CS425 - Computer Networks waghela@iitk.ac.in

Project - 2

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Browser Used: *Google Chrome*

How to run

> Make all

> ./proxy PortNumber

> python proxy_tester.py proxy {port number optional}

Design Choices made:

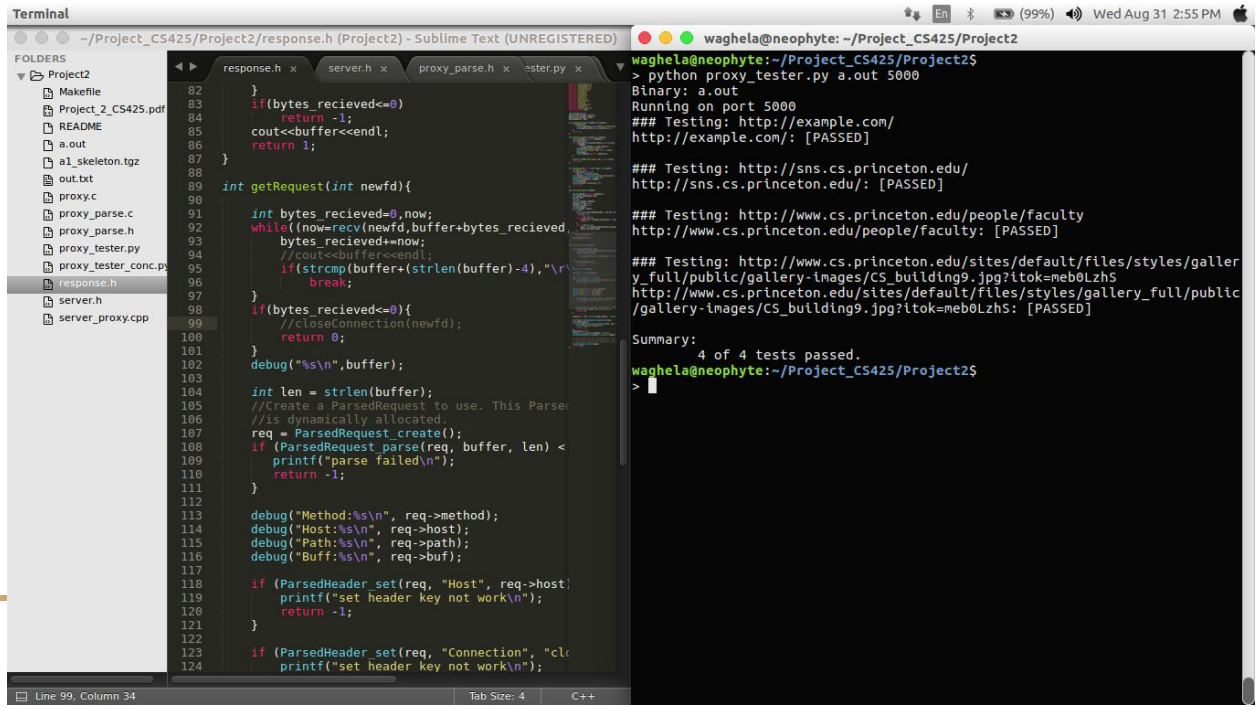
1. Request length is less than 4096 bytes.
2. Server should be given no more than 20 simultaneous/ parallel requests.
3. All parsing error and buffer overflows are replied with “500 Internal Server Error”.
4. The server reads a request until there is something to read and then quits if request end is observed([CLRF][CLRF]) else waits for a fixed amount of time before quitting.
5. Signal is used to keep track of number of childs, a handler is defined that is called on exit of every child process .

