C-124 ⇒ r^+ mode in File Handling

* "r" mode is we just read the file; if file don't exist then it will not create the file simply it will exit from the program.

r^+ mode:-

* r^+ mode is both for reading and writing, and if the file don't exist it will not create the file; but main purpose is to read.

```
FILE *fp = NULL;

fp = fopen ("abc. txt", "r+");

if ( fp == NULL)
{
        printf (" Error/ file do not exist");
        exit(1);
}


// To read we use fgets (or) fgetc
        fgets( str, 50, fp);


// To write is a file using r+ mode
we can only modify that file, but not appending into that file.
```

* Example, consider we have a file "abc.txt" with some contents and we are using r⁺ mode is it used to do both read & write,

* But write mode will start to write is the file from the point where the file pointer exist.

abc.txt

Hi, this is awesome.

fputc ("z", fp); ⇒

abc.txt

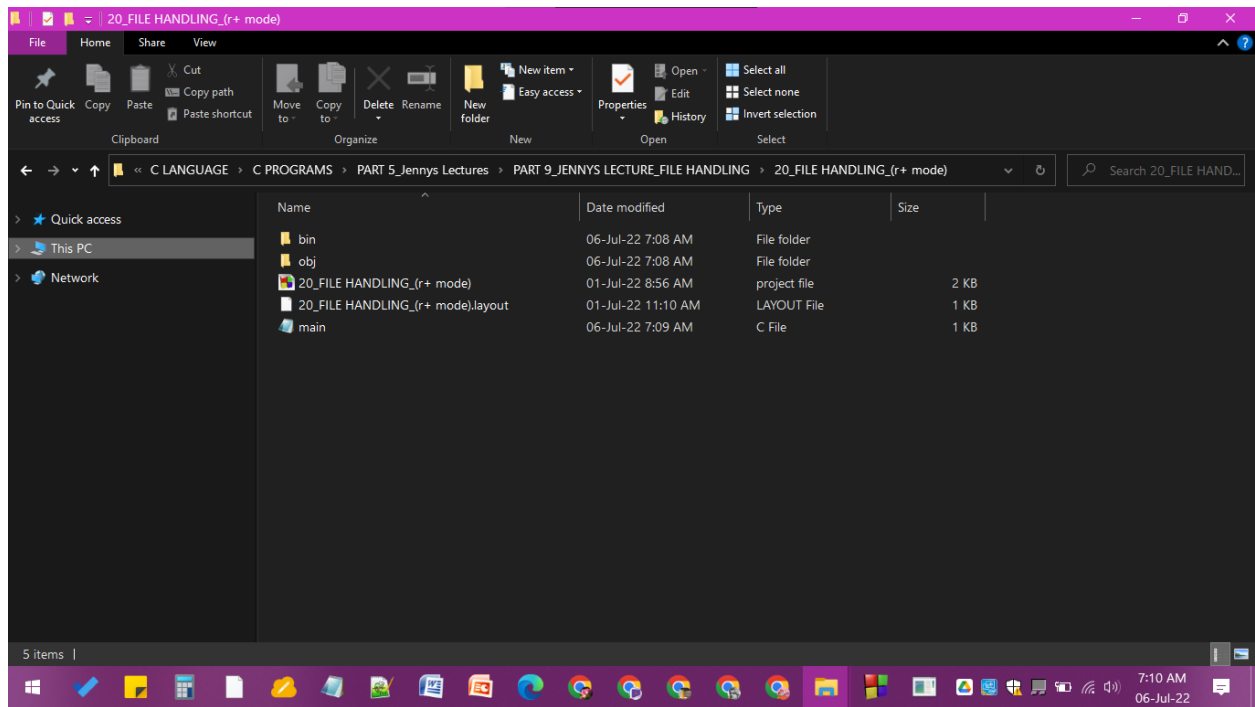| z i, this is awesom |
|---|

fputs ("Jenny", fp); ⇒

z Jenny is is awesome.

