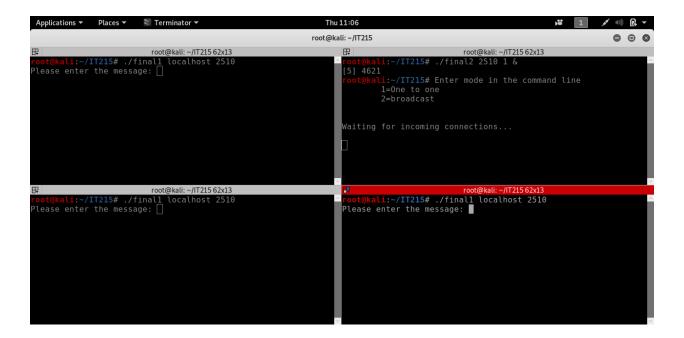# Output for Datagram Sockets Implementation

One to One :

The given procedure is followed-

1. Client 1 (Top Left) sends "hi from client 1" to client 2.
2. Client 2 (Bottom Left) receives message from client 1 and ,sends "hi from client 2 " to client 3.
3. Client 3 (Bottom Right) receives message from client 2 and, sends "hi from client 3 " to client 1.
4. Client 1 (Top Left) receives message from client 3 and, sends "bye from client 1 " to client 2.
5. Client 2 (Bottom Left) receives message from client 1 and, sends "bye from client 2 " to client 3 .
6. Client 3 (Bottom Right) receives message from client 2 and, sends "bye from client 3 " to client 1.
7. Client 1 receives message from Client 3.

root@kali: ~/IT215

```
                          root@kali: ~/IT215 62x13                              root@kali: ~/IT215 62x13
root@kali:~/IT215# ./final1 localhost 2510              [5] 4621
Please enter the message: hi from client 1             root@kali:~/IT215# Enter mode in the command line
Acknowledgement message from server                             1=One to one
                                                               2=broadcast
Please enter the message: ⬚

                                                       Waiting for incoming connections...

                                                       Message from Client : hi from client 1

                                                       Message from Client : hi from client 2

                                                        ⬚
                          root@kali: ~/IT215 62x13                              root@kali: ~/IT215 62x13
root@kali:~/IT215# ./final1 localhost 2510             root@kali:~/IT215# ./final1 localhost 2510
Please enter the message:                              Please enter the message:
hi from client 1                                       hi from client 2
hi from client 2
Acknowledgement message from server

Please enter the message: ⬚
```

root@kali: ~/IT215

```
                          root@kali: ~/IT215 62x13                              root@kali: ~/IT215 62x13
root@kali:~/IT215# ./final1 localhost 2510                     1=One to one
Please enter the message: hi from client 1                     2=broadcast
Acknowledgement message from server

Please enter the message:                              Waiting for incoming connections...
hi from client 3
                                                       Message from Client : hi from client 1

                                                       Message from Client : hi from client 2

                                                       Message from Client : hi from client 3

                                                        ⬚
                          root@kali: ~/IT215 62x13                              root@kali: ~/IT215 62x13
root@kali:~/IT215# ./final1 localhost 2510             root@kali:~/IT215# ./final1 localhost 2510
Please enter the message:                              Please enter the message:
hi from client 1                                       hi from client 2
                                                       hi from client 3
hi from client 2                                       Acknowledgement message from server
Acknowledgement message from server
                                                       Please enter the message: ⬚
Please enter the message: ⬚
```

```
Applications ▼    Places ▼    Terminator ▼              Thu 11:07                              1           ◀ ))  ⟨⟨  ▼
                                              root@kali: ~/IT215                                        ─  □  ⊗
⊞              root@kali: ~/IT215 62x13              ⊞              root@kali: ~/IT215 62x13
Please enter the message: hi from client 1          Message from Client : hi from client 1
Acknowledgement message from server
                                                    Message from Client : hi from client 2
Please enter the message:
hi from client 3                                    Message from Client : hi from client 3

bye from client 1                                   Message from Client : bye from client 1
Acknowledgement message from server
                                                    Message from Client : bye from client 2
Please enter the message:
bye from client 3                                   Message from Client : bye from client 3

□                                                   □
⊞              root@kali: ~/IT215 62x13              ⊞              root@kali: ~/IT215 62x13
Please enter the message:                           Please enter the message:
hi from client 1                                    hi from client 2

hi from client 2                                    hi from client 3
Acknowledgement message from server                 Acknowledgement message from server

Please enter the message:                           Please enter the message:
bye from client 1                                   bye from client 2

bye from client 2                                   bye from client 3
Acknowledgement message from server                 Acknowledgement message from server

Please enter the message: □                         Please enter the message:
```

Broadcast Mode :

The given procedure is followed-
1. Client 1 (Top Left) sends "hi from client 1" to client 2 and client 3.
2. Client 2 (Bottom Left) and Client 3 receive message from client 1. Client 2 sends "hi from client 2 " to client 3 and client 1.
3. Client 3 (Bottom Right) and Client 1 receive message from client 2. Client 3 sends "hi from client 3 " to client 1 and client 2.
4. Client 1 (Top Left) and Client 2 receive message from client 3. Client 1 sends "bye from client 1" to client 2 and client 3.
5. Client 2 (Bottom Left) and Client 3 receive message from client 1. Client 2 sends "bye from client 2" to client 1 and client 3.
6. Client 3 (Bottom Right) and Client 1 receive message from client 2. Client 3 sends "bye from client 3" to client 1 and client 2.
7. Client 1 and Client 2 receive message from Client 3.