Explanation of Testing Results

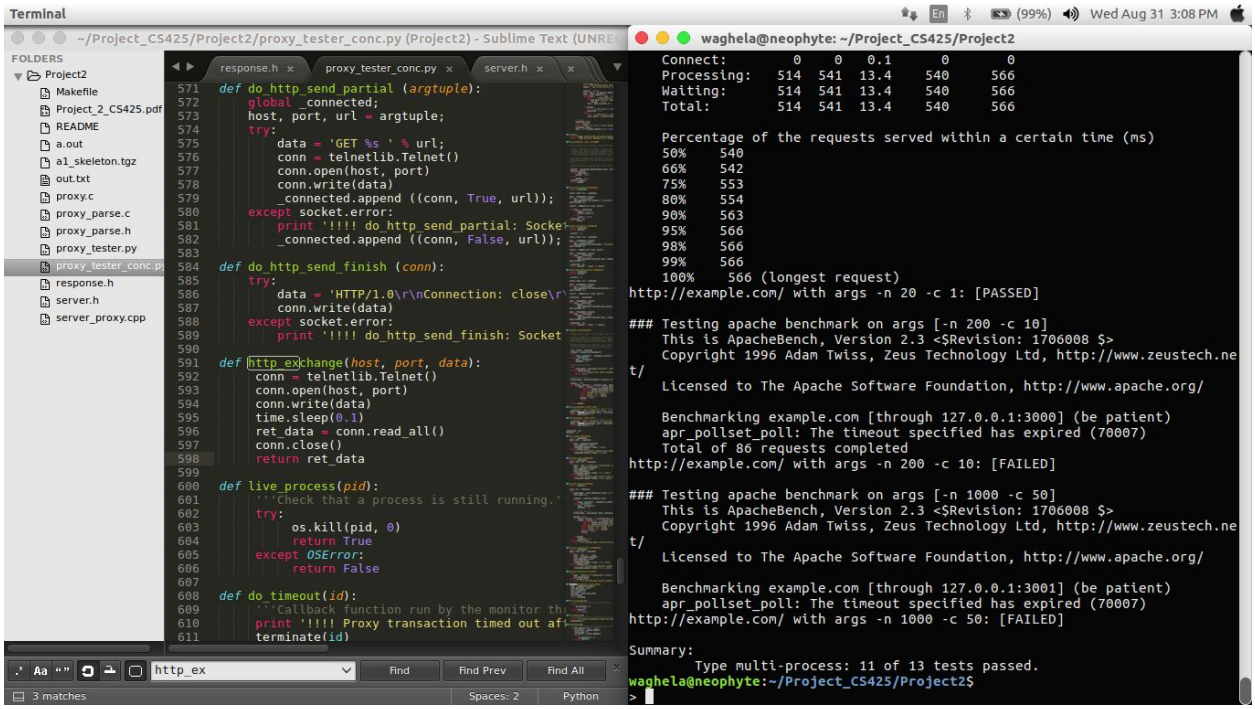
1. **Script1**
   - I added an extra wait in the script to pass the last test case, as it was immediately trying to get response.
2. **Script2**
   - 11/13 test cases passed, 1 of which was the 4th one, I did not add any wait in this script hence got failed.
   - The other was apache benchmark, it did not passed due to slow connection at hostel network and yield connection timeout, works fine on CSE network.
3. **Browser Response**
   - A request to 9gag.com was sent on port 3000 which processed successfully (localhost2 proxy setting was server:locahost port:3000).
   - The “parse failed” is due to the dynamic components in other web pages that are trying to send various request.
4. **Malformed Response**
   - To test 500 Internal Error

Testing Results

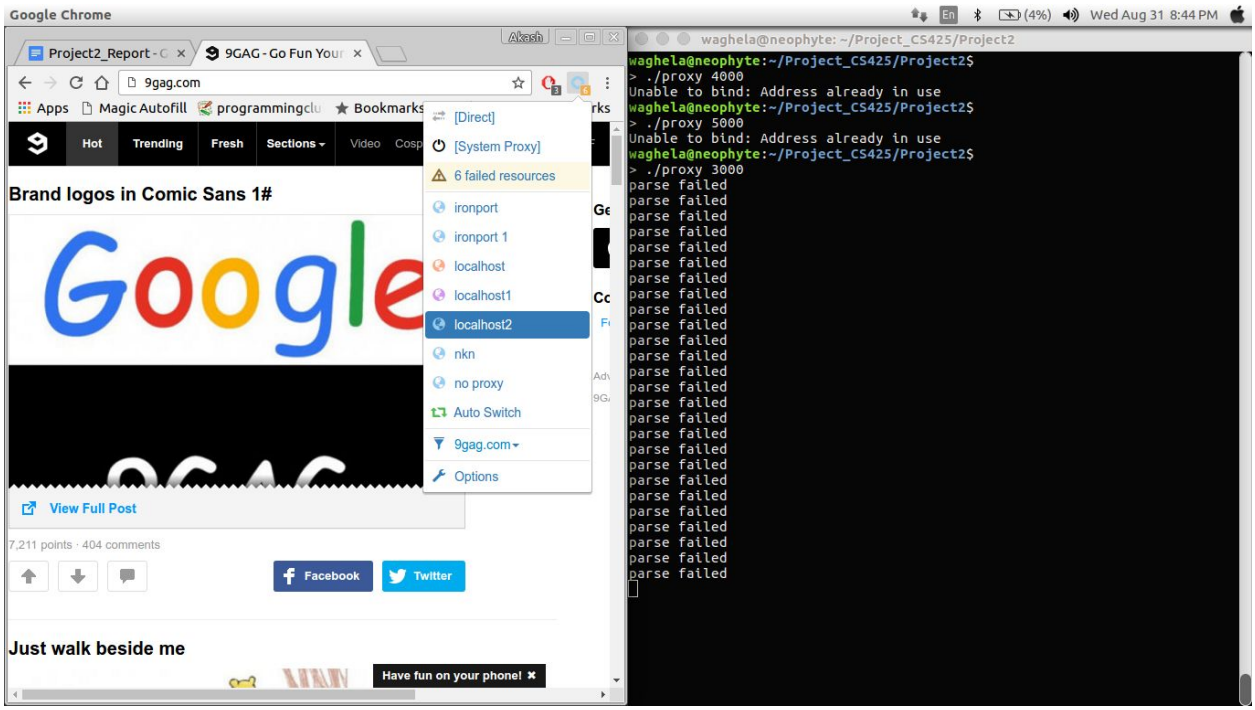
1. **OutPut of Script1 (proxy_tester.py)**



