Introduction to Web Programming I (CSC 211)

Lecture Note 2(3)

HTML Tables and Forms

27th October, 2021

How to Use Tables

- HTML **tables** were created to add tabular material (data arranged into rows and columns) to a web page.
- Tables may be used to organize schedules, product comparisons, statistics, or other types of information.
- A table cell may contain any sort of information, including numbers, text elements, and even images and multimedia objects.
- In browsers, the arrangement of data in rows and columns fives readers an instant understanding or relationships between data cells and their respective header labels.
- In early days before the style sheets, tables were the only option for creating multi-column layouts or controlling alignment and white space.
- If you need rows and columns for presentation purposes use CSS flexible boxes and/or grids

Minimal Table Structure

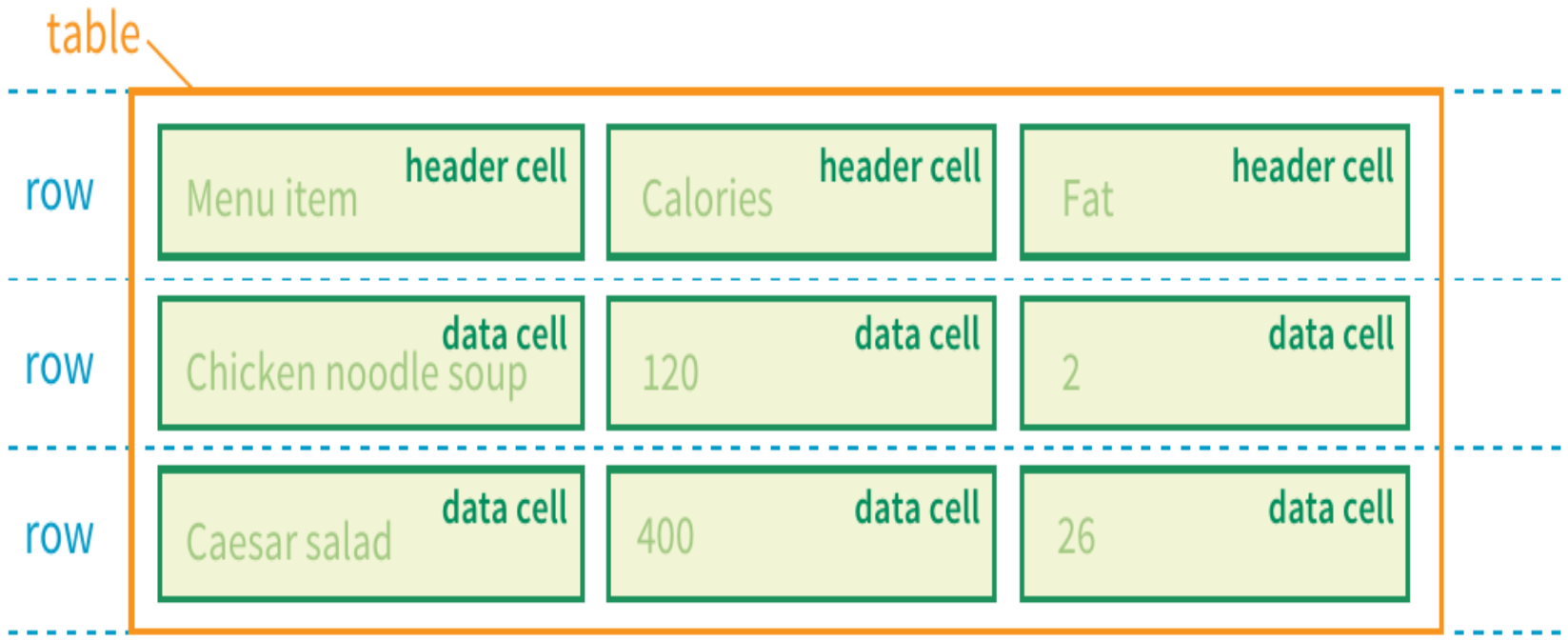
- Below is a small table with three rows and three columns that lists nutritional information

