

NETWORK PROGRAMMING LAB

LAB 7 - SOCKET CLIENT SERVER

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Q) Write a Socket program for client / server to upload the file from the client and to retrieve from server by any client.

CODE -

Server-

```
import java.io.BufferedInputStream;
import java.io.File;
import java.io.FileInputStream;
import java.io.IOException;
import java.io.OutputStream;
import java.net.ServerSocket;
import java.net.Socket;

public class NP_Server {

    public final static int SOCKET_PORT = 13268;
    public final static String FILE_TO_SEND = "D:\\fall maths\\matlab report3.pdf";

    public static void main (String [] args ) throws IOException {
        FileInputStream fis = null;
        BufferedInputStream bis = null;
        OutputStream os = null;
        ServerSocket servsock = null;
```

```

Socket sock = null;

try {
    servsock = new ServerSocket(SOCKET_PORT);
    while (true) {
        System.out.println("Waiting...");
        try {
            sock = servsock.accept();
            System.out.println("Accepted connection : " + sock);
            File myFile = new File (FILE_TO_SEND);
            byte [] mybytearray = new byte [(int)myFile.length()];
            fis = new FileInputStream(myFile);
            bis = new BufferedInputStream(fis);
            bis.read(mybytearray,0,mybytearray.length);
            os = sock.getOutputStream();
            System.out.println("Sending " + FILE_TO_SEND + "(" + mybytearray.length + " bytes)");
            os.write(mybytearray,0,mybytearray.length);
            os.flush();
            System.out.println("Done.");
        }
        finally {
            if (bis != null) bis.close();
            if (os != null) os.close();
            if (sock!=null) sock.close();
        }
    }
}
finally {
    if (servsock != null) servsock.close();
}
}
}

```

```
Command Prompt - java NP_Server
Microsoft Windows [Version 10.0.19042.1288]
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C:\Users\Sreenidhi>cd Desktop

C:\Users\Sreenidhi\Desktop>javac NP_Server.java

C:\Users\Sreenidhi\Desktop>java NP_Server
Waiting...
```

```
Command Prompt - java NP_Server
Microsoft Windows [Version 10.0.19042.1288]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Sreenidhi>cd Desktop

C:\Users\Sreenidhi\Desktop>javac NP_Server.java

C:\Users\Sreenidhi\Desktop>java NP_Server
Waiting...
Accepted connection : Socket[addr=/127.0.0.1,port=51098,localport=13268]
Sending D:\fall maths\matlab report3.pdf(87207 bytes)
Done.
Waiting...
```

Client –

```
import java.io.BufferedOutputStream;
```

```
import java.io.FileOutputStream;
```

```
import java.io.IOException;
```

```
import java.io.InputStream;
```

```
import java.net.Socket;
```

```
public class NP_Client {
```

```
    public final static int SOCKET_PORT = 13268;
```

```
    public final static String SERVER = "127.0.0.2";
```

```
    public final static String
```

```
        FILE_TO_RECEIVED = "D:\\fall maths\\matlab report3.pdf";
```

```

public final static int FILE_SIZE = 6022386;

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

    int bytesRead;

    int current = 0;

    FileOutputStream fos = null;

    BufferedOutputStream bos = null;

    Socket sock = null;

    try {

        sock = new Socket(SERVER, SOCKET_PORT);

        System.out.println("Connecting...");


        // receive file

        byte [] mybytearray = new byte [FILE_SIZE];

        InputStream is = sock.getInputStream();

        fos = new FileOutputStream(FILE_TO_RECEIVED);

        bos = new BufferedOutputStream(fos);

        bytesRead = is.read(mybytearray,0,mybytearray.length);

        current = bytesRead;


        do {

            bytesRead =

                is.read(mybytearray, current, (mybytearray.length-current));

            if(bytesRead >= 0) current += bytesRead;

        } while(bytesRead > -1);


        bos.write(mybytearray, 0 , current);

        bos.flush();

        System.out.println("File " + FILE_TO_RECEIVED

            + " downloaded (" + current + " bytes read)");

    }

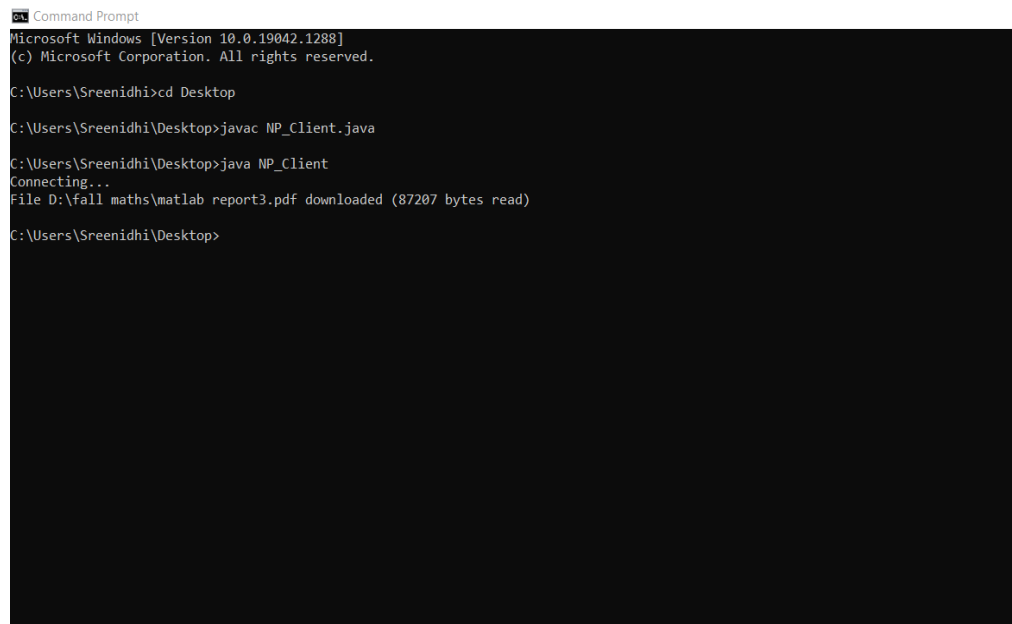
    finally {

```

```
        if (fos != null) fos.close();

        if (bos != null) bos.close();

        if (sock != null) sock.close();
    }
}
```



```
Command Prompt
Microsoft Windows [Version 10.0.19042.1288]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Sreenidhi>cd Desktop

C:\Users\Sreenidhi\Desktop>javac NP_Client.java

C:\Users\Sreenidhi\Desktop>java NP_Client
Connecting...
File D:\fall maths\matlab report3.pdf downloaded (87207 bytes read)

C:\Users\Sreenidhi\Desktop>
```