

Count no of Vowels & Consonants

Code:

```
vc.l - Notepad
File Edit Format View Help
%{
#include<stdio.h>
int v=0,c=0;
}%

%%
[aeiouAEIOU] {v++;}
[a-zA-Z] {c++;}
. {}
%%
int yywrap(void) {
return 1;
}
int main()
{
printf("Enter the Text:");
yylex();
printf("\nNo. of Vowels=%d\nNo. of Consonents=%d\n",v,c);
return 0;
}
```

Output:

```
C:\Windows\System32\cmd.exe
C:\Users\Student\Desktop\SPCC D12B>vc.exe
Enter the Text:SPCC lab

No. of Vowels=1
No. of Consonents=6
C:\Users\Student\Desktop\SPCC D12B>
```

Count no of Words, characters & lines

Code:

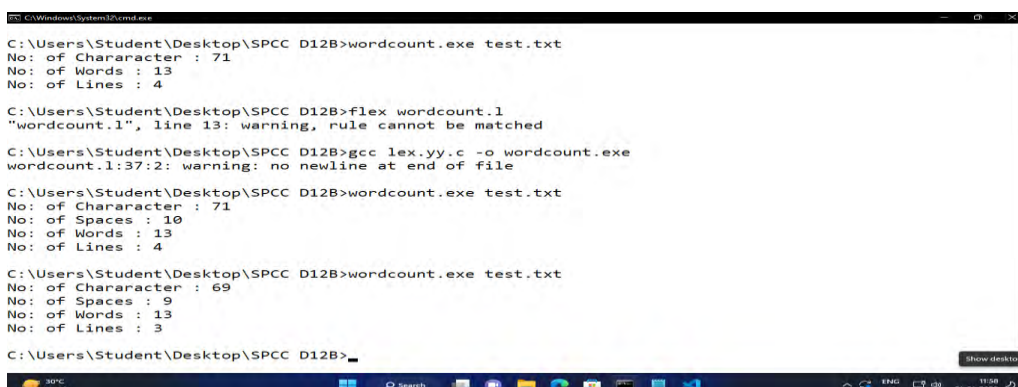


wordcount.L - Notepad

File Edit Format View Help

```
%{
#include <stdlib.h>
#include <stdio.h>
int charCount=0;
int wordCount=0;
int spaceCount=0;
int lineCount=0;
}%
%%
\n {charCount++; lineCount++;}
[ \t] { spaceCount++; charCount+=yyleng;}
[^ \t\n]+ {wordCount++; charCount+=yyleng;}
. {charCount++;}
%%
int yywrap(void) {
return 1;
}
int main(int argc, char** argv)
{
if (argc > 1)
{
FILE *file;
file = fopen(argv[1], "r");
if (!file)
{
fprintf(stderr, "Could not open %s\n", argv[1]);
exit(1);
}
yyin = file;
}
yylex();
printf("No: of Character : %d \n", charCount);
printf("No: of Spaces : %d \n", spaceCount);
printf("No: of Words : %d \n", wordCount);
printf("No: of Lines : %d \n", lineCount);
return 0;
}
```

Output:



```
C:\Windows\System32\cmd.exe
C:\Users\Student\Desktop\SPCC D12B>wordcount.exe test.txt
No: of Character : 71
No: of Words : 13
No: of Lines : 4

C:\Users\Student\Desktop\SPCC D12B>flex wordcount.1
"wordcount.1", line 13: warning, rule cannot be matched

C:\Users\Student\Desktop\SPCC D12B>gcc lex.yy.c -o wordcount.exe
wordcount.1:37:2: warning: no newline at end of file

C:\Users\Student\Desktop\SPCC D12B>wordcount.exe test.txt
No: of Character : 71
No: of Spaces : 10
No: of Words : 13
No: of Lines : 4

C:\Users\Student\Desktop\SPCC D12B>wordcount.exe test.txt
No: of Character : 69
No: of Spaces : 9
No: of Words : 13
No: of Lines : 3

C:\Users\Student\Desktop\SPCC D12B>
```

