

Compiler HW1 0316219 林語新

platform:Linux workstation of cs / Mac OS X

abilities: 1. regular expression

2. "trigger" to figure whether the code is inside * *\

3. linked list by structure to count the ids.

sample input:

```
// print hello world
void main()
{
    int a;
    double b;
    print "hello world";

    a = 1+1;
    b = 1.23;

    if (a > 1){
        b = b*1.23e-1;
    }
#pragma token off/*
a
b
c
aaaaa*/
/*
aa
b*/
    if (a > 1){
#pragma token on
        b = b*1.23e-1;
    }
}
```

sample output:

```
| Lewis@B16deMacBook-Pro:Compiler lewis@B165 ./scanner main.c
1:// print hello world

<KW:void>
<id:main>
<delim:|>
<delim:|>
2:void main()

<delim:|>
3:{

<KW:int>
<id:a>
<delim:|>
4:    int a;

<KW:double>
<id:b>
<delim:|>
5:    double b;

<KW:print>
<string:hello world>
<delim:|>
6:    print "hello world";

7:

8:

<id:a>
<"a">
<int:1>
<"+">
<int:1>
<delim:|>
9:    a = 1+1;

<id:b>
<"b">
<float:1.23>
<delim:|>
10:    b = 1.23;

11:

<KW:if>
<delim:|>
<id:a>
<"a">
<int:1>
<delim:|>
<delim:|>
12:    if (a > 1){

<id:b>
<"b">
<id:b>
<"a">
<scientific:1.23e-1>
<delim:|>
13:        b = b*1.23e-1;

<delim:|>
14:    }

15:#pragma token off/*

16:

17:a

18:b

19:c

20:aaaaa*/

21:/*

22:aa

23:b*/

24:    if (a > 1){

25:#pragma token on

<id:b>
<"b">
<id:b>
<"a">
<scientific:1.23e-1>
<delim:|>
26:        b = b*1.23e-1;

<delim:|>
27:    }

<delim:|>
28:}

frequencies of identifiers:
main 1
a 4
b 6
```