HTML Table Handbook

1. `<table>`

- **Description**: Defines a table structure to organize tabular data.
- **Usage**: Wraps all table rows (`<tr>`) and optionally sections (`<thead>`, `<tbody>`, `<tfoot>`).
- **Syntax**:

```
<table> ... </table>
```

- **Attributes**:
- **border** → Defines table border width. Example: `border="2"`.
- **cellpadding** → Space inside cells. Example: `cellpadding="10"`.
- **cellspacing** → Space between cells. Example: `cellspacing="5"`.
- **width** → Table width (pixels or %). Example: `width="70%"`.
- **height** → Table height.
- **align** → Alignment of table (`left`, `center`, `right`). Deprecated; use CSS `text-align`.
- **bgcolor** → Background color. Deprecated; use CSS `background-color`.
- **rules** → Specifies which internal borders to display (`none`, `groups`, `rows`, `cols`, `all`).

2. `<caption>`

- **Description**: Adds a title or caption to the table.
- **Usage**: First child of `<table>`.
- **Syntax**:

```
<table>
  <caption>Table Title</caption>
</table>
```

- **Attributes**:
- **align** → `top`, `bottom`. Deprecated; use CSS `caption-side`.

3. `<thead>`

- **Description**: Groups header rows of a table.
- **Usage**: Contains `<tr>` with `<th>` cells.
- **Syntax**:

```
<thead>
  <tr>
    <th>Header 1</th>
    <th>Header 2</th>
  </tr>
</thead>
```

- **Attributes**: None (use CSS for styling).

---

4. `<tbody>`

- **Description**: Groups the main body rows of the table.
- **Usage**: Contains `<tr>` with `<td>`.
- **Syntax**:

```
<tbody>
  <tr>
    <td>Data 1</td>
    <td>Data 2</td>
  </tr>
</tbody>
```

- **Attributes**: None (styling via CSS).

---

5. `<tfoot>`

- **Description**: Groups footer rows, often used for totals or summaries.
- **Usage**: Contains `<tr>` with `<td>` or `<th>`.
- **Syntax**:

```
<tfoot>
  <tr>
    <td>Total</td>
    <td>100</td>
  </tr>
</tfoot>
```

- **Attributes**: None.

---

6. `<tr>`

- **Description**: Represents a table row.
- **Usage**: Must be inside `<table>`, `<thead>`, `<tbody>`, or `<tfoot>`.
- **Syntax**:

```
<tr>
  <td>Cell 1</td>
  <td>Cell 2</td>
</tr>
```

- **Attributes**:
- **align** → `left`, `center`, `right`. Deprecated; use CSS.
- **valign** → `top`, `middle`, `bottom`. Deprecated; use CSS `vertical-align`.
- **bgcolor** → Cell background for row. Deprecated; use CSS.

---

7. `<th>`

- **Description**: Header cell, bold and centered by default.
- **Usage**: Inside `<tr>`.
- **Syntax**:

```
<th>Header</th>
```

- **Attributes**:
- **colspan** → Number of columns the header spans. Example: `<th colspan="2">Merged</th>`.
- **rowspan** → Number of rows the header spans. Example: `<th rowspan="3">Tall Header</th>`.
- **scope** → Defines header relation: `col`, `row`, `colgroup`, `rowgroup`.

---

8. `<td>`

- **Description**: Table data cell.
- **Usage**: Inside `<tr>` in `<tbody>`, `<thead>`, or `<tfoot>`.
- **Syntax**:

```
<td>Data</td>
```

- **Attributes**:
- **colspan** → Number of columns to span. Syntax: `<td colspan="2">Merged Data</td>`.
- **rowspan** → Number of rows to span. Syntax: `<td rowspan="3">Tall Data</td>`.

- **headers** → Associates cell with header IDs for accessibility. Example: `<td headers="h1 h2">Content</td>`.
- **align** → `left`, `center`, `right`. Deprecated; use CSS.
- **valign** → `top`, `middle`, `bottom`. Deprecated; use CSS.
- **bgcolor** → Cell background color. Deprecated; use CSS.

9. Accessibility Tips

- Use `<th>` for all header cells; `<td>` for data cells.
- Assign IDs to headers (`<th id="h1">`) and use `headers` in `<td>` for screen readers.
- Use `scope` in `<th>` for simpler tables.
- Prefer CSS for styling (`border`, `bgcolor`, `align`, `valign`) instead of deprecated HTML attributes.

10. Example Table

```
<table border="2" cellpadding="10" cellspacing="5" width="80%">
  <caption>F1 Drivers Stats</caption>
  <thead>
    <tr>
      <th rowspan="2">Driver</th>
      <th colspan="2">Performance</th>
    </tr>
    <tr>
      <th>Wins</th>
      <th>Podiums</th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <td>Max Verstappen</td>
      <td>10</td>
      <td>15</td>
    </tr>
    <tr>
      <td>Lewis Hamilton</td>
      <td>8</td>
      <td>12</td>
    </tr>
  </tbody>
  <tfoot>
    <tr>
      <td>Total</td>
```

```
        <td>18</td>
        <td>27</td>
      </tr>
    </tfoot>
</table>
```