

C Piscine C 00

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Summary: This document is the subject for the C 00 module of the C Piscine @ 42.

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#### Chapter I

#### Instructions

- Only this page will serve as reference: do not trust rumors.
- Watch out! This document could potentially change up before submission.
- Make sure you have the appropriate permissions on your files and directories.
- You have to follow the submission procedures for all your exercises.
- Your exercises will be checked and graded by your fellow classmates.
- On top of that, your exercises will be checked and graded by a program called Moulinette.
- Moulinette is very meticulous and strict in its evaluation of your work. It is entirely automated and there is no way to negotiate with it. So if you want to avoid bad surprises, be as thorough as possible.
- Moulinette is not very open-minded. It won't try and understand your code if it doesn't respect the Norm. Moulinette relies on a program called norminette to check if your files respect the norm. TL;DR: it would be idiotic to submit a piece of work that doesn't pass norminette's check.
- These exercises are carefully laid out by order of difficulty from easiest to hardest. We will not take into account a successfully completed harder exercise if an easier one is not perfectly functional.
- Using a forbidden function is considered cheating. Cheaters get -42, and this grade is non-negotiable.
- You'll only have to submit a main() function if we ask for a program.
- Moulinette compiles with these flags: -Wall -Wextra -Werror, and uses gcc.
- If your program doesn't compile, you'll get 0.
- You <u>cannot</u> leave <u>any</u> additional file in your directory than those specified in the subject.
- Got a question? Ask your peer on the right. Otherwise, try your peer on the left.

- $\bullet$  Your reference guide is called Google / man / the Internet / ....
- Check out the "C Piscine" part of the forum on the intranet, or the slack Piscine.
- Examine the examples thoroughly. They could very well call for details that are not explicitly mentioned in the subject...
- By Odin, by Thor! Use your brain!!!



Norminette must be launched with the  $\mbox{-R CheckForbiddenSourceHeader}$  flag. Moulinette will use it too.

#### Chapter II

#### Foreword

Cod liver oil is a nutritional supplement derived from liver of cod fish (Gadidae).

As with most fish oils, it has high levels of the omega-3 fatty acids, eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). Cod liver oil also contains vitamin A and vitamin D.

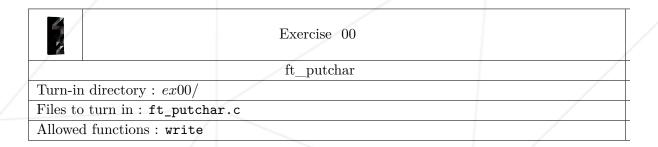
It has historically been taken because of its vitamin A and vitamin D content.

It was once commonly given to children, because vitamin D has been shown to prevent rickets and other symptoms of vitamin D deficiency.

Contrary to Cod liver oil, C is good, eat some!

# Chapter III

# Exercice 00: ft\_putchar



- Write a character that displays the character passed as a parameter.
- It will be prototyped as follows :

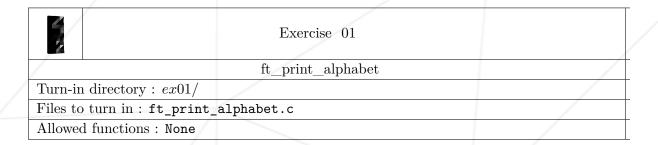
```
void ft_putchar(char c);
```

To display the character, you must use the texttt write function as follows.

write(1, &c, 1);

#### Chapter IV

# Exercise 01: ft\_print\_alphabet



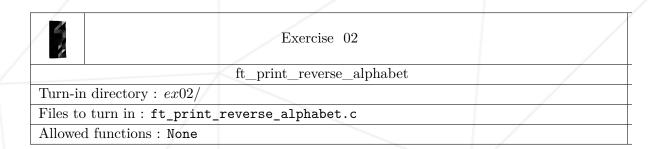
- Create a function that displays the alphabet in lowercase, on a single line, by ascending order, starting from the letter 'a'.
- Here's how it should be prototyped:

void ft\_print\_alphabet(void);

