

# Guidelines

- Only grade the work that was turned in the Git repository of the evaluated student or group.
- Double-check that the Git repository belongs to the student(s). Ensure that the project is the one expected. 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 that is not the content of the official repository.
- To avoid any surprises and if applicable, review together any scripts used to facilitate the grading (scripts for testing or automation).
- If you have not completed the assignment you are going to evaluate, you have to read the entire subject prior to starting the evaluation process.
- Use the available flags to report an empty repository, a non-functioning program, a Norm error, cheating, and so forth. In these cases, the evaluation process ends and the final grade is 0,

or -42 in case of cheating. However, except for cheating, student are strongly encouraged to review together the work that was turned in, in order to identify any mistakes that shouldn't be repeated 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.

## **Use of Libraries and Tools**

- Ensure that the team has not used libraries or tools that provide an immediate complete solution for a global feature or module.
- Verify that any direct instruction about the usage (can, must, can't) of a third party library or tool has been followed.
- The use of small libraries or tools that solve a simple and unique

task, representing a subcomponent of a global feature or module, is allowed.

- The team must justify any usage of library or tool that is not explicitly approved by the subject.
- The evaluator must determine if the usage of a specific library or tool is legit (and allowed) or almost solving an entire feature or module (and therefore prohibited).

## **Preliminary tests**

- Any credentials, API keys, environment variables must be set inside a .env file during the evaluation. In case any credentials, API keys are available in the git repository and outside of the .env file created during the evaluation, the evaluation stop and the mark is 0.
- Ensure the docker compose file is at the root of the repository.
- Run the "docker-compose up --build" command.
- Since the rating of this project is more flexible, do not stop the evaluation process unless you encounter a 500 error, a crash, or anything that actually doesn't work within the project scope.

## **Basic checks**

- The website is available.
- The user can subscribe on the website.
- Registered users can log in.
- The website is a Single Page Application. The user can use the "Back" and "Forward" buttons of the web browser.
- You can browse the website using the latest version of Chrome.

## Security concerns

- Ensure that the website is secured.
- Be careful about TLS. If there is a backend or any other features, it must be available.
- Check if there is a database the passwords must be hashed.
- Check the server for server-side validation/sanitization on forms and any user input.
- Ensure the security measures are properly implemented and thoroughly tested.
- If there is any error, the evaluation ends now.

## Local game

- You should be able to use this game locally on the same computer using the keyboard.
- Each player should be able to utilize a section of the keyboard.
- You must also be able to initiate a tournament, and the tournament should offer a matchmaking system to connect local players.

## Gameplay

The game itself must be playable and respect the original Pong game. The controls must be intuitive or correctly explained (with some rules or manual). When a game is over, either a kind of end-game screen is displayed or the game page just exits.

## Lags & disconnects

Unexpected disconnections and lags have to be handled. The game and the website must not crash when a user is experiencing lags or is disconnected.

Handling such issues in an efficient way is appreciated but not mandatory:

- Pause the game for a defined duration.
- Disconnected users can reconnect.
- Lagging users can catch up to the match.
- And so forth. Any solution is acceptable. The only requirement is: the game should not crash.

## Modules

*For this section, it is crucial to thoroughly read the PDF document detailing the requirements for each module, and provide clear and precise explanations for each choice made. In case of any doubt, do not hesitate to stop.*

### Major module 01

You must now verify the chosen module(s) with each group participant.

You must comprehensively understand everything that will be explained, with the subject PDF as your reference. The obligations for each module are clearly stated in the subject's PDF.

Do not hesitate to ask any questions and request a demonstration of the proper functioning of these module(s).

As a reminder, one major module is equivalent to 2 minor modules, as specified in the subject.

A module is considered valid under the following criteria:

- There are no issues with the proper functioning of the presented module(s).
- We understand how it works and why it was chosen.
- No errors are visible
- A comprehensive explanation allows for a detailed understanding of these module(s).

We would like to remind you that this is an important project, and that it is essential to carry out this evaluation properly.

## **Module 02**

You must now verify the chosen module(s) with each group participant.

