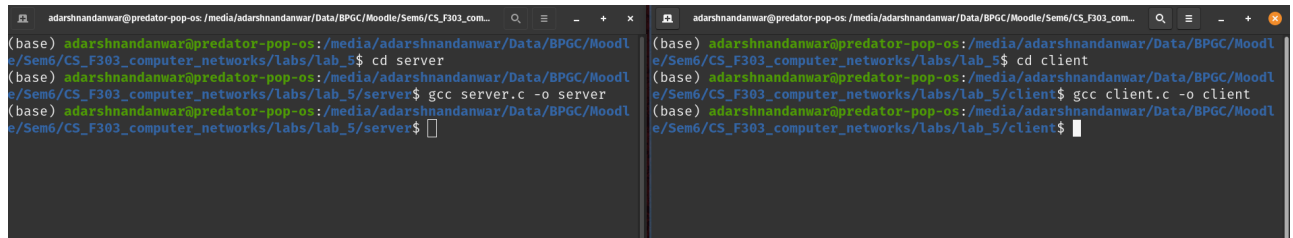


Lab 5

Name- Adarsh Nandanwar
BITS ID- 2018A7PS0396G

Screenshots

1. Navigating to the directories of server and client and compiling their respective C programs.

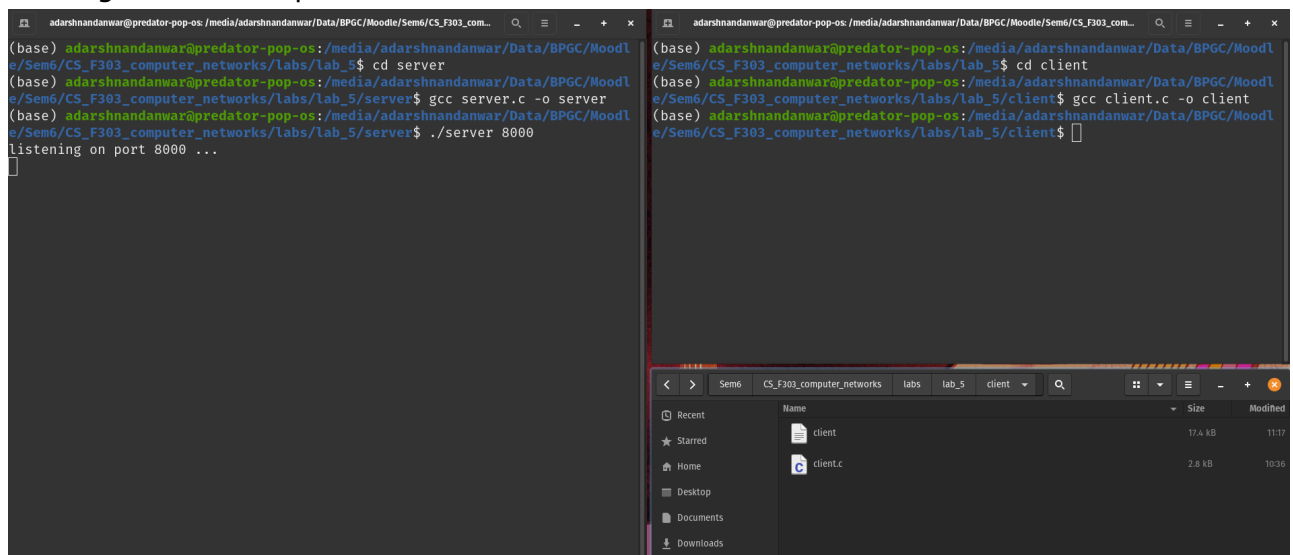


The image shows two terminal windows side-by-side. The left window shows the user navigating to the server directory and compiling the server.c program. The right window shows the user navigating to the client directory and compiling the client.c program.

```
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodle/Sem6/CS_F303_computer_networks/labs/lab_5$ cd server
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodle/Sem6/CS_F303_computer_networks/labs/lab_5/server$ gcc server.c -o server
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodle/Sem6/CS_F303_computer_networks/labs/lab_5/server$

(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodle/Sem6/CS_F303_computer_networks/labs/lab_5$ cd client
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodle/Sem6/CS_F303_computer_networks/labs/lab_5/client$ gcc client.c -o client
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodle/Sem6/CS_F303_computer_networks/labs/lab_5/client$
```

