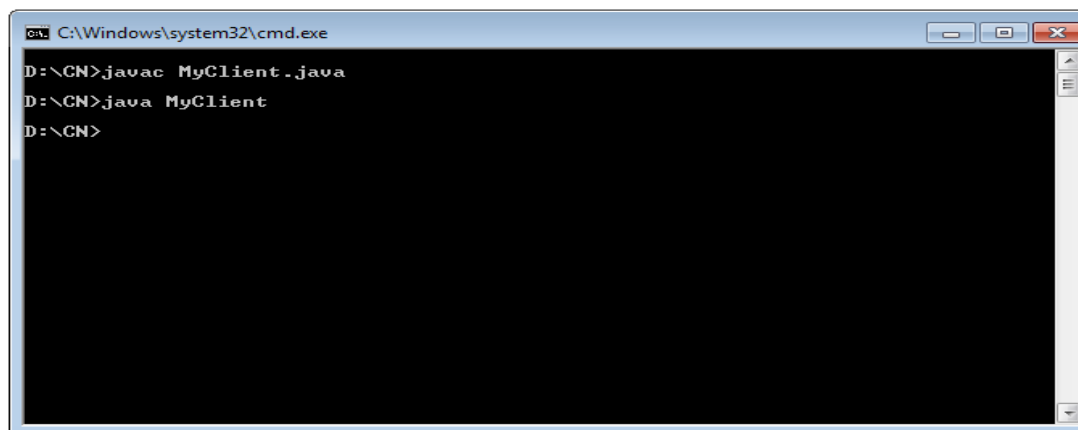


A screenshot of a Windows command prompt window. The title bar reads "C:\Windows\system32\cmd.exe". The command prompt shows the following text:   
D:\CN>java MyServer  
message= Hello Server  
D:\CN>



A screenshot of a Windows command prompt window. The title bar reads "C:\Windows\system32\cmd.exe". The command prompt shows the following text:   
D:\CN>javac MyClient.java  
D:\CN>java MyClient  
D:\CN>

```
Command Prompt - java UDPEchoServer
-Warning Terminate compilation if warnings occur

D:\java program\bin>javac UDPEchoServer.java
UDPEchoServer.java:13: error: unclosed string literal
    System.out.println("Created UDP Echo Server on port
                        ^
UDPEchoServer.java:14: error: unclosed string literal
    "+port);
    ^
2 errors

D:\java program\bin>javac UDPEchoServer.java

D:\java program\bin>java UDPEchoServer
Created UDP Echo Server on port 8000
Received from server: hi hello how are you
```

```
Command Prompt - java UDPEchoClient
Microsoft Windows [Version 10.0.19042.1110]
(c) Microsoft Corporation. All rights reserved.

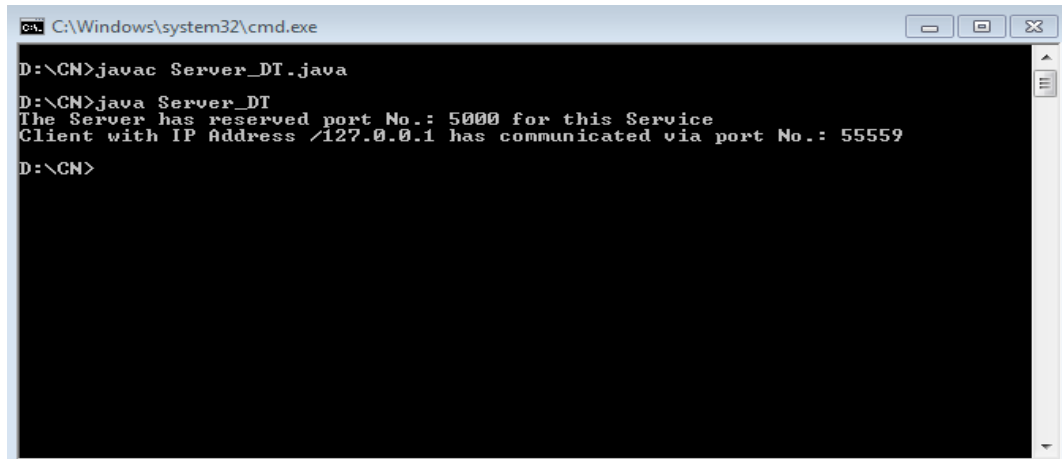
C:\Users\admin>d:

D:\>cd D:\java program\bin

D:\java program\bin>javac UDPEchoClient.java
UDPEchoClient.java:26: error: unclosed string literal
    System.out.println("Received from server:
                        ^
UDPEchoClient.java:27: error: unclosed string literal
    "+receivedString);
    ^
2 errors

D:\java program\bin>javac UDPEchoClient.java

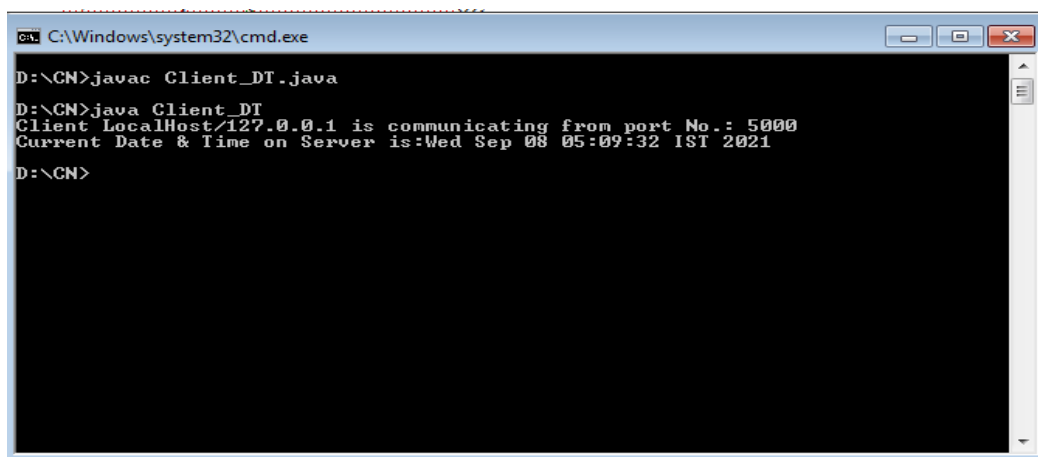
D:\java program\bin>java UDPEchoClient
Ready to send your messages...
hi hello how are you
Received from server: hi hello how are you
```