You must comprehensively understand everything that will be explained, with the subject PDF as your reference. The obligations for each module are clearly stated in the subject's PDF.

Do not hesitate to ask any questions and request a demonstration of the proper functioning of these module(s).

As a reminder, one major module is equivalent to 2 minor modules, as specified in the subject.

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## **Module 03**

You must now verify the chosen module(s) with each group participant.

You must comprehensively understand everything that will be explained, with the subject PDF as your reference. The obligations for each module are clearly stated in the subject's PDF.

Do not hesitate to ask any questions and request a demonstration of the proper functioning of these module(s).

As a reminder, one major module is equivalent to 2 minor modules, as specified in the subject.

A module is considered valid under the following criteria:

- There are no issues with the proper functioning of the presented module(s).
- We understand how it works and why it was chosen.
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- A comprehensive explanation allows for a detailed understanding of these module(s).

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## **Module 04**

You must now verify the chosen module(s) with each group participant.

You must comprehensively understand everything that will be explained, with the subject PDF as your reference. The obligations for each module are clearly stated in the subject's PDF.



Do not hesitate to ask any questions and request a demonstration of the proper functioning of these module(s).

As a reminder, one major module is equivalent to 2 minor modules, as specified in the subject.

A module is considered valid under the following criteria:

- There are no issues with the proper functioning of the presented module(s).
- We understand how it works and why it was chosen.
- No errors are visible
- A comprehensive explanation allows for a detailed understanding of these module(s).

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## **Module 05**

You must now verify the chosen module(s) with each group participant.

You must comprehensively understand everything that will be explained, with the subject PDF as your reference. The obligations for each module are clearly stated in the subject's PDF.

Do not hesitate to ask any questions and request a demonstration of the proper functioning of these module(s).

As a reminder, one major module is equivalent to 2 minor modules, as specified in the subject.

A module is considered valid under the following criteria:

- There are no issues with the proper functioning of the presented module(s).
- We understand how it works and why it was chosen.
- No errors are visible
- A comprehensive explanation allows for a detailed understanding of these module(s).

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## **Module 06**

You must now verify the chosen module(s) with each group participant.

You must comprehensively understand everything that will be explained, with the subject PDF as your reference. The obligations for each module are clearly stated in the subject's PDF.

Do not hesitate to ask any questions and request a demonstration of the proper functioning of these module(s).

As a reminder, one major module is equivalent to 2 minor modules, as specified in the subject.

A module is considered valid under the following criteria:

- There are no issues with the proper functioning of the presented module(s).
- We understand how it works and why it was chosen.
- No errors are visible
- A comprehensive explanation allows for a detailed understanding of these module(s).

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## **Module 07**

You must now verify the chosen module(s) with each group participant.

You must comprehensively understand everything that will be explained, with the subject PDF as your reference. The obligations for each module are clearly stated in the subject's PDF.

Do not hesitate to ask any questions and request a demonstration of the proper functioning of these module(s).

As a reminder, one major module is equivalent to 2 minor modules, as specified in the subject.

A module is considered valid under the following criteria:

- There are no issues with the proper functioning of the presented module(s).
- We understand how it works and why it was chosen.
- No errors are visible
- A comprehensive explanation allows for a detailed understanding of these module(s).

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## **Bonus**

*Evaluate the bonus part if, and only if, the mandatory part has been entirely and perfectly done, and the error management handles unexpected or bad usage. In case all the mandatory points were not passed during the defense, bonus points must be totally ignored.*

## **Extra Module**

You must now verify the extra chosen module(s) with each group participant.

You must comprehensively understand everything that will be explained,  
with the subject PDF as your reference. The obligations for each module  
are clearly stated in the subject's PDF.

Do not hesitate to ask any questions and request a demonstration of the  
proper functioning of these module(s).

As a reminder, one major module is equivalent to 2 points. One minor module is  
equivalent to 1 point.

A module is considered valid under the following criteria:

- There are no issues with the proper functioning of the presented module(s).
- We understand how it works and why it was chosen.
- No errors are visible
- A comprehensive explanation allows for a detailed understanding of these module(s).

We would like to remind you that this is an important project, and that it is essential  
to carry out this evaluation properly.

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