

(https://profile.intra.42.fr)

Remember that the quality of the defenses, hence the quality of the of the school on the labor market depends on you. The remote defences during the Covid crisis allows more flexibility so you can progress into your curriculum, but also brings more risks of cheat, injustice, laziness, that will harm everyone's skills development. We do count on your maturity and wisdom during these remote defenses for the benefits of the entire community.

## SCALE FOR PROJECT WEBSERV (/PROJECTS/WEBSERV)

You should evaluate 2 students in this team



Git repository

`git@vogosphere.msk.21-school.ru:vogosphere/intra-uuid-d7ed584`



## Introduction

Please respect the following rules:

- Remain polite, courteous, respectful and constructive throughout the evaluation process. The well-being of the community depends on it.
- Identify with the person (or the group) evaluated the eventual dysfunctions of the work. Take the time to discuss and debate the problems you have identified.
- You must consider that there might be some difference in how your peers might have understood the project's instructions and the scope of its functionalities. Always keep an open mind and grade him/her as honestly as possible. The pedagogy is valid only and only if peer-evaluation is conducted seriously.

## Guidelines

- Only grade the work that is in the student or group's GiT repository.
- Double-check that the GiT repository belongs to the student or the group. Ensure that the work is for the relevant project

and also check that "git clone" is used in an empty folder.

- Check carefully that no malicious aliases was used to fool you and make you evaluate something other than the content of the official repository.

- To avoid any surprises, carefully check that both the evaluating and the evaluated students have reviewed the possible scripts used to facilitate the grading.

- If the evaluating student has not completed that particular project yet, it is mandatory for this student to read the entire subject prior to starting the defence.

- Use the flags available on this scale to signal an empty repository, non-functioning program, a norm error, cheating etc. In these cases, the grading is over and the final grade is 0 (or -42 in case of cheating). However, with the exception of cheating, you are encouraged to continue to discuss your work (even if you have not finished it) in order to identify any issues that may have caused this failure and avoid repeating the same mistake in the future.

- Remember that for the duration of the defence, no segfault, no other unexpected, premature, uncontrolled or unexpected termination of the program, else the final grade is 0. Use the appropriate flag.

You should never have to edit any file except the configuration file if it exists.

If you want to edit a file, take the time to explicit the reasons with the evaluated student and make sure both of you are okay with this.


- You must also verify the absence of memory leaks. Any memory allocated on the heap must be properly freed before the end of execution.

You are allowed to use any of the different tools available on the computer, such as leaks, valgrind, or e\_fence. In case of memory leaks, tick the appropriate flag.

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## Attachments

 subject.pdf (<https://cdn.intra.42.fr/pdf/pdf/13265/en.subject.pdf>)

 tester (/uploads/document/document/2092/tester)

 ubuntu\_cgi\_tester (/uploads/document/document/2093/ubuntu\_cgi\_tester)

 cgi\_tester (/uploads/document/document/2094/cgi\_tester)

 ubuntu\_tester (/uploads/document/document/2095/ubuntu\_tester)

## Mandatory Part

### Check the code and ask questions

- launch the installation of siege with homebrew
- Ask to get an explanation of how select is working.
- Ask if they use only one select and how they've managed the server accept and the client read/write.
- the select should be in the main loop and should check fd for read and write AT THE SAME TIME, if not please give a 0 and stop the evaluation.
- There should be only one read or one write per client per select. Ask to show you the code that goes from the select to the read and write of a client.
- Search for all read/recv/write/send on a socket and check that if an error returned the client is removed
- Search for all read/recv/write/send and check if the returned value is well checked. (checking only -1 or 0 is not good you should check both)
- If a check of errno is done after read/recv/write/send. Please stop the evaluation and put a mark to 0
- Writing or reading ANY file descriptor without going through the select is strictly FORBIDDEN

 Yes

 No

### Configuration

- In the configuration file check if you can do the following and test the result:
- setup multiple servers with different port
- setup multiple servers with different host name (use something like: curl --resolve example.com:80:127.0.0.1 http://example.com/)
- setup default error page (try to change the error 404)
- limit the client body (use curl -X POST -H "Content-Type: plain/text" --data "BODY IS HERE write something shorter or longer than body limit")
- setup routes in a server to different directories
- setup a default file to search for if you ask for a directory
- setup a list of method accepted for a certain route (ex: setup only HEAD on a route and use curl with and without option -X HEAD)

 Yes

 No

### Run the tester

- Download the tester in attachments and run it. It should not fail.

 Yes

 No

## Check Headers

- Open the RFC 7231 and check the list of header of the subject, ask questions about it.
- Use a browser, open the network part of it and try to connect to the server with it
- Look at the request header and response header
- Try wrong URL on the server
- Try things

✓ Yes

✗ No

## Port issues

- In the configuration file setup multiple port and use different website, use a browser to check that the configuration is working as expected and show the right website.
- In the configuration try to setup the same port multiple times. It should not work.
- Launch multiple server at the same time with different configuration but with common ports. Is it working? If it is working, ask why the server should work if one of the configuration isnt working. keep going

✓ Yes

✗ No

## Siege

- Use Siege to run some stress test.
- Check if there is no memory leak
- Check if there is no hanging connection
- You should be able to use siege indefinitely without restarting the server (look at siege -b)
- Availability should be above 99.5% for a simple get on an empty page with a siege -b on that page

✓ Yes

✗ No

# Bonus Part

## Loadable plugins

Plugins are loadable directly on the server. Each plugin brings one point up to 5.



Rate it from 0 (failed) through 5 (excellent)

## Workers

Webserv has available workers in the form of threads or processes.

They function as per the subject, and can take as many requests as needed.

☒ Yes☐ No

## Configuration File

The configuration file allows:

- to specify the number of workers
- to specify plugins to load
- routes defined with regexp
- to configure a proxy to another http/https server
- to use an internal module for a backend language (PHP/Python/Ruby...)

Add one point per valid bonus



Rate it from 0 (failed) through 5 (excellent)

## Ratings

Don't forget to check the flag corresponding to the defense

☒ Ok☐ ★ Outstanding project☐ Empty work☐ No author file☐ Invalid compilation☐ Norme☐ Cheat☐ Crash☐ Leaks☐ Forbidden function

## Conclusion

Leave a comment on this evaluation

Finish evaluation

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