* We can also modify the content at last or at any point we want but we should write a seperate logic and this will be discussed in futures lessons.
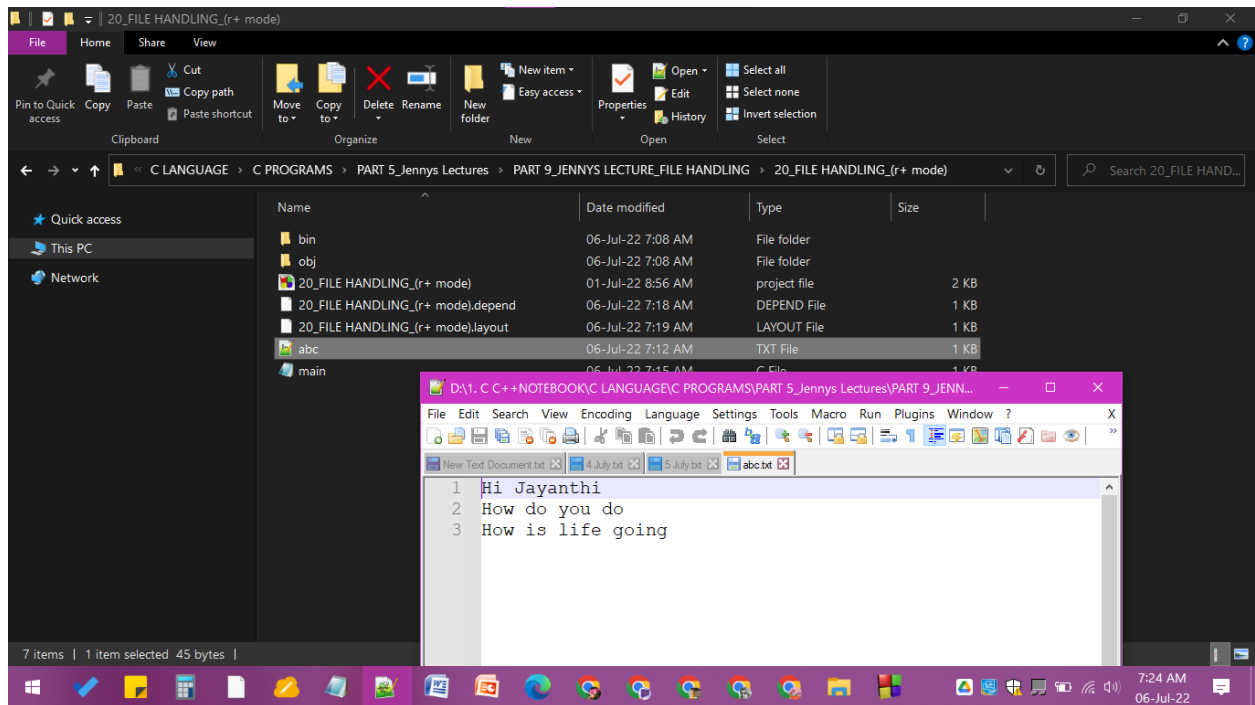
* But by default r⁺ mode will modify the file from where the file pointer exists.