Count no of keywords, identifiers & operators

Code:

```
keyid.L - Notepad
File Edit Format View Help

%{
#include<stdio.h>
#include<stdlib.h>
int keywords =0;
int identifiers =0;
int operators =0;
}%

%%

if | else | while | do | for | int | printf | return | main    {keywords++;}
[a-zA-Z][a-zA-Z0-9]*    {identifiers++;}
\+ |\- |\| |\% |\= |\!=    {operators++;}
.
%%
int yywrap(void){
return 1;
}
int main(int argc, char** argv){
if(argc > 1){
FILE *file;
file = fopen(argv[1],"r");
if(!file){
fprintf(stderr,"could not open %s\n",argv[1]);

}

}

yyin = file;
}
yylex();
printf("keywords: %d\nIdentifiers: %d\nOperators:%d\n",keywords,identifiers,operators);
return 0;
}

porgram.c

#include<stdio.h>
int main(){
float num1;
double num2;

printf("enter a no :");
scanf("%f",&num1);
printf("enter another number");
scanf("%lf",&num2);
printf("num1= %f\n ",num1);
printf("num2= %f\n ",num2);
return 0;
}
```

Output:

```
C:\Users\Student\Desktop\exp2>keywords.exe porgram.c new.txt

keywords: 7
Identifiers: 27
Operators:6
```

Identify Even & odd integers

Code:

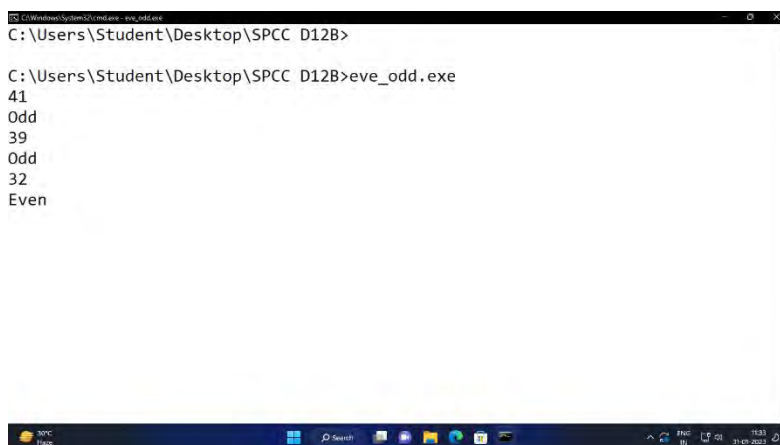
```
eve_odd.L - Notepad
File Edit Format View Help
/*Lex program to take check whether
the given number is even or odd */

%{
#include<stdio.h>
int i;
%}

%%
[0-9]+ {i=atoi(yytext);
        if(i%2==0)
            printf("Even");
        else
            printf("Odd");}

%%
int yywrap(){}
/* Driver code */
int main()
{
    yylex();
    return 0;
}
```

Output:



```
C:\Windows\system32\cmd.exe
C:\Users\Student\Desktop\SPCC D12B>
C:\Users\Student\Desktop\SPCC D12B>eve_odd.exe
41
Odd
39
Odd
32
Even
```

Count of printf & scanf statements in C program

Code:

```
printf.L - Notepad
File Edit Format View Help
%{

#include<stdio.h>

int pfc = 0, sfc = 0;

%}

%%
"printf" {fprintf(yyout,"writef"); pfc++;}
"scanf" {fprintf(yyout, "readf"); sfc++;}

%%
main(int argc, char *argv[])
{
    if(argc != 3 )
    {
        printf("Usage: ./a.out in.txt out.txt\n");

        printf("Usage: ./a.out in.txt out.txt\n");

        yyin = fopen(argv[1], "r");
        yyout = fopen(argv[2], "w");
        yylex();
        printf("\n the number of printf lines = %d\n", pfc);
        printf("\n the number of scanf lines = %d\n", sfc);

        exit(0);
    }
}

int yywrap()
{
    return 1;
}
```

```
inp_print - Notepad
File Edit Format View Help
#include<stdio.h>
int main(){
    printf("Hello World");
    int a;
    printf("Enter number");
    scanf("%d", &a);
    printf("Your number is %d", a);
    return 0;
}
```

Output:

```
E:\spcc\exp 3\printf scanf>printf_scanf.exe in.txt
Usage: ./a.out in.txt out.txt
#include<stdio.h>

int main(){

writef("Hello World");
int a;
writef("Enter number");
readf("%d", &a);
writef("Your number is %d", a);
return 0;

}
the number of printf lines = 3
the number of scanf lines = 1
```