

# SCALE FOR PROJECT PUSH\_SWAP (/PROJECTS/42CURSUS-PUSH\_SWAP)

You should evaluate 1 student in this team



Git repository

git@vogsphere-v2.hive.fi:vogsphere/intra-uuid-d462e8d2-fcd3-45:

## Introduction



Please comply with the following rules:

- Remain polite, courteous, respectful and constructive throughout the evaluation process. The well-being of the community depends on it.
- Identify possible dysfunctions in the evaluated student's or group's project. Take the time to discuss and debate the problems that may have been identified.
- You must consider that there might be some differences in how your peers might have understood the project's instructions and the scope of its functionalities. Always keep an open mind and grade them as honestly as possible. Pedagogy is effective only if peer evaluation is taken seriously.

## Guidelines

- Only grade the work that was turned in the Git repository of the evaluated student or group.
- Ensure that the Git repository belongs to the student(s) and that the project is the expected one. Additionally, ensure that 'git clone' is executed in an empty folder.
- Check carefully that no malicious aliases were 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, students are strongly encouraged to review together the work that was submitted, in order to identify any mistakes that shouldn't be repeated in the future.
- 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. If memory leaks are detected, select the appropriate flag.

## Attachments

-  subject.pdf (https://cdn.intra.42.fr/pdf/pdf/169252/en.subject.pdf)
-  checker\_Mac (https://cdn.intra.42.fr/document/document/36053/checker\_Mac)

 checker\_linux (https://cdn.intra.42.fr/document/document/36054/checker\_linux)

## Mandatory part

*Reminder: During the defense, no segmentation faults, unexpected crashes, premature termination uncontrolled exits are allowed. Otherwise, the final grade will be 0. Use the appropriate flag. This rule throughout the entire defense.*

### Memory leaks

Throughout the defense, monitor the memory usage of push\_swap (e.g., using the top command) to detect anomalies and ensure that all allocated memory is properly freed. If there is one memory leak (or more), the final grade is 0.

 Yes

 No

### Error management

In this section, we'll evaluate the push\_swap's error management. If at least one fails, no points will be awarded for this section. Move to the next one.

- Run push\_swap with non numeric parameters. The program must display "Error" followed by a '\n' on the standard error.
- Run push\_swap with a duplicate numeric parameter. The program must display "Error" followed by a '\n' on the standard error.
- Run push\_swap with only numeric parameters including one greater than MAXINT. The program must display "Error" followed by a '\n' on the standard error.
- Run push\_swap without any parameters. The program must not display anything and give the prompt back.

 Yes

 No

### Push\_swap - Identity test

In this section, we will evaluate push\_swap's behavior when given an already sorted list. Execute the following tests. If at least one fails, no points will be awarded for this section. Move to the next one.

- Run the following command "\$> ./push\_swap 42".  
The program should display nothing (0 instruction).
- Run the following command "\$> ./push\_swap 2 3".  
The program should display nothing (0 instruction).
- Run the following command "\$> ./push\_swap 0 1 2 3".  
The program should display nothing (0 instruction).
- Run the following command "\$> ./push\_swap 0 1 2 3 4 5 6 7 8 9".  
The program should display nothing (0 instruction).
- Run the following command "\$> ./push\_swap <Between 0 and 9 randomly chosen sorted values>".  
The program should display nothing (0 instruction).

 Yes

 No

### Push\_swap - Simple version

If the following tests fail, no points will be awarded for this section. Move to the next one. Use the checker binary provided in the attachments.

- Run "\$> ARG="2 1 0"; ./push\_swap \$ARG | ./checker\_OS \$ARG".  
Check that the checker program displays "OK" and that the size of the list of instructions from push\_swap is 2 OR 3. Otherwise the test fails.

## Intra Projects push\_swap Edit

- Run "\$>ARG="<Between 0 and 3 randomly chosen values>"; ./push\_swap \$ARG | ./checker\_OS \$ARG".

Check that the checker program displays "OK" and that the size of the list of instructions from push\_swap is between 0 AND 3. Otherwise the test fails.

 Yes

 No
**Another simple version**

Execute the following 2 tests. If at least one fails, no points will be awarded for this section. Move to the next one. Use the checker binary provided in the attachments.

- Run "\$>ARG="1 5 2 4 3"; ./push\_swap \$ARG | ./checker\_OS \$ARG". Check that the checker program displays "OK" and that the size of the instruction list from push\_swap does not exceed 12. Kudos if the instruction list contains only 8 steps.
- Run "\$>ARG="<5 random values>"; ./push\_swap \$ARG | ./checker\_OS \$ARG" and replace the placeholder by 5 random valid values.

Check that the checker program displays "OK" and that the size of the list of instructions from push\_swap isn't more than 12. Otherwise this test fails. You'll have to specifically check that the program wasn't developed to only answer correctly on the test included in this scale. You should repeat this test couple of times with several permutations before you validate it.

