

## Brute Force Test Results

### Code

```
33 | ContextFreeGrammar cfg = MyGrammar.makeGrammar();
34 |
35 |
36 | System.out.println("BRUTE FORCE 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 | System.out.println("1+1-0      :      "+parser.isInLanguage(cfg, new Word("1+1-0")));
56 |
57 | CurrentTime = System.currentTimeMillis()-StartTime;
58 | System.out.println("      :      "+CurrentTime);
59 | parser.generateParseTree(cfg, new Word("1+0")).print();
60 | CurrentTime = System.currentTimeMillis()-StartTime;
61 | System.out.println("      :      "+CurrentTime);
62 | parser.generateParseTree(cfg, new Word("01")).print();
63 | CurrentTime = System.currentTimeMillis()-StartTime;
64 | System.out.println("      :      "+CurrentTime);
65 | parser.generateParseTree(cfg, new Word("*-*")).print();
66 | CurrentTime = System.currentTimeMillis()-StartTime;
67 | System.out.println("      :      "+CurrentTime);
68 |
69 | parser.generateParseTree(cfg, new Word("1*-0")).print();
70 | CurrentTime = System.currentTimeMillis()-StartTime;
71 | System.out.println("      :      "+CurrentTime);
72 | parser.generateParseTree(cfg, new Word("1+1-0")).print();
73 | CurrentTime = System.currentTimeMillis()-StartTime;
74 | System.out.println("      :      "+CurrentTime);
75 | }
76 |
```

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### Results

```
3 - Run custom code (see the code for Main.java)
9 - Quit
3

BRUTE FORCE ALGORITHM TESTS
Word      :      isInLanguage?      :      Time Stamp(ms)
      :      :      :      :
1+0      :      true      :      2
01      :      false      :      136
*-*      :      false      :      209
1*-0      :      false      :      964
1+1-0      :      false      :      26094

      S
      / \
     E  E2
    / \ / \
   1  Vi T  0
      +
      0

No tree exists for 01      :      26709
S

No tree exists for 01      :      26709
S

No tree exists for *-*      :      26747
S

No tree exists for 1*-0      :      26752
S

No tree exists for 1+1-0      :      26786
S

      :      38813

(Press enter to continue...)
[]
```