Top screenshot:

```
Applications ▾   Places ▾   ⬚ Terminator ▾        Thu 11:08                           ⬚  1   ✎ ◀) ⬚ ▾
                                    root@kali: ~/IT215                                        ─ ▢ ✕

  ⬚          root@kali: ~/IT215 62x13              ⬚          root@kali: ~/IT215 62x13
root@kali:~/IT215# ./final1 localhost 2511      root@kali:~/IT215# ./final2 2511 2 &
Please enter the message: ▮                      [6] 4752
                                                 root@kali:~/IT215# Enter mode in the command line
                                                         1=One to one
                                                         2=broadcast


                                                 Waiting for incoming connections...

                                                 ▯

  ⬚          root@kali: ~/IT215 62x13              ⬚          root@kali: ~/IT215 62x13
root@kali:~/IT215# ./final1 localhost 2511      root@kali:~/IT215# ./final1 localhost 2511
Please enter the message: ▯                      Please enter the message: ▯
```

Bottom screenshot:

```
Applications ▾   Places ▾   ⬚ Terminator ▾        Thu 11:08                           ⬚  1   ✎ ◀) ⬚ ▾
                                    root@kali: ~/IT215                                        ─ ▢ ✕

  ⬚          root@kali: ~/IT215 62x13              ⬚          root@kali: ~/IT215 62x13
root@kali:~/IT215# ./final1 localhost 2511               1=One to one
Please enter the message:  hi from client 1              2=broadcast
Acknowledgement message from server

Please enter the message:                        Waiting for incoming connections...
hi from client 2
                                                 Message from Client :  hi from client 1

hi from client 3                                 Message from Client : hi from client 2

▯                                                Message from Client : hi from client 3

                                                 ▯

  ⬚          root@kali: ~/IT215 62x13              ⬚          root@kali: ~/IT215 62x13
root@kali:~/IT215# ./final1 localhost 2511      root@kali:~/IT215# ./final1 localhost 2511
Please enter the message:                        Please enter the message:
 hi from client 1                                 hi from client 1
                                                 
hi from client 2                                 hi from client 2
Acknowledgement message from server
                                                 hi from client 3
Please enter the message:                        Acknowledgement message from server
hi from client 3
                                                 Please enter the message: ▮
▯
```

```
root@kali: ~/IT215 62x13
Please enter the message:  hi from client 1
Acknowledgement message from server

Please enter the message:
hi from client 2


hi from client 3

bye from client 1
Acknowledgement message from server

Please enter the message: █
```

```
root@kali: ~/IT215 62x13

Waiting for incoming connections...

Message from Client :  hi from client 1

Message from Client : hi from client 2

Message from Client : hi from client 3

Message from Client : bye from client 1
```

```
root@kali: ~/IT215 62x13
Please enter the message:
 hi from client 1

hi from client 2
Acknowledgement message from server

Please enter the message:
hi from client 3

bye from client 1
```

```
root@kali: ~/IT215 62x13
Please enter the message:
 hi from client 1

hi from client 2

hi from client 3
Acknowledgement message from server

Please enter the message:
bye from client 1
```

```
root@kali: ~/IT215 62x13
Please enter the message:
hi from client 2


hi from client 3

bye from client 1
Acknowledgement message from server

Please enter the message:
bye from client 2
```

```
root@kali: ~/IT215 62x13
Waiting for incoming connections...

Message from Client :  hi from client 1

Message from Client : hi from client 2

Message from Client : hi from client 3

Message from Client : bye from client 1

Message from Client : bye from client 2
```

```
root@kali: ~/IT215 62x13
hi from client 2
Acknowledgement message from server

Please enter the message:
hi from client 3


bye from client 1

bye from client 2
Acknowledgement message from server

Please enter the message: █
```

```
root@kali: ~/IT215 62x13
hi from client 2

hi from client 3
Acknowledgement message from server

Please enter the message:
bye from client 1


bye from client 2
```

root@kali: ~/IT215   ⊖ ▢ ✕

▣   root@kali: ~/IT215 62x13   ▣   root@kali: ~/IT215 62x13

```
hi from client 3                                            Message from Client :  hi from client 1

bye from client 1                                           Message from Client : hi from client 2
Acknowledgement message from server
                                                            Message from Client : hi from client 3
Please enter the message:
bye from client 2                                           Message from Client : bye from client 1

                                                            Message from Client : bye from client 2
bye from client 3
                                                            Message from Client : bye from client 3

□                                                           □
```

▣   root@kali: ~/IT215 62x13   🔳   root@kali: ~/IT215 62x13

```
Please enter the message:                                   hi from client 3
hi from client 3                                            Acknowledgement message from server

                                                            Please enter the message:
bye from client 1                                           bye from client 1

bye from client 2
Acknowledgement message from server                         bye from client 2

Please enter the message:                                   bye from client 3
bye from client 3                                            Acknowledgement message from server

                                                            Please enter the message: █
□
```