Grammar

Description

Refer to Table 1, please modify the program according to the solution in Problem 1. Your program has to check the source whether it follows grammar rules or not. If yes, print “Valid” with a newline. If no, print “Invalid input” with a newline.

You will get no credits if you are not using Recursive-Decent-Parsing.

Input Format

Input program source, each line will end with a ‘\n’ character.
Not all input will follow the token definition and grammar rule.

Output Format

If the program source follow the rule, print “Valid” with a newline.
If the program source not follow the rule, print “Invalid” with a newline.

Table 1.

Productions			
1	program	→	stmts
2	stmts	→	stmt stmts
3	stmts	→	λ
4	stmt	→	exp SEMICOLON
5	exp	→	primary
6	exp	→	STRLIT
7	exp	→	λ
8	primary	→	ID primary_tail
9	primary_tail	→	DOT ID primary_tail
10	primary_tail	→	LBR exp RBR primary_tail
11	primary_tail	→	λ

Sample Input "test_string"; Test_ID; **Sample Output** Valid	**Sample Input** “string”; **Sample Output** Valid
Sample Input Str.length(; **Sample Output** Invalid	**Sample Input** Str.; **Sample Output** Invalid