**//Implementation of program for lecxical analyser**

#include<stdio.h>

#include<stdlib.h>

#include<string.h>

#include<ctype.h>

int isKeyword(char buffer[])

{

char keywords [32][10]={"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","union",

"unsigned","void","volatile","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[]={'+','-','\*','/','%','=','<','>'},seperator[]={';',',','}','{','(',')','.'},digit[]={'0','1','2','3','4','5','6','7','8','9'};

FILE\*fp;

int o;

char buff[10];

int i,j=0;

fp=fopen("program.txt","r");

if(fp==NULL)

{

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

exit(0);

}

printf("Lexemes Token\n");

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

{

for(i=0;i<10;++i)

{

if(ch==operators[i])

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

}

for(i=0;i<7;++i)

{

if(ch==seperator[i])

printf("%c \tseperator\n",ch);

}

for(i=0;i<10;++i)

{

if(ch==digit[i])

printf("%c \t digit\n",ch);

}

if(isalpha(ch))

{

buffer[j++]=ch;

}

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

{

buffer[j]='\0';

j=0;

if(isKeyword(buffer)==1)

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

else

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

}

}

fclose(fp);

return 0;

}

**Input File;**

void main()

{

int a = 10;

int b = 5;

int c = a + b;

}

**Output:**

ubuntu@ubuntu-OptiPlex-3020:~/TEA37$ gcc lex.c

ubuntu@ubuntu-OptiPlex-3020:~/TEA37$ ./a.out

Lexemes Token

void keyword

( seperator

) seperator

main identifier

{ seperator

int keyword

a identifier

= operator

1 operator

1 digit

0 operator

0 digit

; seperator

int keyword

b identifier

= operator

5 digit

; seperator

int keyword

c identifier

= operator

a identifier

+ operator

; seperator

b identifier

} seperator