

Program: echo

Eserver

```
import java.net.*;

import java.io.*;

public class EServer

{

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

    {

        ServerSocket ss=new ServerSocket(8020);

        String line;

        DataInputStream dis;

        PrintStream ps;

        Socket s;

        s=ss.accept();

        dis=new DataInputStream(s.getInputStream());

        ps=new PrintStream(s.getOutputStream());

        while(true)

        {

            line=dis.readLine();

            ps.println(line);

        }

    }

}
```

EClient

```
import java.net.*;

import java.io.*;

public class EClient

{

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

    {

        InetAddress ia=InetAddress.getLocalHost();

        Socket c=new Socket(ia,8020);

        String line;

        DataInputStream is,is1;

        PrintStream os;

        os=new PrintStream(c.getOutputStream());

        is=new DataInputStream(System.in);

        is1=new DataInputStream(c.getInputStream());

        while(true)

        {

            System.out.println("Client:");

            line=is.readLine();

            os.println(line);

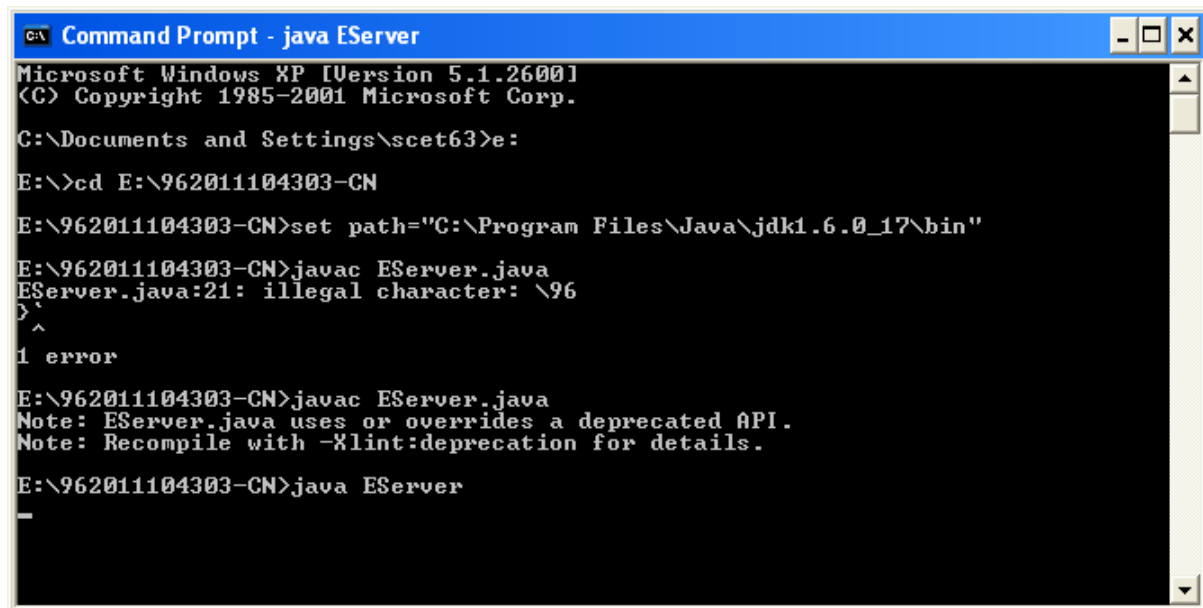
            System.out.println("Server:"+is1.readLine());

        }

    }

}
```

