

C_130 ⇒ C Program to Count number of lines in a file

* Suppose in a file if we have many lines like 3 or 4, 5... the ~~show~~ output should print the number of lines in the program.

eg: ①

abc.txt	
Hi	
Hello	↕ cursor

→ 2 lines.

eg: ②

abc.txt	
Hi	
Hello	
Jerry	↕ cursor

→ 4 lines.

eg: ③

Hi
Hello
Jerry
↕ cursor

→ 4 lines.

eg: ④

--

→ 1 line.

* so we should write a program according to that.

* We put '\n' for new line and it is done by 'ENTER'

abc.txt	
Hi \n	
Hello	

→ only one '\n' but we have two lines, so how to count the lines.

As soon as we get a new line we increase the count by 1 and put is a loop and we read till end of file.

Eg ①

```
FILE *fp = NULL;
int count = 1;
char ch;
fp = fopen("abc.txt", "r");
```

abc.txt

Hi \n ENTER
Hello \n
EOF

9/10

3 lines

```
if (fp == NULL)
```

```
printf("Error");
exit(1);
```

```
// for (c = getc(fp); c != EOF; c = fgetc(fp))
while ((ch = getc(fp)) != EOF)
```

```
if (ch == '\n')
    count ++;
```

}

```
fclose(fp);
```

```
printf("%d", count);
```

}

abc.txt

Eg ③

abc.txt

Eg ②

Hi \n → ENTER

Hello \n → ENTER

EOF

EOF

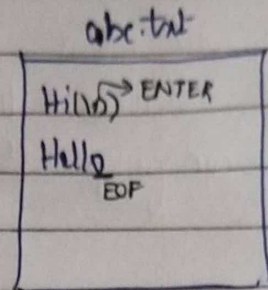
9/10
3 lines

When we press ENTER we go to next line

* Now we want to count both the number of characters and number of lines in a file.

Eg 4:-

```
FILE *fp = NULL;
int countline = 1;
char ch;
int countchar = 0;
fp = fopen("abc.txt", "r");
```



O/p
 2 lines
 7 characters

```
if (fp == NULL)
{
```

```
    printf("File do not exists or  

           error");
```

```
    exit(1);
```

```
}
```

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

```
    countchar ++;
```

```
    if (ch == '\n')
    {
```

```
        countline ++;
```

```
    }
```

```
}
```

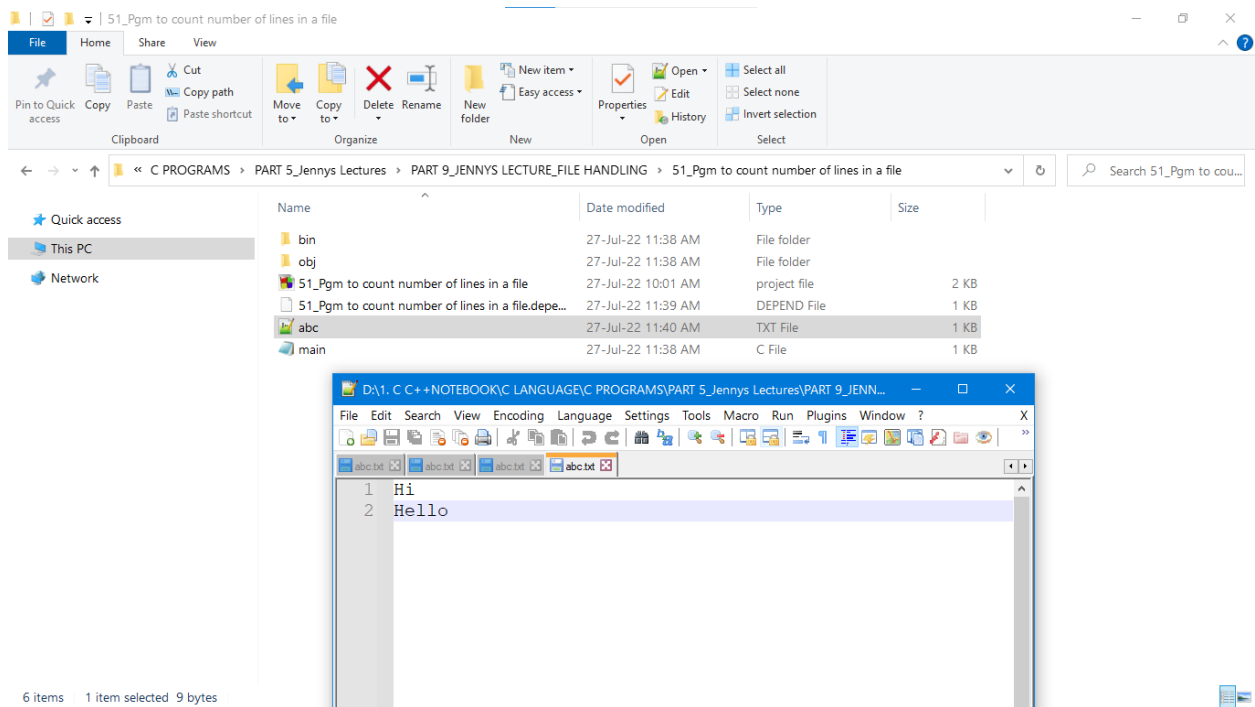
```
fclose(fp);
```

```
printf("No of lines in file is %d", countline);
printf("No of characters in file is %d", countchar);
```

