

CSE 341 - PROGRAMMING LANGUAGES – HW #3 REPORT

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Part1)

I written makefile, so you can easily execute.

Run command : make

`./output.out`

If you want to read from file : `./output.out test.gpp`

My yacc file : `gpp_interpreter.y`

My lexer file : `gpp_lexer.l`

Generated files : `y.tab.c`

`y.tab.h`

`lex.yy.c`

My other files : `gpp_interpreter.c`

`gpp_interpreter.h`

My test file : `test.gpp`

-> My other files are the necessary files to successfully work for my parser.

-> I implemented all operations except 1 operations. I didn't implement `set(KW_SET)` or `assignment(=)` operations.

-> I implemented `deffun` but I could not implement it exactly as it should be.

-> If your expression is not recognized, the program are exited.

-> Test results :

```
> ./output.out
(+ 3 3)
6
(- 10 3)
7
(* 10 5)
50
(/ 10 2)
5
(list 10 4 5 7 62)
(10 4 5 7 62)
(if (equal 0 0) 1 2)
1
(if (not (equal 0 0)) 1 2)
2
(append 1 (list 5 6 7))
(1 5 6 7)
(concat (list 1 2 3) (list 5 6 7))
(1 2 3 5 6 7)
(dispatch true)
true
(dispatch 10)
10
(less 20 10)
false
(and true true)
true
(or false true)
true
(exit)
```

```
> ./output.out
(for (x 2 6) (list 1 2 3 4 5 6 7 8 9))
3
4
5
6
7
```

Part2)

Run command : `clisp gpp_interpreter.lisp`

If you want to read from file : `clisp gpp_interpreter.lisp test.gpp`

My parser file : gpp_interpreter.lisp

My lexer file : gpp_lexer.lisp

My test file : test.gpp

-> I implemented all operations except 3-4 operations.

-> I didn't implemented if ,concat, function, set operation.

-> Test results :

```
> clisp gpp_interpreter.lisp
(+ 20 3)
23
(- 10 3)
7
(* 25 5)
125
(/ 25 5)
5
(list 3 4 5 6 7)
(3 4 5 6 7)
(append 1 (list 4 5 2))
(4 5 2 1)
(dispatch true)
true
(dispatch false)
false
(not true)
false
(not false)
true
(less 20 10)
false
(and true true)
true
(or false true)
true
(equal 30 30)
true
```