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	\.
SEMICOLON	;

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_tai   →  LBR exp RBR primary_tail
11   primary_tai   →  λ
```

Sample Input

"test_string";
Test_ID;

Sample Output

STRLIT " test_string "
SEMICOLON ;
ID Test_ID
SEMICOLON ;

Sample Input

illiga!id;

Sample Output

invalid input

Sample Input

Str. length();

Sample Output

ID Str
DOT .
ID length
LBR (
RBR)
SEMICOLON ;

Sample Input

printf("HelloWorld");

Sample Output

ID printf
LBR (
STRLIT " HelloWorld "
RBR)
SEMICOLON ;