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By: Ronald Nicholls in [Development](#) | [6 Comments](#) | [Stumble It!](#) [Bookmark](#)

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# DESIGN TO XHTML

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Think how many websites that are built and need an image, and a thumbnail version of that image. When building [boxofficeBUZ](#) I came across a very simple but normal issue. Why waste time creating an image and thumbnail version in Photoshop or any other **image processing software**, why not do it dynamically with php.

82

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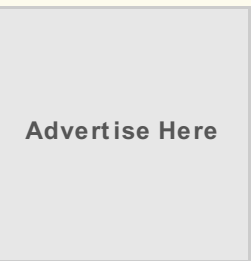
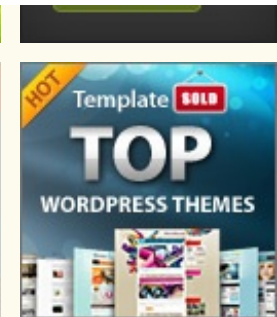
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Image credit: [dcreeves2000](#)

From there I started researching php's built in GD image library, and ways to create thumbnails. There is a lot of information on creating thumbnails, most either create a thumbnail by just giving a height or width. If you can specify a height and width the thumbnails usually result in being stretched. It is from here that I started to combine scripts and eventually came up with a standard thumbnail script that I use for most of my websites. This not only creates a thumbnail, but crops the image keeping its dimensions intact and results in not stretching the thumbnail image.



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In this tutorial, we will be using php to create on the fly dynamic thumbnails of images. This tutorial will show you how to do it for all major image formats *ie. png, jpg, gif*.

Step 1 is telling the script what size & width you would like the thumbnail images to be.

```
1 | $nw = 150;    //New Width
2 | $nh = 100;    //new Height
```

Now we want to tell the script the source file, and the destination of the thumbnail.

```
1 | $source = "images/test/test.jpg";    //Source file
2 | $dest = "images/test/thumb/test.jpg";    //Destination *Note you can add or change
```

The next part of the code will dynamically figure out the extension of the file. We use php's explode function to find the period before the file extension, and then use count to find everything after the period, resulting in the file extension.

```
1 | $stype = explode(".", $source);
2 | $stype = $stype[count($stype)-1];
```

The next step is to get the original image size.

```
1 | $size = getimagesize($source);
2 | $w = $size[0];    //Images width
3 | $h = $size[1];    //Images height
```

The next part of the code is switch statement to make sure we use the right php function to create the thumbnail image.

```
1 | switch($stype) {
2 |     case 'gif':
3 |         $simg = imagecreatefromgif($source);
4 |         break;
5 |     case 'jpg':
6 |         $simg = imagecreatefromjpeg($source);
7 |         break;
8 |     case 'png':
9 |         $simg = imagecreatefrompng($source);
10 |        break;
```

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11 | }

The next part of the code is what does all the magic, it will create the thumbnail, and move it into the desired folder. The last line of the next block of code goes in this order (*destination image, destination, quality of image*).

```
1 $dimg = imagecreatetruecolor($nw, $nh);
2 $wm = $w/$nw;
3 $hm = $h/$nh;
4 $h_height = $nh/2;
5 $w_height = $nw/2;
6
7 if($w > $h) {
8     $adjusted_width = $w / $hm;
9     $half_width = $adjusted_width / 2;
10    $int_width = $half_width - $w_height;
11    imagecopyresampled($dimg, $simg, -$int_width, 0, 0, 0, $adjusted_width, $nh, $w, $h);
12 } elseif(($w < $h) || ($w == $h)) {    $adjusted_height = $h / $wm;    $half hei
```

Now the code all together.

```
1 $source = "images/test/test.jpg";    //Source file $dest = "images/test/thumb/test
2 $adjusted_width = $w / $hm;
3 $half_width = $adjusted_width / 2;
4 $int_width = $half_width - $w_height;
5 imagecopyresampled($dimg, $simg, -$int_width, 0, 0, 0, $adjusted_width, $nh, $w, $h);
6 } elseif(($w < $h) || ($w == $h)) {
7     $adjusted_height = $h / $wm;
8     $half_height = $adjusted_height / 2;
9     $int_height = $half_height - $h_height;
10
11    imagecopyresampled($dimg, $simg, 0, -$int_height, 0, 0, $nw, $adjusted_height, $w, $h);
12 } else {
13     imagecopyresampled($dimg, $simg, 0, 0, 0, 0, $nw, $nh, $w, $h);
14 }
15
16 imagejpeg($dimg, $dest, 100);
```



