# 2.5 Tables

## Creating a table

A **table** is an HTML structure surrounded by the opening and closing tags that allows data to be organized in rows and columns. A **cell** is a location in the table at a specific row and column.

- The opening and closing tags create a table row, which contains all the row's cells.
- The opening and closing tags create a new table cell containing table header information about the data. Usually, the browser displays table headers centered with a bold font.
- The opening and closing tags create a new table cell containing table data.

A table **caption** defines a short descriptive text for a table and is created with **<caption>** tags. The caption opening and closing tags must immediately follow the opening table tag. A web browser typically renders the table caption centered above the table.

PARTICIPATION ACTIVITY

2.5.1: HTML tables organize data into rows and columns.



Start

2x speed

```
    <caption>Presidential Nominees</caption>

        Party
        Party
```

**Presidential Nominees** 

Party Nominee

Democratic Franklin Pierce

Whig Winfield Scott

## Captions ^

- 1. The opening and closing tags create a structure to store the table's contents.
- 2. The <caption> opening and </caption> closing tags surround the table's caption, which renders above the table.
- 3. The opening and closing tags create a row inside the table.
- 4. The > opening and > closing tags create two header cells in the same row.

- 5. Two more rows are added to the table. Each row has two data cells, created with opening and closing tags.
- 6. Without CSS, the table renders with no borders around the table cells.

Feedback?

## Table borders

The tables in this section appear with borders for clarity. CSS can be added to a webpage to display table borders. Ex:

```
<style>
table, th, td {
   border: 2px solid gray;
}
</style>
```

CSS, discussed elsewhere, can also be used to increase the table's size, add borders, add background images and color, change the cell text alignment, etc.

PARTICIPATION ACTIVITY

2.5.2: Table structure.



Match the tags to the correct blanks to render the table below.

```
_A_ Transistors then and now</caption>
 Attribute
   1975
   2015
 ___B
   Transistor size
   6 μ m
   14 nm
 </tr>
 <tr>
    C Transistor count
   6K
    _D__ 1.3G</td>
```

### Transistors then and now

Attribute	1975	2015
Transistor size	6 µm	14 nm
Transistor count	6K	1.3G

If unable to drag and drop, refresh the page.

<caption></caption>	A The <caption> opening tag starts a descriptive caption "Transistors then and now."</caption>	Correct
	The  opening tag starts a table row for the transistor sizes.	Correct
	The opening tag starts a table cell for a header: Transistor count.	Correct
>	The opening tag starts a table cell for a datum: 1.3G.	Correct

Reset

Feedback?

**PARTICIPATION ACTIVITY** 

2.5.3: Creating tables.



Enter the necessary HTML to create the different parts of a table.

1) Create a table cell with datum of "open".



**Show answer** 





A table cell is created with the opening tag, the cell's content, and the closing tag.

2) Create a table cell with header of "hours".

Check



**Answer** 

hours

A table header is created with the opening tag, the header cell's content, and the closing tag.

3) Create an empty table row with no content.



**Show answer** 

4) Create an empty table with the caption "Store Information".



**Answer** 

A table row is created with the opening tag, the row's content, and the closing tag. An empty row will only have opening and closing tags.

**Answer** 

<caption>Store Information</caption> 

A table with a caption is started with the opening tag followed by the caption. A caption is created with the <caption> opening tag, the caption text, and the </caption> closing tag. The table ends with the closing tag.

Feedback?

**PARTICIPATION ACTIVITY** 

2.5.4: Add table row.