NOTE:-
always don't forget to close the file pointed with file pointer fp // fclose(fp);

```c
#include <stdio.h>
#include <stdlib.h>
/** 20-File Handling (r+ mode) **/
/** It do both read/write but special purpose is to read **/
/** It wont create a file, if file exist it will read or write **/

        /** Only Read mode **/
int main()
{
    FILE *fp=NULL;
    fp=fopen("abc.txt","r+");
    if(fp==NULL)
    {
     printf("Error/File do not exist...");
     exit(1);
    }
    char str[50];
    while(!feof(fp))
    {
     fgets(str,45,fp);
     printf("%s",str);
    }
    fclose(fp);
 return 0;
```

```c
#include <stdio.h>
#include <stdlib.h>
/** 20-File Handling (r+ mode) **/
/** It do both read/write but special purpose is to read **/
/** It wont create a file, if file exist it will read or write **/

        /** Only Read mode **/
int main()
{
    FILE *fp=NULL;
    fp=fopen("abc.txt","r+");
    if(fp==NULL)
    {
     printf("Error/File do not exist...");
     exit(1);
    }
    char str[50];
    while(!feof(fp))
    {
     fgets(str,45,fp);
     printf("%s",str);
    }
    fclose(fp);
return 0;
```



```
Hi Jayanthi
How do you do
How is life going
Process returned 0 (0x0)   execution time : 0.016 s
Press any key to continue.
```

```c
#include <stdio.h>
#include <stdlib.h>
/** 21-File Handling (r+ mode) **/
/** It do both read/write but special purpose is to read **/
/** It wont create a file, if file exist it will read or write **/

            /** Only Write mode **/
int main()
{
    FILE *fp=NULL;
    fp=fopen("abc.txt","r+");
    if(fp==NULL)
    {
     printf("Error/File do not exist...");
     exit(1);
    }
    char str[50];
    printf("Enter the content to write in file:\n");
    gets(str);
    fprintf(fp,"%s",str);
    fclose(fp);
return 0;
}
```

```
Error/File do not exist...
Process returned 1 (0x1)   execution time : 0.047 s
Press any key to continue.
```

```c
1   #include <stdio.h>
2   #include <stdlib.h>
3   /** 21-File Handling (r+ mode) **/
4   /** It do both read/write but special purpose is to read **/
5   /** It wont create a file, if file exist it will read or write **/
6
7           /** Only Write mode **/
8   int main()
9   {
10      FILE *fp=NULL;
11      fp=fopen("abc.txt","r+");
12      if(fp==NULL)
13      {
14       printf("Error/File do not exist...");
15       exit(1);
16      }
17      char str[50];
18      printf("Enter the content to write in file:\n");
19      gets(str);
20      fprintf(fp,"%s",str);
21      fclose(fp);
22  return 0;
23  }
24
```

21_FILE HANDLING_(r+ mode)

File Home Share View

C LANGUAGE › C PROGRAMS › PART 5_Jennys Lectures › PART 9_JENNYS LECTURE_FILE HANDLING › 21_FILE HANDLING_(r+ mode)

Quick access
This PC
Network

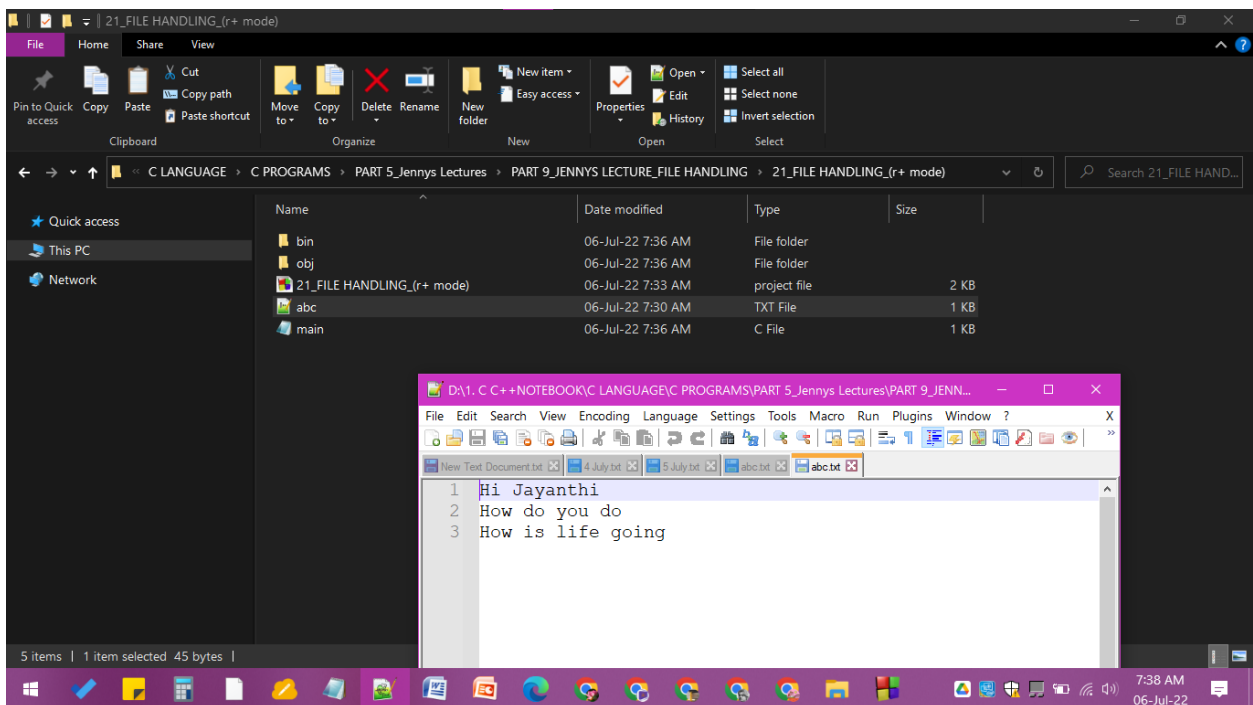| Name	Date modified	Type	Size
bin	06-Jul-22 7:36 AM	File folder	
obj	06-Jul-22 7:36 AM	File folder	
21_FILE HANDLING_(r+ mode)	06-Jul-22 7:33 AM	project file	2 KB
abc	06-Jul-22 7:30 AM	TXT File	1 KB
main	06-Jul-22 7:36 AM	C File	1 KB

