

# **ENSF 381**

# **Full Stack Web Development**

## **Lecture 07:**

## **Tables**

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# What is HTML table?

- HTML table is a structured set of data organized in rows and columns.
- It is created using the `<table>` element in HTML.
- Tables allow us to:
  - Organize and display data in a structured format.
  - Structure the layout of the webpage.

# What is HTML table?

→ Assignments	→ Grade
Assignment 1 ←	8 ←
Assignment 2 ←	10 ←

# Table structure

- Table (`<table>`): the container element for the entire table.
- Table row (`<tr>`): defines a row in the table.
- Table header (`<th>`): defines header cells in a table. Header cells are typically placed in the first row or first column of the table and contain labels or headings.
- Table data (`<td>`): defines data cells in a table. These cells **contain the actual data of the table.**

# Table - example

```
<!DOCTYPE html>
<html>
<head>
<title>Tables</title>
</head>
<body>
<table>
```

```
  <tr>
    <th>Assignments</th>
    <th>Grade</th>
  </tr>
```

```
  <tr>
    <td>Assignment 1</td>
    <td>8</td>
  </tr>
```

```
  <tr>
    <td>Assignment 2</td>
    <td>10</td>
  </tr>
```

```
</table>
</body></html>
```

# Table - example



The image shows a web browser window with a dark address bar. The address bar contains navigation icons (back, forward, refresh) and a file path: `file:///Users/ahmadabdellatif/Desktop/ENSF381/examples/tables.html`. Below the address bar, a table is displayed with two columns: 'Assignments' and 'Grade'.

Assignments	Grade
Assignment 1	8
Assignment 2	10

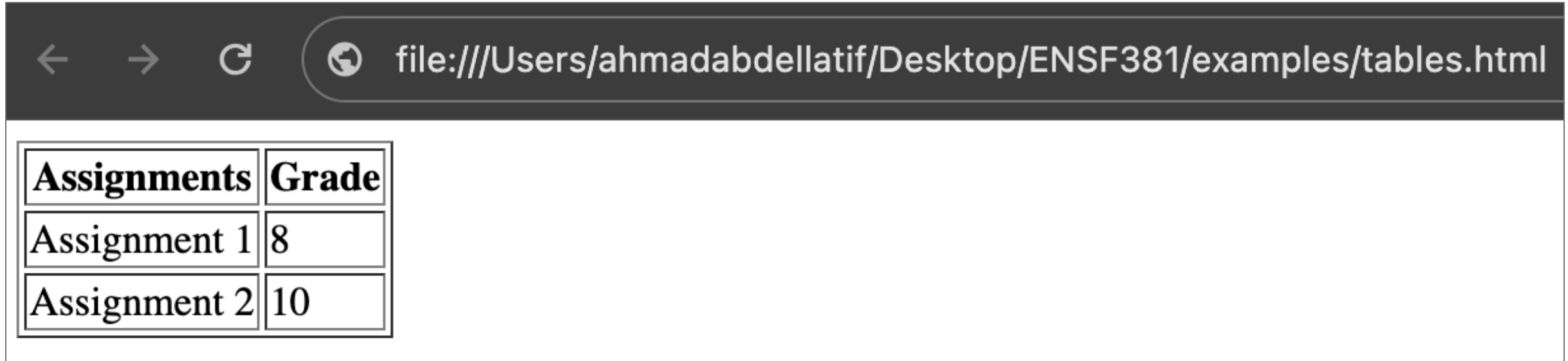
# Adding borders to the table - example

```
<body>

<table border="1px">
  <tr>
    <th>Assignments</th>
    <th>Grade</th>
  </tr>
  <tr>
    <td>Assignment 1</td>
    <td>8</td>
  </tr>
  <tr>
    <td>Assignment 2</td>
    <td>10</td>
  </tr>
</table>

</body>
```

# Adding borders to the table - example



A screenshot of a web browser window. The address bar shows the file path: file:///Users/ahmadabdellatif/Desktop/ENSF381/examples/tables.html. The browser content area displays a table with two columns: 'Assignments' and 'Grade'. The table has three rows: a header row with bold text, and two data rows. The table cells have black borders.