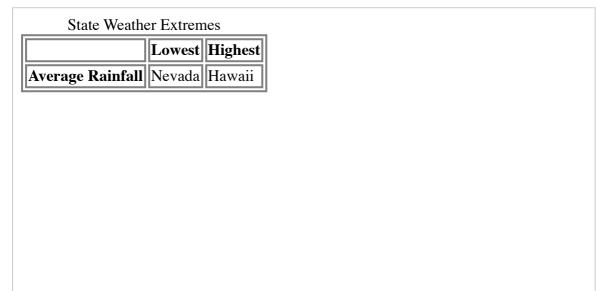
The following HTML is an example of a table with one row of column headers and one row of data. Try adding the necessary HTML and text to create another row, Average Temperature, at the bottom of the table that shows Alaska as having the lowest average temperature and Florida as having the highest average temperature.

```
1 
2
   <caption>State Weather Extremes</caption>
3
4
     5
     Lowest
6
     Highest
7
   8
   9
     Average Rainfall
     Nevada
10
     Hawaii
11
12
   13
```

Render webpage

Reset code

### Your webpage



▼ View solution

```
Explain
```

```
<caption>State Weather Extremes</caption>
```

--- START FILE: HTML ---

```
Lowest
  Highest
 Average Rainfall
  Nevada
  Hawaii
 Average Temperature
  Alaska
  Florida
 --- END FILE: HTML ---
```

Feedback?

PARTICIPATION ACTIVITY

2.5.5: Add table column.



The following HTML is an example of a table with one column of headers and one column of data. Try adding the necessary HTML and text to create another column, Heaviest, on the right side of the table that shows Ostrich as the heaviest bird and Blue Whale as the heaviest mammal.

```
1 
2
   <caption>Weight Extremes</caption>
3
   4
5
     Lightest
6
   7
   8
     Bird
     Bee Hummingbird
9
10
   11
   Mammal
12
     Pygmy Shrew
13
14
   15 
16
```

Render webpage

Reset code

### Your webpage

Wei	ght Extremes
	Lightest
Bird	Bee Hummingbird
Mammal	Pygmy Shrew

▼ View solution

```
>.< Explain
```

```
--- START FILE: HTML ---
<caption>Weight Extremes</caption>
 Lightest
  Heaviest
 Bird
  Bee Hummingbird
  0strich
 Mammal
  Pygmy Shrew
  Blue Whale
 --- END FILE: HTML ---
```

Feedback?

### Note

Web browsers often have to process invalid HTML and attempt to fix errors. However, the resulting behavior is unpredictable. Because web developers commonly do not write the closing  $\langle tr \rangle$ ,  $\langle th \rangle$ , and  $\langle td \rangle$  tags, the Living HTML Standard permits not writing those closing tags. Good practice is to always use both the opening and closing tags for the  $\langle tr \rangle$ ,  $\langle th \rangle$ , and  $\langle td \rangle$  tags.

## Ugly tables

HTML tables are rather plain without CSS. Table columns and rows render just large enough to display the inner content, and usually no table border is displayed. CSS (discussed elsewhere) can be used to increase the table's size, add borders, add background images and color, change the cell text alignment, etc.

# Spanning multiple columns and rows

A single table cell occupies a single row and column by default, but a cell may span multiple columns or multiple rows using the **colspan attribute** and **rowspan attribute** to specify how many columns or rows to span. The **colspan** and **rowspan** attributes apply to and and

PARTICIPATION ACTIVITY

2.5.6: Spanning multiple columns and rows.



The following HTML creates a table with a "Warmup" cell that spans 3 columns and a "Scrimmage" cell that spans 2 rows. Add HTML and text to create a "Sat" column and "12:00" row containing cells spanning multiple rows or columns as shown in the expected webpage.

```
1 
2
  <caption>Team Schedule</caption>
3
   4
    5
    Mon
    Wed
6
7
    Fri
8
   9
   9:00
10
    Warmup
11
12
13
   14
    10:00
    Drills
15
    Skills Test
16
```

Render webpage

Reset code

### Your webpage

## **Expected webpage**

Team Schedule				
	Mon	Wed	Fri	
9:00	Warm	up		
10:00	Drills	Skills Test	Scrimmage	
11:00	Film	Weights	Scrimmage	

Team Schedule				
	Mon	Wed	Fri	Sat
9:00	Warmup			
10:00	Drills	Skills Test	Scrimmage	Games
11:00	Film	Weights		
12:00			Team Lunch	

▼ View solution

> Explain

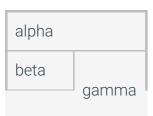
```
9:00
  Warmup
  Games
 10:00
  Drills
  Skills Test
  Scrimmage
 11:00
  Film
  Weights
 12:00
  Team Lunch
 --- END FILE: HTML ---
--- START FILE: CSS ---
table,th,td {
 border: 2px solid gray;
}
--- END FILE: CSS ---
                            Feedback?
```

PARTICIPATION ACTIVITY

2.5.7: Spanning multiple columns and rows.

