C library function - freopen()

Description

The C library function **FILE *freopen(const char *filename, const char *mode, FILE *stream)** associates a new **filename** with the given open stream and at the same time closes the old file in the stream.

Declaration

Following is the declaration for freopen() function.

```
FILE *freopen(const char *filename, const char *mode, FILE *stream)
```

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 then its content is erased and the file is considered as a new empty file.
3	**"a"** Appends to a file. Writing operations appends 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.

- **stream** − This is the pointer to a FILE object that identifies the stream to be re-opened.

Return Value

If the file was re-opened successfully, the function returns a pointer to an object identifying the stream or else, null pointer is returned.

Example

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

Live Demo

```
#include <stdio.h>

int main () {
   FILE *fp;

   printf("This text is redirected to stdout\n");
```

```
   fp = freopen("file.txt", "w+", stdout);

   printf("This text is redirected to file.txt\n");

   fclose(fp);

   return(0);
}
```

Let us compile and run the above program that will send the following line at STDOUT because initially we did not open stdout −

```
This text is redirected to stdout
```

After a call to **freopen()**, it associates STDOUT to file **file.txt**, so whatever we write at STDOUT that goes inside **file.txt**. So, the file **file.txt** will have the following content.

```
This text is redirected to file.txt
```

Now let's 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);
}
```