

## README.md

# OS-assignment-2

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## Instructions for Using the Server and Client Programs

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### Prerequisites

- Ensure that each file to be downloaded has a file extension (e.g., .txt , .list , etc.).

### Server Setup

- To activate the server program, provide the full path where the server will run. For example:

```
./server /path/to/server/directory
```

### Client Usage

- The client program accepts the following arguments:
- `<method>` : The HTTP method to use ( `POST` or `GET` ). Note that the method is case-sensitive.
- `<REMOTEPath>` : The path relative to the server's directory. This should start with the server's address (must start with `http` or `https` ), followed by the DNS of the server, and then the rest of the path. For example,  
`https://example.com/path/relative/to/server` .
- `<PATHTOCONTENTS>` : (Only required for `POST` method) The full path to the file containing the contents to be posted.
- To download a file from the server (`GET` request), run the client with the following command:

```
./client GET https://example.com/path/relative/to/server
```

The file will be saved in the directory where the client is being run from, with the same name as it had on the server.

- To upload a file to the server (POST request), run the client with the following command:

```
./client POST https://example.com/path/relative/to/server
/full/path/to/local/file
```

If a file with the same name already exists on the server, the request will result in a 500 Internal Server Error. The client should receive a response from the server ( 200 OK , 404 FILE NOT FOUND , Or 500 INTERNAL ERROR ).

## Additional Notes

- The line ending used in the communication between the client and server is CRLF ( \r\n ).

## Run Sample:

- running the server (as written in server setup above)

```
osboxes@osboxes:~/Documents/Development/OS/assignment_2/server$ ./server /home/osboxes/Documents/Development/OS/assignment_2/ass2
Server socket created
Socket options set
Server socket bound and listening

New client accepted.
Client details:
IP Address: 127.0.0.1
Port: 46524

New client accepted.
Client details:
IP Address: 127.0.0.1
Port: 38498

New client accepted.
Client details:
IP Address: 127.0.0.1
Port: 38514

New client accepted.
Client details:
IP Address: 127.0.0.1
Port: 38526

New client accepted.
Client details:
IP Address: 127.0.0.1
Port: 38540

New client accepted.
Client details:
IP Address: 127.0.0.1
Port: 38546
```

- running POST in the client (as written in client usage above)

```
osboxes@osboxes:~/Documents/Development/OS/assignment_2/client$ ./client POST http://localhost/another_new_folder/tryl.list /home/osboxes/Documents/Development/OS/assignment_2/ass2/trying_stuff_for_OS_ASS_2/notcodedlst.list
200 OK
```

- running GET in the client (as written in client usage above)

```
osboxes@osboxes:~/Documents/Development/OS/assignment_2/client$ ./client GET http://localhost/trying_stuff_for_OS_ASS_2/tryl.list
200 OK
200 OK
```