Universidade Federal de Alagoas
Instituto de Computação
Ciência da Computação

Nova - Lexer

Rubens Pessoa

8 de outubro de 2016

Sumário

Sumário **i**

1 Outputs **1**
1.1 Hello World 1
1.2 Fibonacci 1
1.3 ShellSort 4

1 Outputs

1.1 Hello World

```
[(Sequence: void, Token Category: 40, Position: (0, 0))
, (Sequence: main, Token Category: 1, Position: (0, 4))
, (Sequence: (, Token Category: 30, Position: (0, 8))
, (Sequence: ), Token Category: 31, Position: (0, 9))
, (Sequence: {, Token Category: 32, Position: (0, 10))
, (Sequence: printOut, Token Category: 42, Position: (1, 0))
, (Sequence: (, Token Category: 30, Position: (1, 8))
, (Sequence: "AloMundo!", Token Category: 4, Position: (1, 9))
, (Sequence: ), Token Category: 31, Position: (1, 20))
, (Sequence: ;, Token Category: 29, Position: (1, 21))
, (Sequence: }, Token Category: 33, Position: (2, 0))
]
```

1.2 Fibonacci

```
[(Sequence: int, Token Category: 23, Position: (0, 0))
, (Sequence: fibonacci, Token Category: 1, Position: (0, 3))
, (Sequence: (, Token Category: 30, Position: (0, 12))
, (Sequence: int, Token Category: 23, Position: (0, 13))
, (Sequence: n, Token Category: 1, Position: (0, 16))
, (Sequence: ), Token Category: 31, Position: (0, 17))
, (Sequence: {, Token Category: 32, Position: (0, 18))
, (Sequence: int, Token Category: 23, Position: (1, 0))
, (Sequence: f1, Token Category: 1, Position: (1, 3))
, (Sequence: =, Token Category: 5, Position: (1, 5))
, (Sequence: 0, Token Category: 3, Position: (1, 6))
, (Sequence: ;, Token Category: 29, Position: (1, 7))
, (Sequence: int, Token Category: 23, Position: (2, 0))
, (Sequence: f2, Token Category: 1, Position: (2, 3))
, (Sequence: =, Token Category: 5, Position: (2, 5))
, (Sequence: 1, Token Category: 3, Position: (2, 6))
, (Sequence: ;, Token Category: 29, Position: (2, 7))
, (Sequence: int, Token Category: 23, Position: (3, 0))
, (Sequence: fi, Token Category: 1, Position: (3, 3))
, (Sequence: =, Token Category: 5, Position: (3, 5))
, (Sequence: 0, Token Category: 3, Position: (3, 6))
```

```
22  , (Sequence: ;, Token Category: 29, Position: (3, 7))
23  , (Sequence: int, Token Category: 23, Position: (5, 0))
24  , (Sequence: Out, Token Category: 1, Position: (5, 3))
25  , (Sequence: (, Token Category: 30, Position: (5, 6))
26  , (Sequence: 0, Token Category: 3, Position: (5, 7))
27  , (Sequence: ), Token Category: 31, Position: (5, 8))
28  , (Sequence: ;, Token Category: 29, Position: (5, 9))
29  , (Sequence: string, Token Category: 26, Position: (6, 0))
30  , (Sequence: Out, Token Category: 1, Position: (6, 6))
31  , (Sequence: (, Token Category: 30, Position: (6, 9))
32  , (Sequence: "", Token Category: 4, Position: (6, 10))
33  , (Sequence: ,, Token Category: 43, Position: (6, 12))
34  , (Sequence: "", Token Category: 4, Position: (6, 13))
35  , (Sequence: ), Token Category: 31, Position: (6, 15))
36  , (Sequence: ;, Token Category: 29, Position: (6, 16))
37  , (Sequence: int, Token Category: 23, Position: (7, 0))
38  , (Sequence: Out, Token Category: 1, Position: (7, 3))
39  , (Sequence: (, Token Category: 30, Position: (7, 6))
40  , (Sequence: 1, Token Category: 3, Position: (7, 7))
