

Ex No:**Date:****Applications using TCP sockets: File Transfer****AIM:**

To write a java program for file transfer using TCP Sockets.

ALGORITHM:**Server:**

- 1.Import java packages and create class file server.
- 2.Create a new server socket and bind it to the port.
- 3.Accept the client connection
- 4.Get the file name and stored into the BufferedReader.
- 5.Create a new object class file and realine.
- 6.If file is exists then FileReader read the content until EOF is reached.
- 7.Stop the program.

Client:

- 1.Import java packages and create class file server.
- 2.Create a new server socket and bind it to the port.
- 3.Now connection is established.
- 4.The object of a BufferedReader class is used for storing data content which has been retrieved from socket object.
- 5.The connection is closed.
- 6.Stop the program.

PROGRAM:**File Server :**

```
import
java.io.BufferedReader;
import java.io.File;
import
java.io.FileInputStream;
import java.io.OutputStream;
import java.net.InetAddress;
import java.net.ServerSocket;import java.net.Socket

public class FileServer {
public static void main(String[] args) throws Exception {
// Initialize Sockets
ServerSocket ssock = new ServerSocket(5000);
Socket socket = ssock.accept();
// The InetAddress specification
InetAddress IA = InetAddress.getByName("localhost");

// Specify the file
```

```
File file = new File("e:\\Bookmarks.html");
FileInputStream fis = new FileInputStream(file);
BufferedInputStream bis = new BufferedInputStream(fis);
OutputStream os = socket.getOutputStream();
byte[] contents;
long fileLength = file.length();
long current = 0;
long start = System.nanoTime();
while (current != fileLength) {
    int size = 10000;
    if (fileLength - current >= size)
        current += size;
    else {
        size = (int) (fileLength - current);
        current = fileLength;
    }
    contents = new byte[size];

    bis.read(contents, 0, size);
    os.write(contents);
    System.out.print("Sending file ... " + (current * 100) / fileLength + "% complete!");
}
os.flush();
socket.close();
sock.close();
System.out.println("File sent successfully!");
}
```

File Client:

```
import java.io.BufferedOutputStream;
import java.io.FileOutputStream;
import java.io.InputStream;
import java.net.InetAddress;
import java.net.Socket;

public class FileClient {
    public static void main(String[] args) throws Exception {
        // Initialize socket
        Socket socket = new Socket(InetAddress.getByName("localhost"), 5000);
        byte[] contents = new byte[10000];
        BufferedOutputStream bos = new BufferedOutputStream(fos);
        InputStream is = socket.getInputStream();
        while ((bytesRead = is.read(contents)) != -1)
            bos.write(contents, 0, bytesRead);
        bos.flush();
        socket.close();
        System.out.println("File saved successfully!");
    }
}
```

**RESULT:**

Thus the java application program using TCP Sockets was developed and executed successfully.