Assignments	Grade
Assignment 1	8
Assignment 2	10



# Adding another row - example

```
<table border="1px">
  <tr>
    <th>Assignments</th>
    <th>Grade</th>
  </tr>
  <tr>
    <td>Assignment 1</td>
    <td>8</td>
  </tr>
  <tr>
    <td>Assignment 2</td>
    <td>10</td>
  </tr>
  <tr>
    <td>Assignment 3</td>
    <td>9</td>
  </tr>
</table>
```

Adding a new row

# Adding another row - example



← → ↻ file:///Users/ahmadabdellatif/Desktop/ENSF381/examples/tables.html

Assignments	Grade
Assignment 1	8
Assignment 2	10
Assignment 3	9

# Adding another column - example

```
<table border="1px">
  <tr>
    <th>Assignments</th>
    <th>Grade</th>
    <th>Weight</th> ←
  </tr>
  <tr>
    <td>Assignment 1</td>
    <td>8</td>
    <td> 20% </td> ←
  </tr>
  <tr>
    <td>Assignment 2</td>
    <td>10</td>
    <td> 40% </td> ←
  </tr>
  <tr>
    <td>Assignment 3</td>
    <td>9</td>
    <td> 40% </td> ←
  </tr> </table>
```

# Adding another column - example



A screenshot of a web browser window. The address bar shows the file path: file:///Users/ahmadabdellatif/Desktop/ENSF381/examples/tables.html. The browser displays a table with three columns: Assignments, Grade, and Weight. The table contains three rows of data.

Assignments	Grade	Weight
Assignment 1	8	20%
Assignment 2	10	40%
Assignment 3	9	40%

# What is the output?

```
<table border="1px">
  <tr>
    <th>Assignments</th>
    <th>Grade</th>
    <th>Weight</th>
  </tr>
  <tr>
    <td>Assignment 1</td>
    <td>8</td>
    <td> 20% </td>
  </tr>
  <tr>
    <td>Assignment 2</td>
    <td>10</td>
    <del>40% </td> <img alt="red arrow pointing left" data-bbox="215 725 250 745"/>
  </tr>
  <tr>
    <td>Assignment 3</td>
    <td>9</td>
    <td> 40% </td>
  </tr>
</table>
```

# What is the output?

Assignments	Grade	Weight
Assignment 1	8	20%
Assignment 2	10	
Assignment 3	9	40%

# Table styling attributes

- Table Border (**border**): add double borders to the table.
- Single border (**border-collapse**): add a single border to the table.
- Background color (**bgcolor**): change the background color of the table or cell.
- Size (**width or height**): specify the size of a table, row or column.

# Table styling - example

```
<body>
<table style="width:50%; height:30%; border="1px">
  <tr>
    <th>Assignments</th>
    <th>Grade</th>
    <th>Weight</th>
  </tr>
  <tr>
    <td>Assignment 1</td>
    <td style="width:300px; height:200px;">8</td>
    <td> 20% </td>
  </tr>
  <tr>
    <td>Assignment 2</td>
    <td>10</td>
    <td bgcolor="green"> 40% </td>
  </tr>
</table></body>
```



# Table styling - example

Assignments	Grade	Weight
Assignment 1	8	20%
Assignment 2	10	40%

# Merging cells

- Combining two or more adjacent table cells into a single, larger cell.
- This can be done either horizontally (using the `colspan` attribute) or vertically (using the `rowspan` attribute).
- Useful technique when you want to **create a more complex layout** or represent data in a way that requires **spanning across multiple rows or columns**.

# Merging cells - example

```
<table border="1">
  <tr>
    <td>Cell 1</td>
    <td colspan="2" bgcolor="red">Merged Cells</td>
  </tr>
  <tr>
    <td rowspan="2" bgcolor="orange">Merged Cells</td>
    <td>Data 1,2</td>
    <td>Data 1,3</td>
  </tr>
  <tr>
    <td>Data 2,2</td>
    <td>Data 2,3</td>
  </tr>
</table>
```


# Merging cells - example

Cell 1	Merged Cells	
Merged Cells	Data 1,2	Data 1,3
	Data 2,2	Data 2,3

# Adding a picture to a table - example

```
<table border="1">
  <tr>
    <td>Cell 1</td>
    <td colspan="2">
      
    </td>
  </tr>
  <tr>
    <td rowspan="2">Merged Cells</td>
    <td>Data 1,2</td>
    <td>Data 1,3</td>
  </tr>
  <tr>
    <td>Data 2,2</td>
    <td>Data 2,3</td>
  </tr>
</table>
```

# Adding a picture to a table - example

Cell 1	 <b>UNIVERSITY OF CALGARY</b>	
Merged Cells	Data 1,2	Data 1,3
	Data 2,2	Data 2,3

# Questions



# Assignment 1

- The assignment is available on D2L.
- Teams are limited to a maximum of two students.
- Deadline: Feb 7<sup>th</sup>, 2025 at 11:59 PM