**Experiment No. 2**

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**Code:**

#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); } }

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++; }

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 lo !" Identifier: getch

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