2. Running the server on port 8000.



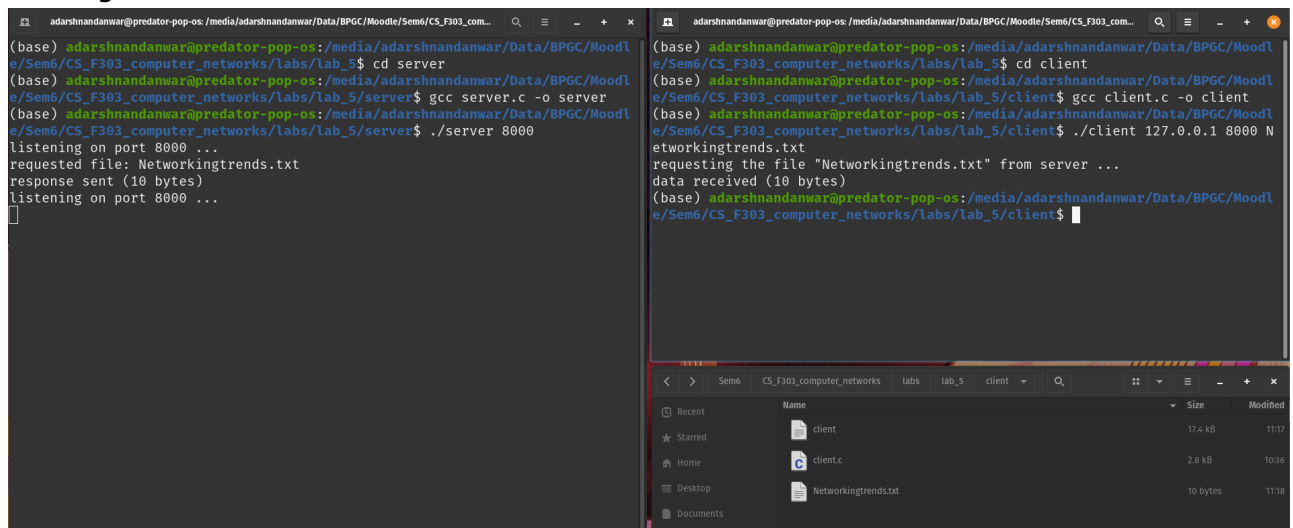
The image shows a terminal window on the left and a file explorer on the right. The terminal window shows the user running the server program on port 8000. The file explorer shows the contents of the client directory, including the client.c file and the client directory.

```
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodle/Sem6/CS_F303_computer_networks/labs/lab_5$ cd server
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodle/Sem6/CS_F303_computer_networks/labs/lab_5/server$ gcc server.c -o server
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodle/Sem6/CS_F303_computer_networks/labs/lab_5/server$ ./server 8000
listening on port 8000 ...
```

The file explorer shows the following files:

| Name | Size | Modified |
|----------|---------|----------|
| client | 17.4 kB | 11:17 |
| client.c | 2.8 kB | 10:36 |

3. Running the client. Received data stored in the file.



The image shows a terminal window on the left and a file explorer on the right. The terminal window shows the user running the client program, which requests the file "Networkingtrends.txt" from the server and receives the data. The file explorer shows the contents of the client directory, including the client.c file, the client directory, and the Networkingtrends.txt file.

