

Experiment No. 2

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Code:

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#include<stdio.h>
#include<ctype.h>
#include<string.h>
voidkeyw(char *p);
inti=0,id=0,kw=0,num=0,op=0;
char keys[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"};
void main() {
    char ch,str[25],seps[15]=" \t\n,;(){}[]#\"<>",oper[]="!%^&*-+=~|.<>/?";
    int j;
    charfname[50];
    FILE *f1;
    clrscr();
    printf("Enter file path \n");
    scanf("%s",fname);
    f1 = fopen(fname,"r");
    if(f1==NULL) {
        printf("File not found");
        getch();
        exit(0);    }
    while((ch=fgetc(f1))!=EOF) {
        for(j=0;j<=14;j++) {
            if(ch==oper[j]) {
                printf("Operator: %c ",ch);
                op++;
                str[i]='\0';
                keyw(str); } }
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for(j=0;j<=14;j++) {
if(i== -1) break;
if(ch==seps[j]) {
if(ch=='/') {
    if(fgetc(f1)=='/') {
        printf("Comment found");
        while(ch=fgetc(f1)!='\n')
            ch=fgetc(f1);
    } }
if(ch=='#') {
    while(ch!='<')
        ch=fgetc(f1);
    printf("Header file: ");
    do {
        printf("%c",ch);
        ch=fgetc(f1);
    } while(ch!='>');
    printf("%c ",ch);
    i=-1;
    break; }
if(ch=="") {
    printf("Argument: ");
    do {
        ch=fgetc(f1);
        printf("%c ",ch);
    }while(ch!="");
    i=-1;
    break; }
str[i]='\0';
keyw(str); } }
if(i!= -1) {
    str[i]=ch;
    i++; }

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        else
            i=0; }
printf("\nKeywords: %d Identifiers: %d Operators: %d Numbers: %d\n",kw,id,op,num);
getch(); }

voidkeyw(char *p) {
    intk,flag=0;
    for(k=0;k<=31;k++) {
        if(strcmp(keys[k],p)==0) {
            printf("Keyword: %s ",p);
            kw++;
            flag=1;
            break; } }
    if(flag==0) {
        if(isdigit(p[0])) {
            printf("Number: %s ",p);
            num++; }
        else {
            if(p[0]!='\0') {
                printf("Identifier: %s ",p);
                id++; } } }
    i=-1; }

```

Output

Enter file path

hello.c

Operator: / Operator: / Identifier: Hello Identifier: World Identifier: Program

Header file: <stdio.h> Header file: <conio.h> Keyword: void Identifier: main

Identifier: printf Argument: H e l l o !" Identifier: getch

Keywords: 1 Identifiers: 6 Operators: 2 Numbers: 0