

The background of the slide is a light beige color. In the top left corner, there is a corkboard with a few papers pinned to it. In the center, there is a large, stylized illustration of a laptop. The laptop screen displays a website layout with a blue header, a main content area with a colorful bar chart, and a footer with three grey rectangular boxes. Surrounding the laptop are several colorful circles containing text: a blue circle with 'www', a red circle with 'HTML5', a red circle with 'js', a grey circle with 'Cloud', an orange circle with 'XML', and a green circle with 'PHP'. To the left of the laptop, there is a complex system of grey pipes and red mechanical components, including a pump and two gauges. The overall theme is web technologies and engineering.

ECAP472

# WEB TECHNOLOGIES

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# Learning Outcomes

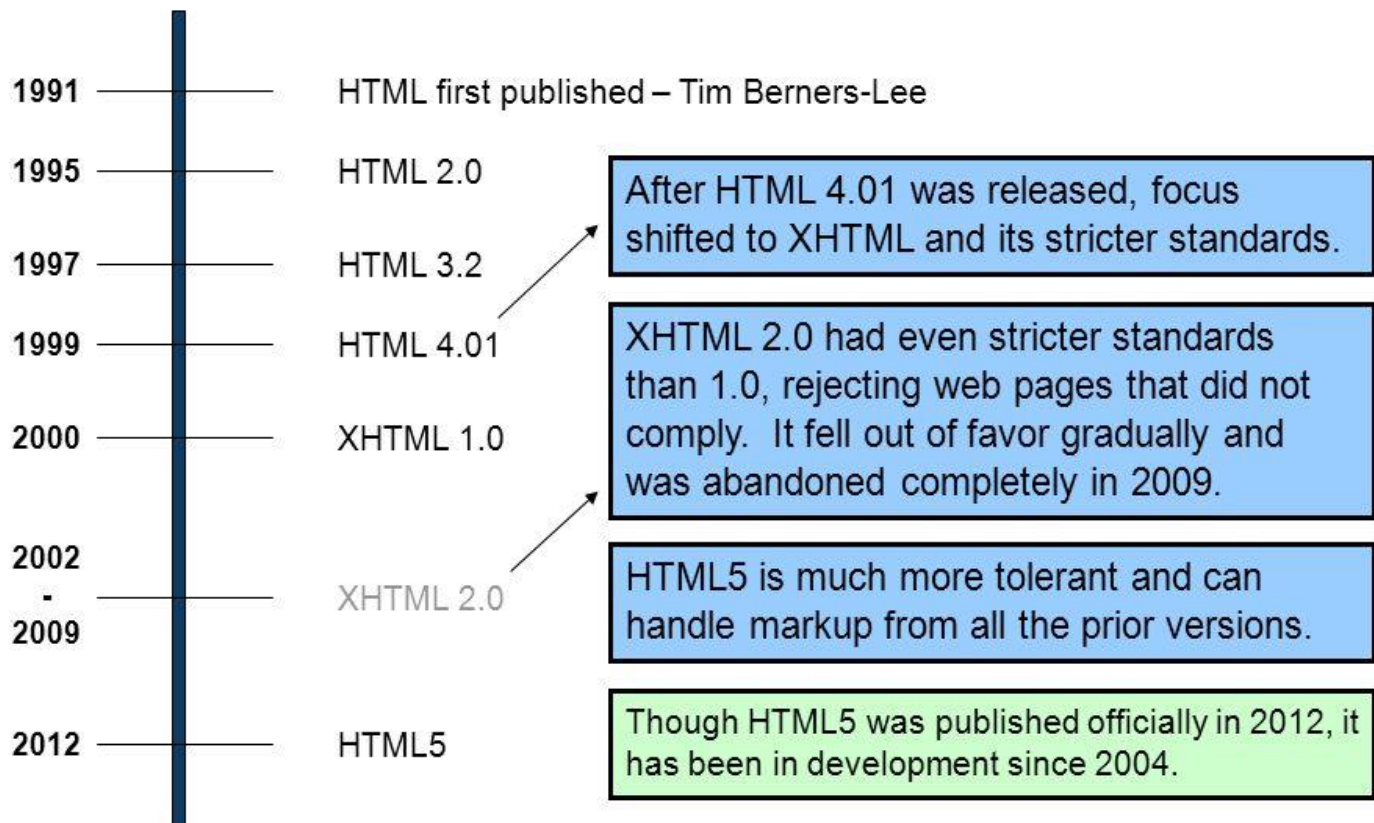


After this lecture, you will be able to


- go over relevant history of HTML and difference of HTML vs HTML5.
- understand anatomy of Html tag .
- practical implementation of HTML `<table>` Tag

# HTML History


## History of HTML




# Difference between HTML and HTML5?

- HTML5 is more complete and easier than **HTML4**, it has lots of new tags like <header>, <footer>, <nav>, <Audio>, <video>, <main>
- It also supports graphics. 
- HTML is referred to as the **primary** language of the World Wide Web. HTML has many updates over time, and the latest HTML version is HTML5.

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# Difference between HTML and HTML5?

- HTML5 supports both **audio and video** .
- HTML cannot allow JavaScript to run within the web browser, while **HTML5** provides full support for running JavaScript.
- In **HTML5**, inline **mathML** and **SVG** can be used in a text, while in HTML it is not possible.



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# Difference between HTML and HTML5?

- **HTML5 supports new types of form controls**, such as **date** and **time**, **email**, **number**, **category**, **title**, **Url**, **search**, etc.