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

D:\CN>javac Server_DT.java
D:\CN>java Server_DT
The Server has reserved port No.: 5000 for this Service
Client with IP Address /127.0.0.1 has communicated via port No.: 55559
D:\CN>
```

A screenshot of a Windows command prompt window. The title bar shows 'C:\Windows\system32\cmd.exe'. The command history shows the user compiling 'Server\_DT.java' and then running 'java Server\_DT'. The output indicates the server has reserved port 5000 and a client at 127.0.0.1 has communicated via port 55559.



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

D:\CN>javac Client_DT.java
D:\CN>java Client_DT
Client LocalHost/127.0.0.1 is communicating from port No.: 5000
Current Date & Time on Server is:Wed Sep 08 05:09:32 IST 2021
D:\CN>
```

A screenshot of a Windows command prompt window. The title bar shows 'C:\Windows\system32\cmd.exe'. The command history shows the user compiling 'Client\_DT.java' and then running 'java Client\_DT'. The output indicates the client is communicating from port 5000 and shows the current date and time on the server as Wednesday, September 8, 2021 at 05:09:32 IST.

```

Microsoft Windows [Version 10.0.17763.1]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\ELCOT>d:

D:\>cd D:\JAVA\bin

D:\JAVA\bin>javac Server2.java

D:\JAVA\bin>java Server2
Connection established
hello
how are you
how are you
I am fine
this is an example of half duplex
this SS
adDHGDHAgdhAKASHJ5K5J5KJHGF