5 items   1 item selected 45 bytes

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File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?

New Text Document.txt | 4 July.txt | 5 July.txt | abc.txt | abc.txt

```
1  Hi Jayanthi
2  How do you do
3  How is life going
```

7:38 AM
06-Jul-22

NOTE:

In r+ mode, the whole content of the file is loaded into the buffer and when we do only write operation the content in the file is overwritten from where the file pointer exists.
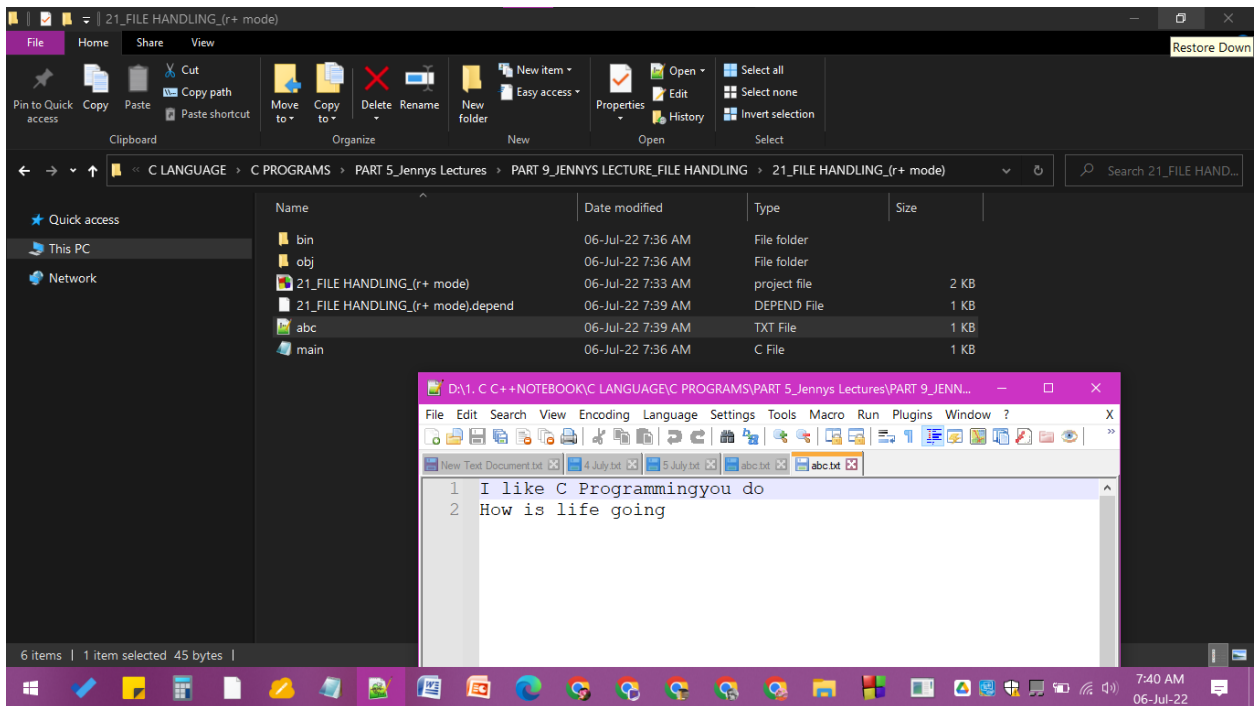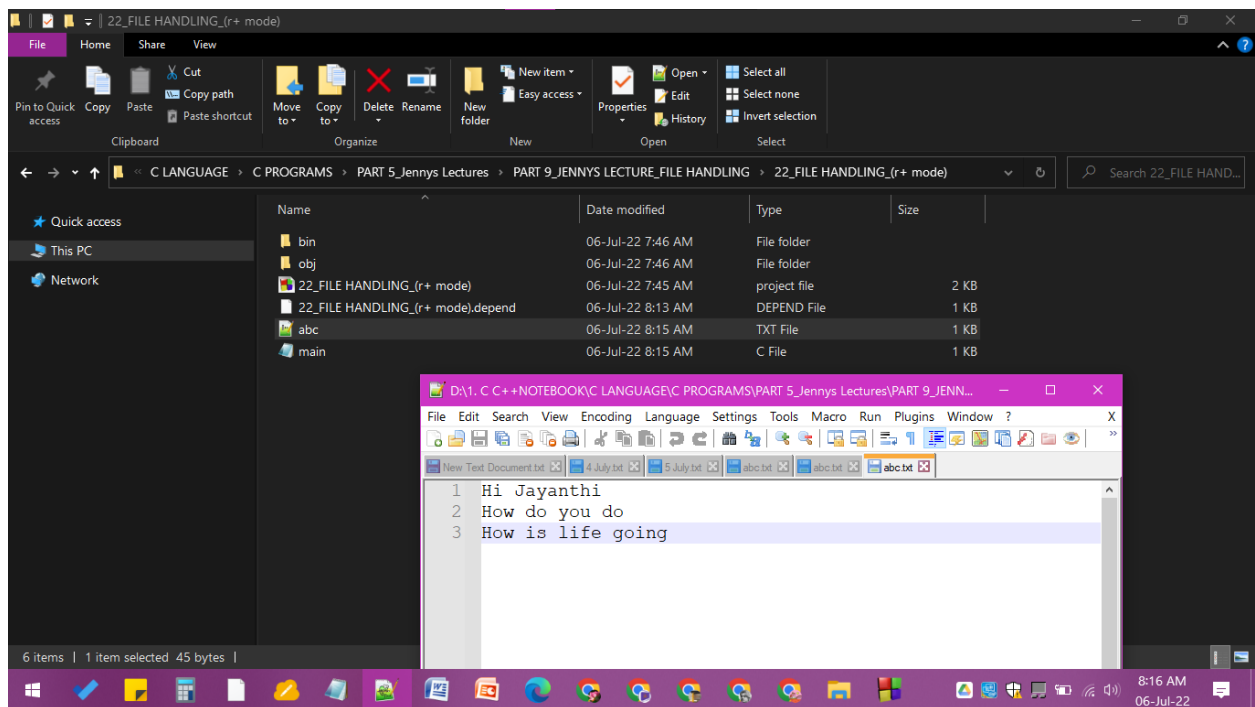
```c
#include <stdio.h>
#include <stdlib.h>
/** 22-File Handling (r+ mode) **/
/** It do both read/write but special purpose is to read **/
/** It wont create a file, if file exist it will read or write **/

            /** First read and do write operation **/
int main()
{
    FILE *fp=NULL;
    fp=fopen("abc.txt","r+");
    if(fp==NULL)
    {
     printf("Error/File do not exist...");
     exit(1);
    }
    char str[50];
    while(!feof(fp))
    {
     fgets(str,45,fp);
     printf("%s",str);
    }
    fputs("Hello",fp);
    fclose(fp);
return 0;
```

22_FILE HANDLING_(r+ mode)

File   Home   Share   View

C LANGUAGE > C PROGRAMS > PART 5_Jennys Lectures > PART 9_JENNYS LECTURE_FILE HANDLING > 22_FILE HANDLING_(r+ mode)

