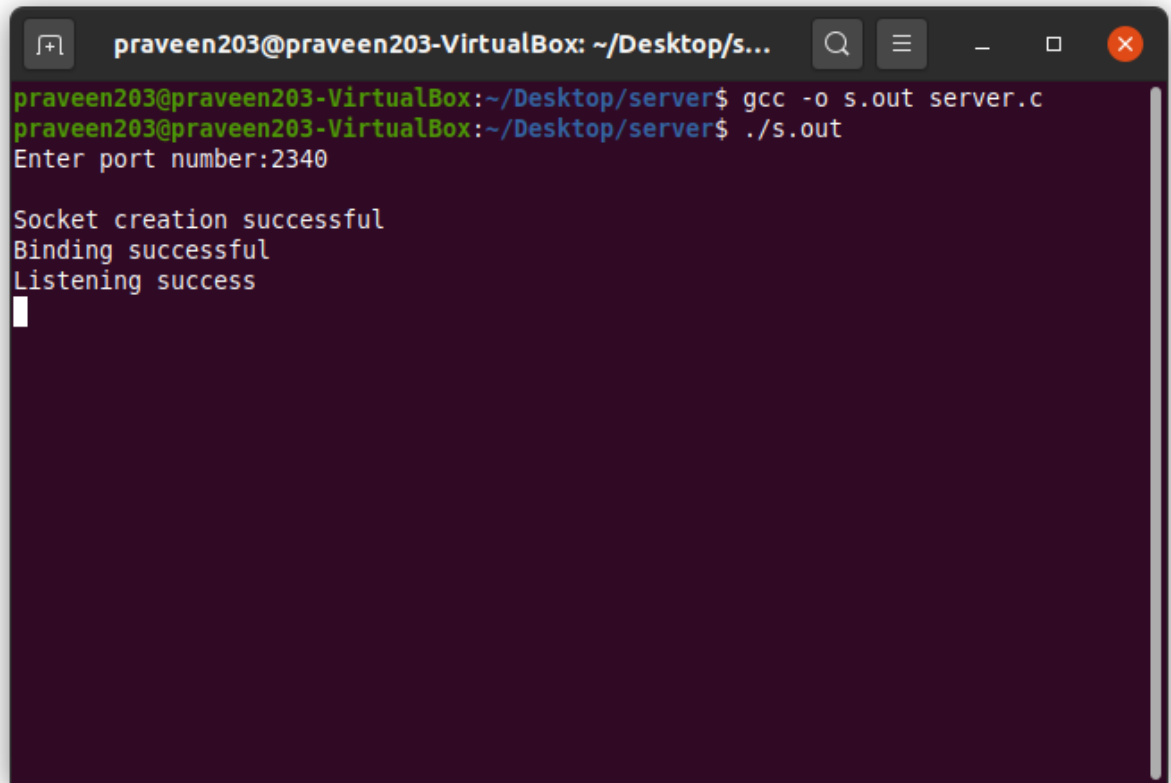


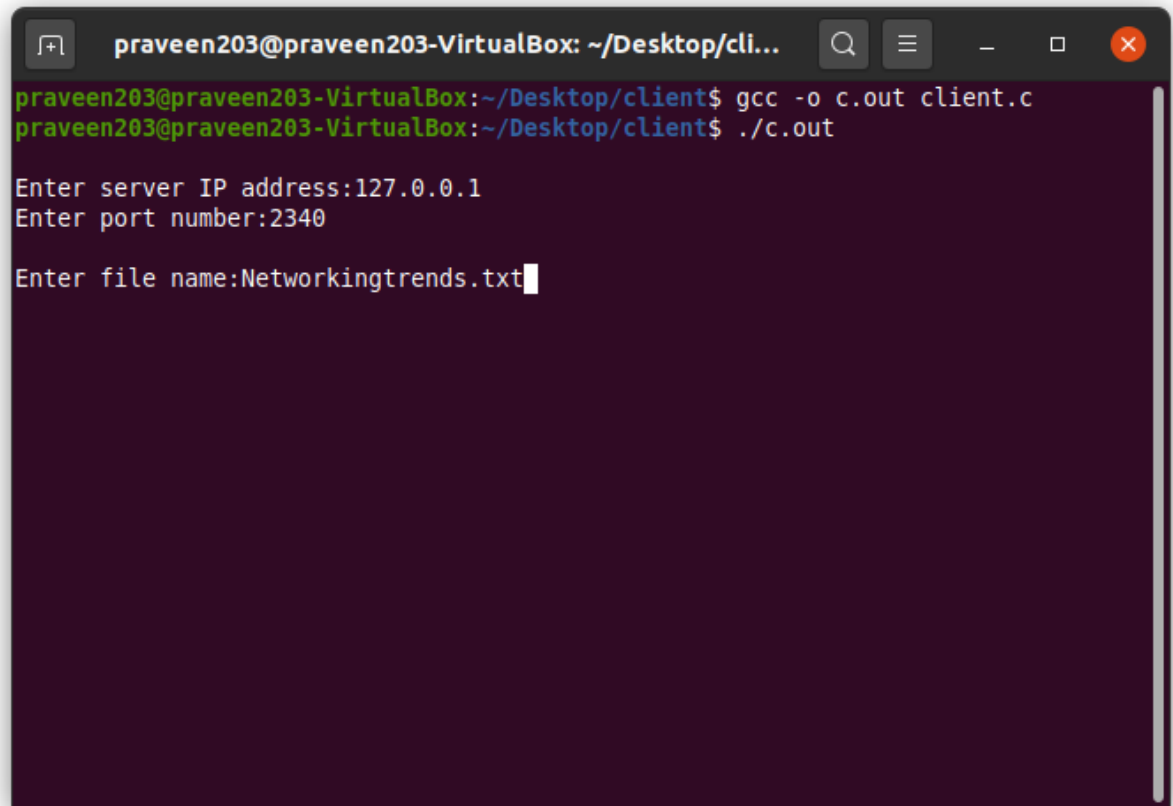
## Computer Networks Lab 5

1. Server accepting port number as input parameter:



```
praveen203@praveen203-VirtualBox: ~/Desktop/s...  
praveen203@praveen203-VirtualBox:~/Desktop/server$ gcc -o s.out server.c  
praveen203@praveen203-VirtualBox:~/Desktop/server$ ./s.out  
Enter port number:2340  
  
Socket creation successful  
Binding successful  
Listening success  
█
```

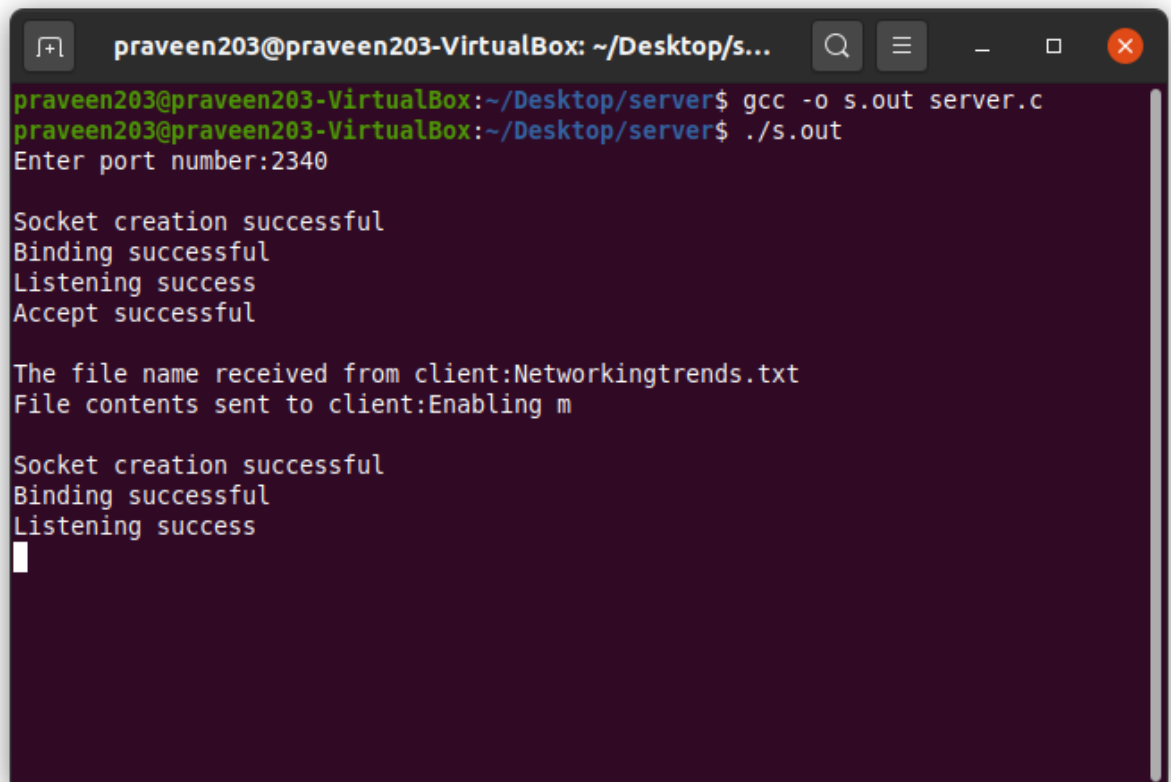
2. Client accepting server IP address, server port number and the file name:

A terminal window titled "praveen203@praveen203-VirtualBox: ~/Desktop/cli..." with standard window controls. The terminal shows the compilation and execution of a C program. The user enters the server IP address 127.0.0.1, port number 2340, and file name Networkingtrends.txt.

```
praveen203@praveen203-VirtualBox:~/Desktop/client$ gcc -o c.out client.c
praveen203@praveen203-VirtualBox:~/Desktop/client$ ./c.out

Enter server IP address:127.0.0.1
Enter port number:2340
Enter file name:Networkingtrends.txt
```

3. Server accepting connect request and sending file contents:

A terminal window titled 'praveen203@praveen203-VirtualBox: ~/Desktop/s...' with standard window controls. The terminal shows the compilation and execution of a C program. The user enters 'gcc -o s.out server.c' and './s.out'. The program prompts for a port number, which is entered as '2340'. It then prints status messages for socket creation, binding, listening, and accepting. After accepting, it prints the file name received from the client and the contents sent. Finally, it prints another set of status messages and ends with a cursor on a new line.

