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** seperated 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 exp → primary
5 exp → STRLIT
6 exp → λ
7 primary → ID primary_tail
8 primary_tail → DOT ID primary_tail
9 primary_tai → LBR exp 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)