

Name: Shivanandreddy
USN: 1RVU23CSE431
Sec: I
Subject: Network Security
Subject Code: CS3403

Lab Experiment : 3

1.Server – wsl and client – cmd

```
shiva143@Shiva: /mnt/c/Users/shiva/college Work/lab3
shiva143@Shiva:~$ ip addr
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet 10.255.255.254/32 brd 10.255.255.254 scope global lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc mq state UP group default qlen 1000
    link/ether 00:15:5d:84:b3:63 brd ff:ff:ff:ff:ff:ff
    inet 172.26.112.9/20 brd 172.26.127.255 scope global eth0
        valid_lft forever preferred_lft forever
    inet6 fe80::215:5dff:fe84:b363/64 scope link
        valid_lft forever preferred_lft forever
shiva143@Shiva:~$ cd /mnt/c/Users/shiva/college\ Work/lab3
shiva143@Shiva:/mnt/c/Users/shiva/college Work/lab3$ ls
Lab3a_client_Win.py  Lab3a_server_WSL.py
shiva143@Shiva:/mnt/c/Users/shiva/college Work/lab3$ python Lab3a_server_WSL.py
Command 'python' not found, did you mean:
  command 'python3' from deb python3
  command 'python' from deb python-is-python3
shiva143@Shiva:/mnt/c/Users/shiva/college Work/lab3$ python3 Lab3a_server_WSL.py
Lab1: Exp0:Server running on WSL: Welcome !!!
Server listening on 0.0.0.0:65432
```

✓ Server is ready.

```
Command Prompt
Microsoft Windows [Version 10.0.26200.7628]
(c) Microsoft Corporation. All rights reserved.

C:\Users\shiva>labcd /mnt/c/Users/Shivanand\ Reddy\College\ Work
'labcd' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\shiva>cd /mnt/c/Users/Shivanand\ Reddy\College\ Work
The system cannot find the path specified.

C:\Users\shiva>cd /mnt/c/Users/Shivanand\ Reddy\CollegeWork
The system cannot find the path specified.

C:\Users\shiva>cd "C:\Users\Shivanand Reddy\College Work"
The system cannot find the path specified.

C:\Users\shiva>cd C:\Users\shiva\College Work\lab3

C:\Users\shiva\College Work\lab3>py Lab3a_client_Win.py
Lab1: Exp0:Client running on Windows: Welcome !!!
Host name: Shiva
IP address: 10.17.19.230
FQDN: Shiva.RVU.local
Received Hello, server! from server

C:\Users\shiva\College Work\lab3>_

29 print(f"Received {data.decode()} from server")
```

