C Piscine

C 01

Summary: This document is the subject for the module C 01 of the C Piscine @ 42.

Version: 4

Contents

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 cannot leave any 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.

- 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 *-R CheckForbiddenSourceHeader* flag. Moulinette will use it too.

Chapter II

Foreword

Vincent: And you know what they call a... a... a Quarter Pounder with Cheese in Paris?

Jules: They don't call it a Quarter Pounder with cheese?

Vincent: No man, they got the metric system. They wouldn't know what the fuck a Quarter Pounder is.

Jules: Then what do they call it?

Vincent: They call it a Royale with cheese.

Jules: A Royale with cheese. What do they call a Big Mac?

Vincent: Well, a Big Mac's a Big Mac, but they call it le Big-Mac.

Jules: Le Big-Mac. Ha ha ha ha. What do they call a Whopper?

Vincent: I dunno, I didn't go into Burger King.

At least one of the following exercices has nothing to do you with a Royale with cheese.

Chapter III

Exercise 00 : ft__ft

	Exercise 00
	ft__ft
Turn-in directory : *ex00/*	
Files to turn in : `ft_ft.c`	
Allowed functions : `None`	

- Create a function that takes a pointer to int as a parameter, and sets the value "42" to that int.

- Here's how it should be prototyped :

```
void        ft_ft(int *nbr);
```

Chapter IV

Exercise 01 : ft_ultimate_ft

	Exercise 01
	ft_ultimate_ft
Turn-in directory : *ex01/*	
Files to turn in : `ft_ultimate_ft.c`	
Allowed functions : `None`	

- Create a function that takes a pointer to pointer to pointer to pointer to pointer to pointer to pointer to pointer to pointer to int as a parameter and sets the value "42" to that int.

- Here's how it should be prototyped :

```
void        ft_ultimate_ft(int *********nbr);
```

Chapter V

Exercise 02 : ft__swap

	Exercise 02
	ft_swap
Turn-in directory : *ex02/*	
Files to turn in : `ft_swap.c`	
Allowed functions : `None`	

- Create a function that swaps the value of two integers whose addresses are entered as parameters.

- Here's how it should be prototyped :

```
void    ft_swap(int *a, int *b);
```

Chapter VI

Exercise 03 : ft__div__mod

	Exercise 03
	ft__div__mod
Turn-in directory : *ex03/*	
Files to turn in : `ft_div_mod.c`	
Allowed functions : `None`	

- Create a function `ft_div_mod` prototyped like this :

```
void    ft_div_mod(int a, int b, int *div, int *mod);
```

- This function divides parameters `a` by `b` and stores the result in the int pointed by `div`. It also stores the remainder of the division of `a` by `b` in the int pointed by `mod`.

Chapter VII

Exercise 04 : ft_ultimate_div_mod

	Exercise 04
	ft_ultimate_div_mod
Turn-in directory : *ex04/*	
Files to turn in : `ft_ultimate_div_mod.c`	
Allowed functions : `None`	

- Create a function `ft_ultimate_div_mod` with the following prototype :

```
void    ft_ultimate_div_mod(int *a, int *b);
```

- This function divides parameters `a` by `b`. The result of this division is stored in the int pointed by `a`. The remainder of the division is stored in the int pointed by `b`.

Chapter VIII

Exercise 05 : ft__putstr

	Exercise 05
	ft__putstr
Turn-in directory : *ex05/*	
Files to turn in : `ft_putstr.c`	
Allowed functions : `write`	

- Create a function that displays a string of characters on the standard output.

- Here's how it should be prototyped :

```
void    ft_putstr(char *str);
```

Chapter IX

Exercise 06 : ft__strlen

	Exercise 06
	ft__strlen
Turn-in directory : *ex06/*	
Files to turn in : `ft_strlen.c`	
Allowed functions : `None`	

- Create a function that counts and returns the number of characters in a string.

- Here's how it should be prototyped :

```
int        ft_strlen(char *str);
```

Chapter X

Exercise 07 : ft_rev_int_tab

	Exercise 07
	ft_rev_int_tab
Turn-in directory : *ex07/*	
Files to turn in : `ft_rev_int_tab.c`	
Allowed functions : `None`	

- Create a function which reverses a given array of integer (first goes last, etc).

- The arguments are a pointer to int and the number of ints in the array.

- Here's how it should be prototyped :

```
void    ft_rev_int_tab(int *tab, int size);
```

Chapter XI

Exercise 08 : ft_sort_int_tab

	Exercise 08
	ft_sort_int_tab
Turn-in directory : *ex08/*	
Files to turn in : `ft_sort_int_tab.c`	
Allowed functions : `None`	

- Create a function which sorts an array of integers by ascending order.

- The arguments are a pointer to int and the number of ints in the array.

- Here's how it should be prototyped :

```
void    ft_sort_int_tab(int *tab, int size);
```