```

```

C:\Users\ELCOT>d:

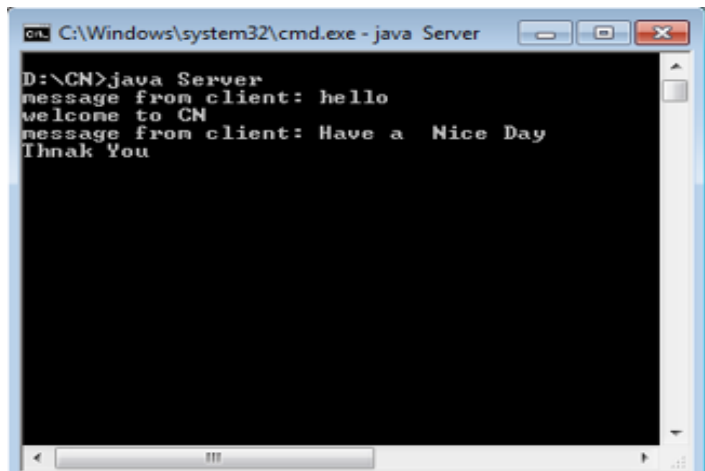
D:\>cd D:\JAVA\bin

D:\JAVA\bin>javac Client2.java

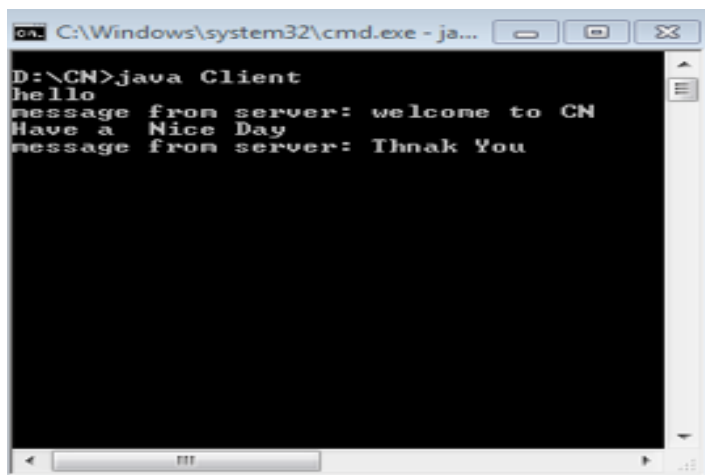
D:\JAVA\bin>java Client2
Exception in thread "main" java.net.ConnectException: Connection refused: connect
    at java.net.DualStackPlainSocketImpl.connect0(Native Method)
    at java.net.DualStackPlainSocketImpl.socketConnect(DualStackPlainSocketImpl.java:75)
    at java.net.AbstractPlainSocketImpl.doConnect(AbstractPlainSocketImpl.java:476)
    at java.net.AbstractPlainSocketImpl.connectToAddress(AbstractPlainSocketImpl.java:218)
    at java.net.AbstractPlainSocketImpl.connect(AbstractPlainSocketImpl.java:200)
    at java.net.PlainSocketImpl.connect(PlainSocketImpl.java:162)
    at java.net.SocksSocketImpl.connect(SocksSocketImpl.java:394)
    at java.net.Socket.connect(Socket.java:696)
    at java.net.Socket.connect(Socket.java:555)
    at java.net.Socket.<init>(Socket.java:451)
    at java.net.Socket.<init>(Socket.java:228)
    at Client2.main(Client2.java:11)

D:\JAVA\bin>java Client2
hello
how are you
how are you
I am fine
this is an example of half duplex
this SS
adDHGDHAgdhAKASHJ5K5J5KJHGF