41  , (Sequence: ), Token Category: 31, Position: (7, 8))
42  , (Sequence: ;, Token Category: 29, Position: (7, 9))
43  , (Sequence: if, Token Category: 18, Position: (9, 0))
44  , (Sequence: (, Token Category: 30, Position: (9, 2))
45  , (Sequence: n, Token Category: 1, Position: (9, 3))
46  , (Sequence: =, Token Category: 5, Position: (9, 4))
47  , (Sequence: =, Token Category: 5, Position: (9, 5))
48  , (Sequence: 0, Token Category: 3, Position: (9, 6))
49  , (Sequence: or, Token Category: 16, Position: (9, 7))
50  , (Sequence: n, Token Category: 1, Position: (9, 9))
51  , (Sequence: =, Token Category: 5, Position: (9, 10))
52  , (Sequence: =, Token Category: 5, Position: (9, 11))
53  , (Sequence: 1, Token Category: 3, Position: (9, 12))
54  , (Sequence: ), Token Category: 31, Position: (9, 13))
55  , (Sequence: {, Token Category: 32, Position: (9, 14))
56  , (Sequence: shoot, Token Category: 20, Position: (10, 0))
57  , (Sequence: 1, Token Category: 3, Position: (10, 5))
58  , (Sequence: ;, Token Category: 29, Position: (10, 6))
59  , (Sequence: }, Token Category: 33, Position: (11, 0))
60  , (Sequence: ;, Token Category: 29, Position: (11, 1))
61  , (Sequence: while, Token Category: 21, Position: (13, 0))
62  , (Sequence: (, Token Category: 30, Position: (13, 5))
```

```
 63  , (Sequence: fi , Token Category: 1, Position: (13, 6))
 64  , (Sequence: <, Token Category: 6, Position: (13, 8))
 65  , (Sequence: n, Token Category: 1, Position: (13, 9))
 66  , (Sequence: ), Token Category: 31, Position: (13, 10))
 67  , (Sequence: {, Token Category: 32, Position: (13, 11))
 68  , (Sequence: fi , Token Category: 1, Position: (14, 0))
 69  , (Sequence: =, Token Category: 5, Position: (14, 2))
 70  , (Sequence: f1 , Token Category: 1, Position: (14, 3))
 71  , (Sequence: +, Token Category: 12, Position: (14, 5))
 72  , (Sequence: f2 , Token Category: 1, Position: (14, 6))
 73  , (Sequence: ;, Token Category: 29, Position: (14, 8))
 74  , (Sequence: f1 , Token Category: 1, Position: (15, 0))
 75  , (Sequence: =, Token Category: 5, Position: (15, 2))
 76  , (Sequence: f2 , Token Category: 1, Position: (15, 3))
 77  , (Sequence: ;, Token Category: 29, Position: (15, 5))
 78  , (Sequence: f2 , Token Category: 1, Position: (16, 0))
 79  , (Sequence: =, Token Category: 5, Position: (16, 2))
 80  , (Sequence: fi , Token Category: 1, Position: (16, 3))
 81  , (Sequence: ;, Token Category: 29, Position: (16, 5))
 82  , (Sequence: printOut , Token Category: 42, Position: (17, 0))
 83  , (Sequence: (, Token Category: 30, Position: (17, 8))
 84  , (Sequence: "", Token Category: 4, Position: (17, 9))
 85  , (Sequence: ,, Token Category: 43, Position: (17, 11))
 86  , (Sequence: "", Token Category: 4, Position: (17, 12))
 87  , (Sequence: ), Token Category: 31, Position: (17, 14))
 88  , (Sequence: ;, Token Category: 29, Position: (17, 15))
 89  , (Sequence: printOut , Token Category: 42, Position: (18, 0))
 90  , (Sequence: (, Token Category: 30, Position: (18, 8))
 91  , (Sequence: "fi", Token Category: 4, Position: (18, 9))
 92  , (Sequence: ), Token Category: 31, Position: (18, 13))
 93  , (Sequence: ;, Token Category: 29, Position: (18, 14))
