

CKY Tests:

Code

```
Main.java
27 public static void customCode() {
28     // You can write your own custom code here and run it with option 3.
29     // Good for testing your code works!
30     // Any code here is totally informal and does not count towards your submission.
31
32     // Below is the kind of code you might want to write to test your parser
33
34     ContextFreeGrammar cfg = MyGrammar.makeGrammar();
35
36     System.out.println("CKY ALGORITHM TESTS");
37     System.out.println("Word      :      isInLanguage?      :      Time Stamp(ms)");
38     long StartTime = System.currentTimeMillis();
39     long CurrentTime = System.currentTimeMillis()-StartTime;
40     System.out.println("      :      "+CurrentTime);
41     CurrentTime = System.currentTimeMillis()-StartTime;
42     System.out.println("1+0      :      "+parser.isInLanguage(cfg, new Word("1+0")));
43     System.out.println("      :      "+CurrentTime);
44     CurrentTime = System.currentTimeMillis()-StartTime;
45     System.out.println("01      :      "+parser.isInLanguage(cfg, new Word("01")));
46     CurrentTime = System.currentTimeMillis()-StartTime;
47     System.out.println("      :      "+CurrentTime);
48     System.out.println("*-      :      "+parser.isInLanguage(cfg, new Word("*-")));
49
50     CurrentTime = System.currentTimeMillis()-StartTime;
51     System.out.println("      :      "+CurrentTime);
52     System.out.println("1*-0      :      "+parser.isInLanguage(cfg, new Word("1*-0")));
53     CurrentTime = System.currentTimeMillis()-StartTime;
54     System.out.println("      :      "+CurrentTime);
55
56     CurrentTime = System.currentTimeMillis()-StartTime;
57     System.out.println("      :      "+CurrentTime);
58     System.out.println("1*-0*-1+0*-1      :      "+parser.isInLanguage(cfg, new Word("1*-0*-1+0*-1")));
59     CurrentTime = System.currentTimeMillis()-StartTime;
60     System.out.println("      :      "+CurrentTime);
61     System.out.println("0+-1*-0+1*1      :      "+parser.isInLanguage(cfg, new Word("0+-1*-0+1*1")));
62     CurrentTime = System.currentTimeMillis()-StartTime;
63     System.out.println("      :      "+CurrentTime);
64     System.out.println("1*0+-1+0*1      :      "+parser.isInLanguage(cfg, new Word("1*0+-1+0*1")));
65     CurrentTime = System.currentTimeMillis()-StartTime;
66     System.out.println("      :      "+CurrentTime);
67     System.out.println("1*0+0-1+1*0+-0      :      "+parser.isInLanguage(cfg, new Word("1*0+0-1+1*0+-0")));
68     CurrentTime = System.currentTimeMillis()-StartTime;
69     System.out.println("      :      "+CurrentTime);
70
71     parser.generateParseTree(cfg, new Word("1+0")).print();
72     CurrentTime = System.currentTimeMillis()-StartTime;
73     System.out.println("      :      "+CurrentTime);
74     parser.generateParseTree(cfg, new Word("01")).print();
75     CurrentTime = System.currentTimeMillis()-StartTime;
76     System.out.println("      :      "+CurrentTime);
77     parser.generateParseTree(cfg, new Word("*-")).print();
78     CurrentTime = System.currentTimeMillis()-StartTime;
79     System.out.println("      :      "+CurrentTime);
80
81     parser.generateParseTree(cfg, new Word("1*-0")).print();
82     CurrentTime = System.currentTimeMillis()-StartTime;
83     System.out.println("      :      "+CurrentTime);
84     parser.generateParseTree(cfg, new Word("1+1-0")).print();
85     CurrentTime = System.currentTimeMillis()-StartTime;
86     System.out.println("      :      "+CurrentTime);
87     parser.generateParseTree(cfg, new Word("1+1*-0")).print();
88     CurrentTime = System.currentTimeMillis()-StartTime;
89     System.out.println("      :      "+CurrentTime);
90     parser.generateParseTree(cfg, new Word("1+x*-0")).print();
91     CurrentTime = System.currentTimeMillis()-StartTime;
92     System.out.println("      :      "+CurrentTime);
93
94 }
```

Output

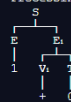
```
1 - Demo the code
2 - Run simple tests on Parser.java
3 - Run custom code (see the code for Main.java)
9 - Quit
3
```

CKY ALGORITHM TESTS

Word	:	isInLanguage?	:	Time Stamp(ms)
	:		:	0
1+0	:	true	:	0
01	:	false	:	2
-	:	false	:	3
1*-0	:	false	:	4
1+1-0	:	false	:	6
1+1*-0	:	true	:	8
1*x*-0	:	true	:	9
1*-0*-1+0*-1	:	true	:	15
0+-1*-0+1*1	:	true	:	19
1*0+--1+0*1	:	false	:	23
1*0+0-1+1*0+-0	:	false	:	29

Processing... 0.0%

Processing... 100.0%



No tree exists for 01 : 441

S

No tree exists for *-* : 452

S

No tree exists for 1*-0 : 454

S

No tree exists for 1+1-0 : 455

S

No tree exists for 1+1*-0 : 455

S

No tree exists for 1+1*x*-0 : 455

S

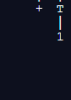
Processing... 0.0%

Processing... 25.0%

Processing... 50.0%

Processing... 75.0%

Processing... 100.0%



No tree exists for 1+1*-0 : 1146

S

No tree exists for 1+1*x*-0 : 1146

S

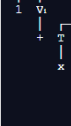
Processing... 0.0%

Processing... 25.0%

Processing... 50.0%

Processing... 75.0%

Processing... 100.0%



No tree exists for 1+1*x*-0 : 1641

S

(Press enter to continue...)

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