HTML tables are used to display **tabular data**—information that is best organized into a grid of rows and columns, like a spreadsheet. While they were once used for page layout, this is now considered a bad practice. Their true purpose is to structure data.

Core Table Structure

A table has a clear, hierarchical structure.

Tag	Name	Description
`<table>`	Table	The main container for the entire table. All other table elements must be inside this tag.
`<tr>`	Table Row	Defines a single row within the table.
`<th>`	Table Header	Defines a header cell. The text is **bold** and **centered** by default. It's used to give a title to a column (or sometimes a row). It must be placed inside a `<tr>`.
`<td>`	Table Data	Defines a standard data cell. The text is regular and left-aligned by default. This is where your actual data goes. It must be placed inside a `<tr>`.

Exmple :

```html
<table>
  <tr>
    <th>First Name</th>
    <th>Last Name</th>
  </tr>
  <tr>
    <td>John</td>
    <td>Doe</td>
  </tr>
</table>
```

This will create a simple 2x2 table.

Semantic Grouping Tags

For more complex tables, it's a best practice to group your rows into logical sections. These tags help with accessibility and styling and provide a clearer structure.

Example with Grouping:

HTML

```html
<table>
  <thead>
    <tr>
      <th>Item</th>
      <th>Price</th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <td>Apple</td>
      <td>$1.00</td>
    </tr>
    <tr>
      <td>Orange</td>
      <td>$1.50</td>
    </tr>
  </tbody>
  <tfoot>
    <tr>
      <td>Total</td>
      <td>$2.50</td>
    </tr>
  </tfoot>
</table>
```
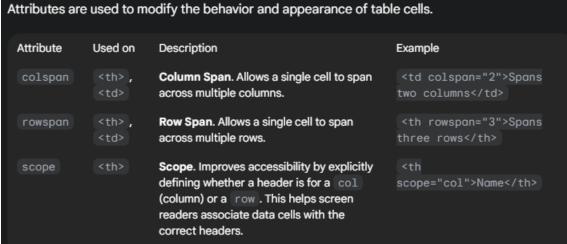
Tag	Name	Description
`<thead>`	Table Head	Groups the header content of the table. It should contain one or more `<tr>` elements with `<th>` cells. There can only be one `<thead>` per table.
`<tbody>`	Table Body	Groups the main body content of the table. This is where the bulk of your data rows (`<tr>` with `<td>` cells) will go.
`<tfoot>`	Table Foot	Groups the footer content of the table. It's often used for summary rows, like totals or conclusions. There can only be one `<tfoot>` per table.

Table Caption

The <caption> tag provides a title or description for the entire table.

- It must be placed immediately after the opening <table> tag.

- It is crucial for accessibility, as it gives context to screen readers before they read the cell data.

- A table can only have one <caption>.

Attributes are used to modify the behavior and appearance of table cells.

Attribute	Used on	Description	Example
colspan	`<th>`, `<td>`	**Column Span.** Allows a single cell to span across multiple columns.	`<td colspan="2">Spans two columns</td>`
rowspan	`<th>`, `<td>`	**Row Span.** Allows a single cell to span across multiple rows.	`<th rowspan="3">Spans three rows</th>`
scope	`<th>`	**Scope.** Improves accessibility by explicitly defining whether a header is for a `col` (column) or a `row`. This helps screen readers associate data cells with the correct headers.	`<th scope="col">Name</th>`

Example Using colspan and rowspan:

```
<table>
        <caption>Employee Schedule</caption>
        <thead>
                <tr>
                        <th rowspan="2">Employee</th>
                        <th colspan="2">Shift</th>
                </tr>
                <tr>
                        <th>Morning</th>
                        <th>Afternoon</th>
                </tr>
        </thead>
        <tbody>
                <tr>
                        <td>Alice</td>
                        <td>9am - 1pm</td>
                        <td>1pm - 5pm</td>
                </tr>
                <tr>
                        <td>Bob</td>
                        <td colspan="2">9am - 5pm (Full Day)</td>
                </tr>
        </tbody>
</table>
```