

System-oriented Programming

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S10

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Exercise 1

What is the meaning of the following four expressions :

- `.a` : any single character followed by an "a".
- `\.a` : a dot followed by an "a".
- `[a]*` : zero or more "a" consecutively.
- `[^a]*` : non-"a" character, zero or more times, consecutively.

What is the meaning of the following line commands :

1. print all line (and line number) from "hello.c" which contains a left bracket or a right bracket.
2. print all line (and line number) from "hello.c" which contains a character.
3. same as `cat hello.c` but with the line number, print the whole file.
4. print the number of line from "hello.c" that end with a ";".
5. print the number of line from "hello.c" that don't end with a ";".
6. print all file name in the current directory (and sub-directory, recursively) where its name contains any character followed by a "c".
7. print all file name in the current directory (and sub-directory, recursively) where its name contains a dot followed by a "c".
8. print all file name in the current directory (and sub-directory, recursively) where its name end by a dot and a "c".
9. print all the file name which contains a line with "my_stack.h", for example showing all the file that include "my_stack.h".

"Hello World" : `egrep -rl 'Hello world'`

"Pattern" : `egrep -rli 'Pattern'`

"Hello world" in .c files : `egrep -l 'Hello World' `find . -printf "%p\n" | egrep '\.c'``

- `("University" AND "Fribourg")`
- `("University" OR "Fribourg")`
- `"University Fribourg"`
- `("University Fribourg" OR "University Bern")`
- `("University Fribourg" OR "University Bern") NOT "University Geneva"`

Output of `echo $USER "$USER" '$USER'` :

`snipy snipy $USER`

The `$USER` in single quote is not interpreted by the shell.

Additional features

- Deletion of a triplet (delete the matching triplet).
- Implementation of a static index, which needs to be rebuild if the database change.
- Implementation of a dynamic index, which index the data on each insert and delete.
- The possibility to precise the index we want to use.
- Implementation of a simple shell, in order to use the database in (kind of) real-time, without having to hard code it.
- I have much more idea, but it is limited to 5 here :).