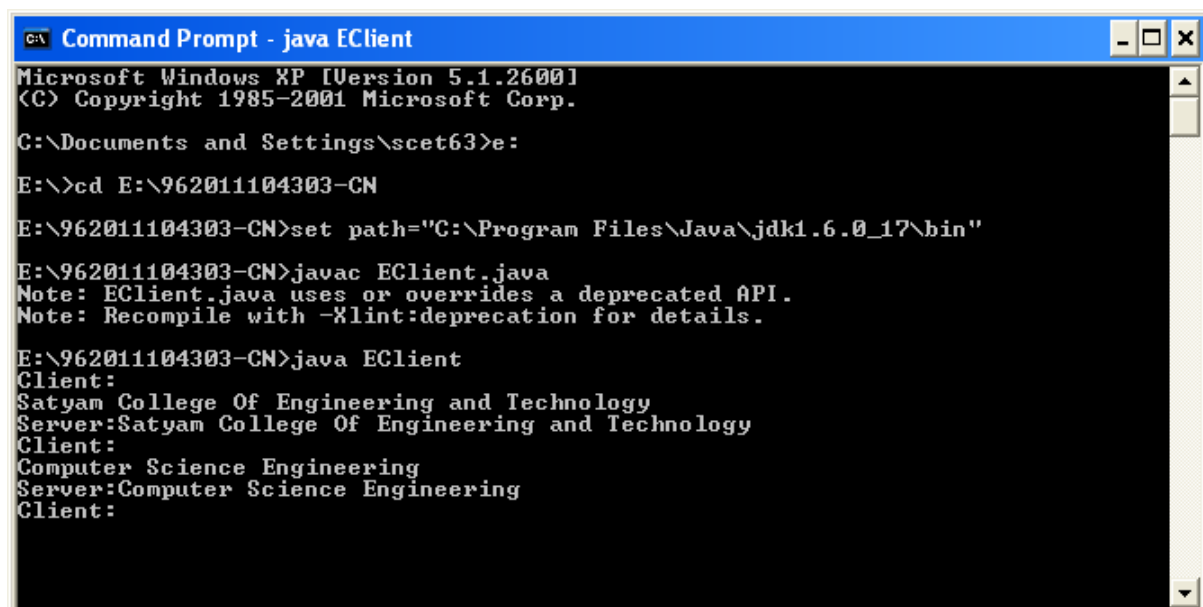
EServer:



```
Command Prompt - java EServer
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\scet63>e:
E:\>cd E:\962011104303-CN
E:\962011104303-CN>set path="C:\Program Files\Java\jdk1.6.0_17\bin"
E:\962011104303-CN>javac EServer.java
EServer.java:21: illegal character: \96
>^
1 error
E:\962011104303-CN>javac EServer.java
Note: EServer.java uses or overrides a deprecated API.
Note: Recompile with -Xlint:deprecation for details.
E:\962011104303-CN>java EServer
-
```

EClient:



```
Command Prompt - java EClient
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\scet63>e:
E:\>cd E:\962011104303-CN
E:\962011104303-CN>set path="C:\Program Files\Java\jdk1.6.0_17\bin"
E:\962011104303-CN>javac EClient.java
Note: EClient.java uses or overrides a deprecated API.
Note: Recompile with -Xlint:deprecation for details.
E:\962011104303-CN>java EClient
Client:
Satyam College Of Engineering and Technology
Server: Satyam College Of Engineering and Technology
Client:
Computer Science Engineering
Server: Computer Science Engineering
Client:
```

Program: chat

Server

```
import java.net.*;

import java.io.*;

public class Server

{

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

    {

        ServerSocket ss=new ServerSocket(3000);

        Socket s=ss.accept();

        System.out.println("My Server is Ready: ");

        DataInputStream in=new DataInputStream(s.getInputStream());

        PrintStream ps=new PrintStream(s.getOutputStream());

        while(true)

        {

            String st=in.readLine();

            System.out.println(st);

            st=new DataInputStream(System.in).readLine();

            ps.println("Server message= "+st);

        }

    }

}
```

