

OPERATING SYSTEMS PROJECT ON FILE SERVER USING NAMED PIPE

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ALGORITHMIC DESCRIPTION

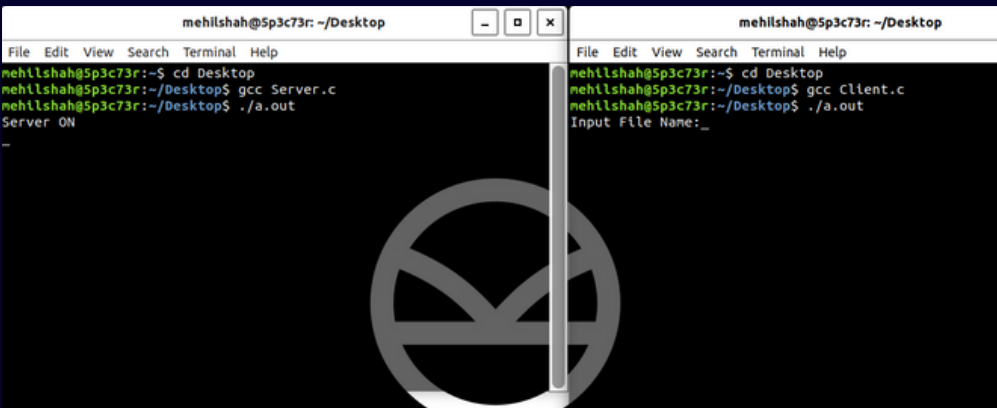
- This project is built on the client -server model.
- This project helps the unrelated client and server processes communicate through named Pipe also known as FIFO.
- In this project, the client first reads the file name from STDIN and writes the file name to the pipe.
- Server reads the file name from the pipe and tries to open the file.
- If the Open is successful, Server reads the contents of the file and writes it to the pipe.

ALGORITHMIC DESCRIPTION

- After writing it to the pipe, Client reads from the pipe and displays the file contents on the standard output.
- If the Open is not successful, the Server writes the error message to the pipe.
- Client reads the error message and displays the error message.

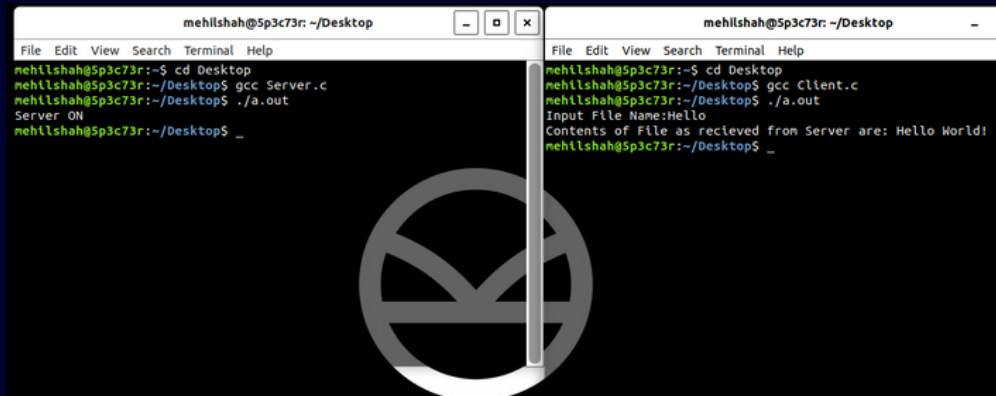
OUTPUT SCREENSHOTS

1. Initial State, when no File Name is entered.



OUTPUT SCREENSHOTS

2. When a correct File Name is entered, the contents of the file are displayed.



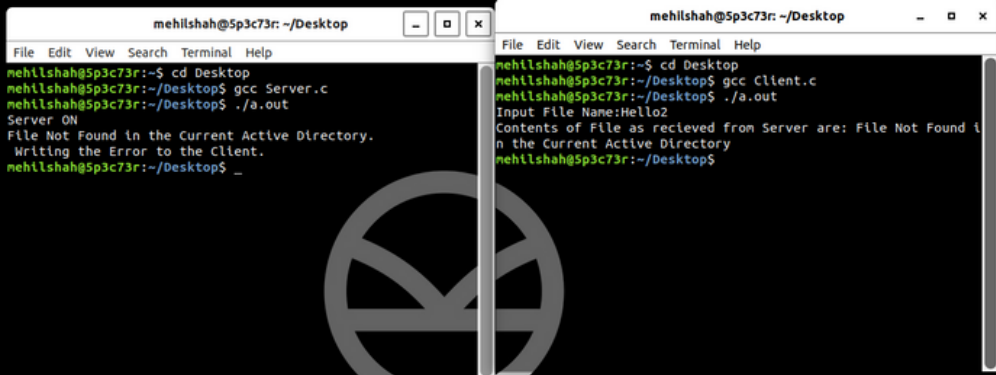
The image displays two side-by-side terminal windows from a Linux environment. The left window shows the compilation and execution of a program named 'Server.c'. The user navigates to the Desktop directory, compiles the file with 'gcc', and runs it with './a.out'. The right window shows the execution of a program named 'Client.c'. The user enters 'Hello' as the input file name, and the program outputs the contents of the file as received from the server, which is 'Hello World!'. A large, faint watermark logo is visible in the background of the terminal windows.

```
mehilshah@Sp3c73r: ~/Desktop
File Edit View Search Terminal Help
mehilshah@Sp3c73r:~$ cd Desktop
mehilshah@Sp3c73r:~/Desktop$ gcc Server.c
mehilshah@Sp3c73r:~/Desktop$ ./a.out
Server ON
mehilshah@Sp3c73r:~/Desktop$ _
```

```
mehilshah@Sp3c73r: ~/Desktop
File Edit View Search Terminal Help
mehilshah@Sp3c73r:~$ cd Desktop
mehilshah@Sp3c73r:~/Desktop$ gcc Client.c
mehilshah@Sp3c73r:~/Desktop$ ./a.out
Input File Name:Hello
Contents of File as recieved from Server are: Hello World!
mehilshah@Sp3c73r:~/Desktop$ _
```

OUTPUT SCREENSHOTS

3. When the Wrong File Name is entered, Server displays the Error Message, and writes the error message to the client.



The image displays two terminal windows side-by-side, illustrating a file transfer error. The left window shows the server's perspective, and the right window shows the client's perspective.

Left Terminal Window (Server):

```
mehilshah@Sp3c73r: ~/Desktop
File Edit View Search Terminal Help
mehilshah@Sp3c73r:~$ cd Desktop
mehilshah@Sp3c73r:~/Desktop$ gcc Server.c
mehilshah@Sp3c73r:~/Desktop$ ./a.out
Server ON
File Not Found in the Current Active Directory.
Writing the Error to the Client.
mehilshah@Sp3c73r:~/Desktop$ _
```

Right Terminal Window (Client):

```
mehilshah@Sp3c73r: ~/Desktop
File Edit View Search Terminal Help
mehilshah@Sp3c73r:~$ cd Desktop
mehilshah@Sp3c73r:~/Desktop$ gcc Client.c
mehilshah@Sp3c73r:~/Desktop$ ./a.out
Input File Name:Hello2
Contents of File as recieved from Server are: File Not Found i
n the Current Active Directory
mehilshah@Sp3c73r:~/Desktop$
```

A large, faint watermark of a wheel is visible in the background of the terminal windows.

Thank You.