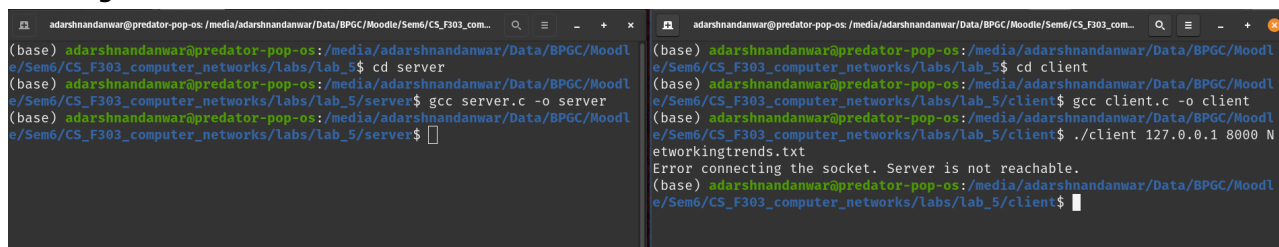
```
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodle/Sem6/CS_F303_computer_networks/labs/lab_5$ cd server
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodle/Sem6/CS_F303_computer_networks/labs/lab_5/server$ gcc server.c -o server
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodle/Sem6/CS_F303_computer_networks/labs/lab_5/server$ ./server 8000
listening on port 8000 ...
requested file: Networkingtrends.txt
response sent (10 bytes)
listening on port 8000 ...

(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodle/Sem6/CS_F303_computer_networks/labs/lab_5$ cd client
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodle/Sem6/CS_F303_computer_networks/labs/lab_5/client$ gcc client.c -o client
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodle/Sem6/CS_F303_computer_networks/labs/lab_5/client$ ./client 127.0.0.1 8000 N
etworkingtrends.txt
requesting the file "Networkingtrends.txt" from server ...
data received (10 bytes)
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodle/Sem6/CS_F303_computer_networks/labs/lab_5/client$
```

The file explorer shows the following files:

| Name | Size | Modified |
|----------------------|----------|----------|
| client | 17.4 kB | 11:17 |
| client.c | 2.8 kB | 10:36 |
| Networkingtrends.txt | 10 bytes | 11:18 |

4. Running client when server is unreachable.



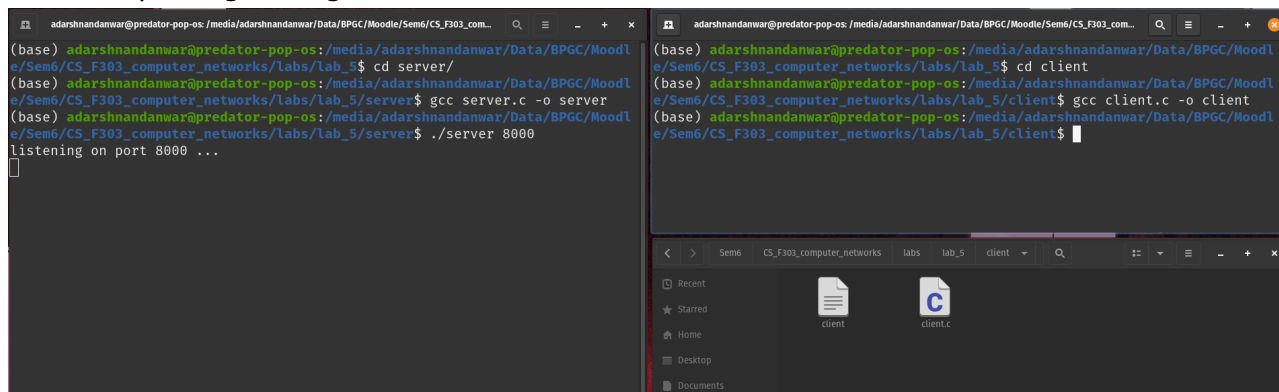
```

(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodl
e/Sem6/CS_F303_computer_networks/labs/lab_5$ cd server
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodl
e/Sem6/CS_F303_computer_networks/labs/lab_5/server$ gcc server.c -o server
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodl
e/Sem6/CS_F303_computer_networks/labs/lab_5/server$

(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodl
e/Sem6/CS_F303_computer_networks/labs/lab_5$ cd client
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodl
e/Sem6/CS_F303_computer_networks/labs/lab_5/client$ gcc client.c -o client
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodl
e/Sem6/CS_F303_computer_networks/labs/lab_5/client$ ./client 127.0.0.1 8000 N
etworkingtrends.txt
Error connecting the socket. Server is not reachable.
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodl
e/Sem6/CS_F303_computer_networks/labs/lab_5/client$