Client

```
import java.net.*;

import java.io.*;

public class Client

{

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

    {

        InetAddress ina=InetAddress.getLocalHost();

        Socket s=new Socket(ina,3000);

        System.out.println("My Client is Ready: ");

        DataInputStream dis=new DataInputStream(s.getInputStream());

        PrintStream ps=new PrintStream(s.getOutputStream());

        while(true)

        {

            String st=new DataInputStream(System.in).readLine();

            ps.println("Client message= "+st);

            st=dis.readLine();

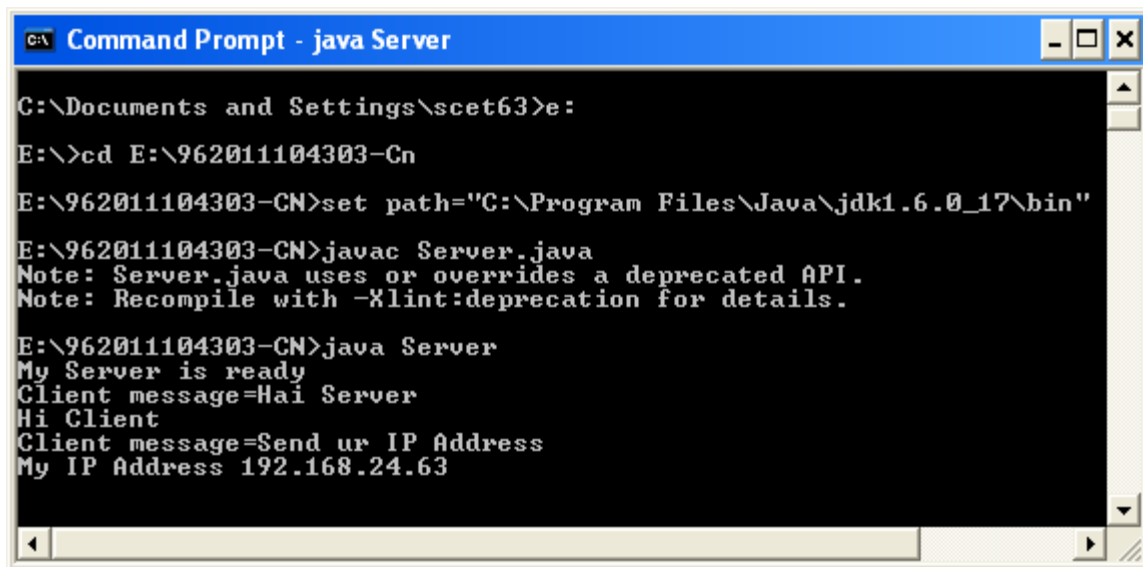
            System.out.println(st);

        }

    }

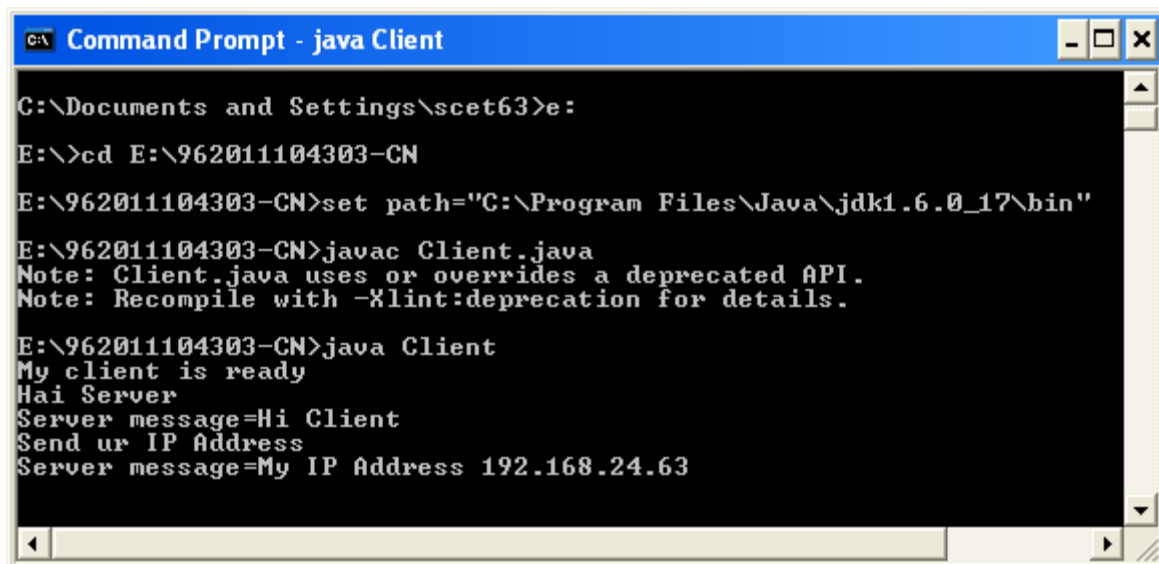
}
```

