PHP File Handling

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File handling is an important part of any web application. You often need to open and process a file for different tasks.

PHP Manipulating Files

PHP has several functions for creating, reading, uploading, and editing files.

**Be careful when manipulating files!**

When you are manipulating files you must be very careful.

You can do a lot of damage if you do something wrong. Common errors are: editing the wrong file, filling a hard-drive with garbage data, and deleting the content of a file by accident.

PHP readfile() Function

The readfile() function reads a file and writes it to the output buffer.

Assume we have a text file called "webdictionary.txt", stored on the server, that looks like this:

AJAX = Asynchronous JavaScript and XML  
CSS = Cascading Style Sheets  
HTML = Hyper Text Markup Language  
PHP = PHP Hypertext Preprocessor  
SQL = Structured Query Language  
SVG = Scalable Vector Graphics  
XML = EXtensible Markup Language

The PHP code to read the file and write it to the output buffer is as follows (the readfile() function returns the number of bytes read on success):

Example

<?php  
echo readfile("webdictionary.txt");  
?>

[Run example »](https://tryphp.w3schools.com/showphp.php?filename=demo_file_readfile)

The readfile() function is useful if all you want to do is open up a file and read its contents.

The next chapters will teach you more about file handling.

PHP Open File - fopen()

A better method to open files is with the fopen() function. This function gives you more options than the readfile() function.

We will use the text file, "webdictionary.txt", during the lessons:

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The first parameter of fopen() contains the name of the file to be opened and the second parameter specifies in which mode the file should be opened. The following example also generates a message if the fopen() function is unable to open the specified file:

Example

<?php  
$myfile = fopen("webdictionary.txt", "r") or die("Unable to open file!");  
echo fread($myfile,filesize("webdictionary.txt"));  
fclose($myfile);  
?>

[Run example »](https://tryphp.w3schools.com/showphp.php?filename=demo_file_fopen)

**Tip:** The fread() and the fclose() functions will be explained below.

The file may be opened in one of the following modes:

|  |  |
| --- | --- |
| **Modes** | **Description** |
| R | **Open a file for read only**. File pointer starts at the beginning of the file |
| W | **Open a file for write only**. Erases the contents of the file or creates a new file if it doesn't exist. File pointer starts at the beginning of the file |
| A | **Open a file for write only**. The existing data in file is preserved. File pointer starts at the end of the file. Creates a new file if the file doesn't exist |
| X | **Creates a new file for write only**. Returns FALSE and an error if file already exists |
| r+ | **Open a file for read/write**. File pointer starts at the beginning of the file |
| w+ | **Open a file for read/write**. Erases the contents of the file or creates a new file if it doesn't exist. File pointer starts at the beginning of the file |
| a+ | **Open a file for read/write**. The existing data in file is preserved. File pointer starts at the end of the file. Creates a new file if the file doesn't exist |
| x+ | **Creates a new file for read/write**. Returns FALSE and an error if file already exists |

PHP Read File - fread()

The fread() function reads from an open file.

The first parameter of fread() contains the name of the file to read from and the second parameter specifies the maximum number of bytes to read.

The following PHP code reads the "webdictionary.txt" file to the end:

fread($myfile,filesize("webdictionary.txt"));

PHP Close File - fclose()

The fclose() function is used to close an open file.

It's a good programming practice to close all files after you have finished with them. You don't want an open file running around on your server taking up resources!

The fclose() requires the name of the file (or a variable that holds the filename) we want to close:

<?php  
$myfile = fopen("webdictionary.txt", "r");  
// some code to be executed....  
fclose($myfile);  
?>

PHP Read Single Line - fgets()

The fgets() function is used to read a single line from a file.

The example below outputs the first line of the "webdictionary.txt" file:

Example

<?php  
$myfile = fopen("webdictionary.txt", "r") or die("Unable to open file!");  
echo fgets($myfile);  
fclose($myfile);  
?>

[Run example »](https://tryphp.w3schools.com/showphp.php?filename=demo_file_fgets)

**Note:** After a call to the fgets() function, the file pointer has moved to the next line.

PHP Check End-Of-File - feof()

The feof() function checks if the "end-of-file" (EOF) has been reached.

The feof() function is useful for looping through data of unknown length.

The example below reads the "webdictionary.txt" file line by line, until end-of-file is reached:

Example

<?php  
$myfile = fopen("webdictionary.txt", "r") or die("Unable to open file!");  
// Output one line until end-of-file  
while(!feof($myfile)) {  
  echo fgets($myfile) . "<br>";  
}  
fclose($myfile);  
?>

[Run example »](https://tryphp.w3schools.com/showphp.php?filename=demo_file_feof)

PHP Read Single Character - fgetc()

The fgetc() function is used to read a single character from a file.

The example below reads the "webdictionary.txt" file character by character, until end-of-file is reached:

Example

<?php  
$myfile = fopen("webdictionary.txt", "r") or die("Unable to open file!");  
// Output one character until end-of-file  
while(!feof($myfile)) {  
  echo fgetc($myfile);  
}  
fclose($myfile);  
?>

[Run example »](https://tryphp.w3schools.com/showphp.php?filename=demo_file_fgetc)

PHP Create File - fopen()

The fopen() function is also used to create a file. Maybe a little confusing, but in PHP, a file is created using the same function used to open files.

If you use fopen() on a file that does not exist, it will create it, given that the file is opened for writing (w) or appending (a).

The example below creates a new file called "testfile.txt". The file will be created in the same directory where the PHP code resides:

Example

$myfile = fopen("testfile.txt", "w")

PHP File Permissions

If you are having errors when trying to get this code to run, check that you have granted your PHP file access to write information to the hard drive.

PHP Write to File - fwrite()

The fwrite() function is used to write to a file.

The first parameter of fwrite() contains the name of the file to write to and the second parameter is the string to be written.

The example below writes a couple of names into a new file called "newfile.txt":

Example

<?php  
$myfile = fopen("newfile.txt", "w") or die("Unable to open file!");  
$txt = "John Doe\n";  
fwrite($myfile, $txt);  
$txt = "Jane Doe\n";  
fwrite($myfile, $txt);  
fclose($myfile);  
?>

Notice that we wrote to the file "newfile.txt" twice. Each time we wrote to the file we sent the string $txt that first contained "John Doe" and second contained "Jane Doe". After we finished writing, we closed the file using the fclose() function.

If we open the "newfile.txt" file it would look like this:

John Doe  
Jane Doe

PHP Overwriting

Now that "newfile.txt" contains some data we can show what happens when we open an existing file for writing. All the existing data will be ERASED and we start with an empty file.

In the example below we open our existing file "newfile.txt", and write some new data into it:

Example

<?php  
$myfile = fopen("newfile.txt", "w") or die("Unable to open file!");  
$txt = "Mickey Mouse\n";  
fwrite($myfile, $txt);  
$txt = "Minnie Mouse\n";  
fwrite($myfile, $txt);  
fclose($myfile);  
?>

If we now open the "newfile.txt" file, both John and Jane have vanished, and only the data we just wrote is present:

Mickey Mouse  
Minnie Mouse