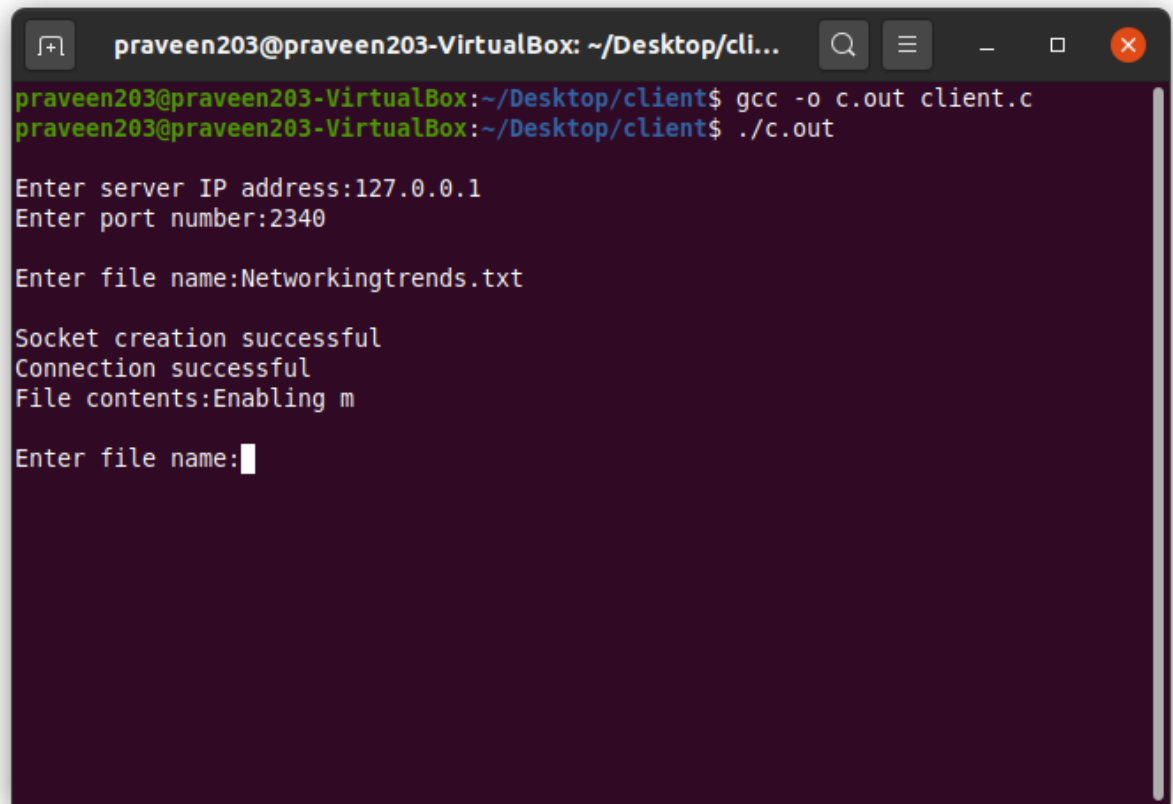
```
praveen203@praveen203-VirtualBox:~/Desktop/server$ gcc -o s.out server.c
praveen203@praveen203-VirtualBox:~/Desktop/server$ ./s.out
Enter port number:2340

Socket creation successful
Binding successful
Listening success
Accept successful

The file name received from client:Networkingtrends.txt
File contents sent to client:Enabling m

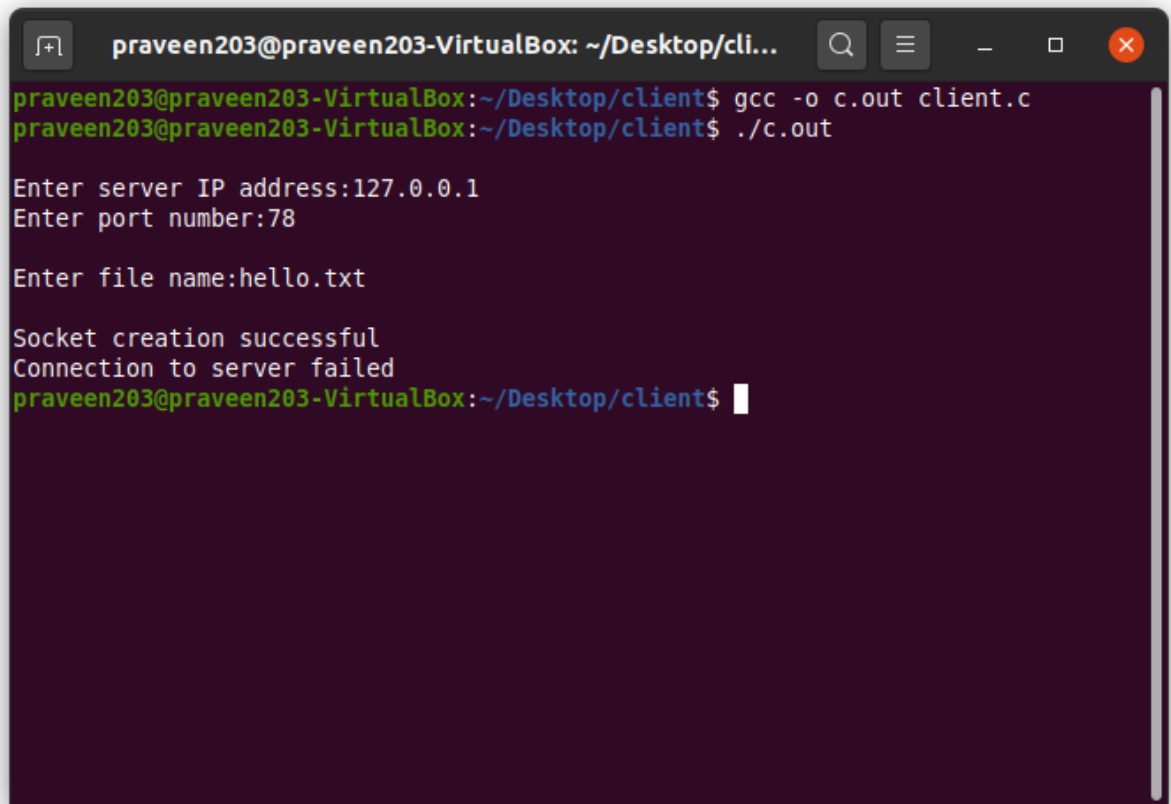
Socket creation successful
Binding successful
Listening success
█
```

