B1- Unix and C Lab Seminar

B-CPE-101

EvalExpr

Evaluating an Arithmetic Expression

v1.7

EvalExpr

Evaluating an Arithmetic Expression

binary name:	eval_expr
repository name:	CPool_evalexpr_$ACADEMICYEAR
repository rights:	ramassage-tek
language:	C
group size:	2
compilation:	via Makefile, including re, clean and fclean rules

- Your repository must contain the totality of your source files, but no useless files (binary, temp files, obj files,...).
- 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 (0 if there is no error).

The goal of this project is to write the **eval_expr** function, which must be prototyped as follows:

```
int eval_expr(char *str);
```

It takes a string as parameter, which represents a mathematical expression, evaluates this expression and returns the result as an integer.
The string received as parameter will always be **valid** (no syntax errors, no divisions by zero,...).

The following five operators must be supported:

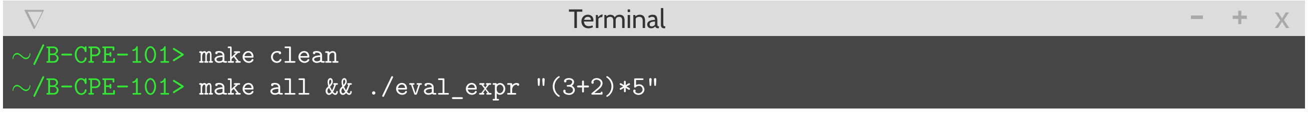
- '+' for addition,
- '-' for subtraction,
- '/' for division,
- '*' for multiplication,
- '%' for modulo.

The function must also handle any number of parenthesis.

Your have to use the following main function:

```
int main(int ac, char **av)
{
        if (ac == 2)
        {
                my_put_nbr(eval_expr(av[1]));
                my_putchar('\n');
                return (0);
        }
        return (84);
}
```

Here is how the function will be tested:



```
~/B-CPE-101> make clean
~/B-CPE-101> make all && ./eval_expr "(3+2)*5"
```

You are allowed not to use any system functions, except *write, malloc, free*.