 94  , (Sequence: }, Token Category: 33, Position: (19, 0))
 95  , (Sequence: shoot , Token Category: 20, Position: (21, 0))
 96  , (Sequence: fi , Token Category: 1, Position: (21, 5))
 97  , (Sequence: ;, Token Category: 29, Position: (21, 7))
 98  , (Sequence: }, Token Category: 33, Position: (22, 0))
 99  , (Sequence: void , Token Category: 40, Position: (24, 0))
100  , (Sequence: main , Token Category: 1, Position: (24, 4))
101  , (Sequence: (, Token Category: 30, Position: (24, 8))
102  , (Sequence: ), Token Category: 31, Position: (24, 9))
103  , (Sequence: {, Token Category: 32, Position: (24, 10))
```

```
104  , (Sequence: int, Token Category: 23, Position: (25, 0))
105  , (Sequence: n, Token Category: 1, Position: (25, 3))
106  , (Sequence: ;, Token Category: 29, Position: (25, 4))
107  , (Sequence: int, Token Category: 23, Position: (26, 0))
108  , (Sequence: In, Token Category: 1, Position: (26, 3))
109  , (Sequence: (, Token Category: 30, Position: (26, 5))
110  , (Sequence: n, Token Category: 1, Position: (26, 6))
111  , (Sequence: ), Token Category: 31, Position: (26, 7))
112  , (Sequence: ;, Token Category: 29, Position: (26, 8))
113  , (Sequence: int, Token Category: 23, Position: (28, 0))
114  , (Sequence: fib, Token Category: 1, Position: (28, 3))
115  , (Sequence: =, Token Category: 5, Position: (28, 6))
116  , (Sequence: fibonacci, Token Category: 1, Position: (28, 7))
117  , (Sequence: (, Token Category: 30, Position: (28, 16))
118  , (Sequence: n, Token Category: 1, Position: (28, 17))
119  , (Sequence: ), Token Category: 31, Position: (28, 18))
120  , (Sequence: ;, Token Category: 29, Position: (28, 19))
121  , (Sequence: #dosomethingwithfib, Token Category: 38, Position: (29
122  , (Sequence: }, Token Category: 33, Position: (30, 0))
123  ]
```

1.3 ShellSort

```
1  [(Sequence: void, Token Category: 40, Position: (0, 0))
2  , (Sequence: main, Token Category: 1, Position: (0, 4))
3  , (Sequence: (, Token Category: 30, Position: (0, 8))
4  , (Sequence: ), Token Category: 31, Position: (0, 9))
5  , (Sequence: {, Token Category: 32, Position: (0, 10))
6  , (Sequence: int, Token Category: 23, Position: (1, 0))
7  , (Sequence: size, Token Category: 1, Position: (1, 3))
8  , (Sequence: ;, Token Category: 29, Position: (1, 7))
9  , (Sequence: readIn, Token Category: 41, Position: (2, 0))
10 , (Sequence: (, Token Category: 30, Position: (2, 6))
11 , (Sequence: size, Token Category: 1, Position: (2, 7))
12 , (Sequence: ), Token Category: 31, Position: (2, 11))
13 , (Sequence: ;, Token Category: 29, Position: (2, 12))
14 , (Sequence: int, Token Category: 23, Position: (4, 0))
15 , (Sequence: vet, Token Category: 1, Position: (4, 3))
16 , (Sequence: ::, Token Category: 39, Position: (4, 6))
17 , (Sequence: size, Token Category: 1, Position: (4, 8))
```

```
18  , (Sequence: ;, Token Category: 29, Position: (4, 12))
19  , (Sequence: for, Token Category: 22, Position: (5, 0))
20  , (Sequence: (, Token Category: 30, Position: (5, 3))
21  , (Sequence: int, Token Category: 23, Position: (5, 4))
22  , (Sequence: i, Token Category: 1, Position: (5, 7))
23  , (Sequence: =, Token Category: 5, Position: (5, 8))
