Working with Files

Manipulating Files

PHP offers a number of functions to use when creating, reading, uploading, and editing files.
The **fopen()** function creates or opens a file. If you use **fopen()** with a file that does not exist, the file will be created, given that the file has been opened for writing (w) or appending (a).

Use one of the following **modes** to open the file.
r: Opens file for read only.
w: Opens file for write only. Erases the contents of the file or creates a new file if it doesn't exist.
a: Opens file for write only.
x: Creates new file for write only.
r+: Opens file for read/write.
w+: Opens file for read/write. Erases the contents of the file or creates a new file if it doesn't exist.
a+: Opens file for read/write. Creates a new file if the file doesn't exist
x+: Creates new file for read/write.

The example below creates a new file, "file.txt", which will be created in the same directory that houses the PHP code.

```
$myfile = fopen("file.txt", "w");
```

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Write to File

When writing to a file, use the **fwrite()** function.
The first parameter of **fwrite()** is the file to write to; the second parameter is the string to be written.

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

```
<?php
$myfile = fopen("names.txt", "w");

$txt = "John\n";
fwrite($myfile, $txt);
$txt = "David\n";
fwrite($myfile, $txt);

fclose($myfile);

/* File contains:
John
David
*/
?>
```

Notice that we wrote to the file "names.txt" twice, and then we used the **fclose()** function to close the file.

The **\n** symbol is used when writing **new lines**.

fclose()

The **fclose()** function closes an open file and returns TRUE on success or FALSE on failure.

> It's a good practice to close all files after you have finished working with them.

Appending to a File

If you want to append content to a file, you need to open the file in **append mode**.

For example:

```
$myFile = "test.txt";
$fh = fopen($myFile, 'a');
fwrite($fh, "Some text");
fclose($fh);
```

> When appending to a file using the **'a' mode**, the file pointer is placed at the end of the file, ensuring that all new data is added at the end of the file.

Appending to a File

Let's create an example of a form that adds filled-in data to a file.

```
<?php
if(isset($_POST['text'])) {
  $name = $_POST['text'];
  $handle = fopen('names.txt', 'a');
  fwrite($handle, $name."\n");
  fclose($handle);
}
?>
<form method="post">
  Name: <input type="text" name="text" />
  <input type="submit" name="submit" />
</form>
```

Now, each time a name is entered and submitted, it's added to the "names.txt" file, along with a new line.

The **isset()** function determined whether the form had been submitted, as well as whether the text contained a value.

> We did not specify an **action** attribute for the form, so it will submit to itself.

Reading a File

The **file()** function reads the entire file into an array. Each element within the array corresponds to a line in the file:

```
$read = file('names.txt');
foreach ($read as $line) {
  echo $line .", ";
}
```

Try It Yourself

This prints all of the lines in the file, and separates them with commas.

> We used the **foreach** loop, because the **$read** variable is an **array**.

Reading a File

At the end of the output in the previous example, we would have a comma, as we print it after each element of the array.
The following code lets us avoid printing that final comma.

```
$read = file('names.txt');
$count = count($read);
$i = 1;
foreach ($read as $line) {
  echo $line;
  if($i < $count) {
    echo ', ';
  }
  $i++;
}
```

Try It Yourself

The $count variable uses the **count** function to obtain the number of elements in the $read array.
Then, in the foreach loop, after each line prints, we determine whether the current line is less than the total number of lines, and print a comma if it is.

> This avoids printing that final comma, as for the last line, $i is equal to $count.

End.