4.Write a program which takes a programming statement as input and find all tokens in it.

Ex. I/P: result=first+second;

O/P: <result (id,1)><= (optr,=)> <first (id,2)> <+ (optr,+)> <second (id, 3)> <; (symbol,:)>

**PROGRAM**

#include<stdio.h>

#include<string.h>

void main()

{

char string[25][25],state[25];

int count=0,flag[25],k=0;

printf("enter any arithmetic expression: ");

for(int i=0;i<=string[i]!=";";i++)

scanf("%s",&string[i]);

for(int j=0;i<=string[j]!=";";j++)

{

if( (string[j][0]>='a'&&string[j][0]<='z')||(string[j][0]>='A'&&string[j][0]<='Z')||(string[j][0]=='\_'))

{

for(int i=1;i<=strlen(string);i++)

{

if((string[j][i]>='a'&& string[j][i]<='z')||(string[j][i]>='A' && string[j][i]<='Z')||(string[j][i]>='0'&& string[j][i]<='9')||(string[j][i]=='-'))

{

count++;

}

}

if(count==strlen(string[i]))

{

flag[j]=0;state[j]="id";

}

}

else if((string[j][0])="=")||(string[j][0])="+")||(string[j][0])="-")||(string[j][0])="\*")||(string[j][0])="/")) state[j]="optr";

}

for(int j=0;i<=string[j]!=";";j++)

{

if((state[j]=="id")&&(flag[j]==0))

printf("<%s (%s,%d)>",string[j],state[j],k++);

else printf("<%s(%s,%s)>",string[j],state[j],string[j]);

}