

C library function - fopen()

Description

The C library function **FILE *fopen(const char *filename, const char *mode)** opens the **filename** pointed to, by filename using the given **mode**.

Declaration

Following is the declaration for fopen() function.

```
FILE *fopen(const char *filename, const char *mode)
```

Parameters

- **filename** – This is the C string containing the name of the file to be opened.
- **mode** – This is the C string containing a file access mode. It includes –

Sr.No.	Mode & Description
1	"r" Opens a file for reading. The file must exist.
2	"w" Creates an empty file for writing. If a file with the same name already exists, its content is erased and the file is considered as a new empty file.
3	"a" Appends to a file. Writing operations, append data at the end of the file. The file is created if it does not exist.
4	"r+" Opens a file to update both reading and writing. The file must exist.
5	"w+" Creates an empty file for both reading and writing.
6	"a+" Opens a file for reading and appending.

Return Value

This function returns a FILE pointer. Otherwise, NULL is returned and the global variable errno is set to indicate the error.

Example

The following example shows the usage of fopen() function.

```
#include <stdio.h>
#include <stdlib.h>

int main () {
    FILE * fp;

    fp = fopen ("file.txt", "w+");
    fprintf(fp, "%s %s %s %d", "We", "are", "in", 2012);

    fclose(fp);
}
```

```
    return(0);  
}
```

Let us compile and run the above program that will create a file **file.txt** with the following content –

```
We are in 2012
```

Now let us see the content of the above file using the following program –

```
#include <stdio.h>  
  
int main () {  
    FILE *fp;  
    int c;  
  
    fp = fopen("file.txt","r");  
    while(1) {  
        c = fgetc(fp);  
        if( feof(fp) ) {  
            break ;  
        }  
        printf("%c", c);  
    }  
    fclose(fp);  
  
    return(0);  
}
```

Let us compile and run the above program to produce the following result –

```
We are in 2012
```