Name	Date modified	Type	Size
bin	06-Jul-22 7:46 AM	File folder	
obj	06-Jul-22 7:46 AM	File folder	
22_FILE HANDLING_(r+ mode)	06-Jul-22 7:45 AM	project file	2 KB
22_FILE HANDLING_(r+ mode).depend	06-Jul-22 8:13 AM	DEPEND File	1 KB
abc	06-Jul-22 8:15 AM	TXT File	1 KB
main	06-Jul-22 8:15 AM	C File	1 KB

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File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?

```
1  Hi Jayanthi
2  How do you do
3  How is life going
```

6 items   1 item selected 45 bytes

"D:\1. C C++NOTEBOOK\C LANGUAGE\C PROGRAMS\PART 5_Jennys Lectures\PART 9_JENNYS LECTURE_FILE HANDLING\22_F.

```
Hi Jayanthi
How do you do
How is life going
Process returned 0 (0x0)   execution time : 0.047 s
Press any key to continue.
```

NOTE:

In r+ mode, the whole content of the file is loaded into the buffer and when we do first read and then write operation, it will read the content in the file then the content in the file is overwritten from where the file pointer is present from where the reading gets over.

```c
#include <stdio.h>
#include <stdlib.h>
/** 23-File Handling (r+ mode) **/
/** It do both read/write but special purpose is to read **/
/** It wont create a file, if file exist it will read or write **/

 /**            /** First read and do write operation **/
/**int main()
{
    FILE *fp=NULL;
    fp=fopen("abc.txt","r+");

    char str[50];
    fgets(str,5,fp);
    printf("%s",str);

     fputs("Hello",fp); //have some doubt in this, not get written in between
return 0;
} **/
```

File Explorer window: 23_FILE HANDLING_(r+ mode)

Path: C LANGUAGE > C PROGRAMS > PART 5_Jennys Lectures > PART 9_JENNYS LECTURE_FILE HANDLING > 23_FILE HANDLING_(r+ mode)