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This is just an added bonus variation of the code, it will take a desired folder, find every image in that folder, and create thumbnails of all the images on the fly.

```
1 $thumb_directory = "images/thumb"; //Thumbnail folder
2 $orig_directory = "images/full"; //Full image folder
3
4 /* Opening the thumbnail directory and looping through all the thumbs: */
5 $dir_handle = @opendir($orig_directory); //Open Full image dirrectory
6 if ($dir_handle > 1){ //Check to make sure the folder opened
7
8 $allowed_types=array('jpg','jpeg','gif','png');
9 $file_parts=array();
10 $ext='';
11 $title='';
12 $i=0;
13
14 while ($file = @readdir($dir_handle))
15 {
16     /* Skipping the system files: */
17     if($file=='.' || $file == '..') continue;
18
19     $file_parts = explode('.', $file); //This gets the file name of the images
20     $ext = strtolower(array_pop($file_parts));
21
22     /* Using the file name (withouth the extension) as a image title: */
23     $title = implode('.', $file_parts);
24     $title = htmlspecialchars($title);
25
26     /* If the file extension is allowed: */
27     if(in_array($ext, $allowed_types))
28     {
29
30         /* If you would like to inpute images into a database, do your mysql query
31
32         /* The code past here is the code at the start of the tutorial */
33         /* Outputting each image: */
34
35         $nw = 150;
36         $nh = 100;
37         $source = "images/full/{$file}";
38         $stype = explode(".", $source);
39         $stype = $stype[count($stype)-1];
40         $dest = "images/thumb/{$file}";
41
42         $size = getimagesize($source);
43         $w = $size[0];
44         $h = $size[1];
45
46         switch($stype) {
47             case 'gif':
48                 $simg = imagecreatefromgif($source);
49                 break;
```

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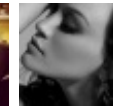
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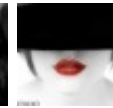
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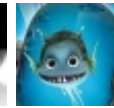
Joel



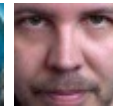
Lucinda



Jaime



Lehel



Irving



Patrice



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```

50     case 'jpg':
51         $simg = imagecreatefromjpeg($source);
52         break;
53     case 'png':
54         $simg = imagecreatefrompng($source);
55         break;
56     }
57
58     $dimg = imagecreatetruecolor($nw, $nh);
59     $wm = $w/$nw;
60     $hm = $h/$nh;
61     $h_height = $nh/2;
62     $w_height = $nw/2;
63
64     if($w > $h) {
65         $adjusted_width = $w / $hm;
66         $half_width = $adjusted_width / 2;
67         $int_width = $half_width - $w_height;
68         imagecopyresampled($dimg, $simg, -$int_width, 0, 0, 0, $adjusted_width, $nh, 0, 0);
69     } elseif(($w < $h) || ($w == $h)) {
70         $adjusted_height = $h / $wm;
71         $half_height = $adjusted_height / 2;
72         $int_height = $half_height - $h_height;
73
74         imagecopyresampled($dimg, $simg, 0, -$int_height, 0, 0, $nw, $adjusted_height, 0, 0);
75     } else {
76         imagecopyresampled($dimg, $simg, 0, 0, 0, 0, $nw, $nh, $w, $h);
77     }
78     imagejpeg($dimg, $dest, 100);
79 }
80
81
82 /* Closing the directory */
83 @closedir($dir_handle);
84
85 }

```



Why waste your time cutting and cropping images with image processing software, when you can just use a PHP built in function to create image thumbnails on the fly. It will give you more free time in the end, and once mastered there are many more things you can do with PHP's image functions.

Posted on: February 25th, 2011

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### *Ronald Nicholls*

Ronald Nicholls is a freelance web developer, and Owner/CEO of Geek Suite, Inc. A graduate of Multimedia Design at durham college. While at Durham he spent his last 2 years of school freelancing, and learning more about the industry. In July 2010 He started Geek Suite Inc. a network of websites that cover a variety of topics and interests, with the basic theme being, "Nerd / Geek" culture.

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**Creative Agency**

February 25, 2011 at 8:58 pm

great tutorial on image crop system using php, we could even do it using lots of available php classes.

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**Josh**

February 25, 2011 at 9:33 pm

Great article! Thanks for sharing. I just had to do this for a client.

[Reply](#)



**Darek**

February 25, 2011 at 9:40 pm

Thanks for this script. I'm having a problem with it though.

The script does produce one or two thumbnails correctly and places them in the correct dir, but then it stops and throws this error:

"HTTP Error 500 (Internal Server Error): An unexpected condition was encountered while the server was attempting to fulfill the request."

Could it be something with my images?



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**Ronald**

February 26, 2011 at 12:56 am

First thing I would check if your trying to create a lot of images is, max execution time. second check to make sure your images are all in the .jpg, .png, or .gif format. If that doesn't work, shoot me an email threw my portfolio website with the issue and ill do my best to help you out. <http://www.ronnicholls.com>

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**Josh F**

February 25, 2011 at 10:33 pm

This is awesome! I've been looking for a way to dynamically create thumbnails on the fly without resizing manually in Photoshop. Thanks!

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