4. Client receiving the file contents from the server and storing the data in a new file:

A terminal window titled "praveen203@praveen203-VirtualBox: ~/Desktop/cli..." with standard window controls. The terminal shows the execution of a C program. The user enters the IP address 127.0.0.1, port 2340, and filename Networkingtrends.txt. The program outputs "Socket creation successful", "Connection successful", and "File contents:Enabling m". It then prompts for a new filename.

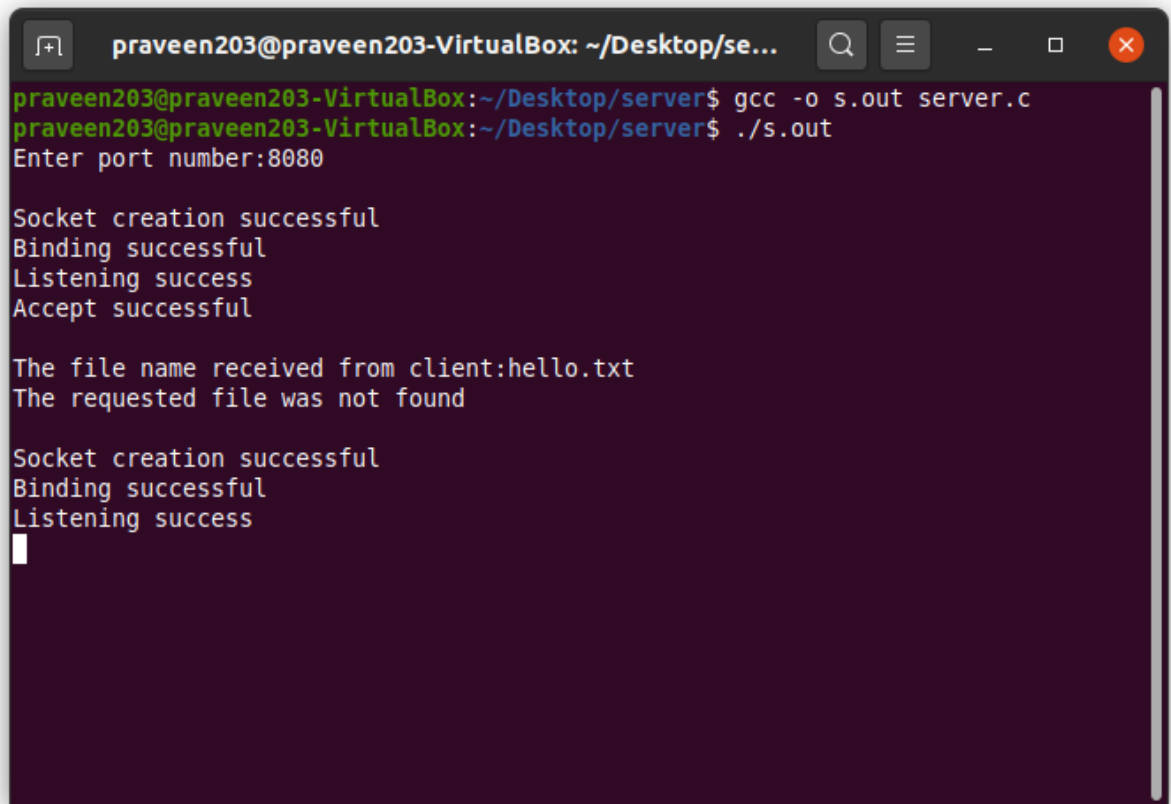
```
praveen203@praveen203-VirtualBox: ~/Desktop/cli...  
praveen203@praveen203-VirtualBox:~/Desktop/client$ gcc -o c.out client.c  
praveen203@praveen203-VirtualBox:~/Desktop/client$ ./c.out  
  
Enter server IP address:127.0.0.1  
Enter port number:2340  
  
Enter file name:Networkingtrends.txt  
  
Socket creation successful  
Connection successful  
File contents:Enabling m  
  
Enter file name:
```

5. Client failing to connect - server unreachable (invalid port number) :



```
praveen203@praveen203-VirtualBox: ~/Desktop/cli...  
praveen203@praveen203-VirtualBox:~/Desktop/client$ gcc -o c.out client.c  
praveen203@praveen203-VirtualBox:~/Desktop/client$ ./c.out  
  
Enter server IP address:127.0.0.1  
Enter port number:78  
  
Enter file name:hello.txt  
  
Socket creation successful  
Connection to server failed  
praveen203@praveen203-VirtualBox:~/Desktop/client$
```

6. Server sending empty file:

A terminal window titled "praveen203@praveen203-VirtualBox: ~/Desktop/se..." with standard window controls. The terminal shows the compilation of a C program and its execution. The user enters the port number 8080. The server successfully creates a socket, binds to the port, and starts listening. It receives a connection from a client and prints the file name "hello.txt". However, it then prints "The requested file was not found", indicating it is sending an empty file. The process then repeats the initialization steps.