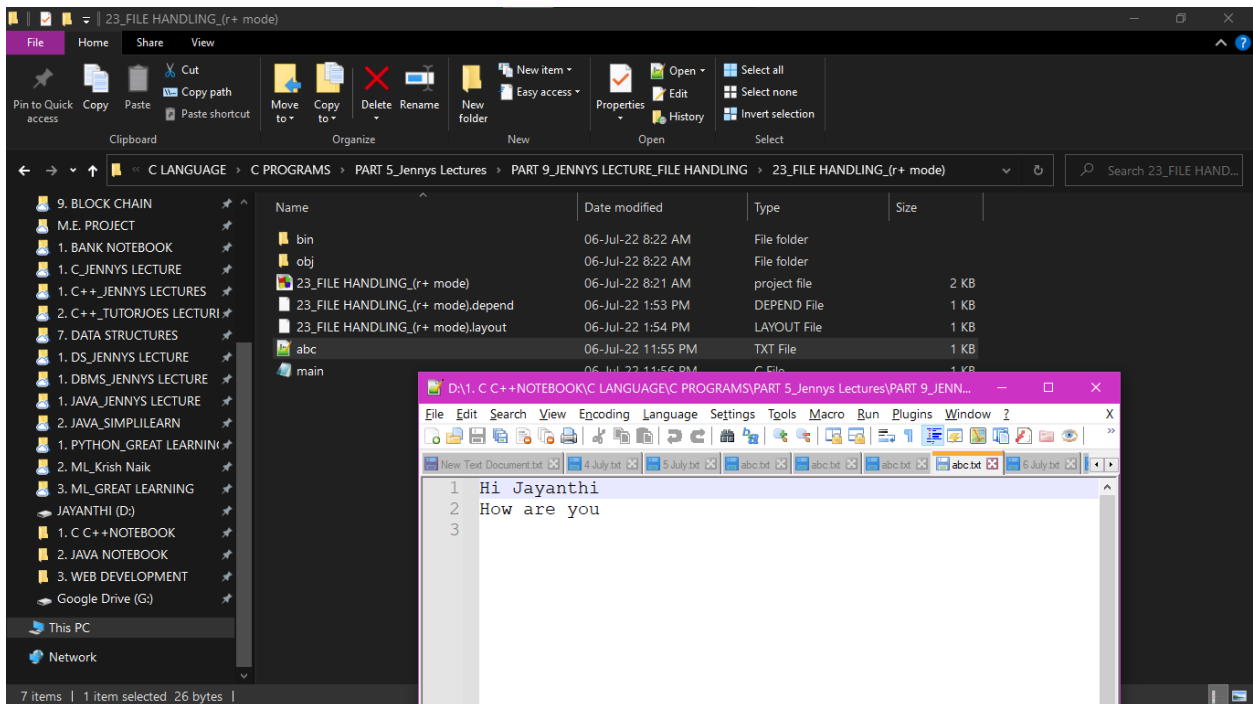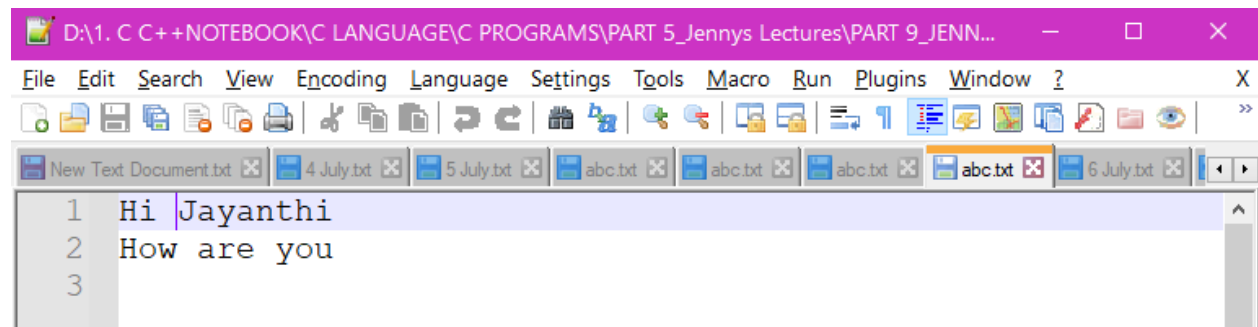| Name	Date modified	Type	Size
bin	06-Jul-22 8:22 AM	File folder	
obj	06-Jul-22 8:22 AM	File folder	
23_FILE HANDLING_(r+ mode)	06-Jul-22 8:21 AM	project file	2 KB
23_FILE HANDLING_(r+ mode).depend	06-Jul-22 1:53 PM	DEPEND File	1 KB
23_FILE HANDLING_(r+ mode).layout	06-Jul-22 1:54 PM	LAYOUT File	1 KB
abc	06-Jul-22 11:55 PM	TXT File	1 KB
main	06-Jul-22 11:56 PM	C File	1 KB

Notepad++ window: D:\1. C C++NOTEBOOK\C LANGUAGE\C PROGRAMS\PART 5_Jennys Lectures\PART 9_JENN...

```
Hi Jayanthi
How are you
```

```
Hi J
Process returned 0 (0x0)   execution time : 0.036 s
Press any key to continue.
```

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File   Edit   Search   View   Encoding   Language   Settings   Tools   Macro   Run   Plugins   Window   ?   X