Menu item	Calories	Fat (g)
Chicken noodle soup	120	2
Caesar salad	400	26

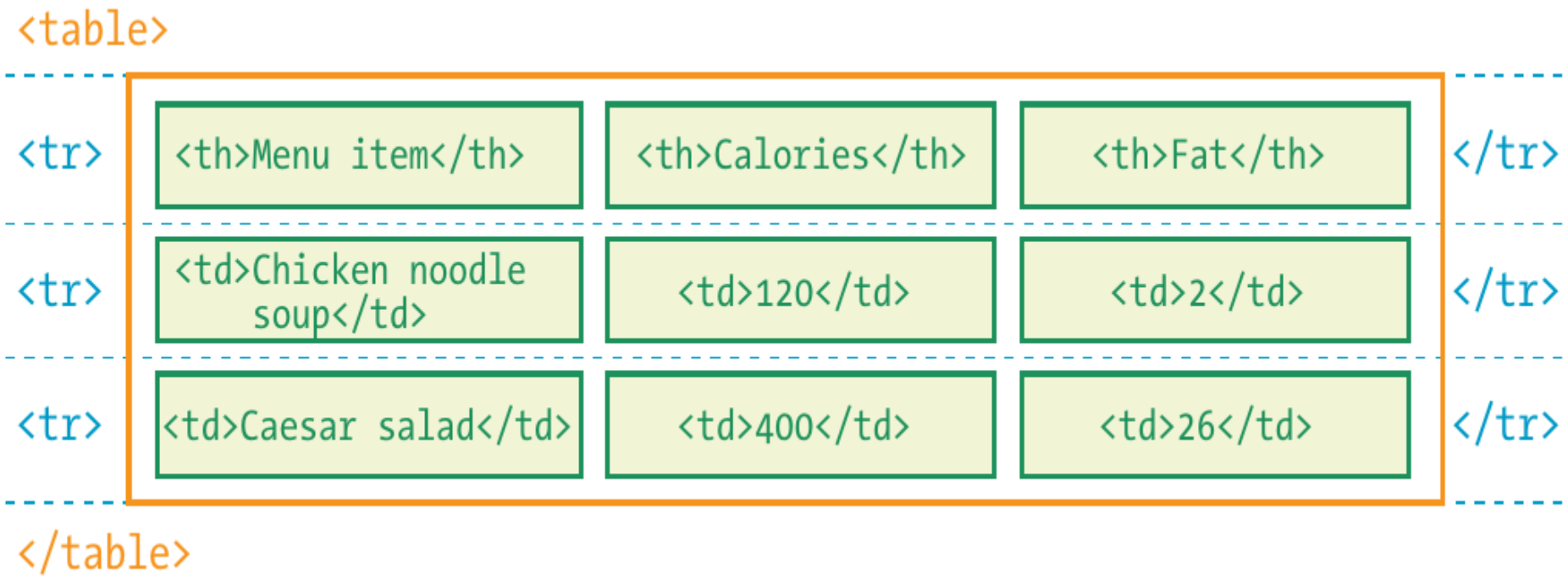
- The figure in the next slide reveals the structure of this table according to the HTML table model. All of the table's content goes into cells that are arranged into rows.
- Cells contain either header information (titles for the columns, such as "Calories") or data, which may be any sort of content.
- Tables are made up of rows that contain cells. Cells are the containers for the content.
- Start and end **table** tags identify the beginning and end of the tabular material. The table element may directly contain only some number of **tr** (row) elements, a caption and, optionally, the row and column group elements.

- The only thing that can go in the tr elements is some number of **td** and **th** elements. In other words, there may be not text content within the **table** and **tr** elements that is not contained within a **td** or **th**.
- The table headers (**th** elements) is displayed differently (usually displayed in bold) from the other cells in the table (**td** elements), that is because they provide information or context about the cells in the row or column they precede.
- The **th** element may be handled differently than **td**s by alternative browsing devices.