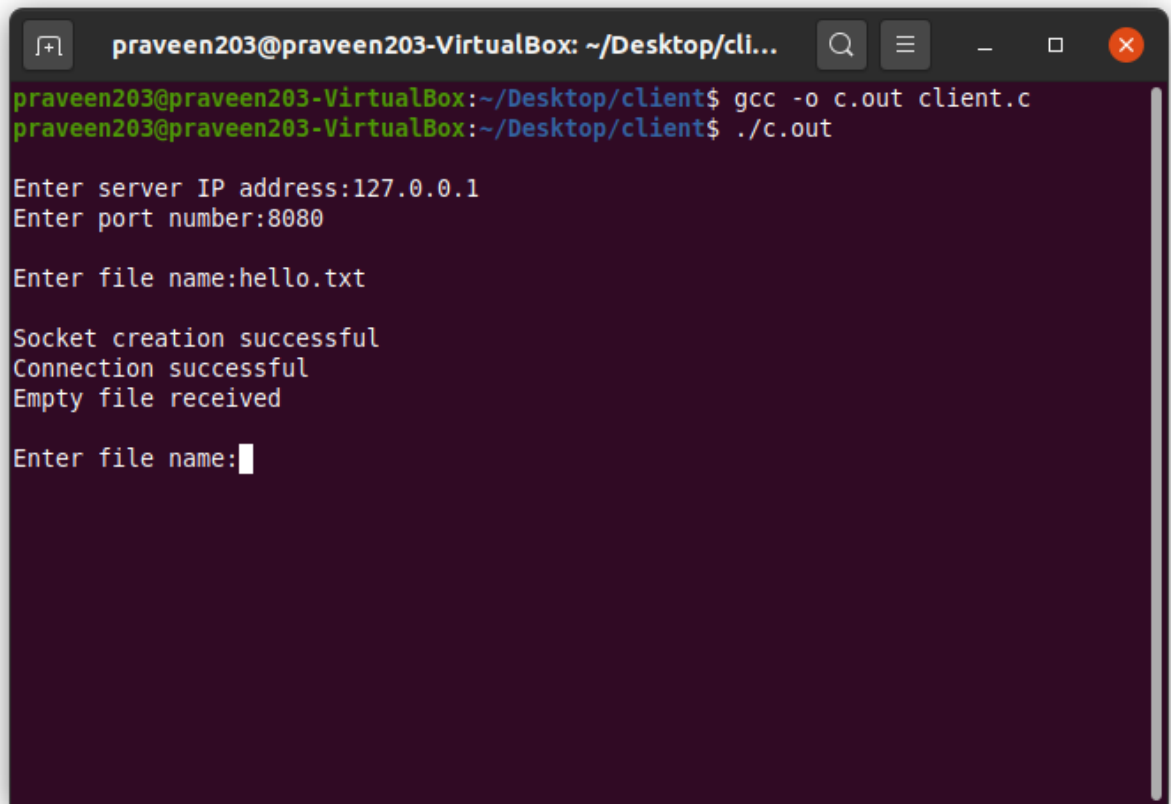
```
praveen203@praveen203-VirtualBox:~/Desktop/server$ gcc -o s.out server.c
praveen203@praveen203-VirtualBox:~/Desktop/server$ ./s.out
Enter port number:8080

Socket creation successful
Binding successful
Listening success
Accept successful

The file name received from client:hello.txt
The requested file was not found

Socket creation successful
Binding successful
Listening success
█
```

7. Client receiving empty file:

A terminal window titled "praveen203@praveen203-VirtualBox: ~/Desktop/cli..." with standard window controls. The terminal shows the compilation and execution of a client program. The user enters the server IP address 127.0.0.1 and port 8080, then the filename hello.txt. The program outputs "Socket creation successful", "Connection successful", and "Empty file received". It then prompts for a filename, which is currently empty.

```
praveen203@praveen203-VirtualBox:~/Desktop/client$ gcc -o c.out client.c
praveen203@praveen203-VirtualBox:~/Desktop/client$ ./c.out

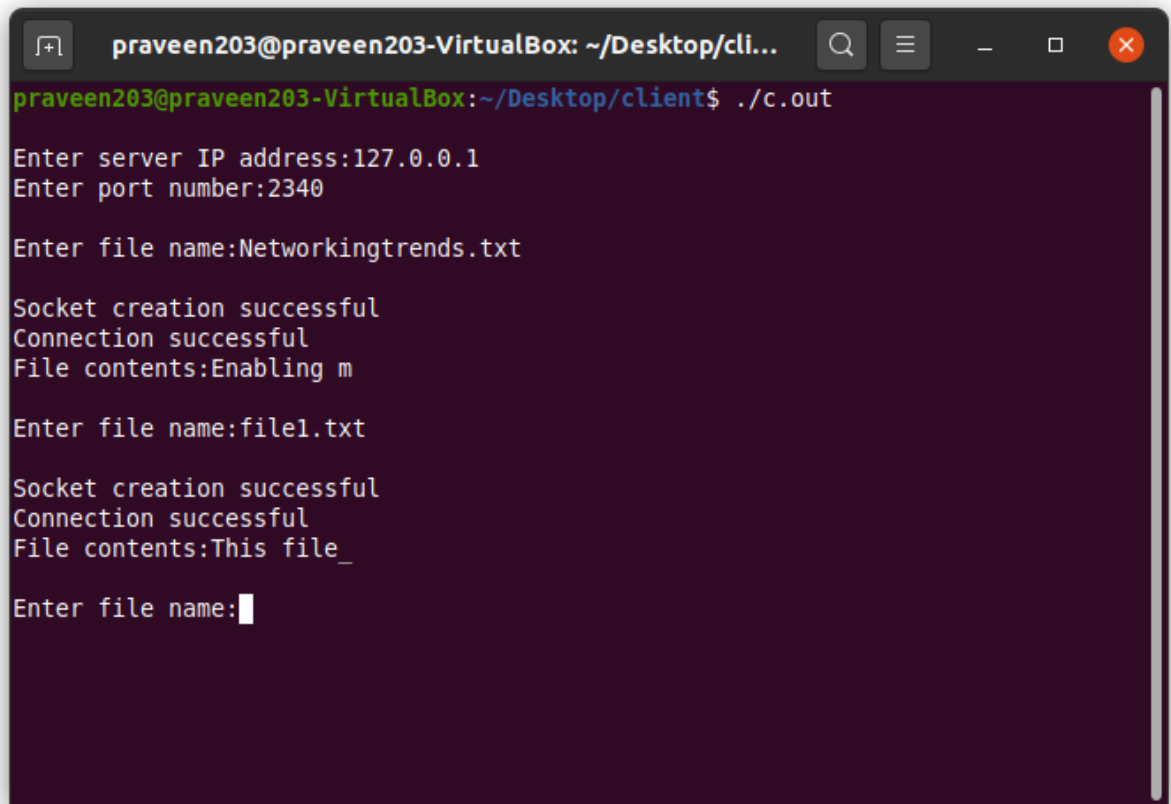
Enter server IP address:127.0.0.1
Enter port number:8080

Enter file name:hello.txt

Socket creation successful
Connection successful
Empty file received

Enter file name:
```

