

Trabalho de Compiladores

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trabalho.l

```

1 %{
2
3 #include <stdio.h>
4 #include "node.h"
5 #include "sint.h"
6
7 %}
8 %%
9
10 "print" {return TOK_PRINT;}
11 "linha" {return TOK_LINHA;}
12 "arco" {return TOK_ARC;}
13 "a" {return TOK_A;}
14 "/" "+" {return TOK_PLUS;}
15 "-" {return TOK_MINUS;}
16 "*" {return TOK_MULTPL;}
17 "/" {return TOK_DIVIDE;} */
18 "(" {return '(';}
19 ")" {return ')'}
20 ":" {return ':';}
21 "," {return ',';}
22
23 [+]?[0-9]+ {yylval.nint = atoi(yytext);
24             return TOK_INTEGER;}
25
26
27
28 [-+]?[0-9]+\.[0-9]+ {yylval.nint = atoi(yytext);
29                     return TOK_DOUBLE;}
30
31 [ \t\n] {}
32

```

trabalho.y

```

44 %start programa
45
46 %%
47 programa
48     : stmts          { Program p;
49                       p.generate($1); }
50     ;
51
52 stmts
53     : stmts stmt      { $$->append($2); }
54     | stmt            { $$ = new Stmts($1); }
55     ;
56
57 stmt
58     : funcao ';'      { $$ = new Stmts($1); }
59     | print ';'       { $$ = new Stmts($1); }
60
61 print
62     : TOK_PRINT funcao { $$ = new Print($2); }
63     ;
64
65 funcao
66     : TOK_LINHA cord TOK_A TOK_LINHA cord {
67         Stmts *s = new Stmts(new LinearMove($2->getCoordX(), $2->getCoordY(), $2->getCoordZ()));
68         s->append(new LinearMove($5->getCoordX(), $5->getCoordY(), $5->getCoordZ()));
69         $$ = s;
70     }
71     | TOK_ARC cord {
72         Stmts *s = new Stmts(new ArcMove($2->getCoordX(), $2->getCoordY(), $2->getCoordZ(), $2->getCoordI(), $2->getCoordJ()));
73         $$ = s;
74     }
75     ;
76
77 cord
78     : '(' number ',' number ',' number ')' { $$ = new Coord($2, $4, $6); }
79     | '(' number ',' number ',' number ',' number ',' number ')' { $$ = new Coord($2, $4, $6, $8, $10); }
80
81 number
82     : TOK_INTEGER { $$ = new Float($1); }
83     | TOK_DOUBLE { $$ = new Float($1); }
84     ;
85 %%

```

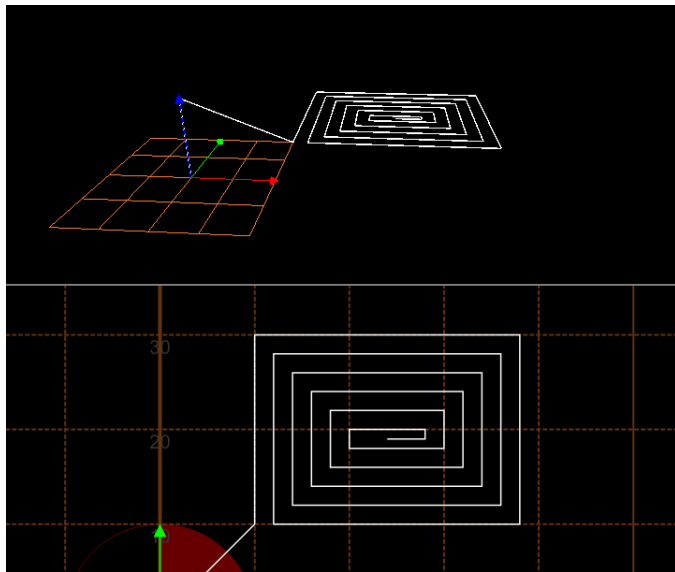
Programa .txt

```
linha(0,0,10) a linha(10,10,0);  
linha(10,30,0) a linha(38,30,0);  
linha(38,10,0) a linha(12,10,0);  
linha(12,28,0) a linha(36,28,0);  
linha(36,12,0) a linha(14,12,0);  
linha(14,26,0) a linha(34,26,0);  
linha(34,14,0) a linha(16,14,0);  
linha(16,24,0) a linha(32,24,0);  
linha(32,16,0) a linha(18,16,0);  
linha(18,22,0) a linha(30,22,0);  
linha(30,18,0) a linha(20,18,0);  
linha(20,18,0) a linha(20,20,0);  
linha(20,20,0) a linha(28,20,0);  
linha(28,19,0) a linha(24,19,0);
```

G-code gerado!

```
douglassilva@douglassilva-desktop ~/Documentos/Compiladores/trabalho $ ./t3.out
G01 X0.000000 Y0.000000 Z10.000000
G01 X10.000000 Y10.000000 Z0.000000
G01 X10.000000 Y30.000000 Z0.000000
G01 X38.000000 Y30.000000 Z0.000000
G01 X38.000000 Y10.000000 Z0.000000
G01 X12.000000 Y10.000000 Z0.000000
G01 X12.000000 Y28.000000 Z0.000000
G01 X36.000000 Y28.000000 Z0.000000
G01 X36.000000 Y12.000000 Z0.000000
G01 X14.000000 Y12.000000 Z0.000000
G01 X14.000000 Y26.000000 Z0.000000
G01 X34.000000 Y26.000000 Z0.000000
G01 X34.000000 Y14.000000 Z0.000000
G01 X16.000000 Y14.000000 Z0.000000
G01 X16.000000 Y24.000000 Z0.000000
G01 X32.000000 Y24.000000 Z0.000000
G01 X32.000000 Y16.000000 Z0.000000
G01 X18.000000 Y16.000000 Z0.000000
G01 X18.000000 Y22.000000 Z0.000000
G01 X30.000000 Y22.000000 Z0.000000
G01 X30.000000 Y18.000000 Z0.000000
G01 X20.000000 Y18.000000 Z0.000000
G01 X20.000000 Y18.000000 Z0.000000
G01 X20.000000 Y20.000000 Z0.000000
G01 X20.000000 Y20.000000 Z0.000000
G01 X28.000000 Y20.000000 Z0.000000
G01 X28.000000 Y19.000000 Z0.000000
G01 X24.000000 Y19.000000 Z0.000000
```

Spiral Quadrada



Fim