New Text Document.txt   4 July.txt   5 July.txt   abc.txt   abc.txt   abc.txt   abc.txt   6 July.txt
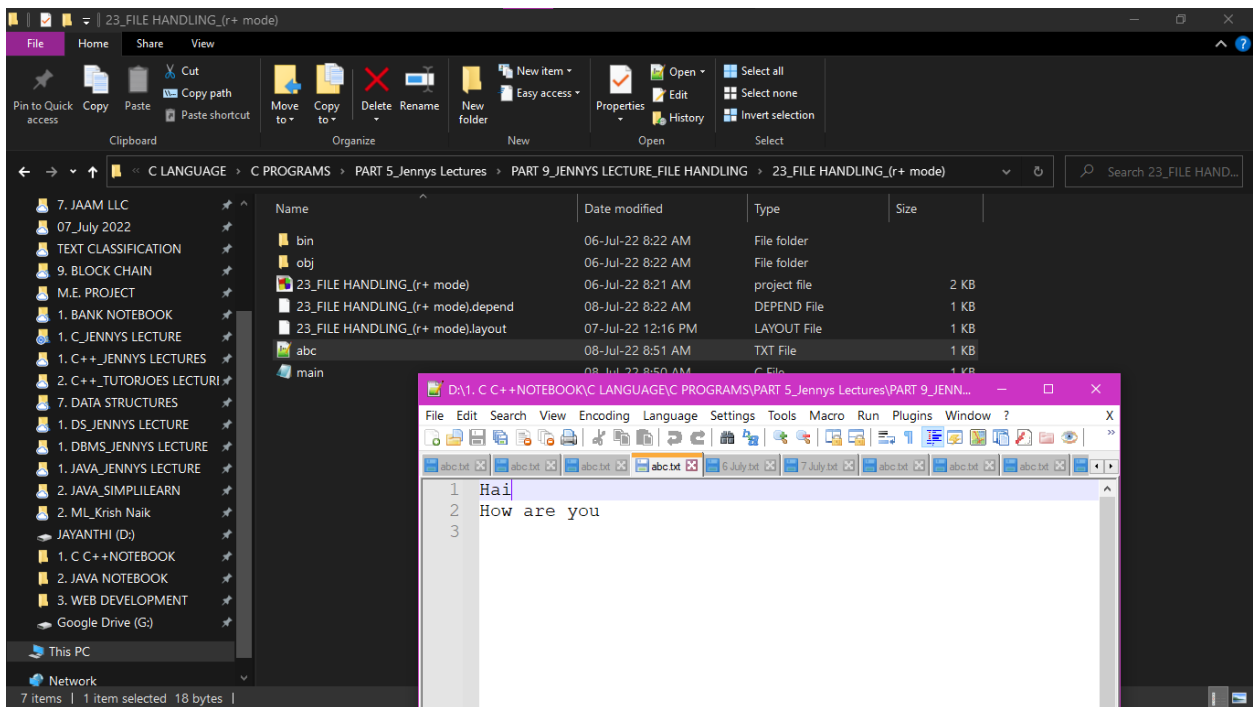
```
1   Hi Jayanthi
2   How are you
3
```

File pointer reads till 5 characters including null and should overwrite after then but we did not get it. So have some doubt in this.

```c
#include <stdio.h>
#include <stdlib.h>
/** 23-File Handling (r+ mode) **/
/** It do both read/write but special purpose is to read **/
/** It wont create a file, if file exist it will read or write **/

            /** First write and do read operation **/
int main()
{
    FILE *fp=NULL;
    fp=fopen("abc.txt","r+");
    if(fp==NULL)
    {
     printf("File does not exit or error");
     exit(1);
    }
    char str[50];
    printf("Enter the content to write in a file:");
    gets(str);
    fputs(str,fp);
     rewind(fp);
    fgets(str,5,fp);
    printf("%s",str);
    fclose(fp);
    getch();


}
        /**    /** First read and do write operation **/
```

23_FILE HANDLING_(r+ mode)

File   Home   Share   View

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Name	Date modified	Type	Size
bin	06-Jul-22 8:22 AM	File folder	
obj	06-Jul-22 8:22 AM	File folder	
23_FILE HANDLING_(r+ mode)	06-Jul-22 8:21 AM	project file	2 KB
23_FILE HANDLING_(r+ mode).depend	08-Jul-22 8:22 AM	DEPEND File	1 KB
23_FILE HANDLING_(r+ mode).layout	07-Jul-22 12:16 PM	LAYOUT File	1 KB
abc	08-Jul-22 8:51 AM	TXT File	1 KB
main	08-Jul-22 8:50 AM	C File	1 KB

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File   Edit   Search   View   Encoding   Language   Settings   Tools   Macro   Run   Plugins   Window   ?

```
1  Hai
2  How are you
3
```

7 items | 1 item selected 18 bytes

"D:\1. C C++NOTEBOOK\C LANGUAGE\C PROGRAMS\PART 5_Jennys Lectures\PART 9_JENNYS LECTURE_FILE HANDLING\23

```
Enter the content to write in a file:Hello
Hell
Process returned 0 (0x0)   execution time : 5.642 s
Press any key to continue.
```