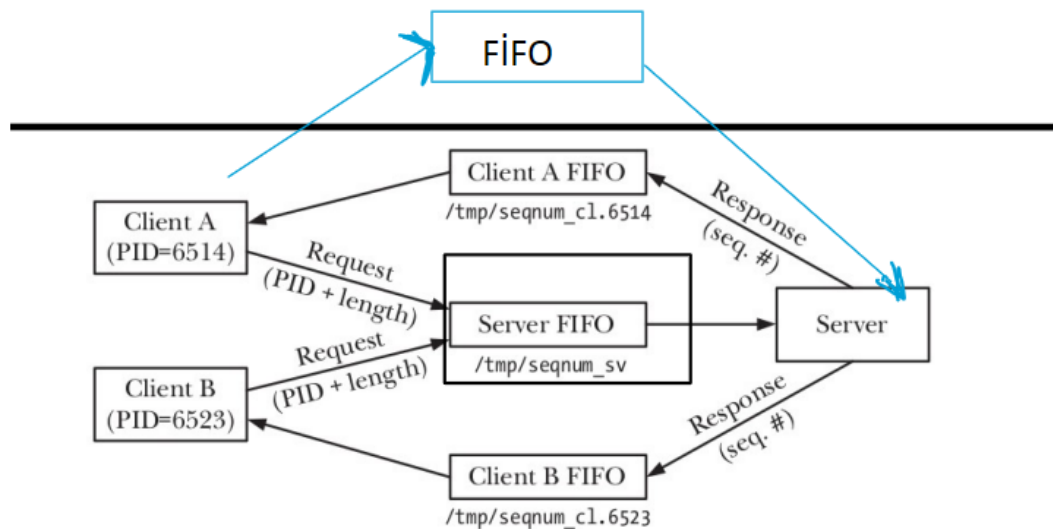


Design:



**Figure 44-6:** Using FIFOs in a single-server, multiple-client application

Server FIFO is used for only server-client connection

Other two fifos (client A FIFO and FiFO) are used for receiving and sending command/output.

We run the server like that:

```
hsnsvn@Ubuntu:~/Desktop/asdasd/haci7$ ./server here 3
Server Started PID 14632...
Waiting for clients...
```

When the server started it will wait for clients to connect:

```
hsnsvn@Ubuntu:~/Desktop/asdasd/haci7$ ./server here 3
Server Started PID 14632...
Waiting for clients...
```

We connect the client to our server like that:

```
hsnsvn@Ubuntu:~/Desktop/asdasd/haci7$ ./client connect 14632
```

When client connect to the server it will wait to enter a command:

```
hsnsvn@Ubuntu: ~/Desktop/asdasd/haci7$ ./client connect 14632
server connection: 1server pid: 14632
Enter command:
```

On the other hand, In the server side the connection of the client will be shown:

```
Server Started PID 14632...
Waiting for clients...

Client PID 14659 connected as client1

hsnsvn@Ubuntu: ~/Desktop/asdasd/haci7$ gcc fifo_seqnum_client.c -o client
hsnsvn@Ubuntu: ~/Desktop/asdasd/haci7$ gcc fifo_seqnum_client.c -o client
hsnsvn@Ubuntu: ~/Desktop/asdasd/haci7$ ./client connect 14632
server connection: 1server pid: 14632
Enter command:
```

More than one client can be connect to the server:

```
hsnsvn@Ubuntu: ~/Desktop/asdasd/haci7$ ./server
Server Started PID 14632...
Waiting for clients...

Client PID 14659 connected as client1
Client PID 14689 connected as client2

hsnsvn@Ubuntu: ~/Desktop/asdasd/haci7$ gcc fifo_seqnum_client.c -o client
hsnsvn@Ubuntu: ~/Desktop/asdasd/haci7$ gcc fifo_seqnum_client.c -o client
hsnsvn@Ubuntu: ~/Desktop/asdasd/haci7$ ./client connect 14632
server connection: 1server pid: 14632
Enter command:
```

We can use “help” command to see all commands:

```
Server Started PID 14632...
Waiting for clients...

Client PID 14659 connected as client1
Client PID 14689 connected as client2

hsnsvn@Ubuntu: ~/Desktop/asdasd/haci7$ gcc fifo_seqnum_client.c -o client
hsnsvn@Ubuntu: ~/Desktop/asdasd/haci7$ gcc fifo_seqnum_client.c -o client
hsnsvn@Ubuntu: ~/Desktop/asdasd/haci7$ ./client connect 14632
server connection: 1server pid: 14632
Enter command:
help
Request: help

Available comments are:
help, list, readF, writeT, upload, download, quit, killServer
```

“List” command:

```
hsnsvn@Ubuntu: ~/Desktop/asdasd/haci7$ ./server
Server Started PID 14722...
Waiting for clients...

Client PID 14730 connected as client1

hsnsvn@Ubuntu: ~/Desktop/asdasd/haci7$ ./client connect 14722
server connection: 1server pid: 14722
Enter command:
list
Request: list

sonuc
server_log.txt
```

“killServer”:

```
hsnsvn@Ubuntu:~/Desktop/asdasd/haci7$ ./server here
Server Started PID 14722...
Waiting for clients...

Client PID 14730 connected as client1
kill signal from client (14730).. terminating..
byehsnsvn@Ubuntu:~/Desktop/asdasd/haci7$

hsnsvn@Ubuntu:~/Desktop/asdasd/haci7$ ./client connect 14722
server connection: 1server pid: 14722
Enter command:
list
Request: list

sonuc
server_log.txt

Enter command:
killServer
Request: killServer

Failed to receive response from the server.
hsnsvn@Ubuntu:~/Desktop/asdasd/haci7$
```

We can also take information from help for other commands:

```
hsnsvn@Ubuntu:~/Desktop/asdasd/haci7$ ./server help readF
Server Started PID 14881...
Waiting for clients...

Client PID 14894 connected as client1
readF <file> <line #>
display the #th line of the <file>, returns with an
error if <file> does not exists

hsnsvn@Ubuntu:~/Desktop/asdasd/haci7$ ./server help writeF
Server Started PID 14881...
Waiting for clients...

Client PID 14894 connected as client1
<file> <line #> <string> :
request to write the content of "string" to the #th line the <file>, if the line
# is not given
writes to the end of file

hsnsvn@Ubuntu:~/Desktop/asdasd/haci7$ ./server help killServer
Server Started PID 14881...
Waiting for clients...

Client PID 14894 connected as client1
killServer
Sends a kill request to the Server

hsnsvn@Ubuntu:~/Desktop/asdasd/haci7$
```