1. **Read a text stored in a file. Count the number of words and lines in the file. Use functions.**

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**DESCRIPTION**

* program to count no of words and lines present in the text in file using functions
* words are calculated by looking into the current character and the next character.

if current character is not a "space" and the next character is either space or the new line character , then that is considered as the words.

* no of lines are calculated by looking into the new line character ( \n ). if found then that indicated the line.
* 3 functions are used in this program

1. function to open the file

C provides function fopen() to open the file which takes the filename and the mode of

opening the file . modes can be read mode ( r ), write mode ( w ), append mode ( a ), read and write ( r+ ) , update ( w+ ), read and append ( a+ ) . FILE pointer is used in C to point to the file. this FILE pointer is returned to the main() function.

syntax :

FILE\* open();

1. function to read the file

C provides lots of function to read the file ( fgets() , fscanf() , fread() ) . we used the fread() function to read the overall content of the file at once, we store that in the character array and return that array to the main() function the values passed into the function is by pass by reference , i,e the modification in the values reflects back.

syntax :

void read(char \*a,FILE \*fp);

a --> character array to which the file content needs to be stored

fp --> FILE pointer to access the file

1. function to count words and lines

This function counts the number of lines and words in the character array which contains the file contents. looping concepts is used here to iterate through each and every character to check for words and lines. it also prints the result in the terminal.

syntax :

void countwordsandlines(char \*a);

a --> character array pointer which contains the file content

* The file is closed in the end to avoid filling of the junk values into the file. this is done by using the C function fclose()
* SAMPLE INPUT

This is the new file content

* OUTPUT

words = 6 lines = 1

//Program

#include<stdio.h>

FILE\* open()

{

return fopen("4input.txt","r");

}

void countwordsandlines(char \*a)

{

int words=0,lines=0,i;

for(i=0;a[i]!='\0';i++)

{

if(a[i]!=' ' && a[i+1]==' ')words++;

else if(a[i]=='\n'){lines++;words++;}

}

lines++;words++;

printf("\n no of words is %d and no of line is %d ",words,lines);

}

void read(char \*a, FILE\* f)

{

fread(a,100,1,f);

}

int main()

{

char a[100];

//FILE \*fp=fopen("newfile.txt","r");

FILE \*fp=open();

if(fp==NULL)

{ printf("file cannot be opened");

return 1;

}

read(a, fp);

//fread(a,100,1,fp);

countwordsandlines(a);

//printf("%s",a);

fclose(fp);

}