Table Structure



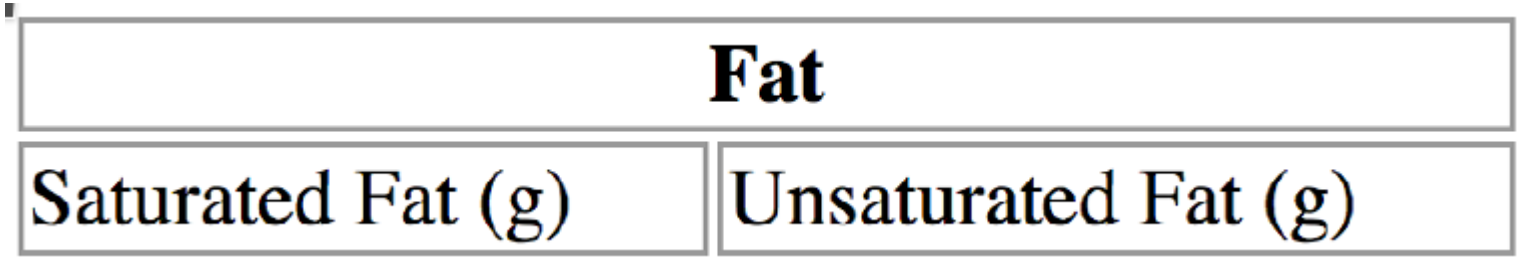
The elements that make up the basic structure of a table.



Spanning cells

- One fundamental feature of table structure is cell spanning, which is the stretching of a cell to cover several rows or columns. Spanning cells allows you to create complex table structures, but it has the side effect of making the markup a little more difficult to keep track of.
- It can also make it potentially more difficult for users with screen readers to follow.
- You can span cells by using **colspan** and **rowspan** attributes.

- **Column Spans**
- Column spans, created with the colspan attribute in the td or th element, stretch a cell to the right to span over the subsequent columns (see the figure below)



Fat	
Saturated Fat (g)	Unsaturated Fat (g)

- Here a column span is used to make a header apply to two columns.

```
<table>
    <tr>
        <th colspan="2">Fat</th>
    </tr>
    <tr>
        <td>Saturated Fat (g)</td>
        <td>Unsaturated Fat (g)</td>
    </tr>
</table>
```

- Notice in the first row (**tr**) that there are is only one **th** element, while the second row has two **td** elements. The **th** for the column that was spanned over is no longer in the source; the cell with the **colspan** stands for it. Every row should have the same number of cells or equivalent **colspan** values.

- **Exercise**
- Try writing the markups for the two (2) tables shown in the figures below. Remember that cells that are spanned over do not appear in the table code.

7:00pm	7:30pm	8:00pm
The Sunday Night Movie		
Perry Mason	Candid Camera	What's My Line?
Bonanza	The Wackiest Ship in the Army	

<table>
<tr><td>apples</td><td rowspan="3">oranges</td><td>pears</td></tr>
<tr><td>bananas</td><td rowspan="2">pineapple</td></tr>
<tr><td>lychees</td></tr>
</table>

- **Row Spans**
- Row spans, created with the **rowspan** attribute, work just like the column spans, but they caused the cell to span *downward* over several rows. In the example below, the first cell in the table spans down three rows:

```
<table>
    <tr>
        <th rowspan="3">Serving Size</th>
        <td>Small (8oz.)</td>
    </tr>
    <tr>
        <td>Medium (16oz.)</td>
    </tr>
    <tr>
        <td>Large (24oz.)</td>
    </tr>
</table>
```

- Notice that the **td** elements for the cells that were spanned over (the first cells in the remaining rows) do not appear in the source. The **rowspan=”3”** implies cells for the subsequent two rows, so no **td** elements are needed.
- The **figure** below shows the output of the markup in the slide above:

