C Piscine

Day 12

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Summary: This document is the subject for Day12 of the C Piscine @ 42.

Contents

Chapter 1

Instructions

- The exercises are carefully laid out in order of difficulty, from easiest to hardest. An exercise is only graded if all previous ones are correct. In other words: the grading for a day stops at the first mistake.

- Be mindful of the submission procedures indicated at the start of every exercise.

- 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. Be as thorough as possible!

- Moulinette relies on a program called **norminette** to check if your files respect the Norm. An exercise containing files that do not respect the Norm will be graded 0.

- Using a forbidden function is considered cheating. Cheaters get -42, and this grade is non-negotiable.

- If **ft_putchar()** is an authorized function, we will compile your code with our **ft_putchar.c**.

- 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, it will be graded 0.

- You should not leave any additional file in your directory than those specified in the subject.

> **For this day, norminette is launched without any particular flag!**

The forewords are entirely unrelated to the subjects and can safely be ignored.

Chapter 2

Topics

Today, you will have to learn about:

- File handling

- Standard file descriptors

Chapter 3

Foreword

Body Count is an American heavy metal band formed in Los Angeles, California, in 1990. The group is fronted by Ice-T, who co-founded the group with lead guitarist Ernie C out of their interest in heavy metal music. Ice-T took on the role of vocalist and writing the lyrics for most of the group's songs. Lead guitarist Ernie C has been responsible for writing the group's music. Their controversial self-titled debut album was released on Sire Records in 1992.

The song "Cop Killer" was the subject of much controversy. Although Sire Records' parent company, Warner Bros. Records, defended the single, Ice-T chose to remove the track from the album because he felt that the controversy had eclipsed the music itself. The group left Sire the following year. Since then, they have released three further albums on different labels, none of which have been received as commercially or critically well as their debut album.

Three out of the band's original six members are deceased: D-Roc died from lymphoma, Beatmaster V from leukemia and Mooseman in a drive-by shooting.

Click here, start it, and work... Right Now !

Chapter 4

Exercise 00 : display_file

Turn-in directory : `ex00/`

Files to turn in: `Makefile, and files needed for your program`

Allowed functions: `close, open, read, write`

- Create a <u>program</u> called **ft_display_file** that displays, on the standard output, the content of the file given as argument.

- The submission directory should have a **Makefile** with the following rules : **all**, **clean**, **fclean**. The binary will be called **ft_display_file**.

- The **malloc** function is forbidden. You can only do this exercise by declaring a fixed-sized array.

- All files given as arguments will be valid.

- Error messages have to be displayed on their reserved output.

  ```
  $> ./ft_display_file
  File name missing.
  $> ./ft_display_file Makefile
  *contenu du Makefile*
  $> ./ft_display_file Makefile display_file.c
  Too many arguments.
  $>
  ```

Chapter 5

Exercise 01 : cat

Turn-in directory : ex01/

Files to turn in: Makefile, and files needed for your program

Allowed functions: close, open, read, write

- Create a <u>program</u> called **ft_cat** which does the same thing as the system's **cat** command-line.

- You don't have to handle options.

- The submission directory should have a **Makefile** with the following rules : **all**, **clean**, **fclean**.

- You may use the variable **errno** (check the **man** for **Errno**).

- You can only do this exercise by declaring a fixed-sized array. This array will have a size limited to a little less than **30 ko**. In order to test that size-limit, use the **limit** command-line in your Shell.

```
$> limit stacksize 32
$> limit stacksize
stacksize 32 kbytes
$>
```

Chapter 6

Exercise 02 : tail

Turn-in directory : ex02/

Files to turn in: Makefile, and files needed for your program

Allowed functions: close, open, read, write, malloc, free

- Create a program called **ft_tail** which does the same thing as the system command **tail**, but which takes at least one file as argument.

- The only option you have to handle is **-c**. This option will be present in all tests.

- The submission directory should have a **Makefile** with the following rules : **all**, **clean**, **fclean**.

- You may use the variable **errno**.

Chapter 7

Exercise 03 : hexdump

Turn-in directory : ex03/

Files to turn in: Makefile, and files needed for your program

Allowed functions: close, open, read, write, malloc, free

- Create a program called **ft_hexdump** which does the same thing as the system's **hexdump** command-line.

- The only option you have to handle is **-C**.

- The submission directory should have a **Makefile** with the following rules : **all**, **clean**, **fclean**.

- You may use the variable **errno**.

Chapter 8

Exercise 04 : last

Turn-in directory : ex04/

Files to turn in: Makefile, and files needed for your program

Allowed functions: close, open, read, write, malloc, free

- Create a program called **ft_last** and that does the same thing as the system's command-line : **last**, without options.

- The submission directory should have a **Makefile** with the following rules : **all**, **clean**, **fclean**.

- You're only allowed to **include <utmp.h>, <time.h>, <errno.h>** and **<sys/types.h>**

- You cannot use functions such as **ctime(), asctime(), stat()**, etc.