HTML Image Maps

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With HTML image maps, you can create clickable areas on an image.

Image Maps

The HTML <map> tag defines an image map. An image map is an image with clickable areas. The areas are defined with one or more <area> tags.

Try to click on the computer, phone, or the cup of coffee in the image below:



Example

Here is the HTML source code for the image map above:

<img src="workplace.jpg" alt="Workplace" usemap="#workmap">  
  
<map name="workmap">  
  <area shape="rect" coords="34,44,270,350" alt="Computer" href="computer.htm">  
  <area shape="rect" coords="290,172,333,250" alt="Phone" href="phone.htm">  
  <area shape="circle" coords="337,300,44" alt="Coffee" href="coffee.htm">  
</map>

[Try it Yourself »](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_images_map2)

How Does it Work?

The idea behind an image map is that you should be able to perform different actions depending on where in the image you click.

To create an image map you need an image, and some HTML code that describes the clickable areas.

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The Image

The image is inserted using the <img> tag. The only difference from other images is that you must add a usemap attribute:

<img src="workplace.jpg" alt="Workplace" usemap="#workmap">

The usemap value starts with a hash tag # followed by the name of the image map, and is used to create a relationship between the image and the image map.

**Tip:** You can use any image as an image map!

Create Image Map

Then, add a <map> element.

The <map> element is used to create an image map, and is linked to the image by using the required name attribute:

<map name="workmap">

The name attribute must have the same value as the <img>'s usemap attribute .

The Areas

Then, add the clickable areas.

A clickable area is defined using an <area> element.

Shape

You must define the shape of the clickable area, and you can choose one of these values:

* rect - defines a rectangular region
* circle - defines a circular region
* poly - defines a polygonal region
* default - defines the entire region

You must also define some coordinates to be able to place the clickable area onto the image.

Shape="rect"

The coordinates for shape="rect" come in pairs, one for the x-axis and one for the y-axis.

So, the coordinates 34,44 is located 34 pixels from the left margin and 44 pixels from the top:



The coordinates 270,350 is located 270 pixels from the left margin and 350 pixels from the top:



Now we have enough data to create a clickable rectangular area:

Example

<area shape="rect" coords="34, 44, 270, 350" href="computer.htm">

[Try it Yourself »](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_images_map3)

This is the area that becomes clickable and will send the user to the page "computer.htm":



Shape="circle"

To add a circle area, first locate the coordinates of the center of the circle:

337,300



Then specify the radius of the circle:

44 pixels



Now you have enough data to create a clickable circular area:

Example

<area shape="circle" coords="337, 300, 44" href="coffee.htm">

[Try it Yourself »](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_images_map4)

This is the area that becomes clickable and will send the user to the page "coffee.htm":



Shape="poly"

The shape="poly" contains several coordinate points, which creates a shape formed with straight lines (a polygon).

This can be used to create any shape.

Like maybe a croissant shape!

How can we make the croissant in the image below become a clickable link?



We have to find the x and y coordinates for all edges of the croissant:



The coordinates come in pairs, one for the x-axis and one for the y-axis:

Example

<area shape="poly" coords="140,121,181,116,204,160,204,222,191,270,140,329,85,355,58,352,37,322,40,259,103,161,128,147" href="croissant.htm">

[Try it Yourself »](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_images_map_croissant)

This is the area that becomes clickable and will send the user to the page "croissant.htm":



Image Map and JavaScript

A clickable area can also trigger a JavaScript function.

Add a click event to the <area> element to execute a JavaScript function:

Example

Here, we use the onclick attribute to execute a JavaScript function when the area is clicked:

<map name="workmap">  
  <area shape="circle" coords="337,300,44" href="coffee.htm" onclick="myFunction()">  
</map>  
  
<script>  
function myFunction() {  
  alert("You clicked the coffee cup!");  
}  
</script>

[Try it Yourself »](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_images_map5)

Chapter Summary

* Use the HTML <map> element to define an image map
* Use the HTML <area> element to define the clickable areas in the image map
* Use the HTML usemap attribute of the <img> element to point to an image map

HTML Image Tags

|  |  |
| --- | --- |
| **Tag** | **Description** |
| [<img>](https://www.w3schools.com/tags/tag_img.asp) | Defines an image |
| [<map>](https://www.w3schools.com/tags/tag_map.asp) | Defines an image map |
| [<area>](https://www.w3schools.com/tags/tag_area.asp) | Defines a clickable area inside an image map |
| [<picture>](https://www.w3schools.com/tags/tag_picture.asp) | Defines a container for multiple image resources |

# HTML Background Images

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A background image can be specified for almost any HTML element.

## Background Image on a HTML element

To add a background image on an HTML element, use the HTML style attribute and the CSS background-image property:

### Example

Add a background image on a HTML element:

<p style="background-image: url('img\_girl.jpg');">

[Try it Yourself »](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_images_background3)

You can also specify the background image in the <style> element, in the <head> section:

### Example

Specify the background image in the <style> element:

<style>  
p {  
  background-image: url('img\_girl.jpg');  
}  
</style>

[Try it Yourself »](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_images_background4)

## Background Image on a Page

If you want the entire page to have a background image, you must specify the background image on the <body> element:

### Example

Add a background image for the entire page:

<style>  
body {  
  background-image: url('img\_girl.jpg');  
}  
</style>

[Try it Yourself »](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_images_background5)

## Background Repeat

If the background image is smaller than the element, the image will repeat itself, horizontally and vertically, until it reaches the end of the element:

### Example

<style>  
body {  
  background-image: url('example\_img\_girl.jpg');  
}  
</style>

[Try it Yourself »](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_images_background6)

To avoid the background image from repeating itself, set the background-repeat property to no-repeat.

