostream=sock.getOutputStream();
```

```
PrintWriter pwrite=new PrintWriter(ostream,true);
```

```
String str;
```

```
while((str=contentRead.readLine())!=null)
```

```
{
```

```
pwrite.println(str);
```

```
}
```

```
sock.close();
```

```
sersock.close();  
pwrite.close();  
fileRead.close();  
contentRead.close();  
}  
}
```

Note: Create two different files TcpClient.java and TcpServer.java. Follow the steps given:

1. Open a terminal run the server program and provide the filename to send
2. Open one more terminal run the client program and provide the IP address of the server.  
We can give localhost address “127.0.0.1” as it is running on same machine or give the IP address of the machine.
3. Send any start bit to start sending file.

First Method of Executing TCP/IP socket based program

Output1

TCPServer

first run TCPServer program.

you will get below message that server is started and ready to connect with client

Server ready for Connection

TCPClient

Next run TCPClient program

Enter the filename

/home/student/naveen/abc.txt

hello atme college of engineering

Second Method of Executing TCP/IP socket based program

Output1

student@student:~/naveen\$ javac TCPServer.java

student@student:~/naveen\$ java TCPServer

Server ready for Connection

Connection is Successful and waiting for chatting

student@student:~/naveen\$

student@student:~/naveen\$ javac TCPClient.java

student@student:~/naveen\$ java TCPClient

Enter the filename

abc.txt

atme college of engineering,mysuru

student@student:~/naveen\$