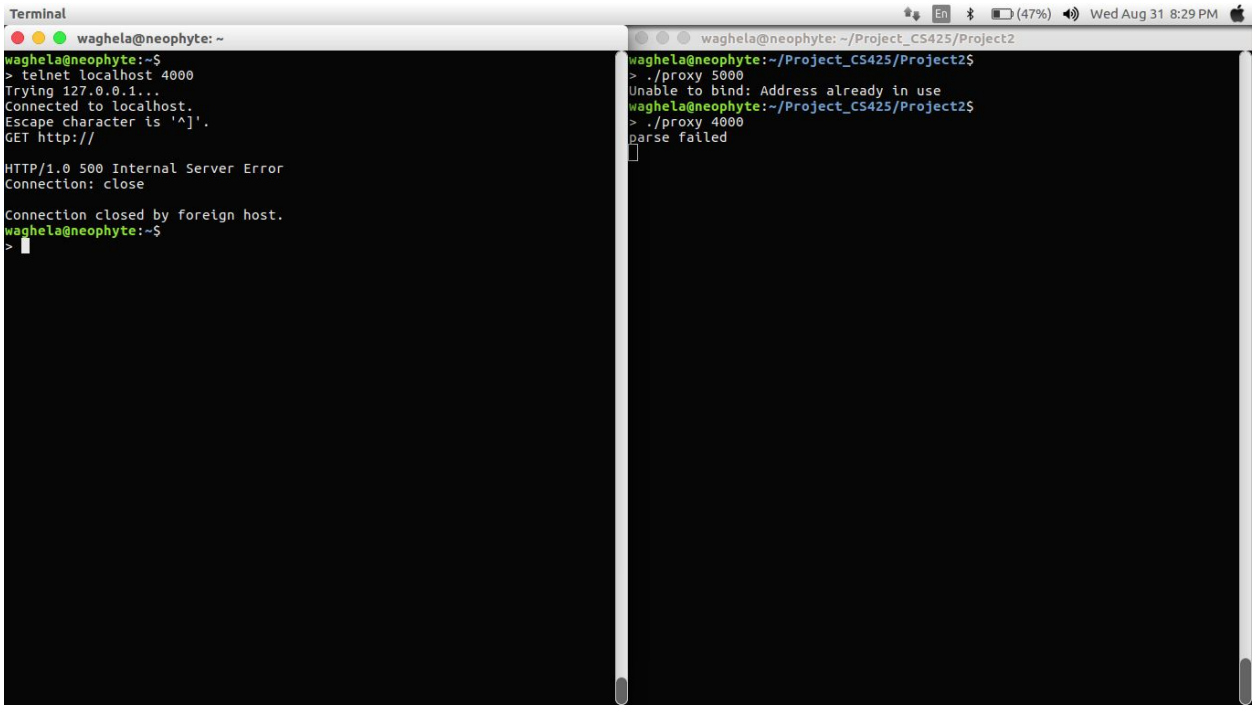
2. OutPut of Script2 (proxy_tester_conc.py)



3. Browser Response



4. Malformed Request


Terminal
Wed Aug 31 8:29 PM
waghela@neophyte: ~
waghela@neophyte:~$
> telnet localhost 4000
Trying 127.0.0.1...
Connected to localhost.
Escape character is '^]'.
GET http://
HTTP/1.0 500 Internal Server Error
Connection: close
Connection closed by foreign host.
waghela@neophyte:~$
>
waghela@neophyte: ~/Project_CS425/Project2
waghela@neophyte:~/Project_CS425/Project2$
> ./proxy 5000
Unable to bind: Address already in use
waghela@neophyte:~/Project_CS425/Project2$
> ./proxy 4000
parse failed