### Example

<style>  
body {  
  background-image: url('example\_img\_girl.jpg');  
  background-repeat: no-repeat;  
}  
</style>

[Try it Yourself »](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_images_background6_1)

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## Background Cover

If you want the background image to cover the entire element, you can set the background-size property to cover.

Also, to make sure the entire element is always covered, set the background-attachment property to fixed:

This way, the background image will cover the entire element, with no stretching (the image will keep its original proportions):

### Example

<style>  
body {  
  background-image: url('img\_girl.jpg');  
  background-repeat: no-repeat;  
  background-attachment: fixed;  
  background-size: cover;  
}  
</style>

[Try it Yourself »](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_images_background7)

## Background Stretch

If you want the background image to stretch to fit the entire element, you can set the background-size property to 100% 100%:

Try resizing the browser window, and you will see that the image will stretch, but always cover the entire element.

### Example

<style>  
body {  
  background-image: url('img\_girl.jpg');  
  background-repeat: no-repeat;  
  background-attachment: fixed;  
  background-size: 100% 100%;  
}  
</style>

# HTML <picture> Element

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The HTML <picture> element allows you to display different pictures for different devices or screen sizes.



## The HTML <picture> Element

The HTML <picture> element gives web developers more flexibility in specifying image resources.

The <picture> element contains one or more <source> elements, each referring to different images through the srcset attribute. This way the browser can choose the image that best fits the current view and/or device.

Each <source> element has a media attribute that defines when the image is the most suitable.

### Example

Show different images for different screen sizes:

<picture>  
  <source media="(min-width: 650px)" srcset="img\_food.jpg">  
  <source media="(min-width: 465px)" srcset="img\_car.jpg">  
  <img src="img\_girl.jpg">  
</picture>

[Try it Yourself »](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_images_picture1)

**Note:** Always specify an <img> element as the last child element of the <picture> element. The <img> element is used by browsers that do not support the <picture> element, or if none of the <source> tags match.

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## When to use the Picture Element

There are two main purposes for the <picture> element:

### 1. Bandwidth

If you have a small screen or device, it is not necessary to load a large image file. The browser will use the first <source> element with matching attribute values, and ignore any of the following elements.

### 2. Format Support

Some browsers or devices may not support all image formats. By using the <picture> element, you can add images of all formats, and the browser will use the first format it recognizes, and ignore any of the following elements.

### Example

The browser will use the first image format it recognizes:

<picture>  
  <source srcset="img\_avatar.png">  
  <source srcset="img\_girl.jpg">  
  <img src="img\_beatles.gif" alt="Beatles" style="width:auto;">  
</picture>

[Try it Yourself »](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_images_picture_format)

**Note:** The browser will use the first <source> element with matching attribute values, and ignore any following <source> elements.

## HTML Image Tags

|  |  |
| --- | --- |
| **Tag** | **Description** |
| [<img>](https://www.w3schools.com/tags/tag_img.asp) | Defines an image |
| [<map>](https://www.w3schools.com/tags/tag_map.asp) | Defines an image map |
| [<area>](https://www.w3schools.com/tags/tag_area.asp) | Defines a clickable area inside an image map |
| [<picture>](https://www.w3schools.com/tags/tag_picture.asp) | Defines a container for multiple image resources |

For a complete list of all available HTML tags, visit our [HTML Tag Reference](https://www.w3schools.com/tags/default.asp).

HTML Favicon

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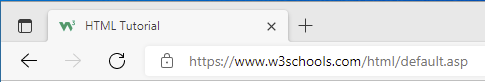
A favicon is a small image displayed next to the page title in the browser tab.

How To Add a Favicon in HTML

You can use any image you like as your favicon. You can also create your own favicon on sites like [https://www.favicon.cc](https://www.favicon.cc/).

**Tip:** A favicon is a small image, so it should be a simple image with high contrast.

A favicon image is displayed to the left of the page title in the browser tab, like this:



To add a favicon to your website, either save your favicon image to the root directory of your webserver, or create a folder in the root directory called images, and save your favicon image in this folder. A common name for a favicon image is "favicon.ico".

Next, add a <link> element to your "index.html" file, after the <title> element, like this:

Example

<!DOCTYPE html>  
<html>  
<head>  
  <title>My Page Title</title>  
  <link rel="icon" type="image/x-icon" href="/images/favicon.ico">  
</head>  
<body>  
  
<h1>This is a Heading</h1>  
<p>This is a paragraph.</p>  
  
</body>  
</html>

Now, save the "index.html" file and reload it in your browser. Your browser tab should now display your favicon image to the left of the page title.

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Favicon File Format Support

The following table shows the file format support for a favicon image:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Browser** | **ICO** | **PNG** | **GIF** | **JPEG** | **SVG** |
| Edge | Yes | Yes | Yes | Yes | Yes |
| Chrome | Yes | Yes | Yes | Yes | Yes |
| Firefox | Yes | Yes | Yes | Yes | Yes |
| Opera | Yes | Yes | Yes | Yes | Yes |
| Safari | Yes | Yes | Yes | Yes | Yes |

Chapter Summary

* Use the HTML <link> element to insert a favicon

HTML Link Tag

|  |  |
| --- | --- |
| **Tag** | **Description** |
| [<link>](https://www.w3schools.com/tags/tag_link.asp) | Defines the relationship between a document and an external resource |