```

5. Before requesting missing file



```

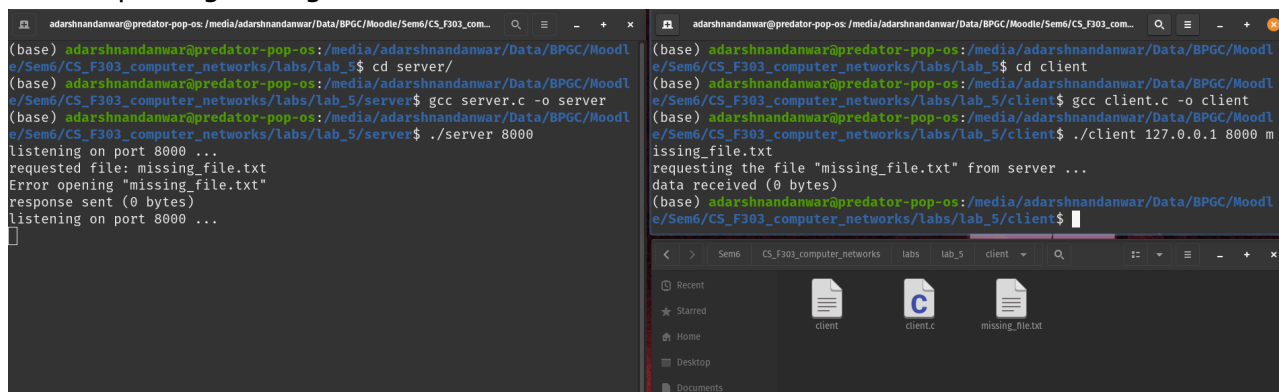
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodl
e/Sem6/CS_F303_computer_networks/labs/lab_5$ cd server/
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodl
e/Sem6/CS_F303_computer_networks/labs/lab_5/server$ gcc server.c -o server
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodl
e/Sem6/CS_F303_computer_networks/labs/lab_5/server$ ./server 8000
listening on port 8000 ...

(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodl
e/Sem6/CS_F303_computer_networks/labs/lab_5$ cd client
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodl
e/Sem6/CS_F303_computer_networks/labs/lab_5/client$ gcc client.c -o client
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodl
e/Sem6/CS_F303_computer_networks/labs/lab_5/client$

```

The file explorer shows the 'client' directory containing 'client' and 'client.c' files.

6. After requesting missing file



```

(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodl
e/Sem6/CS_F303_computer_networks/labs/lab_5$ cd server/
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodl
e/Sem6/CS_F303_computer_networks/labs/lab_5/server$ gcc server.c -o server
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodl
e/Sem6/CS_F303_computer_networks/labs/lab_5/server$ ./server 8000
listening on port 8000 ...
requested file: missing_file.txt
Error opening "missing_file.txt"
response sent (0 bytes)
listening on port 8000 ...

(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodl
e/Sem6/CS_F303_computer_networks/labs/lab_5/client$ ./client 127.0.0.1 8000 m
issing_file.txt
requesting the file "missing_file.txt" from server ...
data received (0 bytes)
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodl
e/Sem6/CS_F303_computer_networks/labs/lab_5/client$

```

The file explorer shows the 'client' directory containing 'client', 'client.c', and 'missing_file.txt' files.