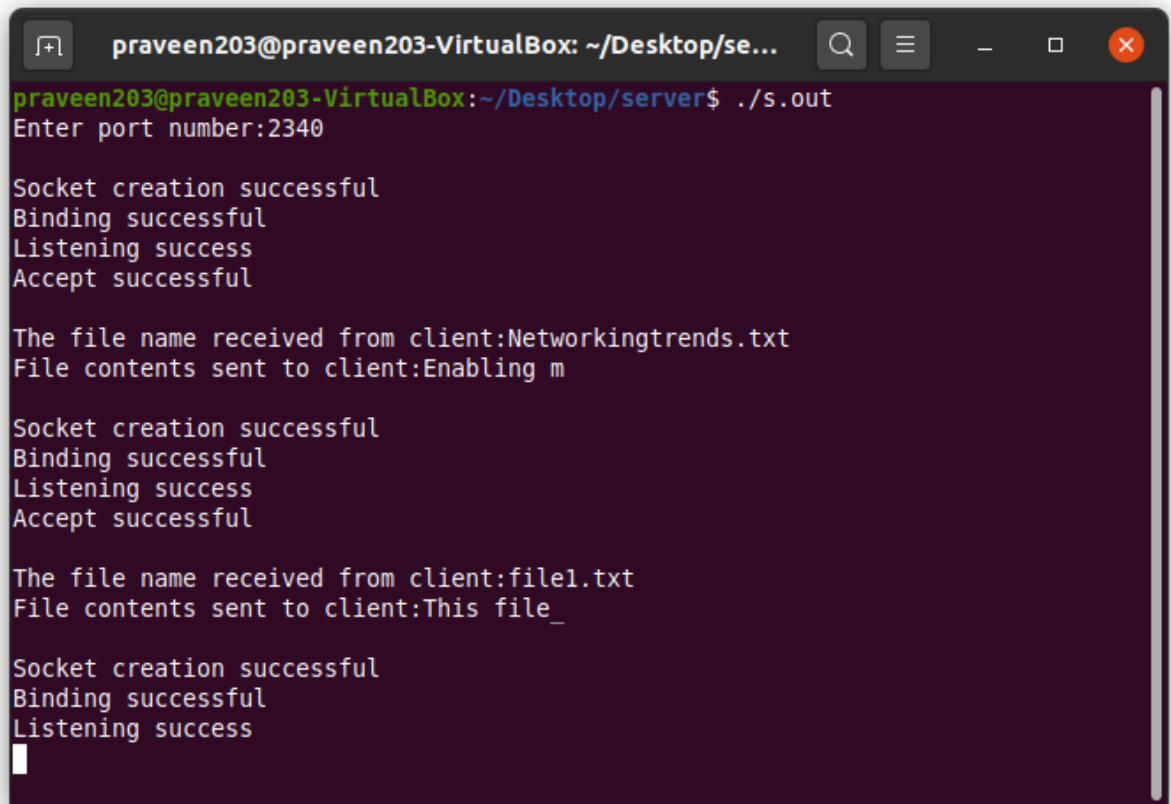
8. Client requesting and receiving multiple files:

A terminal window titled "praveen203@praveen203-VirtualBox: ~/Desktop/cli..." with standard window controls. The terminal shows the execution of a client program. The user enters the server IP address 127.0.0.1 and port number 2340. The program then prompts for a file name, and the user enters "Networkingtrends.txt". The program outputs "Socket creation successful", "Connection successful", and "File contents:Enabling m". It then prompts for another file name, and the user enters "file1.txt". The program outputs "Socket creation successful", "Connection successful", and "File contents:This file\_". Finally, it prompts for a third file name, and the user enters an empty string.

```
praveen203@praveen203-VirtualBox: ~/Desktop/cli...  
praveen203@praveen203-VirtualBox:~/Desktop/client$ ./c.out  
Enter server IP address:127.0.0.1  
Enter port number:2340  
Enter file name:Networkingtrends.txt  
Socket creation successful  
Connection successful  
File contents:Enabling m  
Enter file name:file1.txt  
Socket creation successful  
Connection successful  
File contents:This file_  
Enter file name:
```