Server:



```
C:\Documents and Settings\scet63>e:
E:\>cd E:\962011104303-CN
E:\962011104303-CN>set path="C:\Program Files\Java\jdk1.6.0_17\bin"
E:\962011104303-CN>javac Server.java
Note: Server.java uses or overrides a deprecated API.
Note: Recompile with -Xlint:deprecation for details.
E:\962011104303-CN>java Server
My Server is ready
Client message=Hai Server
Hi Client
Client message=Send ur IP Address
My IP Address 192.168.24.63
```

Client:



```
C:\Documents and Settings\scet63>e:
E:\>cd E:\962011104303-CN
E:\962011104303-CN>set path="C:\Program Files\Java\jdk1.6.0_17\bin"
E:\962011104303-CN>javac Client.java
Note: Client.java uses or overrides a deprecated API.
Note: Recompile with -Xlint:deprecation for details.
E:\962011104303-CN>java Client
My client is ready
Hai Server
Server message=Hi Client
Send ur IP Address
Server message=My IP Address 192.168.24.63
```

Program:**//ARP SERVER**

```
import java.io.*;

import java.net.*;

import java.util.*;

class Serverarp

{

public static void main(String args[])

{

try

{

ServerSocket obj=new ServerSocket(139);

Socket obj1=obj.accept();

while(true)

{

DataInputStream din=new DataInputStream(obj1.getInputStream());

DataOutputStream dout=new DataOutputStream(obj1.getOutputStream());

String str=din.readLine();

String ip[]{"165.165.80.80","165.165.79.1"};

String mac[]{"6A:08:AA:C2","8A:BC:E3:FA"};

for(int i=0;i<ip.length;i++)

{

if(str.equals(ip[i]))

{
```

```
dout.writeBytes(mac[i]+'\\n');
```

```
break;
```

```
}
```

```
}
```

```
obj.close();
```

```
}
```

```
}
```

```
catch(Exception e)
```

```
{
```

```
System.out.println(e);
```

```
}
```

```
}
```

```
}
```