# Chapter V

#### Exercise 02:

 $ft\_print\_reverse\_alphabet$ 

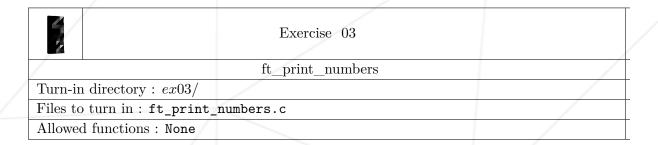


- Create a function that displays the alphabet in lowercase, on a single line, by descending order, starting from the letter 'z'.
- Here's how it should be prototyped :

void ft\_print\_reverse\_alphabet(void);

# Chapter VI

Exercise 03: ft\_print\_numbers

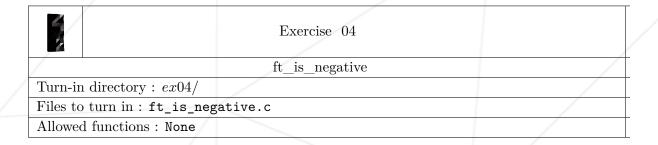


- Create a function that displays all digits, on a single line, by ascending order.
- Here's how it should be prototyped :

void ft\_print\_numbers(void);

#### Chapter VII

Exercise 04: ft\_is\_negative

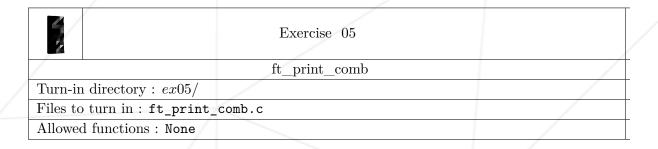


- Create a function that displays 'N' or 'P' depending on the integer's sign entered as a parameter. If n is negative, display 'N'. If n is positive or null, display 'P'.
- Here's how it should be prototyped :

void ft\_is\_negative(int n);

# Chapter VIII

Exercise 05: ft\_print\_comb



- Create a function that displays all different combinations of three different digits in ascending order, listed by ascending order yes, repetition is voluntary.
- Here's the intended output :

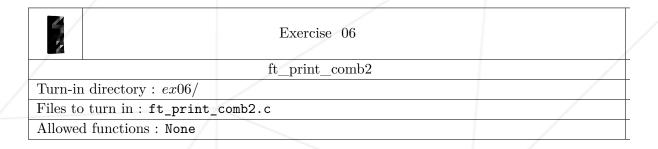
```
$>./a.out | cat -e
012, 013, 014, 015, 016, 017, 018, 019, 023, ..., 789$>
```

- 987 isn't there because 789 already is.
- 999 isn't there because the digit 9 is present more than once.
- Here's how it should be prototyped:

void ft\_print\_comb(void);

#### Chapter IX

# Exercise 06: ft\_print\_comb2



- Create a function that displays all different combination of two digits between 00 and 99, listed by ascending order.
- Here's the expected output :

```
$>./a.out | cat -e
00 01, 00 02, 00 03, 00 04, 00 05, ..., 00 99, 01 02, ..., 97 99, 98 99$>
```

• Here's how it should be prototyped:

void ft\_print\_comb2(void);

# Chapter X

# Exercise 07: ft\_putnbr

	Exercise 07	
/	${ m ft\_putnbr}$	
Turn-in directory : $ex07$	7/	
Files to turn in : ft_putnbr.c		
Allowed functions: None		

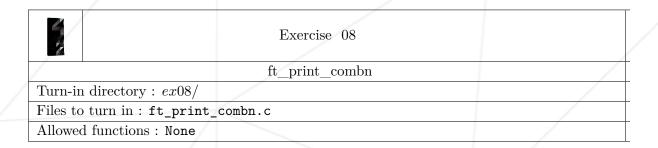
- Create a function that displays the number entered as a parameter. The function has to be able to display all possible values within an int type variable.
- Here's how it should be prototyped :

#### void ft\_putnbr(int nb);

- For example:
  - o ft\_putnbr(42) displays "42".

#### Chapter XI

# Exercise 08: ft\_print\_combn



- Create a function that displays all different combinations of n numbers by ascending order.
- n will be so that : 0 < n < 10.
- If n = 2, here's the expected output :

```
$>./a.out | cat -e
01, 02, 03, ..., 09, 12, ..., 79, 89$>
```

• Here's how it should be prototyped:

void ft\_print\_combn(int n);