9. Server sending multiple files :



```
praveen203@praveen203-VirtualBox: ~/Desktop/se...
praveen203@praveen203-VirtualBox:~/Desktop/server$ ./s.out
Enter port number:2340

Socket creation successful
Binding successful
Listening success
Accept successful

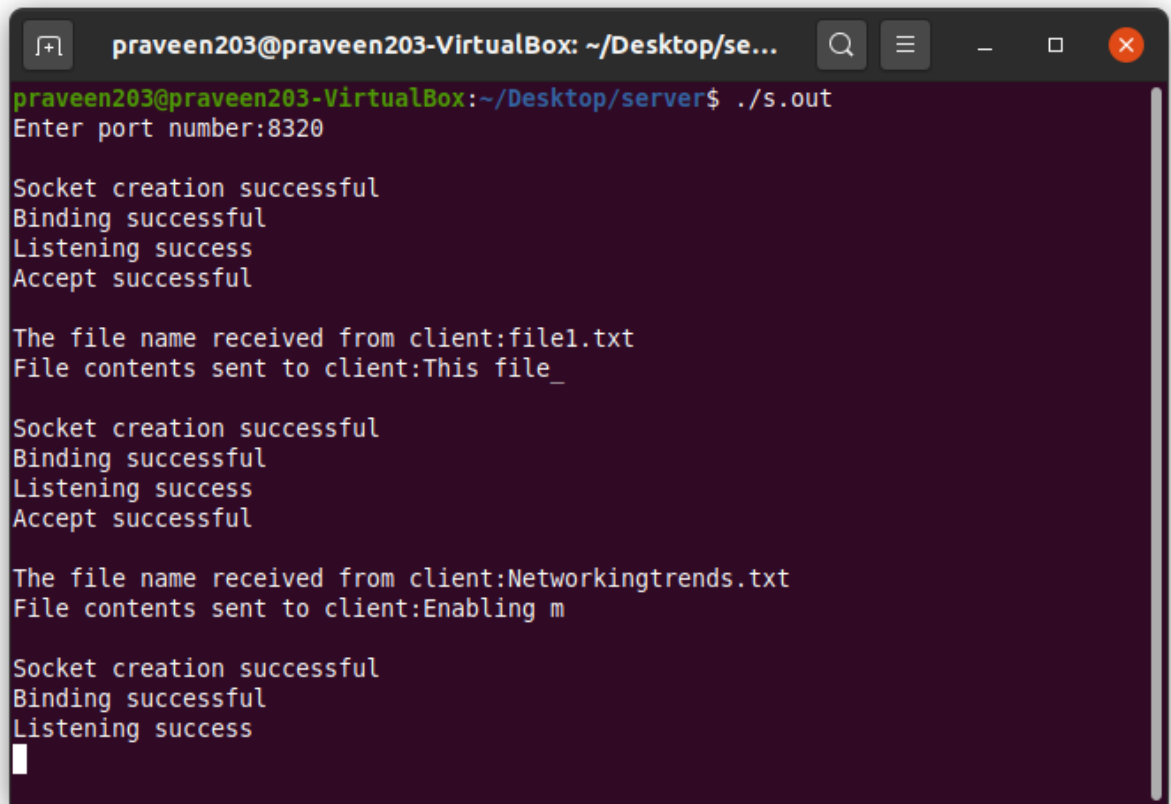
The file name received from client:Networkingtrends.txt
File contents sent to client:Enabling m

Socket creation successful
Binding successful
Listening success
Accept successful

The file name received from client:file1.txt
File contents sent to client:This file_

Socket creation successful
Binding successful
Listening success
```