24  , (Sequence: 0, Token Category: 3, Position: (5, 9))
25  , (Sequence: ;, Token Category: 29, Position: (5, 10))
26  , (Sequence: i, Token Category: 1, Position: (5, 11))
27  , (Sequence: <, Token Category: 6, Position: (5, 12))
28  , (Sequence: size, Token Category: 1, Position: (5, 13))
29  , (Sequence: ;, Token Category: 29, Position: (5, 17))
30  , (Sequence: i, Token Category: 1, Position: (5, 18))
31  , (Sequence: =, Token Category: 5, Position: (5, 19))
32  , (Sequence: i, Token Category: 1, Position: (5, 20))
33  , (Sequence: +, Token Category: 12, Position: (5, 21))
34  , (Sequence: 1, Token Category: 3, Position: (5, 22))
35  , (Sequence: ), Token Category: 31, Position: (5, 23))
36  , (Sequence: {, Token Category: 32, Position: (5, 24))
37  , (Sequence: int, Token Category: 23, Position: (6, 0))
38  , (Sequence: x, Token Category: 1, Position: (6, 3))
39  , (Sequence: ;, Token Category: 29, Position: (6, 4))
40  , (Sequence: readIn, Token Category: 41, Position: (7, 0))
41  , (Sequence: (, Token Category: 30, Position: (7, 6))
42  , (Sequence: x, Token Category: 1, Position: (7, 7))
43  , (Sequence: ), Token Category: 31, Position: (7, 8))
44  , (Sequence: ;, Token Category: 29, Position: (7, 9))
45  , (Sequence: add, Token Category: 1, Position: (8, 0))
46  , (Sequence: (, Token Category: 30, Position: (8, 3))
47  , (Sequence: vet, Token Category: 1, Position: (8, 4))
48  , (Sequence: ,, Token Category: 43, Position: (8, 7))
49  , (Sequence: x, Token Category: 1, Position: (8, 8))
50  , (Sequence: ), Token Category: 31, Position: (8, 9))
51  , (Sequence: ;, Token Category: 29, Position: (8, 10))
52  , (Sequence: }, Token Category: 33, Position: (9, 0))
53  , (Sequence: ;, Token Category: 29, Position: (9, 1))
54  , (Sequence: int, Token Category: 23, Position: (11, 0))
55  , (Sequence: value, Token Category: 1, Position: (11, 3))
56  , (Sequence: ;, Token Category: 29, Position: (11, 8))
57  , (Sequence: int, Token Category: 23, Position: (12, 0))
58  , (Sequence: gap, Token Category: 1, Position: (12, 3))
```

```
59 , (Sequence: =, Token Category: 5, Position: (12, 6))
60 , (Sequence: 1, Token Category: 3, Position: (12, 7))
61 , (Sequence: ;, Token Category: 29, Position: (12, 8))
62 , (Sequence: while, Token Category: 21, Position: (13, 0))
63 , (Sequence: (, Token Category: 30, Position: (13, 5))
64 , (Sequence: gap, Token Category: 1, Position: (13, 6))
65 , (Sequence: <, Token Category: 6, Position: (13, 9))
66 , (Sequence: size, Token Category: 1, Position: (13, 10))
67 , (Sequence: ), Token Category: 31, Position: (13, 14))
68 , (Sequence: {, Token Category: 32, Position: (13, 15))
69 , (Sequence: gap, Token Category: 1, Position: (14, 0))
70 , (Sequence: =, Token Category: 5, Position: (14, 3))
71 , (Sequence: 3, Token Category: 3, Position: (14, 4))
72 , (Sequence: *, Token Category: 14, Position: (14, 5))
73 , (Sequence: gap, Token Category: 1, Position: (14, 6))
74 , (Sequence: +, Token Category: 12, Position: (14, 9))
75 , (Sequence: 1, Token Category: 3, Position: (14, 10))
76 , (Sequence: ;, Token Category: 29, Position: (14, 11))
77 , (Sequence: }, Token Category: 33, Position: (15, 0))
78 , (Sequence: ;, Token Category: 29, Position: (15, 1))
