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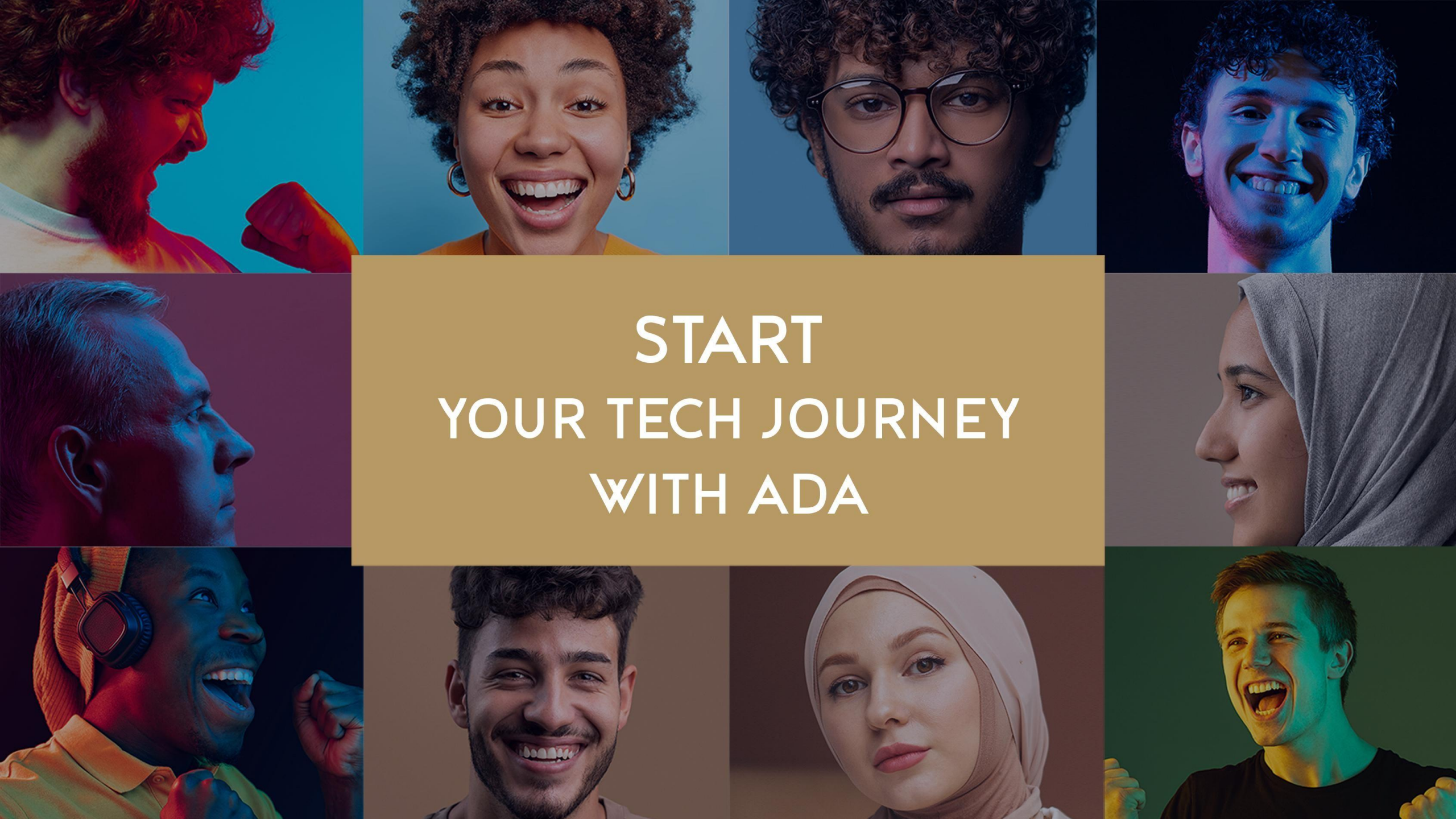
START
YOUR TECH JOURNEY
WITH ADA

Agenda

- Media Elements (Audio, Video, and Iframe) with All Attributes
- Tables with All Attributes

Media Elements: Audio

The <audio> tag is used to embed audio content in a webpage. Key attributes:

- controls: Adds playback controls.
- autoplay: Starts playing the audio automatically.
- loop: Replays the audio in a loop.
- muted: Starts the audio in a muted state.
- preload: Indicates how much of the audio should be loaded (auto, metadata, none).

```
<audio controls>
  <source src="audio.mp3" type="audio/mpeg">
  Your browser does not support the audio element.
</audio>
```

Media Elements: Video

The <video> tag is used to embed video content in a webpage. Key attributes:

