Computer Networks
Assignment 01

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1) Client App:

1- Client checks for inputs {host name and port number}, if there is no port number, Client set it to default port number = "80".

2- Client uses those {host name and port number} to get list of addresses.

3- From this list of addresses, Client tries to get a socket through it Client can connect with host name(Server).

4- Once Client could get connection with Server, It starts to read commands from input file.

5- Then, from array of commands, Client Start to create requests {GET and POST} , if the request is "post", set data with the request.

6- Then, loop in list of requests and start to send them to the server, after Client send each request, It check responses

7- After sending all requests, Client close socket.

2) Server App:

1- Server checks for input "port number", if there is no port number, Server set it to default port number = "80".

2- Server uses "port number" to get list of addresses.

3- From this list of addresses, Server tries to get a socket binding with the port number through this socket, Server can connect with Clients.

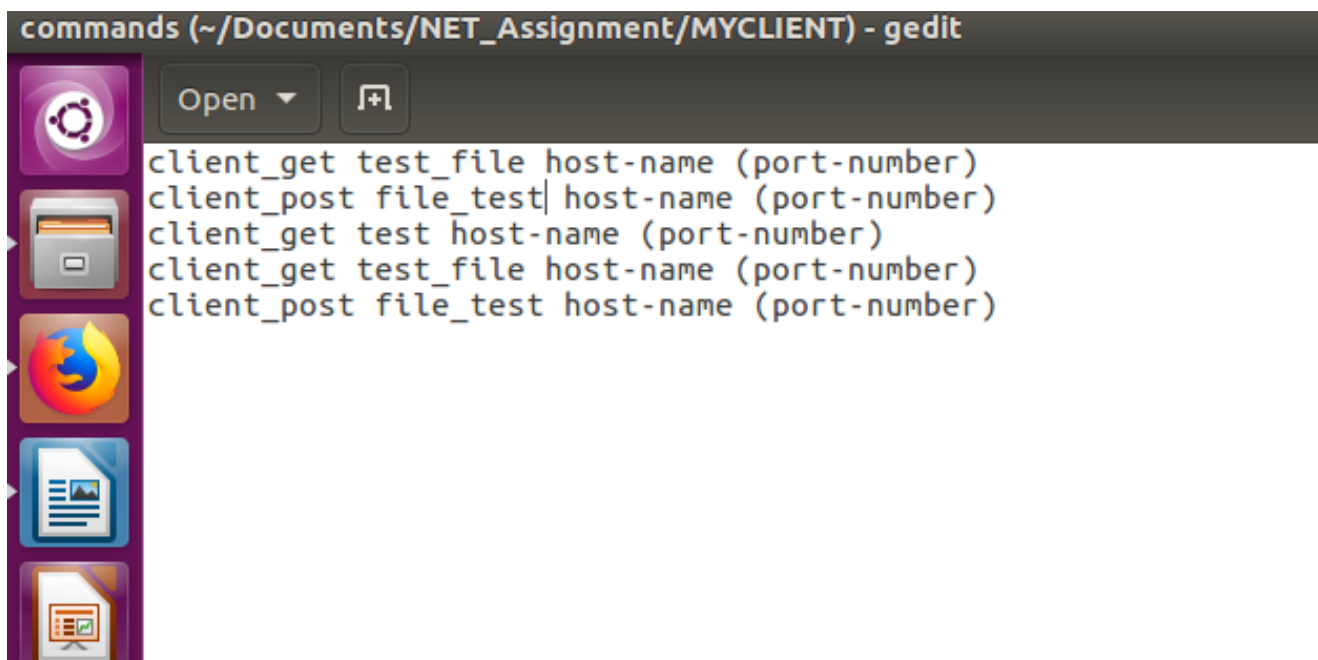4- Then, Server listens for new connection.

5- If there is new connection, Server accept it and creates child process with new socket.

6- On this new socket, Server starts to receive requests from Client.

7- At the end of this connection, server close the new socket.

2) Example:

1- Input File (commands):


```
commands (~/Documents/NET_Assignment/MYCLIENT) - gedit

client_get test_file host-name (port-number)
client_post file_test| host-name (port-number)
client_get test host-name (port-number)
client_get test_file host-name (port-number)
client_post file_test host-name (port-number)
```

2- Results:


```
0

server: received:
'GET test_file HTTP/1.1
header
header
header
'
1

server: received:
'POST file_test HTTP/1.1
header
header
header

Data: hello from client
'
2

server: received:
'GET test HTTP/1.1
header
header
header
'
3

server: received:
'GET test_file HTTP/1.1
header
header
header
'
4

server: received:
'POST file_test HTTP/1.1
header
header
header
```

```
khalil@khalil-HP-EliteBook-8570p:~/Documents/NET_Assignment
t khalil-HP-EliteBook-8570p "3491"
client: connecting to 127.0.1.1
0


client: received
'HTTP/1.1 200 OK'


client: received
'Data: hello from server '
1


client: received
'HTTP/1.1 200 OK'
2


client: received
'HTTP/1.1 404 Not Found'
3


client: received
'HTTP/1.1 200 OK'


client: received
'Data: hello from server '
4


client: received
'HTTP/1.1 200 OK'
khalil@khalil-HP-EliteBook-8570p:~/Documents/NET_Assignment
```