

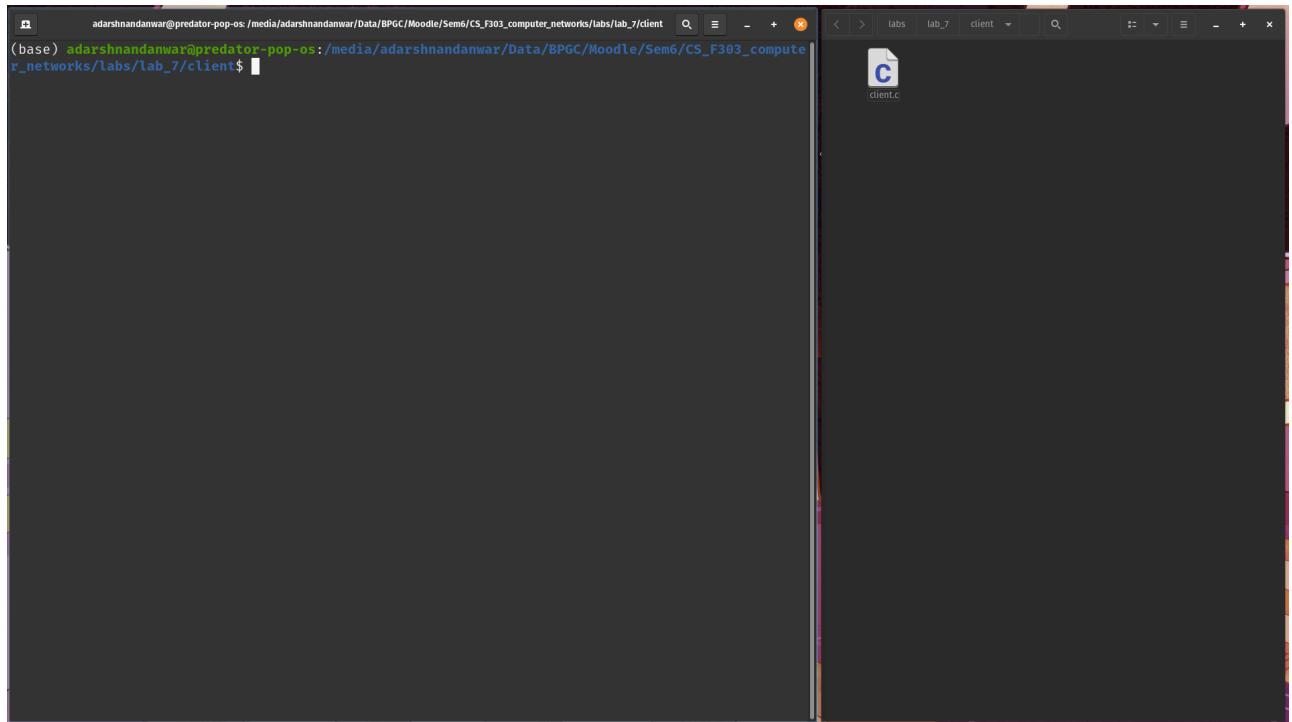
# Lab 7

---

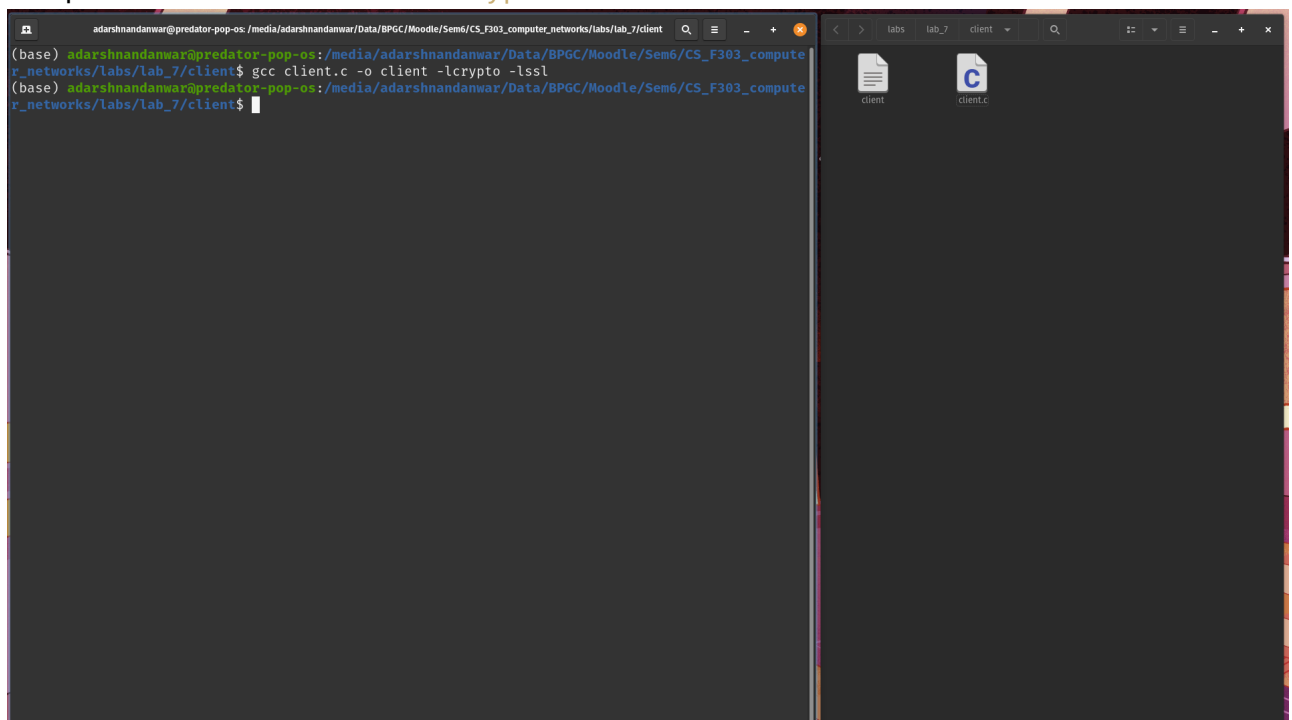
Name- Adarsh Nandanwar  
BITS ID- 2018A7PS0396G