//ARP CLIENT

```
import java.io.*;

import java.net.*;

import java.util.*;

class Clientarp{

    public static void main(String args[]){

        try{

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

            Socket clsct=new Socket("127.0.0.1",139);

            DataInputStream din=new DataInputStream(clsct.getInputStream());

            DataOutputStream dout=new DataOutputStream(clsct.getOutputStream());

            System.out.println("Enter the Logical address(IP):");

            String str1=in.readLine();

            dout.writeBytes(str1+'\n');

            String str=din.readLine();

            System.out.println("The Physical Address is: "+str);

            clsct.close();

        }

        catch (Exception e)

        {

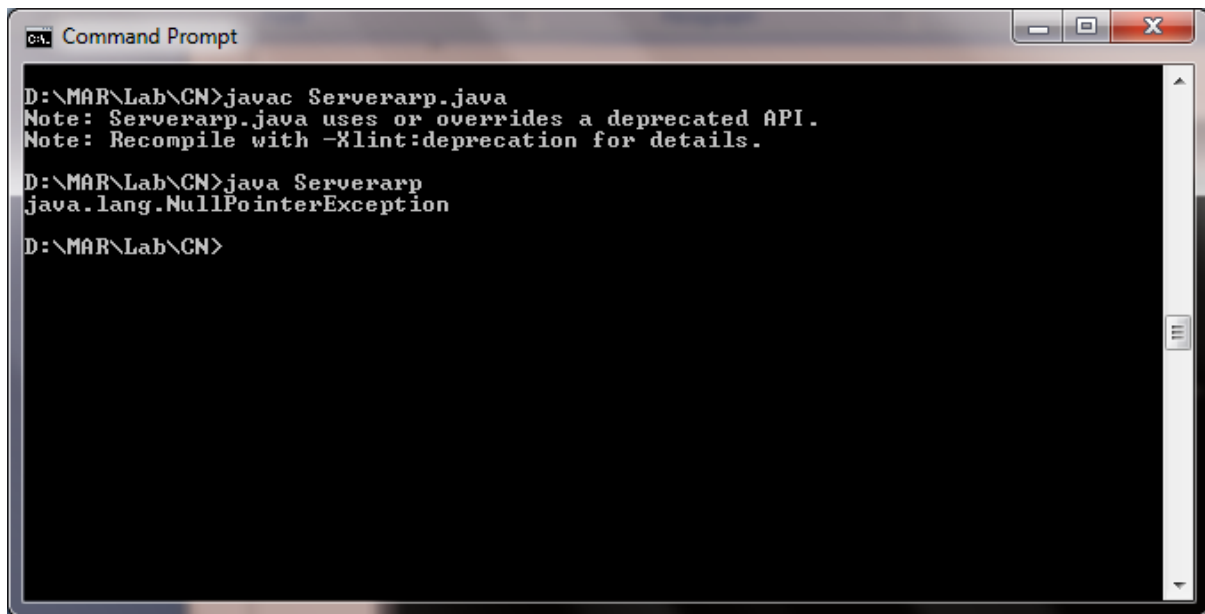
            System.out.println(e);

        }

    }

}
```

Server:



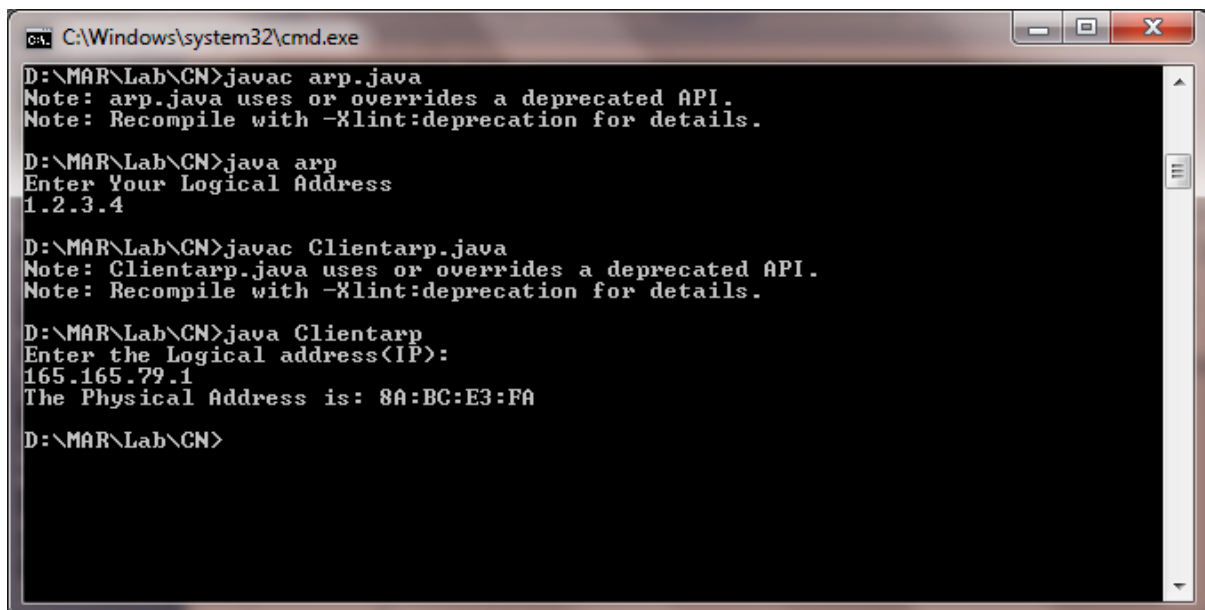
```
Command Prompt

D:\MAR\Lab\CN>javac Serverarp.java
Note: Serverarp.java uses or overrides a deprecated API.
Note: Recompile with -Xlint:deprecation for details.

D:\MAR\Lab\CN>java Serverarp
java.lang.NullPointerException

D:\MAR\Lab\CN>
```

