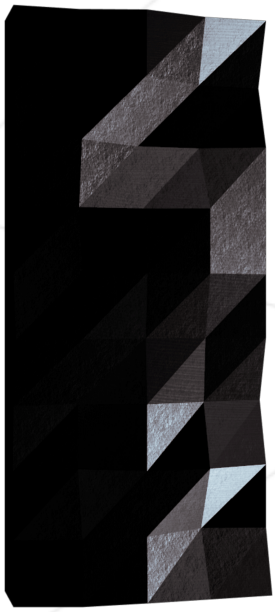

A completely UNIX project

ft_nm, ft_otool

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Summary: This project is about recoding the command nm and the command otool

Contents

Chapter I

Foreword

theorem 1 (Lagrange)**.** *For any finite group G, the order (number of elements) of every subgroup H of G divides the order of G.*

Proof. Let $\sim$, be the relation defined by: for everything $x, y \in G$, $x \sim y$ if and only if there is a in H such as $ax = y$. Let's show that $\sim$ east an equivalence relation.

reflexivity $1x = x$.

Symmetry if $ax = y$ then $x = a^{-1}y$.

transitivity If $ax = y$ and $by = z$ then $(ba)x = z$

The following equivalence classes $\sim$ form a partition of G. By $x \in G$, $cl(x) = Hx$. If we show that all classes have the same cardinal, so we show that the cardinal of $cl(1) = H$ divides the cardinal from G.

Let $a, b \in G$. Let's explain a bijection of Ha dans Hb. Let $f : Ha \longrightarrow Hb$ as for all x in G, $f(x) = xa^{-1}b$. Let $g : Hb \longrightarrow Ha$ as for all x in G, $g(x) = xb^{-1}a$. For all $x \in G$, $f(g(x)) = xb^{-1}aa^{-1}b = x$ et $g(f(x)) = xa^{-1}bb^{-1}a = x$. So $g = f^{-1}$.

□

Chapter II

Sujet

You have to recode the `nm` (with no options) and the `otool` command (exactly the same as `otool -t`)

```
$ man nm

$ man otool
```

- This project will be corrected by humans only. You're allowed to organise and name your files as you see fit, but you must follow the following rules.
- You can in bonus, makes the options of nm and d'otool.
- The executable must be named `ft_nm` and `ft_otool`
- You must use C and submit a Makefile.
- Your Makefile must compile the project and must contain the usual rules.
- If you are clever, you will use your library for your `ft_nm_otool`. Submit also your folder `libft` including its own `Makefile` at the root of your repository. Your Makefile will have to compile the library, and then compile your project.
- Your project must be written in accordance with the Norm. Only norminette is authoritative.
- You have to handle errors carefully. In no way can your program quit in an unexpected manner (Segmentation fault, bus error, double free, etc).
- You'll have to submit a file called `author` containing your usernames followed by a '\n' at the root of your repository.

```
$>cat -e author
xlogin$
$>
```

- Within the mandatory part, you are allowed to use the following functions:
  - open(2)
  - close(2)
  - mmap(2)
  - munmap(2)
  - write(2)
  - fstat(2)
  - malloc(3)
  - free(3)
- You can ask your questions on the forum, on slack...