10. Server responding to newly joining clients (after the old one left):



```
praveen203@praveen203-VirtualBox: ~/Desktop/se...
praveen203@praveen203-VirtualBox:~/Desktop/server$ ./s.out
Enter port number:8320

Socket creation successful
Binding successful
Listening success
Accept successful

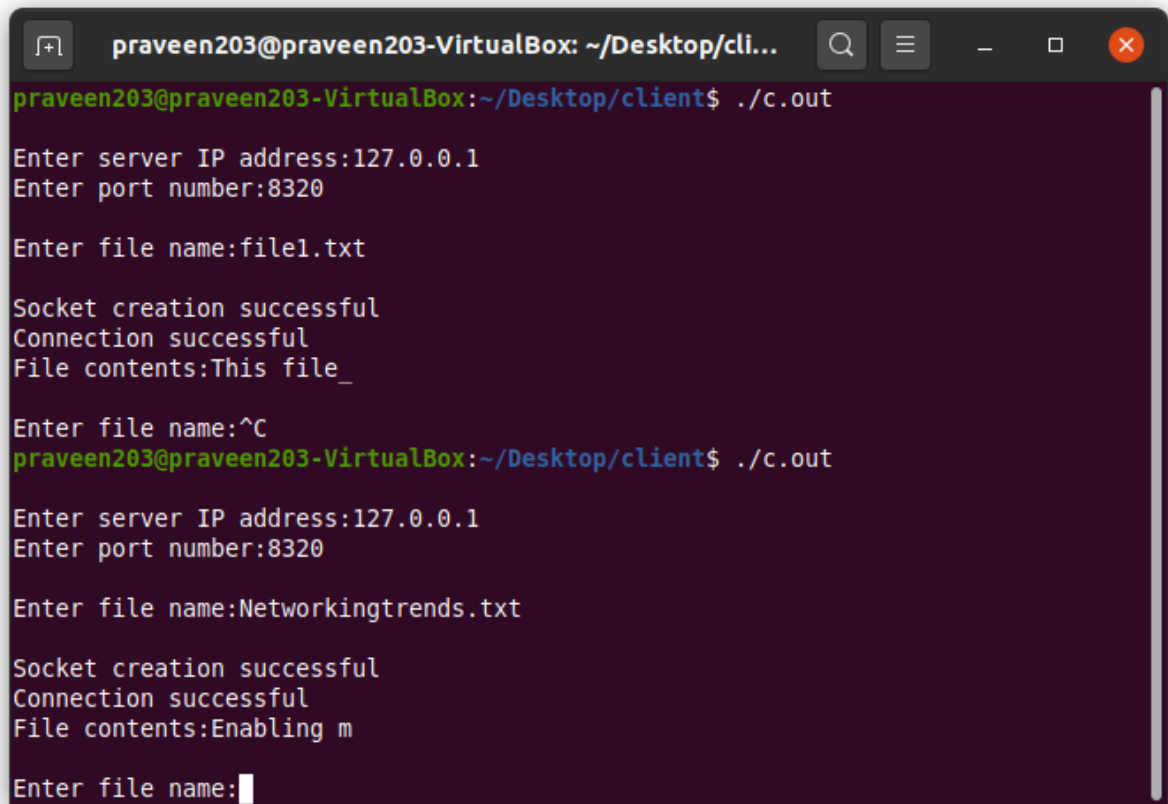
The file name received from client:file1.txt
File contents sent to client:This file_

Socket creation successful
Binding successful
Listening success
Accept successful

The file name received from client:Networkingtrends.txt
File contents sent to client:Enabling m

Socket creation successful
Binding successful
Listening success
```

11. New clients joining on the fly and sending requests:



```
praveen203@praveen203-VirtualBox: ~/Desktop/cli...
praveen203@praveen203-VirtualBox:~/Desktop/client$ ./c.out
Enter server IP address:127.0.0.1
Enter port number:8320

Enter file name:file1.txt

Socket creation successful
Connection successful
File contents:This file_

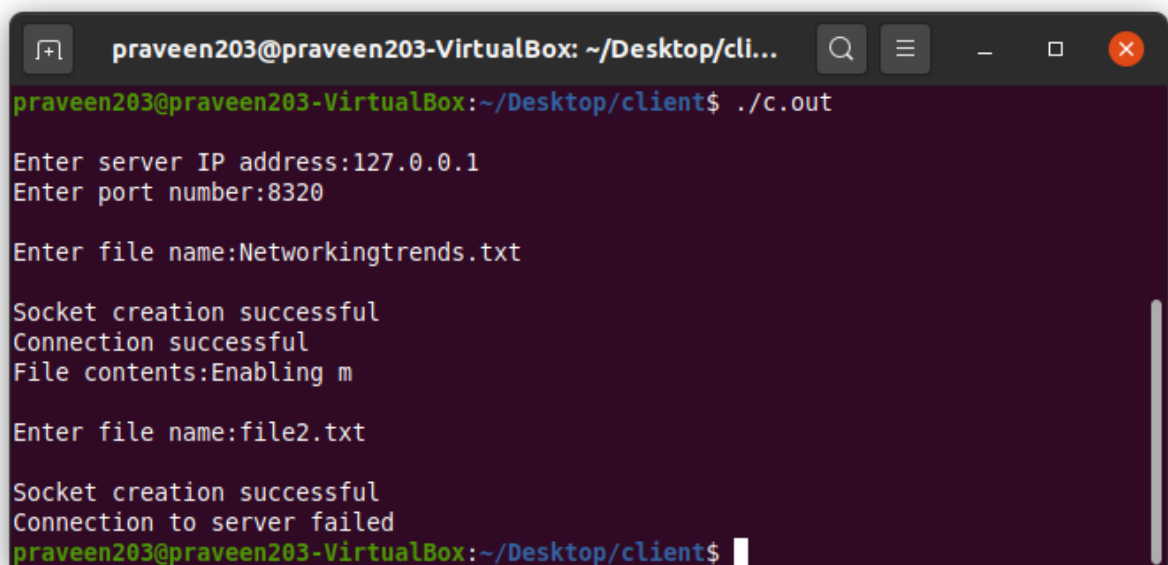
Enter file name:^C
praveen203@praveen203-VirtualBox:~/Desktop/client$ ./c.out
Enter server IP address:127.0.0.1
Enter port number:8320

Enter file name:Networkingtrends.txt

Socket creation successful
Connection successful
File contents:Enabling m

Enter file name:
```

12. Client receiving error after server leaving midway:



```
praveen203@praveen203-VirtualBox: ~/Desktop/cli...
praveen203@praveen203-VirtualBox:~/Desktop/client$ ./c.out
Enter server IP address:127.0.0.1
Enter port number:8320

Enter file name:Networkingtrends.txt

Socket creation successful
Connection successful
File contents:Enabling m

Enter file name:file2.txt

Socket creation successful
Connection to server failed
praveen203@praveen203-VirtualBox:~/Desktop/client$
```