```



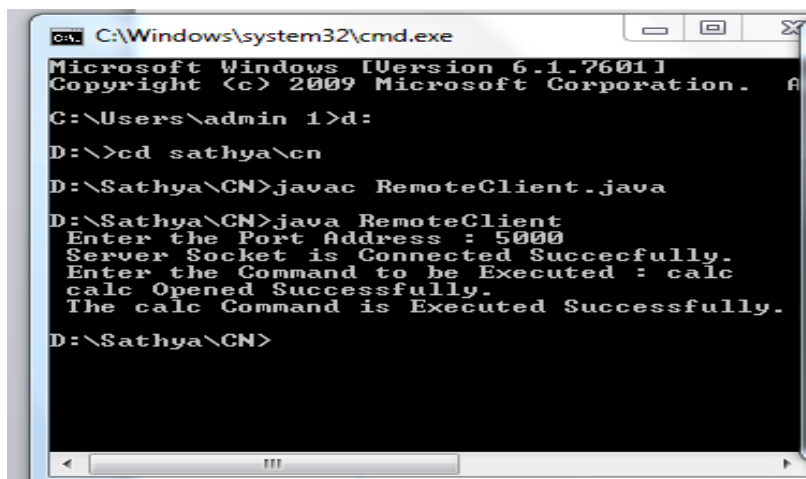
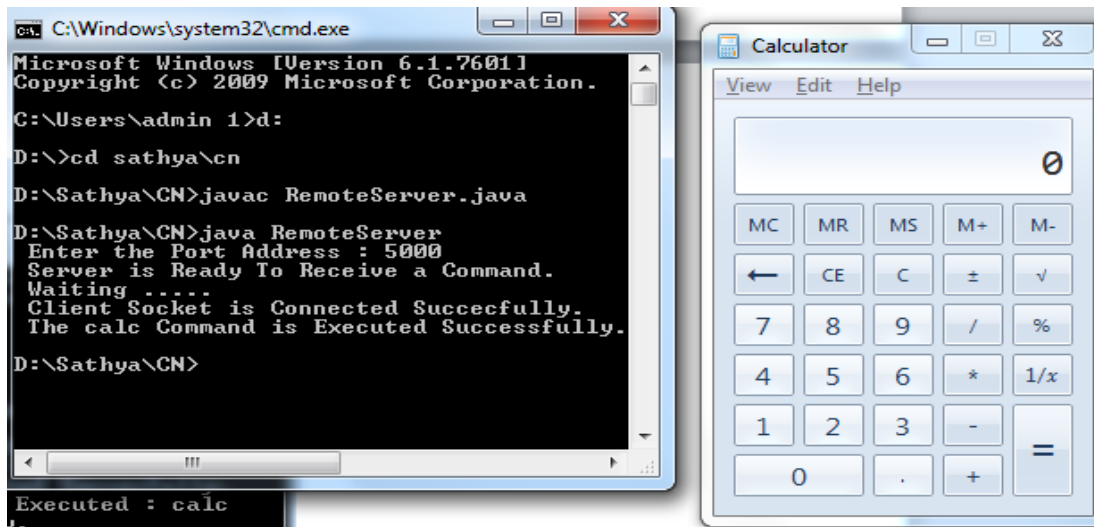
```
C:\Windows\system32\cmd.exe - java Server
D:\CN>java Server
message from client: hello
welcone to CN
message from client: Have a Nice Day
Thnak You
```



```
C:\Windows\system32\cmd.exe - ja...
D:\CN>java Client
hello
message from server: welcone to CN
Have a Nice Day
message from server: Thnak You
```

```
C:\Windows\system32\cmd.exe - java FTPServer
Waiting for Command ---
Waiting for Command ---
Waiting for Command ---
Waiting for Command ---
Waiting for Command ---
Waiting for Command ---
Waiting for Command ---
D:\Sathya\CN>^X^Z
'^' is not recognized as an internal or external command,
operable program or batch file.
D:\Sathya\CN>java FTPServer
FTP Server Started on Port Number 5217
Waiting for Connection ---
FTP Client Connected ---
Waiting for Connection ---
Waiting for Command ---
SEND Command Received ---
Waiting for Command ---
```

```
C:\Windows\system32\cmd.exe - java FTPClient
TPServer.java"
at java.lang.NumberFormatException.forInputString(Numbe
java:48)
at java.lang.Integer.parseInt(Integer.java:447)
at java.lang.Integer.parseInt(Integer.java:497)
at transferfileClient.displayMenu(FTPClient.java:142)
at FTPClient.main(FTPClient.java:12)
D:\Sathya\CN>java FTPClient
[ MENU ]
1. Send File
2. Receive File
3. Exit
Enter Choice :1
Enter File Name :FTPClient.java
File Already Exists. Want to OverWrite (Y/N) ?
n
[ MENU ]
1. Send File
2. Receive File
3. Exit
```



```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\admin 1>d:
D:\>cd sathya/cn
D:\Sathya\CN>javac Server.java
error: cannot read: Server.java
1 error

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

D:\Sathya\CN>java Serverarp
java.lang.NullPointerException

D:\Sathya\CN>
```

```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\admin 1>d:
D:\>cd sathya
D:\Sathya>cd cn
D:\Sathya\CN>javac Clientarp.java
Note: Clientarp.java uses or overrides a deprecated API.
Note: Recompile with -Xlint:deprecation for details.

D:\Sathya\CN>java Clientarp
Enter the Logical address(IP):
165.165.80.80
The Physical Address is: 6A:08:AA:C2

D:\Sathya\CN>
```



```
D:\Sathya\CN>java JavaProgram  
System IP Address : 10.10.14.53  
Public IP Address: 182.72.145.34
```

C:\Windows\System32\cmd.exe - java UDP\_VPN

Microsoft Windows [Version 10.0.19042.1237]  
(c) Microsoft Corporation. All rights reserved.

