ParserTest

Description

Please write a program to read a program source from stdin following the token definition and grammar rule at right.

If **Yes**, print each **token's type** and **the string of token** separated by **a whitespace** " " and end with a **newline**.

If **No**, print only **"invalid input"** with **a newline**. (don't output any token!)

Your program has to check the source whether it follows the token and grammar rules or not.

※請使用 **Recursive-Decent-Parsing (ch02 ppt page 20 begin)** 的模式來撰寫程式，否則將 不予計分。

※測試檔案的換行皆為 **\n**

Terminal	**Regular Expression**
ID	[A-Za-z_][A-Za-z0-9_]*
STRLIT	"[^"]*"
LBR	\(
RBR	\)
DOT	\.

Productions

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

Sample Input

"test_string"
Test_ID

Sample Output

STRLIT "test_string"
ID Test_ID

Sample Input

illiga!id

Sample Output

invalid input

Sample Input

Str. length()

Sample Output

ID Str
DOT .
ID length
LBR (
RBR)

Sample Input

printf("HelloWorld")

Sample Output

ID printf
LBR (
STRLIT "HelloWorld"
RBR)