- controls: Adds playback controls.
- autoplay: Starts playing the video automatically.
- loop: Replays the video in a loop.
- muted: Starts the video in a muted state.
- preload: Indicates how much of the video should be loaded (auto, metadata, none).
- poster: Displays an image before the video plays.

```
<video controls poster="poster.jpg">
  <source src="video.mp4" type="video/mp4">
  Your browser does not support the video element.
</video>
```

Media Elements: Iframe

The <iframe> tag is used to embed external content (like videos or websites) in a webpage. Key attributes:

- src: Specifies the source URL.
- width: Defines the width of the iframe.
- height: Defines the height of the iframe.
- allowfullscreen: Allows full-screen mode for embedded content.
- frameborder: Specifies whether the iframe should have a border (deprecated).

```
<iframe src="https://example.com" width="600" height="400" allowfullscreen>
</iframe>
```

Introduction to HTML Tables

HTML tables are used to display data in rows and columns, making it easy to compare and analyze information. Tables should be used for tabular data only, not for layout purposes.

Introduction to HTML Tables

When to use tables?

```html
<!-- ✅ CORRECT: Use tables for tabular data -->
<table>
  <caption>Monthly Sales Report</caption>
  <thead>
    <tr>
      <th>Month</th>
      <th>Sales</th>
      <th>Growth</th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <td>January</td>
      <td>$10,000</td>
      <td>5%</td>
    </tr>
  </tbody>
</table>
```

```html
<!-- ❌ INCORRECT: Don't use tables for layout -->
<!-- This is outdated and bad for accessibility -->
<table>
  <tr>
    <td>Navigation</td>
    <td>Main Content</td>
    <td>Sidebar</td>
  </tr>
</table>
```

Table vs. Other Elements

```html
<!-- Use tables for data comparison -->
<table>
  <caption>Product Comparison</caption>
  <!-- Table content here -->
</table>

<!-- Use lists for simple data -->
<ul>
  <li>Feature 1</li>
  <li>Feature 2</li>
  <li>Feature 3</li>
</ul>

<!-- Use CSS Grid/Flexbox for layout -->
<div class="grid-layout">
  <header>Header</header>
  <main>Main Content</main>
  <aside>Sidebar</aside>
</div>
```

Basic Table Structure

Essential Table Elements

```html
<!-- Basic table with minimum required elements -->
<table>
  <!-- Table row element -->
  <tr>
    <!-- Table header cell -->
    <th>Header 1</th>
    <th>Header 2</th>
    <th>Header 3</th>
  </tr>

  <!-- Data rows -->
  <tr>
    <!-- Table data cell -->
    <td>Data 1</td>
    <td>Data 2</td>
    <td>Data 3</td>
  </tr>

  <tr>
    <td>Data 4</td>
    <td>Data 5</td>
    <td>Data 6</td>
  </tr>
</table>
```

Basic Table Structure

Complete Table Structure Hierarchy

```html
<!-- Full table structure with all semantic elements -->
<table>
  <!-- Optional: Table caption describes the table content -->
  <caption>Employee Information</caption>

  <!-- Optional: Column group for styling columns -->
  <colgroup>
    <col>                    <!-- First column -->
    <col style="width: 30%"> <!-- Second column with width -->
    <col span="2">           <!-- Third and fourth columns -->
  </colgroup>

  <!-- Table header section -->
  <thead>
    <tr>
      <th>Name</th>
      <th>Position</th>
      <th>Department</th>
      <th>Salary</th>
    </tr>
  </thead>
```

```html
  <!-- Table body section (main data) -->
  <tbody>
    <tr>
      <td>John Doe</td>
      <td>Developer</td>
      <td>IT</td>
      <td>$75,000</td>
    </tr>
    <tr>
      <td>Jane Smith</td>
      <td>Designer</td>
      <td>Creative</td>
      <td>$65,000</td>
    </tr>
  </tbody>

  <!-- Optional: Table footer section -->
  <tfoot>
    <tr>
      <td colspan="3">Total</td>
      <td>$140,000</td>
    </tr>
  </tfoot>
</table>
```

Table Elements Deep Dive

<table> Element

```
<!-- Table element with various attributes -->
<table
  id="employee-table"           <!-- Unique identifier -->
  class="data-table striped"    <!-- CSS classes for styling -->
  border="1"                    <!-- Border width (deprecated, use CSS) -->
  cellpadding="5"               <!-- Cell padding (deprecated, use CSS) -->
  cellspacing="0"               <!-- Cell spacing (deprecated, use CSS) -->
  width="100%"                  <!-- Table width (deprecated, use CSS) -->
  summary="Employee data with names, positions, and salaries"> <!-- For screen rea

  <!-- Table content -->
</table>

<!-- Modern approach using CSS classes -->
<table class="employee-table">
  <!-- Content here -->
</table>
```