3.

The screenshot shows the Code::Blocks 20.03 IDE with a C program named "51_Pgm to count number of lines in a file". The program includes `<stdio.h>` and `<stdlib.h>`. It opens a file named "abc.txt" in read mode. If the file does not exist, it prints an error message and exits. Otherwise, it counts the number of lines and characters in the file and prints the results.

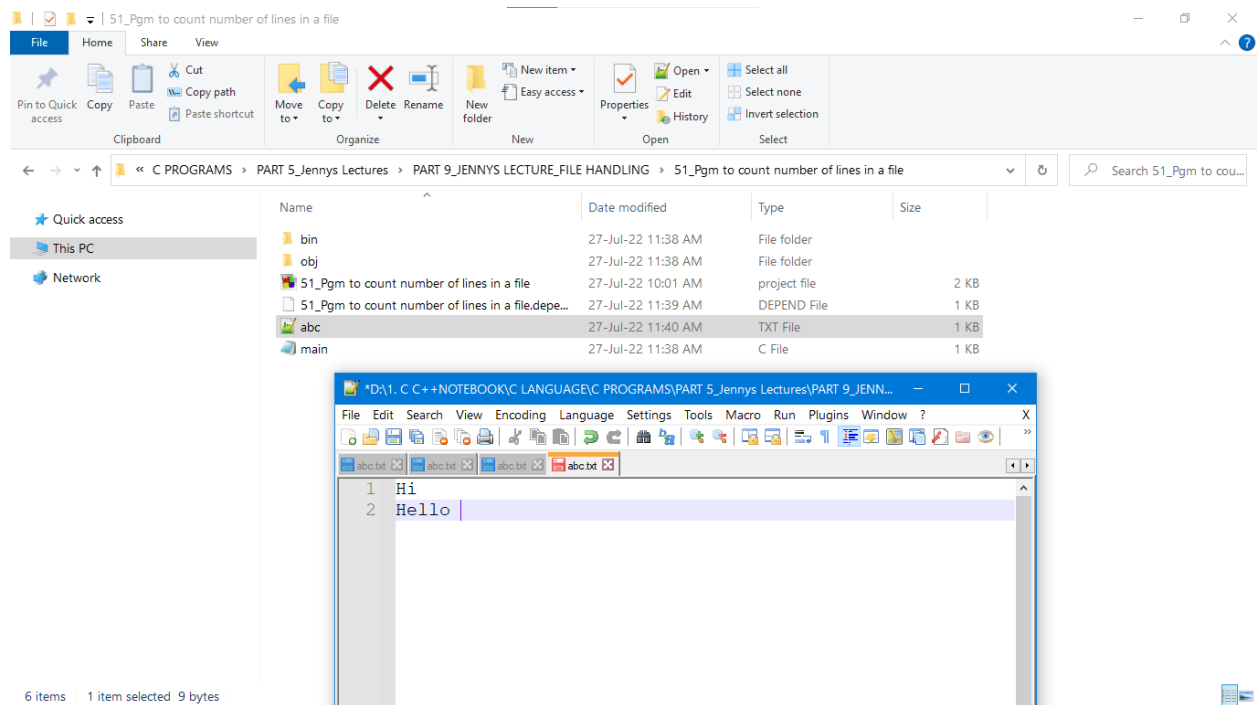
```
1 #include <stdio.h>
2 #include <stdlib.h>
3 /** 51-Program to count number of lines in a file **/
4 int main()
5 {
6     FILE *fp=NULL;
7     fp=fopen("abc.txt","r");
8     if(fp==NULL)
9     {
10        printf("File do not exist or error in opening file..");
11        exit(1);
12    }
13    int count_line=1;
14    int count_char=0;
15    char ch;
16    while((ch=fgetc(fp))!=EOF)
17    {
18        if(ch=='\n')
19        {
20            count_line++;
21        }
22        count_char++;
23    }
24    printf("Number of lines in a file:%d\n",count_line);
25    printf("Number of character in a file:%d\n",count_char);
26    return 0;
27 }
```



