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Assignment Name-Write a program using UDP Sockets to enable file transfer (Script, Text, Audio and Video one file each) between two machines. Demonstrate the packets captured traces using Wireshark Packet Analyzer Tool for peer to peer mode.

Client program code-

```
import java.io.BufferedReader; import
java.io.File; import java.io.FileReader;
import java.net.DatagramPacket; import
java.net.DatagramSocket; import
java.net.InetAddress; import
java.util.Scanner;

public class UDPclient {

    public static void main(String[] args)throws Exception {
        // TODO Auto-generated method stub
        Scanner sc=new Scanner(System.in);
        DatagramSocket s=new DatagramSocket();
        InetAddress ia=InetAddress.getLocalHost();
        File f1=new File("//home//sanket//CN//UDP basic"); File[]
        files=f1.listFiles();

        StringBuilder sb=new StringBuilder("\n"); int x=0;
        for(int i=0;i<files.length;i++)
        {
            if(files[i].canRead()) {

sb.append(files[i].getName()+" ,size"+files[i].length()+"bytes\n");
                x++;
            }
        }
        System.out.println(x+" Files found");
        System.out.println(sb);
        System.out.println(" Enter filename for download ");
        String fname = sc.nextLine(); System.out.println(fname);

        boolean flag = false; int id= 0;
```

```

        for(int i=0;i<files.length;i++) {
            if(files[i].getName().toString().equalsIgnoreCase(fname)) { flag =
                true; id = i; break;
            }
        }

        if(!flag) {
            System.out.println(fname + " does not exist!"); return;
        }

        File filetocopy=new File(files[id].getAbsolutePath());
        FileReader fileReader=new FileReader(filetocopy);
        BufferedReader br=new BufferedReader(fileReader);
        StringBuilder sb1=new StringBuilder();

        String line;
        while((line=br.readLine())!=null)
        { sb1.append(line);
            sb1.append("\n");
        }
        System.out.println(sb1.toString());

        byte[] sentname=files[id].getName().getBytes();
        DatagramPacket p1=new
DatagramPacket(sentname,sentname.length,ia,65535);
        s.send(p1);

        byte[] senttoserver=sb1.toString().getBytes();
        DatagramPacket p2=new
DatagramPacket(sentoserver,sentoserver.length,ia,65535);
        s.send(p2);
        s.close();

    }

}

```

Server program code-

```

import java.io.File; import java.io.PrintWriter; import
java.net.DatagramPacket; import java.net.DatagramSocket; import

```

```

java.net.InetAddress; import java.io.FileWriter; public class UDPserver {
public static void main(String[] args) throws Exception{

    System.out.print("hello");
    DatagramSocket s=new DatagramSocket(65535);
    InetAddress ia=InetAddress.getLocalHost();
    byte[]filename=new byte[1000]; byte[]b=new
    byte[10000000];

    //receiving name

    DatagramPacket name=new DatagramPacket(filename,filename.length);
    s.receive(name); System.out.print("hello");
    System.out.println(new String(name.getData()));

    DatagramPacket p=new DatagramPacket(b,b.length);
    s.receive(p);
    System.out.print("hello");
    System.out.println(new String(p.getData()));

    //String rec="Received your packet";
    //byte[] b1=rec.getBytes();
    //System.out.println(b1);
    //DatagramPacket p1=new DatagramPacket(b1,b1.length,ia,p.getPort());
    //s.send(p1);

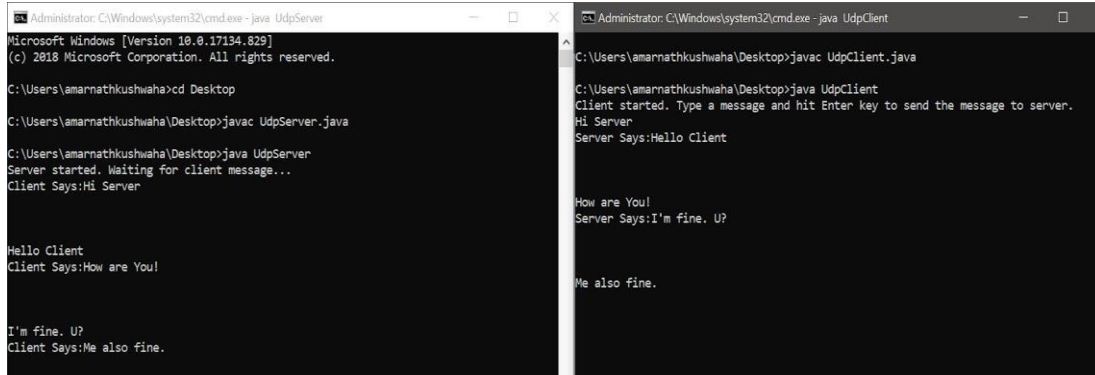
    String fname=new String(name.getData()).trim();
    fname="//home//sanket//CN//"+fname;
    System.out.println(fname);

    String filedata=new String(p.getData()).trim();
    System.out.println(filedata);

    PrintWriter pw = new PrintWriter(fname);
    pw.println(filedata); pw.close();

```

```
}  
}
```



```
Administrator: C:\Windows\system32\cmd.exe - java UdpServer  
Microsoft Windows [Version 10.0.17134.829]  
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C:\Users\amarnathkushwaha>cd Desktop  
  
C:\Users\amarnathkushwaha\Desktop>javac UdpServer.java  
  
C:\Users\amarnathkushwaha\Desktop>java UdpServer  
Server started. Waiting for client message...  
Client Says:Hi Server  
  
  
Hello Client  
Client Says:How are You!  
  
  
I'm fine. U?  
Client Says:Me also fine.  
  
Administrator: C:\Windows\system32\cmd.exe - java UdpClient  
  
C:\Users\amarnathkushwaha\Desktop>javac UdpClient.java  
  
C:\Users\amarnathkushwaha\Desktop>java UdpClient  
Client started. Type a message and hit Enter key to send the message to server.  
Hi Server  
Server Says:Hello Client  
  
  
How are You!  
Server Says:I'm fine. U?  
  
  
Me also fine.
```