### [The HTML table basics](https://courses.edx.org/courses/course-v1:W3Cx+JS.0x+3T2017/courseware/b108897ce3c4449c8326cda572490b8f/3fd025df64df4a5fa2818efe2f1c689d/?activate_block_id=block-v1%3AW3Cx%2BJS.0x%2B3T2017%2Btype%40sequential%2Bblock%403fd025df64df4a5fa2818efe2f1c689d): tags, attributes and CSS styling

#### Introduction

The <table> element helps with rendering tables in an HTML document.

Each table row is defined with the <tr> tag (**T**able **R**ow). A table header is defined with the <th> tag (**T**able **H**eader). By default, table headings are bold and centered. A table data/cell is defined with the <td> tag (**T**able **D**ata). In each cell, you can have other HTML elements/tags. You can have only "column table headers" (the first row of the table will be in bold), or you can also have "row headers" (first cell of each row).

**Best practice for making the table accessible:** always add a <caption> tag inside the <table> tag. Data tables very often have brief descriptive text before or after the table that indicates the content of that table. This text should be associated to its respective table using the <caption> element. The <caption> element must be the first thing after the opening <table> tag.

**Second best practice for accessibility:** use a scope attribute with all <th scope = "row or column"> for identifying whether a table header is a column header or a row header.

**Important information -**

* + You can read [these recommendations](https://www.w3.org/WAI/tutorials/tables/) for making accessible tables

Link - <https://www.w3.org/WAI/tutorials/tables/>

# Tables Concepts

On this page[(skip)](https://www.w3.org/WAI/tutorials/tables/" \l "skipotp)

* [Why is this important?](https://www.w3.org/WAI/tutorials/tables/#why-is-this-important)
* [Related WCAG 2.0 resources](https://www.w3.org/WAI/tutorials/tables/#related)

**Technologies covered in this Tutorial:**

HTML4 HTML5 WAI-ARIA

Data tables are used to organize data with a logical relationship in grids. Accessible tables need HTML markup that indicates header cells and data cells and defines their relationship. Assistive technologies use this information to provide context to users.

Header cells must be marked up with <th>, and data cells with <td> to make tables accessible. For more complex tables, explicit associations may be needed using scope, id, and headers attributes.

This tutorial shows you how to apply appropriate structural markup to tables. It includes the following pages:

* [**Tables with one header[https://www.w3.org/WAI/tutorials/img/img-simple-362d3f4b.png](https://www.w3.org/WAI/tutorials/tables/one-header/)**](https://www.w3.org/WAI/tutorials/tables/one-header/) for rows or columns: For tables with content that is easy to distinguish, mark up header cells with <th> and data cells with <td>elements.
* [**Tables with two headers[https://www.w3.org/WAI/tutorials/img/img-multidir-210ee61f.png](https://www.w3.org/WAI/tutorials/tables/two-headers/)**](https://www.w3.org/WAI/tutorials/tables/two-headers/) have a simple row header and a simple column header: For tables with unclear header directions, define the direction of each header by setting the scope attribute to col or row.
* [**Tables with irregular headers[https://www.w3.org/WAI/tutorials/img/img-irreg-7e6fa7d0.png](https://www.w3.org/WAI/tutorials/tables/irregular/)**](https://www.w3.org/WAI/tutorials/tables/irregular/) have header cells that span multiple columns and/or rows: For these tables, define column and row groups and set the range of the header cells using the colgroup and rowgroup values of the scope attribute.
* [**Tables with multi-level headers[https://www.w3.org/WAI/tutorials/img/img-multi-55740f2d.png](https://www.w3.org/WAI/tutorials/tables/multi-level/)**](https://www.w3.org/WAI/tutorials/tables/multi-level/) have multiple header cells associated per data cell: For tables that are so complex that header cells can’t be associated in a strictly horizontal or vertical way, use id and headers attributes to associate header and data cells explicitly.
* [**Caption & Summary[https://www.w3.org/WAI/tutorials/img/img-caption-234c7b48.png](https://www.w3.org/WAI/tutorials/tables/caption-summary/)**](https://www.w3.org/WAI/tutorials/tables/caption-summary/)**:** A caption identifies the overall topic of a table and is useful in most situations. A summary provides orientation or navigation hints in complex tables.

Some document formats other than HTML, such as PDF, provide similar mechanisms to markup table structures. Word processing applications may also provide mechanisms to markup tables. Tables markup is often lost when converting from one format to another, though some programs may provide functionality to assist converting table markup.

Many web authoring tools and content management systems (CMS) provide functions to define header cells during table creation without having to edit the code manually.

**Notes:** This tutorial provides guidance for creating tables used to display data in a grid. This tutorial does not apply to tables used for layout. As a general rule, tables aren't meant to be used for layout purposes. Instead, a best practice is to use Cascading Style Sheets (CSS) for visual presentation.

[**SHARE**](https://www.w3.org/WAI/tutorials/tables/#why-is-this-important)

## Why is this important?

Tables without structural markup to differentiate and properly link between header and data cells, create accessibility barriers. Relying on visual cues alone is not sufficient to create an accessible table. With structural markup, headers and data cells can be programmatically determined by software, which means that:

* **People using screen readers** can have the row and column headers read aloud as they navigate through the table. Screen readers speak one cell at a time and reference the associated header cells, so the reader doesn’t lose context.
* **Some people use alternative ways to render the data**, for example by using custom stylesheets to display header cells more prominently. Techniques like this enable them to change text size and colors and display the information as lists rather than grids. The table code needs to be properly structured to allow alternative renderings.