 Yes

 No
**Push\_swap - Middle version**

If the following test fails, no points will be awarded for this section. Move to the next one. Use the checker binary provided in the attachments.

- Run "\$>ARG="<100 random values>"; ./push\_swap \$ARG | ./checker\_OS \$ARG" and replace placeholder by 100 random valid values. Check that the checker program displays "OK" and the list of instructions. Give points in accordance:
  - less than 700: 5
  - less than 900: 4
  - less than 1100: 3
  - less than 1300: 2
  - less than 1500: 1 You'll have to specifically check that the program wasn't developed to only answer correctly on the test included in this scale. You should repeat this test multiple times with several permutations before validating it.

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

**Push\_swap - Advanced version**

If the following test fails, no points will be awarded for this section. Move to the next one. Use the checker binary provided in the attachments.

- Run "\$>ARG="<500 random values>"; ./push\_swap \$ARG | ./checker\_OS \$ARG" and replace placeholder by 500 random valid values (One is not called John/Jane Script for nothing). Check that the checker program displays "OK" and the number of instructions is within the following limits:
  - less than 5500: 5
  - less than 7000: 4
  - less than 8500: 3
  - less than 10000: 2
  - less than 11500: 1 You'll have to specifically check that the program wasn't developed to only answer correctly on the test included in this scale. You should repeat this test couple of times with several permutations before you validate it.

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



## Bonus

*Reminder : Remember that for the duration of the defence, no segfault, nor other unexpected, pre- or uncontrolled or unexpected termination of the program, else the final grade is 0. Use the appropriate error management is active throughout the whole defence. We will look at your bonuses if and only if your mandatory part is EXCELLENT. This means that you must complete the mandatory part, beginning to end, and your error management needs to be flawless, even in cases of twisted or bad usage. If the mandatory part does not have a perfect score during this defense, the bonus section will be completely ignored.*

### Checker program - Error management

In this section, we'll evaluate the checker's error management.  
If at least one fails, no points will be awarded for this section. Move to the next one.

- Run checker with non numeric parameters. The program must display "Error" followed by a '\n' on the standard error.
- Run checker with a duplicate numeric parameter. The program must display "Error" followed by a '\n' on the standard error.
- Run checker with only numeric parameters including one greater than MAXINT. The program must display "Error" followed by a '\n' on the standard error.
- Run checker without any parameters. The program must not display anything and give the prompt back.
- Run checker with valid parameters, and write an action that doesn't exist during the instruction phase. The program must display "Error" followed by a '\n' on the standard error.
- Run checker with valid parameters, and write an action with one or several spaces before and/or after the action during the instruction phase. The program must display "Error" followed by a '\n' on the standard error.

✓ Yes

✗ No

### Checker program - False tests

In this section, we'll evaluate the checker's ability to manage a list of instructions that doesn't sort the list. Execute the following 2 tests. If at least one fails, no points will be awarded for this section. Move to the next one.

Don't forget to press CTRL+D to stop reading during the instruction phase.

- Run checker with the following command "\$>./checker 0 9 1 8 2 7 3 6 4 5" then write the following valid action list "[sa, pb, rrr]". The checker should display "KO".
- Run checker with a valid list as parameter of your choice then write a valid instruction list that doesn't order the integers. The checker should display "KO". You'll have to specifically check that the program wasn't developed to only answer correctly on the test included in this scale. You should repeat this test couple of times with several permutations before you validate it.

✓ Yes

✗ No

### Checker program - Right tests

In this section, we'll evaluate the checker's ability to manage a list of instructions that sort the list. Execute the following 2 tests. If at least one fails, no points will be awarded for this section. Move to the next one.

Don't forget to press CTRL+D to stop reading during the instruction phase.

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- Run checker with the following command "\$>./checker 0 1 2" then press CTRL+D without writing any instruction. The program should display "OK".
- Run checker with the following command "\$>./checker 0 9 1 8 2" then write the following valid action list "[pb, ra, pb, ra, sa, ra, pa, pa]". The program should display "OK".
- Run checker with a valid list as parameter of your choice then write a valid instruction list that correctly orders the integers. Checker must display "OK". You'll have to specifically check that the program wasn't developed to only answer correctly on the test included in this scale. You should repeat this test couple of times with several permutations before you validate it.

✔ Yes

✖ No

Ratings

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

✔ Ok

★ Outstanding project

Empty work

📄 Incomplete work

⚙️ Invalid compilation

📖 Norme

📑 Cheat

⚠️ Concerning situation

💧 Leaks

🚫 Forbidden function

💬 Can't support /

Conclusion

Leave a comment on this evaluation ( 2048 chars max )

Finish evaluation