1.Server – cmd and client – wsl

```
Command Prompt
Ethernet adapter vEthernet (WSL (Hyper-V firewall)):

Connection-specific DNS Suffix . :
Link-local IPv6 Address . . . . . : fe80::7ca8:aa31:d191:cccb%61
IPv4 Address. . . . . : 172.26.112.1
Subnet Mask . . . . . : 255.255.240.0
Default Gateway . . . . . :

C:\Users\shiva>cd "C:\Users\Shivanand Reddy\College Work"
The system cannot find the path specified.

C:\Users\shiva>cd "C:\Users\Shivanand Reddy\College Work"
The system cannot find the path specified.

C:\Users\shiva>cd "C:\Users\Shivanand Reddy\College Work\lab"
The system cannot find the path specified.

C:\Users\shiva>cd "C:\Users\Shivanand Reddy\College Work\lab3"
The system cannot find the path specified.

C:\Users\shiva>cd C:\Users\shiva\College Work\lab3

C:\Users\shiva\College Work\lab3>py Lab3a_server_Win.py
Lab1: Exp0:Server running on WSL: Welcome !!!
Server listening on 0.0.0.0:65432
Connected by ('172.26.112.9', 60632)
Received: Hello, server!

C:\Users\shiva\College Work\lab3>
```

```
Command Prompt

Ethernet adapter vEthernet (WSL (Hyper-V firewall)):

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::7ca8:aa31:d191:cccb%61
    IPv4 Address. . . . . : 172.26.112.1
    Subnet Mask . . . . . : 255.255.240.0
    Default Gateway . . . . . : 

C:\Users\shiva>cd "C:\Users\Shivanand Reddy\College Work"
The system cannot find the path specified.

C:\Users\shiva>cd "C:\Users\Shivanand Reddy\College Work"
The system cannot find the path specified.

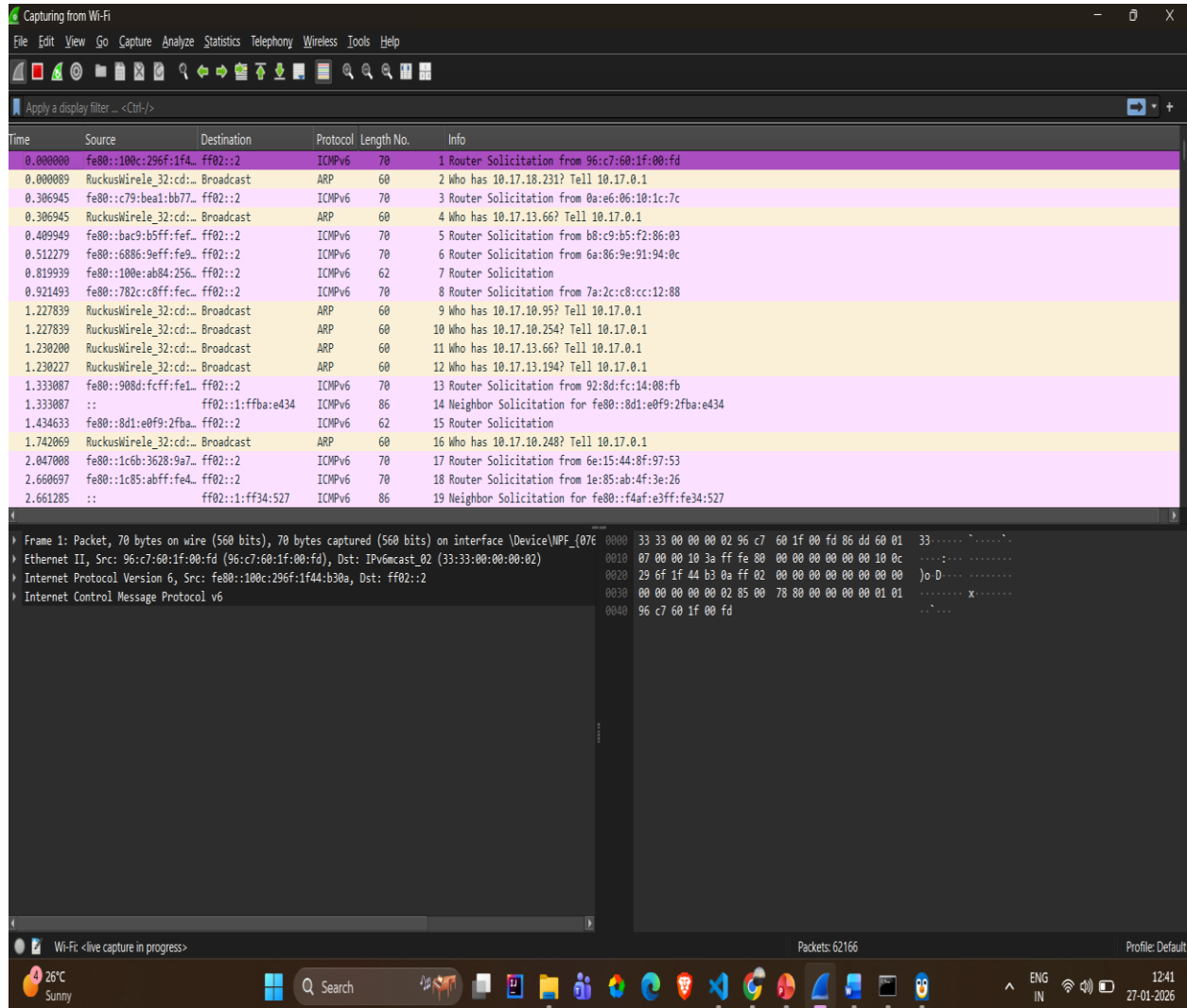
C:\Users\shiva>cd "C:\Users\Shivanand Reddy\College Work\lab"
The system cannot find the path specified.

C:\Users\shiva>cd "C:\Users\Shivanand Reddy\College Work\lab3"
The system cannot find the path specified.

C:\Users\shiva>cd C:\Users\shiva\College Work\lab3

C:\Users\shiva\College Work\lab3>py Lab3a_server_Win.py
Lab1: Exp0:Server running on WSL: Welcome !!!
Server listening on 0.0.0.0:65432
Connected by ('172.26.112.9', 60632)
Received: Hello, server!

C:\Users\shiva\College Work\lab3>
```



The screenshot shows a Wireshark capture of network traffic on a Wi-Fi interface. The packet list on the left shows 19 packets, including Router Solicitations (ICMPv6) and Neighbor Solicitations (ICMPv6). The packet details pane on the right shows the structure of the first packet (Frame 1), which is an ICMPv6 Router Solicitation. The packet bytes pane on the right shows the raw hex and ASCII data of the packet.