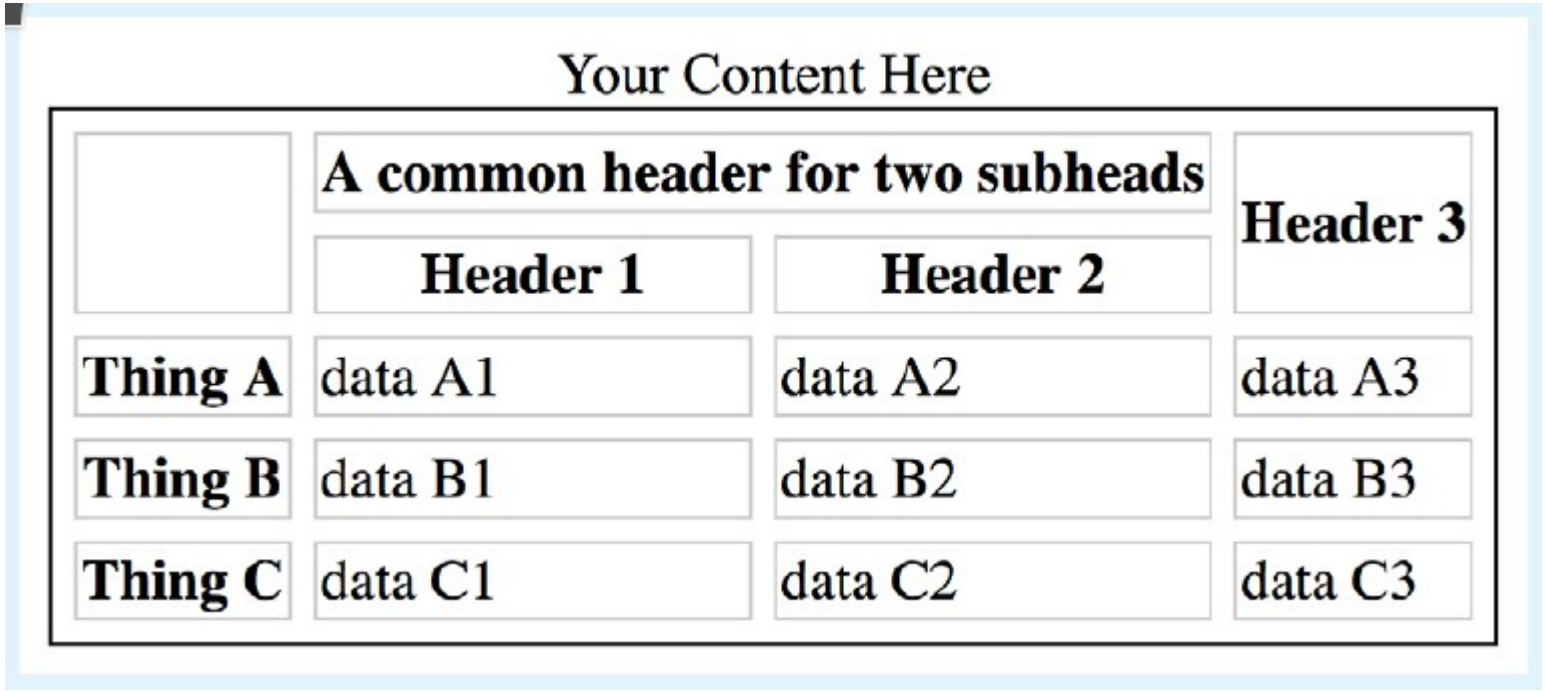
Serving Size	Small (8oz.)
	Medium (16oz.)
	Large (24oz.)

Describing the Table Content

- The most effective way to give sight-impaired users an overview of your table is to give it a title or description with the **caption** element. Captions display next to the **table** (generally, above it) and can be used to describe the table's contents or provide hints on how it is structured.
- When used, the **caption** element must be the first thing within the table element, as shown in this example, which adds a caption to the nutritional chart below:

```
<table>
    <caption>Nutritional Information</caption>
    <tr>
        <th>Menu item</th>
        <th>Calories</th>
        <th>Fat (g)</th>
    </tr>
    <!-- table continues -->
</table>
```

- **Exercise**
- Write markup for the following table. Take note of all the rows and columns spans.



Your Content Here

	A common header for two subheads		Header 3
	Header 1	Header 2	
Thing A	data A1	data A2	data A3
Thing B	data B1	data B2	data B3
Thing C	data C1	data C2	data C3

HTML Forms