CST 334: Operating Systems

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# A simple syntax checker

**Instructions.** Have you noticed how a BNF grammar is like a program? We will write C code to check to see if an input string can be derived from a grammar. The grammar is:

A ::= 0 B

B ::= 1 A | 2 B | ;

Your program "check.c" should output "yes" if the line of standard input can be derived from this grammar, and "no" otherwise. Here are some examples:

$ ./check

0 ;

yes

$ ./check

0 2 1 ;

no

$

The input values will always be separated by spaces, as shown above. A tar file **check.tar** can be found on mlc104 in /home/CLASSES/brunsglenn/cst334/hw/hw12. The tar file contains a C file you will edit, some test cases, and a Makefile. Only edit the file where you see the comments 'YOUR CODE HERE'. I will use additional test cases in testing your code.

To help you get started, I've provided the solution code for a similar problem. A tar file **parens.tar** can also be found in the hw12 directory. This directory contains parens.c, some test cases, and a Makefile. Near the top of the file you can see the BNF grammar. Please read this code carefully and understand it. It will help you in writing the code you need in check.c.

**Submitting.**. Submit your edited check.c on iLearn.

**Grading.** 5 tests will be run on your code. 10 points/test.