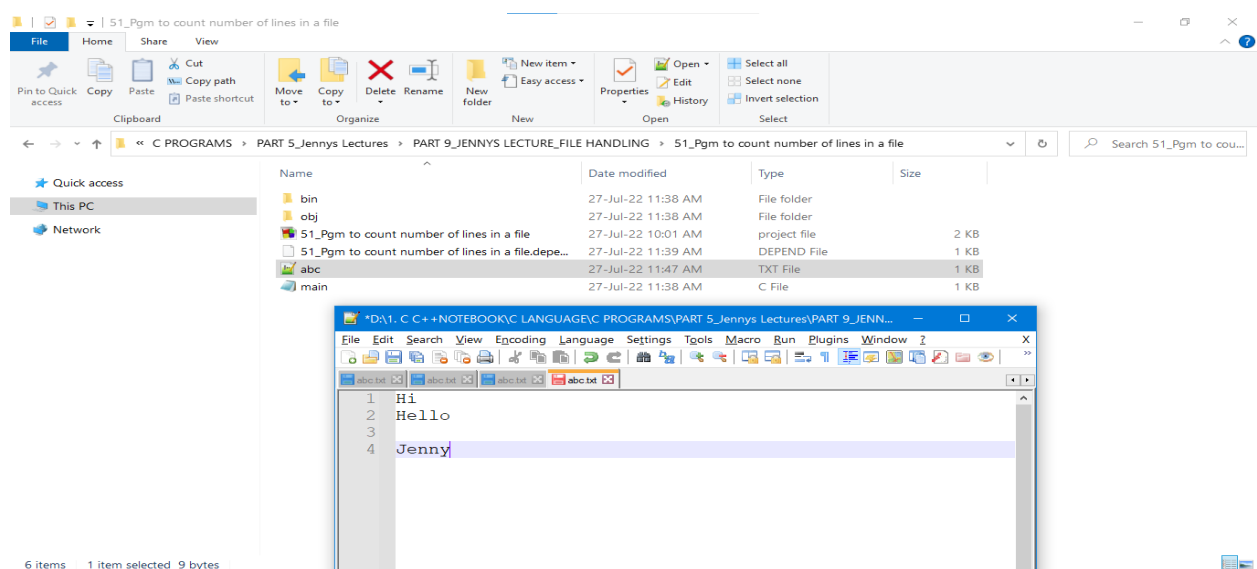
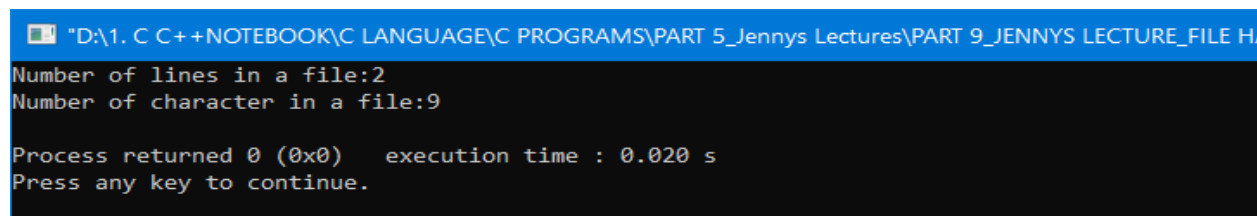
The screenshot shows a terminal window with the following output:

```
D:\1. C C++NOTEBOOK\C LANGUAGE\C PROGRAMS\PART 5_Jennys Lectures\PART 9_JENNYS LECTURE_FILE HANDLING\51_...
Number of lines in a file:2
Number of character in a file:8

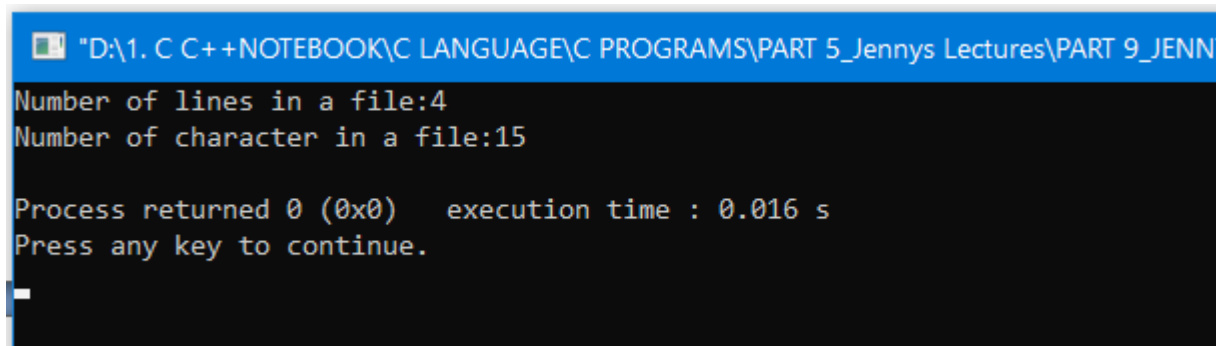
Process returned 0 (0x0)   execution time : 0.013 s
Press any key to continue.
```