Client:



```
C:\Windows\system32\cmd.exe

D:\MAR\Lab\CN>javac arp.java
Note: arp.java uses or overrides a deprecated API.
Note: Recompile with -Xlint:deprecation for details.

D:\MAR\Lab\CN>java arp
Enter Your Logical Address
1.2.3.4

D:\MAR\Lab\CN>javac Clientarp.java
Note: Clientarp.java uses or overrides a deprecated API.
Note: Recompile with -Xlint:deprecation for details.

D:\MAR\Lab\CN>java Clientarp
Enter the Logical address(IP):
165.165.79.1
The Physical Address is: 8A:BC:E3:FA

D:\MAR\Lab\CN>
```

Program: error

```
#include<stdio.h>

char m[50],g[50],r[50],q[50],temp[50];

void caltrans(int);

void crc(int);

void calram();

void shiftl();

int main()

{

int n,i=0;

char ch,flag=0;

printf("Enter the frame bits:");

while((ch=getc(stdin))!='\n')

m[i++]=ch;

n=i;

for(i=0;i<16;i++)

m[n++]='0';

m[n]='\0';

printf("Message after appending 16 zeros:%s",m);

for(i=0;i<=16;i++)

g[i]='0';

g[0]=g[4]=g[11]=g[16]='1';g[17]='\0';

printf("\ngenerator:%s\n",g);

crc(n);
```

```

printf("\n\nquotient:%s",q);

caltrans(n);

printf("\ntransmitted frame:%s",m);

printf("\nEnter transmitted frame:");

scanf("\n%s",m);

printf("CRC checking\n");

crc(n);

printf("\n\nlast remainder:%s",r);

for(i=0;i<16;i++)

if(r[i]!='0')

flag=1;

else

continue;

if(flag==1)

printf("Error during transmission");

else

printf("\n\nReceived freme is correct");

}

void crc(int n)

{

int i,j;

for(i=0;i<n;i++)

temp[i]=m[i];

for(i=0;i<16;i++)

```

```

r[i]=m[i];

printf("\nintermediate remainder\n");

for(i=0;i<n-16;i++)

{

if(r[0]=='1')

{

q[i]='1';

calram();

}

else

{

q[i]='0';

shiffl();

}

r[16]=m[17+i];

r[17]='\0';

printf("\nremainder %d:%s",i+1,r);

for(j=0;j<=17;j++)

temp[j]=r[j];

}

q[n-16]='\0';

}

void calram()

{

```

```

int i,j;

for(i=1;i<=16;i++)

r[i-1]=((int)temp[i]-48)^((int)g[i]-48)+48;

}

void shiftl()

{

int i;

for(i=1;i<=16;i++)

r[i-1]=r[i];

}

void caltrans(int n)

{

int i,k=0;

for(i=n-16;i<n;i++)

m[i]=((int)m[i]-48)^((int)r[k++]-48)+48;

m[i]='\0';

}

```

Output:

Enter the Frame Bits:

1011

The msg after appending 16 zeros:

10110000000000000000

The Transmitted frame is:10111011000101101011

Enter the transmitted Frame

10111011000101101011

Received msg:10111011000101101011

The Remainder is:0000000000000000

Received frame is correct.