Design a lexical Analyzer for given language should ignore the redundant spaces, tabs and new lines and ignore comments using C

Program:

#include<stdio.h>

#include<stdlib.h>

#include<string.h>

#include<ctype.h>

int isKeyword(char buffer[]){

char keywords[32][10] = {"main","auto","break","case","char","const","continue","default",

"do","double","else","enum","extern","float","for","goto",

"if","int","long","register","return","short","signed",

"sizeof","static","struct","switch","typedef",

"unsigned","void","printf","while"};

int i, flag = 0;

for(i = 0; i < 32; ++i)

{

if(strcmp(keywords[i], buffer) == 0)

{

flag = 1;

break;

}

}

return flag;

}

int main()

{

char ch, buffer[15], operators[] = "+-\*/%=";

FILE \*fp;

int i,j=0;

fp = fopen("flex\_input.txt","r");

if(fp == NULL){

printf("error while opening the file\n");

exit(0);

}

while((ch = fgetc(fp)) != EOF){

for(i = 0; i < 6; ++i){

if(ch == operators[i])

printf("%c is operator\n", ch);

}

if(isalnum(ch)){

buffer[j++] = ch;

}

else if((ch == ' ' || ch == '\n') && (j != 0)){

buffer[j] = '\0';

j = 0;

if(isKeyword(buffer) == 1)

printf("%s is keyword\n", buffer);

else

printf("%s is identifier\n", buffer);

}

}

fclose(fp);

return 0;

}

Input: flex\_input.txt

main ( )

{

int a, b, c ;

c = b + c;

printf ( "%d" ,c ) ;

}

Output:

main is keyword

int is keyword

a is indentifier

b is indentifier

c is indentifier

c is indentifier

= is operator

b is indentifier

+ is operator

c is indentifier

printf is keyword

% is operator

d is indentifier

c is indentifier