- Many elements have been introduced in HTML5. Some of the most important are **time**, **audio**, **description**, **embed**, **fig**, **shape**, **footer**, **article**, **canvas**, **navy**, **output**, **section**, **source**, **track**, **video**, etc.




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# Difference between Html and Html5

Features	Html	Html5
Definition	A hypertext markup language (HTML) is the primary language for developing web pages.	HTML5 is a new version of HTML with new functionalities with markup language with Internet technologies.
Multimedia support	Language in <b>HTML</b> does not have support for video and audio.	<b>HTML5</b> supports both video and audio.
Storage	The HTML browser uses cache memory as temporary storage.	HTML5 has the storage options like: <b>application cache, SQL database, and web storage.</b>

# Difference between Html and Html5

Browser compatibility	HTML is compatible with almost all browsers because it has been present for a long time, and the browser made modifications to support all the features.	In HTML5, we have many new tags, elements, and some tags that have been <b>removed/modified</b> , so only some browsers are fully compatible with <b>HTML5</b> . 
Graphics support	In HTML, vector graphics are possible with tools Like <b>Silver light, Adobe Flash, VML</b> , etc.	In HTML5, vector graphics are supported by default. 
Threading	In HTML, the browser interface and JavaScript running in the same thread.	The HTML5 has the JavaScript Web Worker API, which allows the browser interface to run in multiple threads. 

# Difference between Html and Html5

Doc type	Doctype declaration in html is too long <code>&lt;!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN" "http://www.w3.org/TR/html4/strict.dtd"&gt;</code>	The DOCTYPE declaration in html5 is very simple <code>&lt;!DOCTYPE html&gt;</code> 
Character Encoding	Character encoding in HTML is too long. <code>&lt;!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN"&gt;</code>	Character encoding declaration is simple <code>&lt;meta charset = "UTF-8"&gt;</code> 
Multimedia support	Audio and video are not the part of HTML4.	Audio and video are essential parts of HTML5, like: <b>&lt;Audio&gt;</b> , <b>&lt;Video&gt;</b> .

