

## **B1 - Unix & C Lab Seminar**

B-CPE-101

## Bistro-matic

Kind of Basic Calculator



3.0





## Bistro-matic

**binary name**: calc **language**: C

compilation: via Makefile, including re, clean and fclean rules



- The totality of your source files, except all useless files (binary, temp files, obj files,...), must be included in your delivery.
- All the bonus files (including a potential specific Makefile) should be in a directory named *bonus*.
- Error messages have to be written on the error output, and the program should then exit with the 84 error code (O if there is no error).

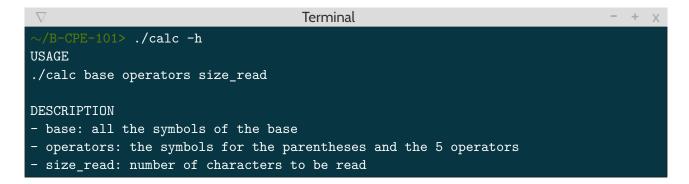


Only the project submitted by your project leader will be checked-out.

The goal of this project is to write a program that will display the result of an evaluated mathematical expression. The expression will be composed of infinite integers that can be expressed in any base. The program must handle the following operators: +-\*/%, parentheses, operation priorities and syntax errors, but not float numbers.



man bc





If a syntax error occurs, the program must display the string defined by the SYNTAX\_ERROR\_MSG macro.

For any other error, the program must display the string defined by the ERROR\_MSG macro.







The libC is forbidden, except the following functions: read, write, malloc, free, exit.

```
Terminal

- + x

- /B-CPE-101> echo '3+6' | ./calc 0123456789 '()+-*/%' 3; echo

- /B-CPE-101> echo '3v6' | ./calc 0123456789 '{}vwxyz' 3; echo

- /B-CPE-101> echo '----+-6(12)' | ./calc 0123456789 '()+-*/%' 10; echo

syntax error

- /B-CPE-101> echo '----+-6*12' | ./calc 0123456789 '()+-*/%' 11 | cat -e; echo

- 72

- /B-CPE-101> echo '-(12-(4*32))' | ./calc 0123456789 '()+-*/%' 12 | cat -e; echo

116

- /B-CPE-101> echo '-(e@-(;*!@))' | ./calc '0A@!;ie& ]' '()+-*/%' 12 | cat -e; echo

ee

- /B-CPE-101> echo '-(12*(13+15/5*(6/(12+14%(30%5+(10*25)-46)+16)-20)/43)*20)

* (-(12-98*42)*(16+63-50/3))' | ./calc 0123456789 '()+-*/%' 84 | cat -e; echo

- 744629760
```



The given main.c and bistromatic.h files are given as-is, feel free to use them (or not). They are not guaranteed to be fully compliant with the coding style.