79 , (Sequence: while, Token Category: 21, Position: (17, 0))
80 , (Sequence: (, Token Category: 30, Position: (17, 5))
81 , (Sequence: gap, Token Category: 1, Position: (17, 6))
82 , (Sequence: >, Token Category: 7, Position: (17, 9))
83 , (Sequence: 1, Token Category: 3, Position: (17, 10))
84 , (Sequence: ), Token Category: 31, Position: (17, 11))
85 , (Sequence: {, Token Category: 32, Position: (17, 12))
86 , (Sequence: gap, Token Category: 1, Position: (18, 0))
87 , (Sequence: =, Token Category: 5, Position: (18, 3))
88 , (Sequence: gap, Token Category: 1, Position: (18, 4))
89 , (Sequence: /, Token Category: 36, Position: (18, 7))
90 , (Sequence: 3, Token Category: 3, Position: (18, 8))
91 , (Sequence: ;, Token Category: 29, Position: (18, 9))
92 , (Sequence: for, Token Category: 22, Position: (19, 0))
93 , (Sequence: (, Token Category: 30, Position: (19, 3))
94 , (Sequence: int, Token Category: 23, Position: (19, 4))
95 , (Sequence: i, Token Category: 1, Position: (19, 7))
96 , (Sequence: =, Token Category: 5, Position: (19, 8))
97 , (Sequence: gap, Token Category: 1, Position: (19, 9))
98 , (Sequence: ;, Token Category: 29, Position: (19, 12))
99 , (Sequence: i, Token Category: 1, Position: (19, 13))
```

```
100  , (Sequence: <, Token Category: 6, Position: (19, 14))
101  , (Sequence: size, Token Category: 1, Position: (19, 15))
102  , (Sequence: ;, Token Category: 29, Position: (19, 19))
103  , (Sequence: i, Token Category: 1, Position: (19, 20))
104  , (Sequence: =, Token Category: 5, Position: (19, 21))
105  , (Sequence: i, Token Category: 1, Position: (19, 22))
106  , (Sequence: +, Token Category: 12, Position: (19, 23))
107  , (Sequence: 1, Token Category: 3, Position: (19, 24))
108  , (Sequence: ), Token Category: 31, Position: (19, 25))
109  , (Sequence: {, Token Category: 32, Position: (19, 26))
110  , (Sequence: value, Token Category: 1, Position: (20, 0))
111  , (Sequence: =, Token Category: 5, Position: (20, 5))
112  , (Sequence: getValue, Token Category: 1, Position: (20, 6))
113  , (Sequence: (, Token Category: 30, Position: (20, 14))
114  , (Sequence: vet, Token Category: 1, Position: (20, 15))
115  , (Sequence: ,, Token Category: 43, Position: (20, 18))
116  , (Sequence: i, Token Category: 1, Position: (20, 19))
117  , (Sequence: ), Token Category: 31, Position: (20, 20))
118  , (Sequence: ;, Token Category: 29, Position: (20, 21))
119  , (Sequence: int, Token Category: 23, Position: (21, 0))
120  , (Sequence: j, Token Category: 1, Position: (21, 3))
121  , (Sequence: =, Token Category: 5, Position: (21, 4))
122  , (Sequence: i, Token Category: 1, Position: (21, 5))
123  , (Sequence: -, Token Category: 13, Position: (21, 6))
124  , (Sequence: gap, Token Category: 1, Position: (21, 7))
125  , (Sequence: ;, Token Category: 29, Position: (21, 10))
126  , (Sequence: while, Token Category: 21, Position: (23, 0))
127  , (Sequence: (, Token Category: 30, Position: (23, 5))
128  , (Sequence: j, Token Category: 1, Position: (23, 6))
129  , (Sequence: >, Token Category: 7, Position: (23, 7))
130  , (Sequence: =, Token Category: 5, Position: (23, 8))
131  , (Sequence: 0, Token Category: 3, Position: (23, 9))