Table Elements Deep Dive

<tr> Element (Table Row)

```html
<table>
  <!-- Regular table row -->
  <tr>
    <td>Regular row</td>
    <td>Normal styling</td>
  </tr>

  <!-- Row with CSS class for styling -->
  <tr class="highlight-row">
    <td>Highlighted row</td>
    <td>Special styling</td>
  </tr>

  <!-- Row with inline styling (not recommended) -->
  <tr style="background-color: #f0f0f0;">
    <td>Inline styled row</td>
    <td>Gray background</td>
  </tr>

  <!-- Row with ID for JavaScript targeting -->
  <tr id="row-total">
    <td>Total Row</td>
    <td>$1,000</td>
  </tr>
</table>
```

Table Elements Deep Dive

<td> Element (Table Data Cell)

```html
<table>
  <tr>
    <!-- Basic data cell -->
    <td>Simple text</td>

    <!-- Cell with CSS class -->
    <td class="number-cell">$1,234.56</td>

    <!-- Cell with text alignment -->
    <td style="text-align: center;">Centered</td>

    <!-- Cell with multiple lines -->
    <td>
      Line 1<br>
      Line 2<br>
      Line 3
    </td>

    <!-- Cell with HTML content -->
    <td>
      <strong>Bold text</strong><br>
      <em>Italic text</em><br>
      <a href="#link">Link text</a>
    </td>
  </tr>
</table>
```

Table Elements Deep Dive

<th> Element (Table Header Cell)

```
<table>
  <!-- Column headers -->
  <tr>
    <th>Name</th>              <!-- Default header -->
    <th scope="col">Age</th>   <!-- Column header with scope -->
    <th abbr="Pos">Position</th> <!-- Header with abbreviation -->
  </tr>

  <tr>
    <!-- Row header -->
    <th scope="row">John Doe</th>
    <td>30</td>
    <td>Developer</td>
  </tr>

  <tr>
    <!-- Row header with styling -->
    <th scope="row" class="row-header">Jane Smith</th>
    <td>25</td>
    <td>Designer</td>
  </tr>
</table>
```

Table Headers and Scope

The scope attribute is crucial for accessibility, helping screen readers understand the relationship between headers and data cells.

Column Headers:

```
<table>
  <caption>Student Grades</caption>
  <thead>
    <tr>
      <!-- Each th with scope="col" identifies column headers -->
      <th scope="col">Student Name</th>
      <th scope="col">Math</th>
      <th scope="col">Science</th>
      <th scope="col">English</th>
      <th scope="col">Average</th>
    </tr>
  </thead>
```

Table Headers and Scope

The scope attribute is crucial for accessibility, helping screen readers understand the relationship between headers and data cells.

Row Headers:

```
<tbody>
  <tr>
    <!-- scope="row" identifies this as a row header -->
    <th scope="row">North America</th>
    <td>$250,000</td>
    <td>$275,000</td>
    <td>$290,000</td>
    <td>$310,000</td>
  </tr>
  <tr>
    <th scope="row">Europe</th>
    <td>$180,000</td>
    <td>$195,000</td>
    <td>$200,000</td>
    <td>$215,000</td>
  </tr>
  <tr>
    <th scope="row">Asia Pacific</th>
    <td>$150,000</td>
    <td>$165,000</td>
    <td>$175,000</td>
    <td>$190,000</td>
  </tr>
</tbody>
```

Complex Headers with Scope Groups

```html
<table>
  <caption>Sales Data by Quarter and Region</caption>
  <thead>
    <tr>
      <th rowspan="2" scope="col">Region</th>
      <!-- scope="colgroup" for headers that span multiple columns -->
      <th colspan="2" scope="colgroup">Q1</th>
      <th colspan="2" scope="colgroup">Q2</th>
    </tr>
    <tr>
      <th scope="col">Sales</th>
      <th scope="col">Growth</th>
      <th scope="col">Sales</th>
      <th scope="col">Growth</th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <th scope="row">North</th>
      <td>$100K</td>
      <td>5%</td>
      <td>$110K</td>
      <td>10%</td>
    </tr>
    <tr>
      <th scope="row">South</th>
      <td>$90K</td>
      <td>3%</td>
      <td>$95K</td>
      <td>5.5%</td>
    </tr>
  </tbody>
</table>
```