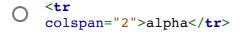


Refer to the table below.



epsilon

1) What HTML creates the "alpha" table cell?



- alpha
- O <td cols="2">alpha
- 2) What HTML creates the second row?

```
    beta
```

- 3) What HTML creates the third row?

```
epsilon

ctd

rowspan="2">gamma
```

#### Correct

The **colspan** attribute indicates the number of columns the table cell spans.

#### Correct

The "beta" cell spans a single row, but "gamma" spans two rows.

#### Correct

The "epsilon" cell spans a single row and column on the last row.

Feedback?

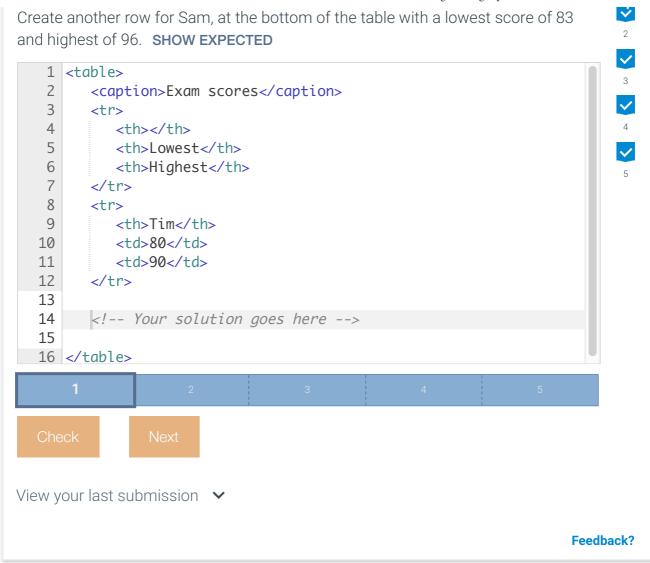
CHALLENGE ACTIVITY

2.5.1: Modifying a table.



530096.4000608.qx3zqy7

Start

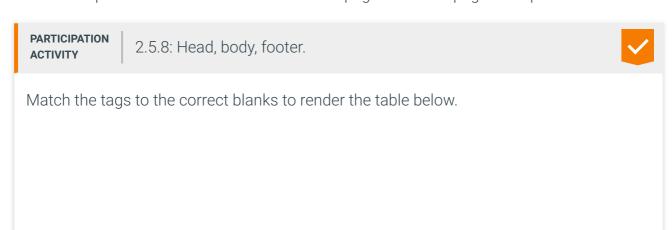


# Header, body, and footer

Three optional table tags specify each part of a table:

- The <thead> tag specifies the table header.
- The tag specifies the table body.
- The **<tfoot>** tag specifies the table footer.

The <thead>, , and <tfoot> tags do not affect the layout of the table, but browsers may use the tags to enable the table body to scroll independently of the header and footer or to print the header and footer on each page of a multi-page table printout.



```
Movie
   Rate
   Price
  </thead>
 ___B_
  Finding Dory
   Adult
   $10
  >
   Finding Dory
   Child
   $6
  _C__
  >
   Total
   $16
  </tfoot>
```

Movie	Rate	Price
Finding Dory	Adult	\$10
Finding Dory	Child	\$6
Total		\$16

If unable to drag and drop, refresh the page.

<thead></thead>	A The <thead> tags surround the rows that define the table header.</thead>	Correct
	The  tags surround the rows that define the table body.	Correct
<tfoot></tfoot>	<u>C</u>	Correct