132  , (Sequence: and, Token Category: 15, Position: (23, 10))
133  , (Sequence: value, Token Category: 1, Position: (23, 13))
134  , (Sequence: <, Token Category: 6, Position: (23, 18))
135  , (Sequence: getValue, Token Category: 1, Position: (23, 19))
136  , (Sequence: (, Token Category: 30, Position: (23, 27))
137  , (Sequence: vet, Token Category: 1, Position: (23, 28))
138  , (Sequence: ,, Token Category: 43, Position: (23, 31))
139  , (Sequence: j, Token Category: 1, Position: (23, 32))
140  , (Sequence: ), Token Category: 31, Position: (23, 33))
```

```
141 , (Sequence: ), Token Category: 31, Position: (23, 34))
142 , (Sequence: {, Token Category: 32, Position: (23, 35))
143 , (Sequence: setValue, Token Category: 1, Position: (24, 0))
144 , (Sequence: (, Token Category: 30, Position: (24, 8))
145 , (Sequence: vet, Token Category: 1, Position: (24, 9))
146 , (Sequence: ,, Token Category: 43, Position: (24, 12))
147 , (Sequence: j, Token Category: 1, Position: (24, 13))
148 , (Sequence: +, Token Category: 12, Position: (24, 14))
149 , (Sequence: gap, Token Category: 1, Position: (24, 15))
150 , (Sequence: ,, Token Category: 43, Position: (24, 18))
151 , (Sequence: getValue, Token Category: 1, Position: (24, 19))
152 , (Sequence: (, Token Category: 30, Position: (24, 27))
153 , (Sequence: vet, Token Category: 1, Position: (24, 28))
154 , (Sequence: ,, Token Category: 43, Position: (24, 31))
155 , (Sequence: j, Token Category: 1, Position: (24, 32))
156 , (Sequence: ), Token Category: 31, Position: (24, 33))
157 , (Sequence: ), Token Category: 31, Position: (24, 34))
158 , (Sequence: ;, Token Category: 29, Position: (24, 35))
159 , (Sequence: j, Token Category: 1, Position: (25, 0))
160 , (Sequence: =, Token Category: 5, Position: (25, 1))
161 , (Sequence: j, Token Category: 1, Position: (25, 2))
162 , (Sequence: −, Token Category: 13, Position: (25, 3))
163 , (Sequence: gap, Token Category: 1, Position: (25, 4))
164 , (Sequence: ;, Token Category: 29, Position: (25, 7))
165 , (Sequence: }, Token Category: 33, Position: (26, 0))
166 , (Sequence: ;, Token Category: 29, Position: (26, 1))
167 , (Sequence: setValue, Token Category: 1, Position: (28, 0))
168 , (Sequence: (, Token Category: 30, Position: (28, 8))
169 , (Sequence: vet, Token Category: 1, Position: (28, 9))
170 , (Sequence: ,, Token Category: 43, Position: (28, 12))
171 , (Sequence: j, Token Category: 1, Position: (28, 13))
172 , (Sequence: +, Token Category: 12, Position: (28, 14))
173 , (Sequence: gap, Token Category: 1, Position: (28, 15))
174 , (Sequence: ,, Token Category: 43, Position: (28, 18))
175 , (Sequence: value, Token Category: 1, Position: (28, 19))
176 , (Sequence: ), Token Category: 31, Position: (28, 24))
177 , (Sequence: ;, Token Category: 29, Position: (28, 25))
178 , (Sequence: }, Token Category: 33, Position: (29, 0))
179 , (Sequence: ;, Token Category: 29, Position: (29, 1))
180 , (Sequence: }, Token Category: 33, Position: (30, 0))
181 , (Sequence: ;, Token Category: 29, Position: (30, 1))
```

```
182  , (Sequence: }, Token Category: 33, Position: (31, 0))
183  , (Sequence: ;, Token Category: 29, Position: (31, 1))
184  ]
```