In this we have 9 characters, in first line we have 3 characters including `\n` for ENTER

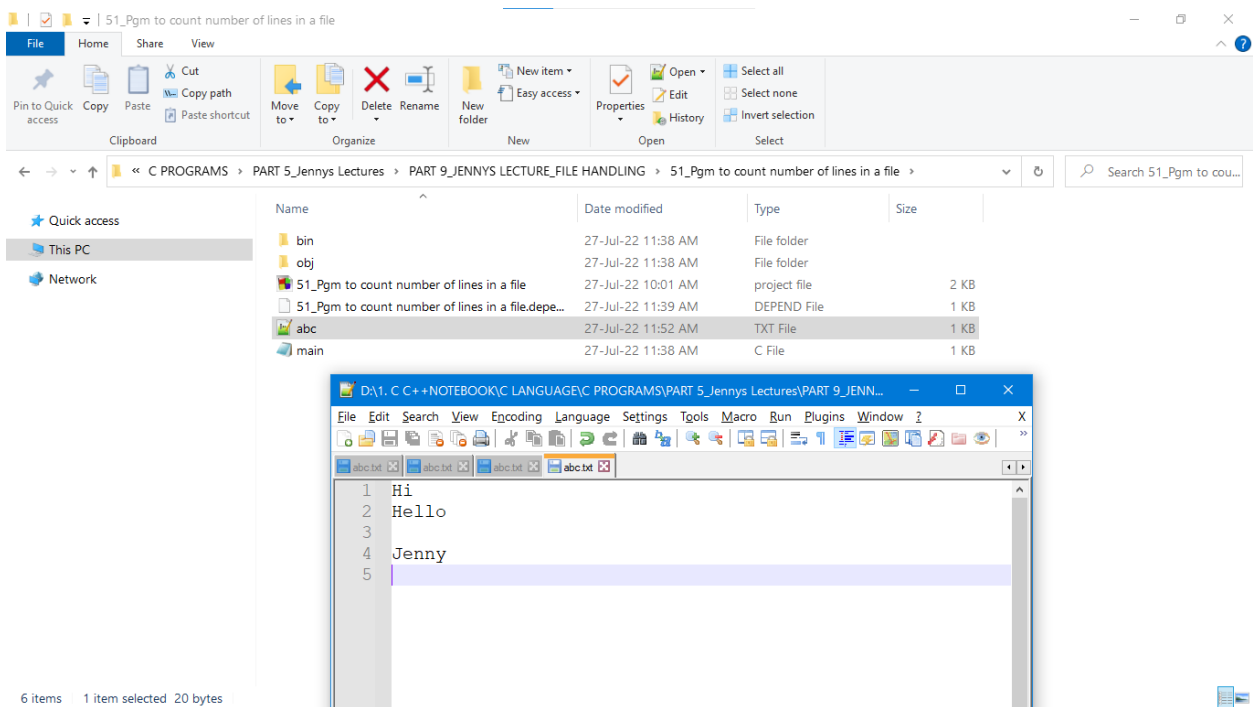


In this we have 15 characters, in first line we have 3 characters including `\n` for ENTER and in second line 6 characters and in third line only one character i.e. `\n` for ENTER and in fourth line we have 5 characters, so $\text{total} = 3 + 6 + 1 + 5 = 15$ characters and 4 lines



```
"D:\1. C C++NOTEBOOK\C LANGUAGE\C PROGRAMS\PART 5_Jennys Lectures\PART 9_JENN...
Number of lines in a file:4
Number of character in a file:15

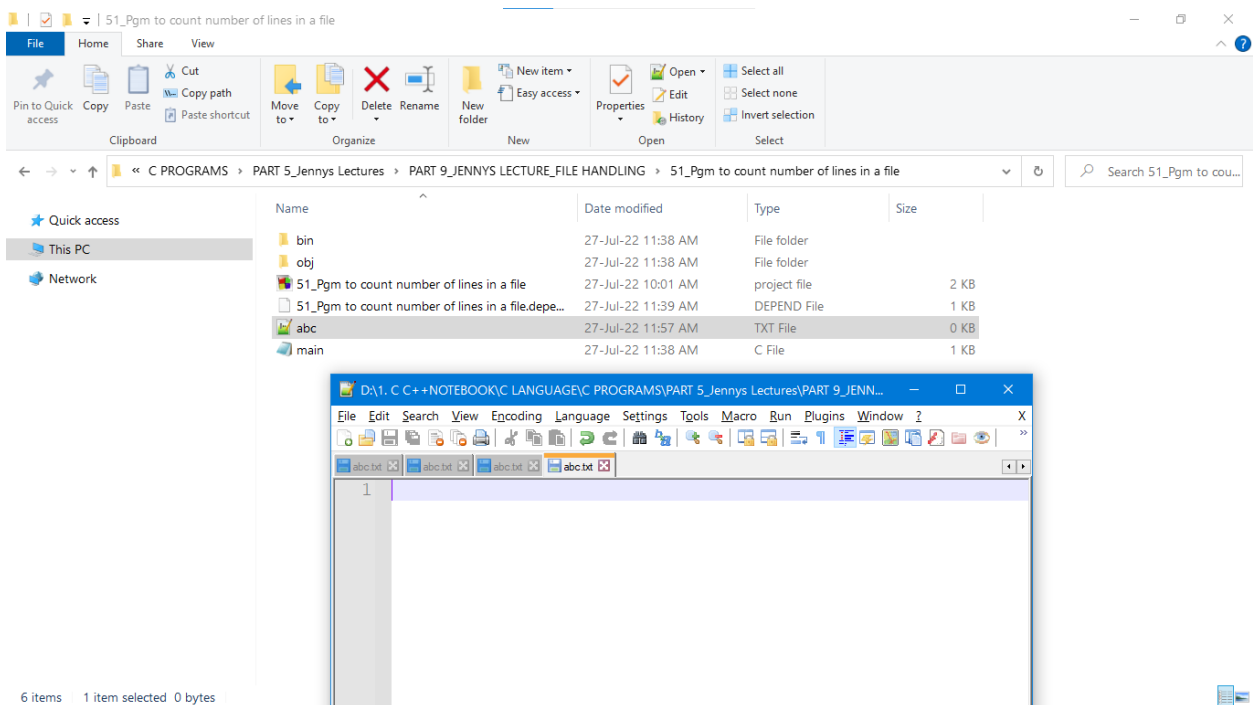
Process returned 0 (0x0)   execution time : 0.016 s
Press any key to continue.
```



In this we have 16 characters, in first line we have 3 characters including `\n` for ENTER and in second line 6 characters and in third line one character i.e. `\n` for ENTER and in fourth line we have 6 characters and in fifth line we have no character, So $\text{total} = 3 + 6 + 1 + 6 + 0 = 16$ characters and 5 lines

```
"D:\1. C C++\NOTEBOOK\C LANGUAGE\C PROGRAMS\PART 5_Jennys Lectures\PART 9_JENNY'S LECTURE_FILE HANDLING\51_Pgm to count number of lines in a file"
Number of lines in a file:5
Number of character in a file:16

Process returned 0 (0x0)   execution time : 0.023 s
Press any key to continue.
```



Now nothing is there in the file and we have only one line and no character

```
"D:\1. C C++\NOTEBOOK\C LANGUAGE\C PROGRAMS\PART 5_Jennys Lectures\PART 9_JENNY'S LECTURE_FILE HANDLING\51_Pgm to count number of lines in a file"
Number of lines in a file:1
Number of character in a file:0

Process returned 0 (0x0)   execution time : 0.016 s
Press any key to continue.
```