#include<stdio.h>

#include<string.h>

#define N 80

char word[5][10]={"begin","end","if","then","else"};

void dectobin(int n) {

if(n>1) dectobin(n/2);

printf("%d",n%2); /\*输出二进制数值\*/

}

int getsym(char a[],int length){

int i=0,j=0,n=0,m=0,temp=0;

char b[N];

if(a[i]!='\0')

{

// 读入字母

if(a[i]>=65&&a[i]<=122)

{

j=0;

while((a[i]>=65&&a[i]<=122)||(a[i]>='0'&&a[i]<='9')||a[i]=='\_')

{

b[j]=a[i];

j++;

i++;

}

if(a[i]!='\0'){

return 0;

}

i--;

b[j]='\0';

for(n=0;n<5;n++)

{

if(strcmp(b,word[n])==0)

{

printf("<关键字,%d,",n+1);

while(word[n][m]!='\0')

{

// printf("%c",word[n][m]);

m++;

}

printf(">\n");

temp=1;

return n+1;

}

}

if(temp==0)

printf("<标识符,20,%s>\n",b);

return 20;

}

//读入数字

else if(a[i]>='0'&&a[i]<='9'){

j=0;

while(a[i]>='0'&&a[i]<='9')

{

b[j]=a[i];

j++;

i++;

}

if(a[i]!='\0'){

return 0;

}

printf("<整常数,21,");

dectobin(atoi(b));

printf(">\n");

return 21;

}

//读入双字符分界符

else if(a[i]==':'){

j=0;

while(a[i]=='='||a[i]==':'){

b[j]=a[i];

j++;

i++;

}

if(a[i]!='\0'||i>2||a[1]==':'){

return 0;

}

if(i==1){

printf("<:,30>\n");

return 30;

}

else{

printf("<:=,31>\n");

return 31;

}

}

else if(a[i]=='/'){

//j=0;

b[0]='/';

j=1;

i=1;

if(a[i]=='\*'){

//进入注释

if(a[length-2]=='\*'&&a[length-1]=='/'){

printf("注释\n");

return 33;

}

else{

return 0;

}

}

else if(a[i]=='\0'){

printf("</，25>\n");

return 25;

}

else{

return 0;

}

}

//读入其他单字符分界符

else

{

if(length!=1) return 0;

switch(a[i])

{

case '+': printf("<+,22>\n");return 22;break;

case '-': printf("<-,23>\n");return 23;break;

case '\*': printf("<\*,24>\n");return 24;break;

case '(': printf("<(,26>\n");return 26;break;

case ')': printf("<),27>\n");return 27;break;

case ',': printf("<,,28>\n");return 28;break;

case ';': printf("<;,29>\n");return 29;break;

case '=': printf("<=,32>\n");return 32;break;

default: return 0;

}

}

i++;

}

}

int main(){

char a[N];

int i=0;

int length=0;//单词长度

int sym=0;//类别编码

//读入一个单词

printf("input a word\n");

scanf("%s",&a);

for(i=0;a[i]!='\0';i++){

}

length=i;

sym=getsym(a,length);

if(sym==0){

printf("ERROR");

}

return 0;

}