

Lab 5

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1. Client accepts URL of the file (HTTP or HTTPS based) as the command line argument.

```
parmesh@parmesh-Nitro-AN515-31: ~/College/CN/Lab7
parmesh@parmesh-Nitro-AN515-31:~/College/CN/Lab7$ ./a.out http://www.google.com/robots.txt
```

```
parmesh@parmesh-Nitro-AN515-31: ~/College/CN/Lab7
parmesh@parmesh-Nitro-AN515-31:~/College/CN/Lab7$ ./a.out https://lab7-cn.herokuapp.com/file/testImage.jpg
```

Client can accept either HTTP based or HTTPS based URL as a command line argument.

2. If the URL does not exist or is unreachable, client prints error and exits.

```
parmesh@parmesh-Nitro-AN515-31: ~/College/CN/Lab7
parmesh@parmesh-Nitro-AN515-31:~/College/CN/Lab7$ ./a.out https://erfvjhb.com/index.html
gethostbyname: Unknown host
parmesh@parmesh-Nitro-AN515-31:~/College/CN/Lab7$
```

```
parmesh@parmesh-Nitro-AN515-31: ~/College/CN/Lab7
parmesh@parmesh-Nitro-AN515-31:~/College/CN/Lab7$ ./a.out
Usage: ./a.out <URL>
parmesh@parmesh-Nitro-AN515-31:~/College/CN/Lab7$
```

Different errors in the command line input prompts the process to show different outputs.

3. After connecting to the server, the client sends a GET request to the server.

```
parmesh@parmesh-Nitro-AN515-31: ~/College/CN/Lab7
parmesh@parmesh-Nitro-AN515-31:~/College/CN/Lab7$ ./a.out http://www.google.com/robots.txt
GET /robots.txt HTTP/1.1
Host: www.google.com
Connection: close

Request sent
File opened

File written
parmesh@parmesh-Nitro-AN515-31:~/College/CN/Lab7$
```

```
parmesh@parmesh-Nitro-AN515-31:~/College/CN/Lab7$ ./a.out https://lab7-cn.herokuapp.com/file/testImage.jpg
GET /file/testImage.jpg HTTP/1.1
Host: lab7-cn.herokuapp.com
Connection: close

Request sent
File opened

File written
parmesh@parmesh-Nitro-AN515-31:~/College/CN/Lab7$
```

4. The client downloads the whole file and saves it to the local folder with the same file name as mentioned in the URL.

```
parmesh@parmesh-Nitro-AN515-31:~/College/CN/Lab7$ ./a.out http://www.google.com/robots.txt
GET /robots.txt HTTP/1.1
Host: www.google.com
Connection: close

Request sent
File opened

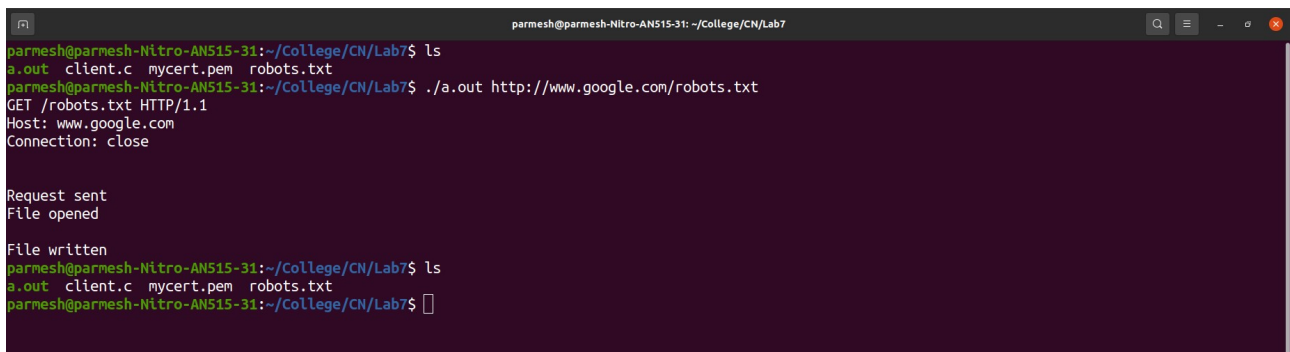
File written
parmesh@parmesh-Nitro-AN515-31:~/College/CN/Lab7$ ls
a.out client.c mycert.pem robots.txt
parmesh@parmesh-Nitro-AN515-31:~/College/CN/Lab7$
```

```
parmesh@parmesh-Nitro-AN515-31:~/College/CN/Lab7$ ./a.out https://lab7-cn.herokuapp.com/file/testImage.jpg
GET /file/testImage.jpg HTTP/1.1
Host: lab7-cn.herokuapp.com
Connection: close

Request sent
File opened

File written
parmesh@parmesh-Nitro-AN515-31:~/College/CN/Lab7$ ls
a.out client.c mycert.pem testImage.jpg
parmesh@parmesh-Nitro-AN515-31:~/College/CN/Lab7$
```

5. If a file with the same name exists, the old file is overwritten.

A terminal window with a dark purple background. The title bar reads 'parmesh@parmesh-Nitro-AN515-31: ~/College/CN/Lab7'. The terminal shows the following commands and output:

```
parmesh@parmesh-Nitro-AN515-31:~/College/CN/Lab7$ ls
a.out client.c mycert.pem robots.txt
parmesh@parmesh-Nitro-AN515-31:~/College/CN/Lab7$ ./a.out http://www.google.com/robots.txt
GET /robots.txt HTTP/1.1
Host: www.google.com
Connection: close

Request sent
File opened

File written
parmesh@parmesh-Nitro-AN515-31:~/College/CN/Lab7$ ls
a.out client.c mycert.pem robots.txt
parmesh@parmesh-Nitro-AN515-31:~/College/CN/Lab7$
```

As shown above, the file robots.txt already existed in the directory, and was replaced after running the program.

6. The client exits after downloading the file.

(As shown in previous pictures for points 3 and 4.)

Please refer to the README.txt file for instructions on how to compile and run the program.