Table Body, Header, and Footer

<thead> Element

```
<table>
  <caption>Product Inventory</caption>

  <!-- Table header: Contains column headers and navigation -->
  <thead>
    <!-- Multiple header rows are allowed -->
    <tr>
      <th colspan="4">Product Information</th>
    </tr>
    <tr>
      <th scope="col">Product ID</th>
      <th scope="col">Name</th>
      <th scope="col">Category</th>
      <th scope="col">Stock</th>
    </tr>
  </thead>

  <tbody>
    <!-- Data rows here -->
  </tbody>
</table>
```

Table Body, Header, and Footer

<tbody> Element

```
<!-- Multiple tbody elements can group related rows -->
<tbody class="pending-orders">
  <tr>
    <td>001</td>
    <td>John Doe</td>
    <td>$150.00</td>
    <td>Pending</td>
  </tr>
  <tr>
    <td>002</td>
    <td>Jane Smith</td>
    <td>$89.99</td>
    <td>Pending</td>
  </tr>
</tbody>

<tbody class="completed-orders">
  <tr>
    <td>003</td>
    <td>Bob Wilson</td>
    <td>$275.50</td>
    <td>Completed</td>
  </tr>
  <tr>
    <td>004</td>
    <td>Alice Brown</td>
    <td>$199.99</td>
    <td>Completed</td>
  </tr>
</tbody>
```

Table Body, Header, and Footer

<tfoot> Element

```
<!-- Table footer: Contains summary information -->
<tfoot>
  <tr>
    <th scope="row">Totals</th>
    <td>$2,500</td>
    <td>$2,525</td>
    <td class="negative">-$25</td>
  </tr>
  <tr>
    <td colspan="4">
      <small>*Budget variance shows actual vs planned spending</small>
    </td>
  </tr>
</tfoot>
```

Spanning Cells (Colspan & Rowspan)

Colspan (Column Spanning)

```
<tr>
  <th scope="col">Page</th>
  <!-- This header spans 3 columns -->
  <th colspan="3" scope="colgroup">Traffic Sources</th>
  <th scope="col">Total</th>
</tr>
```

Spanning Cells (Colspan & Rowspan)

Rowspan (Row Spanning)

```
<!-- Engineering department spans 4 rows -->
<tr>
  <th rowspan="4" scope="rowgroup">Engineering</th>
  <th rowspan="2" scope="rowgroup">Frontend</th>
  <td>John Doe</td>
  <td>Senior Developer</td>
</tr>
```

Spanning Cells (Colspan & Rowspan)

Complex Spanning Example

```
<thead>
  <tr>
    <th rowspan="2" scope="col">Department</th>
    <!-- Q1 spans 3 sub-columns -->
    <th colspan="3" scope="colgroup">Q1</th>
    <!-- Q2 spans 3 sub-columns -->
    <th colspan="3" scope="colgroup">Q2</th>
    <th rowspan="2" scope="col">Total</th>
  </tr>
  <tr>
    <!-- Q1 sub-headers -->
    <th scope="col">Revenue</th>
    <th scope="col">Expenses</th>
    <th scope="col">Profit</th>
    <!-- Q2 sub-headers -->
    <th scope="col">Revenue</th>
    <th scope="col">Expenses</th>
    <th scope="col">Profit</th>
  </tr>
</thead>
```

Table Caption

<caption> Element

```
<table>
  <!-- Basic caption -->
  <caption>Employee Salary Information</caption>
  <thead>
    <!-- Table headers -->
  </thead>
  <tbody>
    <!-- Table data -->
  </tbody>
</table>
```

```
<!-- Caption with styling -->
<table>
  <caption class="table-title">
    <strong>2024 Sales Performance by Region</strong><br>
    <small>Data updated: March 15, 2024</small>
  </caption>
  <!-- Table content -->
</table>
```

```
<!-- Caption with detailed description -->
<table>
  <caption>
    Website Analytics - March 2024
    <details>
      <summary>About this data</summary>
      <p>This table shows website traffic data for March 2024,
         including page views, unique visitors, and bounce rates
         for each major section of the website.</p>
    </details>
  </caption>
  <!-- Table content -->
</table>
```

Column Groups and Styling

<colgroup> and <col> Elements

```
<!-- Column group defines styling for columns -->
<colgroup>
  <!-- First column: Product names -->
  <col class="product-name-col">

  <!-- Second column: Basic price -->
  <col class="price-col" style="background-color: #f0f0f0;">

  <!-- Third and fourth columns: Premium and Enterprise prices -->
  <col span="2" class="premium-cols">

  <!-- Fifth column: Features -->
  <col style="width: 30%;">
</colgroup>
```

THANK YOU

ADAEGY