E:\Ancy\CN Lab>javac UDP\_VPN.java

E:\Ancy\CN Lab>java UDP\_VPN

Client msg : [10.10.23.139, 3333, AbraKaDabra]  
Client Authenticated

Client msg : [10.10.23.139, 8581, Welcome]  
Server msg : [10.10.23.139, 8581, Hello]

C:\Windows\System32\cmd.exe - java UDPClient

Microsoft Windows [Version 10.0.19042.1237]  
(c) Microsoft Corporation. All rights reserved.

E:\Ancy\CN Lab>javac UDPClient.java

E:\Ancy\CN Lab>java UDPClient

asking for authentication from vpn AbraKaDabra  
Connection is established with vpn  
VPN Details : [10.10.23.139, 5555, readyToUse]  
Enter Initial Server IP : 10.10.23.139  
Enter Initial server Port : 8581

Enter something : Welcome  
Server msg : Hello  
Enter something :

C:\Windows\System32\cmd.exe - java UDPServer

Microsoft Windows [Version 10.0.19042.1237]  
(c) Microsoft Corporation. All rights reserved.

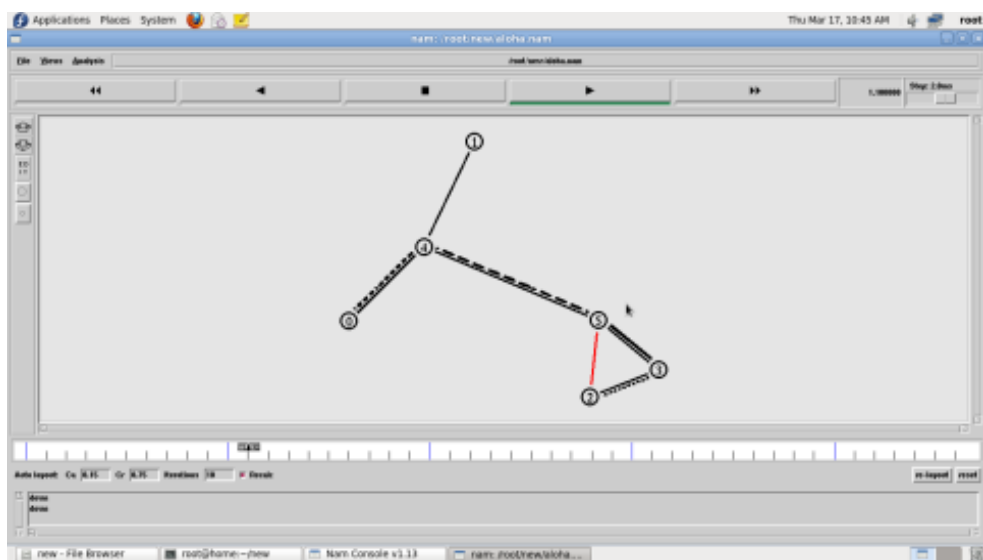
E:\Ancy\CN Lab>javac.UDPServer.java

'javac.UDPServer.java' is not recognized as an internal or external command,  
operable program or batch file.

E:\Ancy\CN Lab>javac UDPServer.java

E:\Ancy\CN Lab>java UDPServer

Server IP : 10.10.23.139  
Server Port : 8581  
Client msg : Welcome  
Enter something :Hello



```
D:\java program\bin>javac bit_stuffing.java
```

```
D:\java program\bin>java bit_stuffing
```

```
Enter the message:-10101001010100101010111111100000111110000
```

```
Flag--> 01111110
```

```
Stuffed data at intermediate site is:
```

```
-----  
|01111110 | 101010010101001010101111111000001111100000 | 01111110|  
-----
```

```
Destuffed BIT is: 10101001010100101010111111100000111110000
```

```
D:\java program\bin>■
```