## Program Screenshots

1. Open a terminal window in the directory containing `client.c` file.



2. Compile the `client.c` file with `-lcrypto` and `-lssl`.



- The image shows a terminal window on the left and a Visual Studio Code editor on the right. The terminal window displays the following commands and output:

```
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodle/Sem6/CS_F303_computer_networks/labs/lab_7/client
r_networks/labs/lab_7/client$ gcc client.c -o client -lcrypto -lssl
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodle/Sem6/CS_F303_computer_networks/labs/lab_7/client$ ./client https://raw.githubusercontent.com/torvalds/linux/master/README
Parsing URL ...
Protocol: https
Host: raw.githubusercontent.com
Path: torvalds/linux/master/README
Filename: README

Server IP address: 185.199.110.133
Server Port: 443
SSL connection using TLS_AES_256_GCM_SHA384

sending the message to server:
GET /torvalds/linux/master/README HTTP/1.1
Host: raw.githubusercontent.com
Connection: close
Content-Type: text/plain

waiting for response from server ...
data received (840 bytes)
HTTP Status: 200 OK
data received (727 bytes)

file downloaded ("README", 727 bytes)
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodle/Sem6/CS_F303_computer_networks/labs/lab_7/client$
```

The Visual Studio Code editor on the right shows the fetched README file, which is the Linux kernel documentation. The file content includes:

```
1  Linux kernel
2  =====
3
4  There are several guides for kernel documentation. These guides
5  be rendered in a number of formats, including HTML, PDF, and
6  Documentation/admin-guide/README.rst
7
8  In order to build the documentation, you need to run:
9  ``make pdfdocs``. The formatted documentation can be found at:
10
11  https://www.kernel.org/doc/html/latest/
12
13  There are various text files in the Documentation directory.
14  several of them using the Restructured Text (reStructuredText)
15
16  Please read the Documentation/process/README.rst file for
17  requirements for building and running the documentation.
18  the problems which may result by upgrading the kernel.
```

- [illegible]

- 2 / 3

```

(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodle/Sem6/CS_F303_computer_networks/labs/lab_7/client
r_networks/labs/lab_7/client$ ./client http://www.example.com/sample.html
Parsing URL ...
Protocol: http
Host: example.com
Path: sample.html
Filename: sample.html
Server IP address: 93.184.216.34
Server Port: 80
sending the message to server:
GET /sample.html HTTP/1.1
Host: example.com
Connection: close
Content-Type: text/plain
waiting for response from server ...
data received (1595 bytes)
HTTP Status: 404 Not Found
file downloaded ("sample.html", 1256 bytes)
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodle/Sem6/CS_F303_computer_networks/labs/lab_7/client$

```

The Visual Studio Code editor shows the file `sample.html` with the following content:

```

1 <!doctype html>
2 <html>
3 <head>
4   <title>Example Domain</title>
5
6   <meta charset="utf-8" />
7   <meta http-equiv="Content-type" content="text/html; charset=utf-8" />
8   <meta name="viewport" content="width=device-width, initial-scale=1" />
9   <style type="text/css">
10     body {
11       background-color: #f0f0f2;
12       margin: 0;
13       padding: 0;
14       font-family: -apple-system, sans-serif;
15     }
16
17     div {
18       width: 600px;
19       margin: 5em auto;
20       padding: 2em;
21       background-color: #fdfdff;
22       border-radius: 0.5em;
23       box-shadow: 2px 3px 7px 2px #ccc;

```

6. Run client with {file\_url} as argument. Here file\_url is "http://google.cooom". This does not exist or is unreachable. Error is displayed.

```

(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodle/Sem6/CS_F303_computer_networks/labs/lab_7/client
r_networks/labs/lab_7/client$ ./client https://google.cooom
Parsing URL ...
Protocol: https
Host: google.cooom
Path:
Filename: google.cooom
error getting addrinfo. please verify the URL.
[error 22]: Invalid argument
(base) adarshnandanwar@predator-pop-os: /media/adarshnandanwar/Data/BPGC/Moodle/Sem6/CS_F303_computer_networks/labs/lab_7/client$

```

The Visual Studio Code editor shows the file explorer with the following files:

- client
- client.c
- git.txt
- README
- sample.html

## References:

<https://stackoverflow.com/questions/41229601/openssl-in-c-socket-connection-https-client>