Time	Source	Destination	Protocol	Length	No.	Info
0.000000	fe80::100c:296f:1f4a::ff02::2	ff02::2	ICMPv6	70	1	Router Solicitation from 96:c7:60:1f:00:fd
0.000089	RuckusWirele_32:cd::	Broadcast	ARP	60	2	Who has 10.17.18.231? Tell 10.17.0.1
0.306945	fe80::c79:bea1:bb77::ff02::2	ff02::2	ICMPv6	70	3	Router Solicitation from 0a:e6:06:10:1c:7c
0.306945	RuckusWirele_32:cd::	Broadcast	ARP	60	4	Who has 10.17.13.66? Tell 10.17.0.1
0.409949	fe80::bac9:b5ff:fef::ff02::2	ff02::2	ICMPv6	70	5	Router Solicitation from b8:c9:b5:f2:86:03
0.512279	fe80::6886:9eff:fe9::ff02::2	ff02::2	ICMPv6	70	6	Router Solicitation from 6a:86:9e:91:94:0c
0.819939	fe80::100e:ab84:256::ff02::2	ff02::2	ICMPv6	62	7	Router Solicitation
0.921493	fe80::782c:c8ff:fec::ff02::2	ff02::2	ICMPv6	70	8	Router Solicitation from 7a:2c:c8:cc:12:88
1.227839	RuckusWirele_32:cd::	Broadcast	ARP	60	9	Who has 10.17.10.95? Tell 10.17.0.1
1.227839	RuckusWirele_32:cd::	Broadcast	ARP	60	10	Who has 10.17.10.254? Tell 10.17.0.1
1.230200	RuckusWirele_32:cd::	Broadcast	ARP	60	11	Who has 10.17.13.66? Tell 10.17.0.1
1.230227	RuckusWirele_32:cd::	Broadcast	ARP	60	12	Who has 10.17.13.194? Tell 10.17.0.1
1.333087	fe80::908d:fcff:fe1::ff02::2	ff02::2	ICMPv6	70	13	Router Solicitation from 92:8d:fc:14:08:fb
1.333087	::	ff02::1:ffba:e434	ICMPv6	86	14	Neighbor Solicitation for fe80::8d1:e0f9:2fba:e434
1.434633	fe80::8d1:e0f9:2fba::ff02::2	ff02::2	ICMPv6	62	15	Router Solicitation
1.742069	RuckusWirele_32:cd::	Broadcast	ARP	60	16	Who has 10.17.10.248? Tell 10.17.0.1
2.047008	fe80::1c6b:3628:9a7::ff02::2	ff02::2	ICMPv6	70	17	Router Solicitation from 6e:15:44:8f:97:53
2.660697	fe80::1c85:abff:fe4::ff02::2	ff02::2	ICMPv6	70	18	Router Solicitation from 1e:85:ab:4f:3e:26
2.661285	::	ff02::1:ff34:527	ICMPv6	86	19	Neighbor Solicitation for fe80::f4af:e3ff:fe34:527

Frame 1: Packet, 70 bytes on wire (560 bits), 70 bytes captured (560 bits) on interface \Device\NPF_{076...} Ethernet II, Src: 96:c7:60:1f:00:fd (96:c7:60:1f:00:fd), Dst: IPv6mcast_02 (33:33:00:00:00:02) Internet Protocol Version 6, Src: fe80::100c:296f:1f4a:b30a, Dst: ff02::2 Internet Control Message Protocol v6

Packet bytes: 0000 33 33 00 00 00 02 96 c7 60 1f 00 fd 86 dd 60 01 33
0010 07 00 00 10 3a ff fe 80 00 00 00 00 00 10 0c
0020 29 6f 1f 44 b3 0a ff 02 00 00 00 00 00 00 00)o D
0030 00 00 00 00 02 85 00 78 80 00 00 00 01 01 x
0040 96 c7 60 1f 00 fd
.....