**HTML TABLE THEORY ASSIGNMENT**

**Q-1: Explain the structure of an HTML table and the purpose of each of the following elements: <table>, <tr>, <th>, <td>, and <thead>.**

**Ans:-**  **Purpose of Elements:-**

* **<table>**: The main container for the table.
* **<tr>**: Stands for "table row" – defines a row in the table.
* **<th>**: Table header cell – shows bold, centered text (usually column names).
* **<td>**: Table data cell – holds regular data inside a row.
* **<thead>**: Groups the header row(s) – helps with styling and structure.

**Example** :-

<table>

<thead>

<tr>

<th>Name</th>

<th>Age</th>

</tr>

</thead>

<tr>

<td>Ravi</td>

<td>25</td>

</tr>

</table>

**Q-2: What is the difference between colspan and rowspan in tables? Provide examples.**

**Ans:- Difference between colspan and rowspan:**

* **Colspan**:
* The colspan attribute in HTML is used to merge two or more columns into a single cell within a table.
* It is applied to a <td> or <th> element to make that cell stretch across multiple columns horizontally.
* This is useful for creating headers or summary rows that span several columns, improving table layout and readability.
* For example, if a cell has colspan="3", it will cover the space of three columns.
* **Rowspan**:
* The rowspan attribute allows a cell to extend vertically across two or more rows in a table.
* It is also used within <td> or <th> elements and is helpful when you want a cell to represent combined information from multiple rows.
* For instance, using rowspan="2" makes one cell take up the height of two rows, often used in side labels or grouped data sections.

**Q-3: Why should tables be used sparingly for layout purposes? What is a better alternative?**

**Ans:-** Tables should be used sparingly for layout purposes because they were not designed for page layout, but for displaying tabular data. Using tables for layout can lead to:

* **Poor accessibility:** screen readers may misinterpret layout tables.
* **Harder to maintain:** table layouts are complex and less flexible.
* **Slower page loads:** especially on mobile or responsive designs.
* **Bad for responsive design:** tables don’t adapt well to different screen sizes.

**Better Alternative: CSS (Cascading Style Sheets):**

CSS is a modern and powerful way to control layout and design. It offers:

* Responsive layouts using Flexbox or Grid.
* Easier styling and maintenance.
* Better performance and cleaner HTML structure.