

Piscine

07

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Summ ry: This document is the subject for the module C 07 of the C Piscine @ 42.

Version: 3

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Ch pter I

Instructions

Only this page will serve as reference: do not trust rumors.

Watch out! This document could potentially change 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? sk your peer on the right. Otherwise, try your peer on the left.

Your reference guide is called Google / man / the Internet / \dots

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 l unched with the $\mbox{-R CheckForbiddenSourceHe der}$ fl g. Moulinette will use it too.

Ch pter II

Foreword

Morty: Rick!

Rick: Uhp-uhp-uhp! Morty, keep your hands off your ding-dong! It's the only way we can speak freely. Look around you, Morty. Do you really think this wuh-world is real? You'd have to be an idiot not to notice all the sloppy details. Look, that guy's putting a bun between two hot dogs.

Morty: I dunno, Rick, I mean, I've seen people do that before.

Rick: Well, look at that old lady. She's-she's walking a cat on a leash.

Morty: Uh, Mrs. Spencer does that all the time, Rick.

Rick: Look, I-I-I don't want to hear about Mrs. Spencer, Morty! She's an idiot! ll right, all right, there. Wh-what about that, Morty?

Morty: Okay, okay, you got me on that one.

Rick: Oh, really, Morty? re you sure you haven't seen that somewhere in real life before?

Morty: No, no, I haven't seen that. I mean, why would a Pop-Tart want to live inside a toaster, Rick? I mean, th-that would be like the scariest place for them to live. Y'know what I mean?

Rick: You're missing the point, Morty. Why would he drive a smaller toaster with wheels? I mean, does your car look like a smaller version of your house? No.

Morty: So, why are they doing this? W-what do they want?

Rick: Well, that would be obvious to you, Morty, if you'd been paying attention. [an ambulance drives past Rick and Morty and stops; open back doors]

Paramedic: We got the President of the United States in here! We need 10cc of concentrated dark matter, stat, or he'll die!

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Morty: Concentrated dark matter? They were asking about that in class.

Rick: Yeah, it's a special fuel I invented to travel through space faster than anybody else. These Zigerions are always trying to scam me out of my secrets, but they made a big mistake this time, Morty. They dragged you into this. Now they're gonna pay!

Morty: What do you- w-w-what are we gonna do?

Rick: We're gonna scam the scammers, Morty. nd we're gonna take 'em for everything they've got.

The following exercices will be easier to complete if you are a fan of "Rick and Morty"

Ch pter III

Exercise $00: ft_strdup$

	Exercise 00	
/	ft_strdup	
Turn-in directory		
Files to turn in:		
llowed functions		

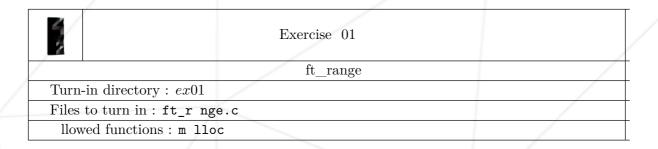
Reproduce the behavior of the function strdup (man strdup).

Here's how it should be prototyped :

ch r *ft_strdup(ch r *src);

Ch pter IV

Exercise 01: ft_r nge



Create a function ft_range which returns an array of ints. This int array should contain all values between min and max.

Min included - max excluded.

Here's how it should be prototyped:

```
int *ft_r nge(int min, int m x);
```

If minvalue is greater or equal to max's value, a null pointer should be returned.

Ch pter V

Exercise 02: ft_ultim te_r nge

	Exercise 02	
	ft_ultimate_range	
Turn-in directory : $ex0$		
Files to turn in : ft_ul		
llowed functions: m		

Create a function ft_ultimate_range which allocates and assigns an array of ints. This int array should contain all values between min and max.

Min included - max excluded.

Here's how it should be prototyped:

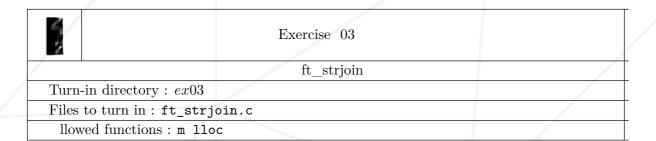
```
int ft_ultim te_r nge(int **r nge, int min, int m x);
```

The size of range should be returned (or -1 on error).

If the value of min is greater or equal to max's value, range will point on NULL and it should return 0.

Ch pter VI

Exercice 03: ft_strjoin



Write a function that will concatenate all the strings pointed by strs separated by sep.

size is the number of strings in strs

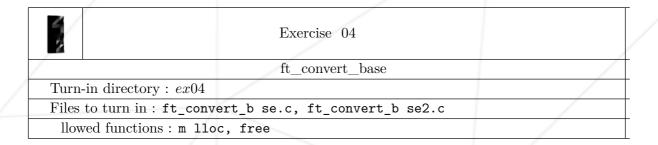
if size is 0, it should a freeable empty string.

Here's how it should be prototyped:

ch r *ft_strjoin(int size, ch r **strs, ch r *sep);

Ch pter VII

Exercise 04: ft_convert_b se



Create a function that returns the result of the conversion of the string nbr from a base base_from to a base base_to.

nbr, base_from, base_to may be not writable.

nbr will follow the same rules as ft_atoi_base (from an other module). Beware of '+', '-' and whitespaces.

The number represented by nbr must fit inside an int.

If a base is wrong, NULL should be returned.

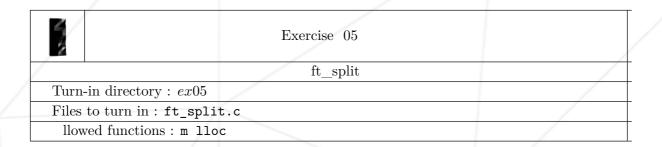
The returned number must be prefix only by a single and uniq '-' if necessary, no whitespaces, no '+'.

Here's how it should be prototyped:

ch r *ft_convert_b se(ch r *nbr, ch r *b se_from, ch r *b se_to);

Ch pter VIII

Exercise 05: ft_split



Create a function that splits a string of character depending on another string of characters.

You'll have to use each character from the string charset as a separator.

The function returns an array where each element of the array contains the address of a string wrapped between two separators. The last element of that array should equal to 0 to indicate the end of the array.

There cannot be any empty strings in your array. Get your own conclusions accordingly.

The string given as argument won't be modifiable.

Here's how it should be prototyped:

ch r **ft_split(ch r *str, ch r *ch rset);