# Explanation of Page Structure

`<!DOCTYPE html>` ← Tells version of HTML

`<html>` ← HTML Root Element

`<head>` ← Used to contain page HTML metadata

`<title>Page Title</title>` ← Title of HTML page

`</head>`

`<body>` ← Hold content of HTML

`<h2>Heading Content</h2>` ← HTML heading tag

`<p>Paragraph Content</p>` ← HTML paragraph tag

`</body>`

`</html>`

## HTML Page Structure



# HTML Tables The `<table>...</table>`


- Attributes

- background
- bgcolor
- border
- cellpadding
- cellspacing
- width
- height



# The `<tr>...</tr>`


- Defines a table row
- Structural tag only (no content)
- Attributes
  - align
  - bgcolor



	<code>&lt;td&gt;</code>	<code>&lt;td&gt;</code>	<code>&lt;td&gt;</code>
<code>&lt;tr&gt;</code>	Content	Content	Content
<code>&lt;tr&gt;</code>	Content	Content	Content
<code>&lt;tr&gt;</code>	Content	Content	Content

# The `<td>...</td>`

- Defines a data cell in a table
- Can contain any content, including another, nested table



	<code>&lt;td&gt;</code>	<code>&lt;td&gt;</code>	<code>&lt;td&gt;</code>
<code>&lt;tr&gt;</code>	Content	Content	Content
<code>&lt;tr&gt;</code>	Content	Content	Content
<code>&lt;tr&gt;</code>	Content	Content	Content

# Rowspan and Colspan

- The rowspan and colspan are <td> tag attributes.
- These are used to specify the number of rows or columns a cell should span.
- The rowspan attribute is for rows as well as the colspan attribute is for columns.

```
<!DOCTYPE html>
<html>
<head></head>
<body>
<table>
<tr>
  <td colspan="add_numberof_cols"></td>
</tr>
<tr>
  <td rowspan="add_numberof_rows"></td>
</tr>
</table>
</body>
</html>
```

# Rowspan and Colspan

Colspan	

	Rowspan

# <td colspan ...> Example




```
<tr>
```

```
  <td    colspan="2"  
    bgcolor="blue">
```

```
  </td>
```


```
  <td>
```

```
  ...
```

```
  </td>
```

```
</tr>
```

# <td rowspan ...> Example



Blue	Red	Red
	Red	Red
Red	Red	Red

```
<tr>
```

```
  <td    rowspan="2"
    bgcolor="blue">
```

```
  </td>
```

```
  <td>
```

```
  ...
```

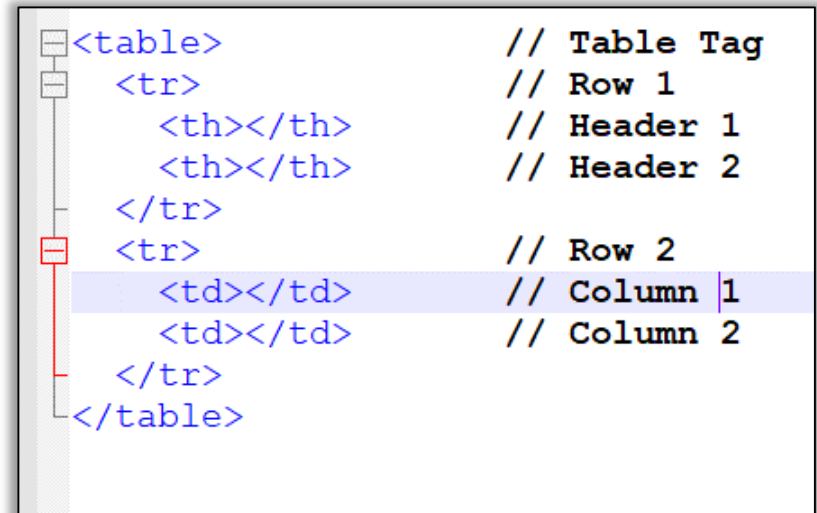
```
  </td>
```

```
</tr>
```



# <th>...</th>

- Defines a header cell
- Acts just like a <td>...</td>
- The text is normally centered vertically and horizontally AND the text is bold
- Attributes are the same as <td> </td>



```
<table>           // Table Tag
  <tr>            // Row 1
    <th></th>      // Header 1
    <th></th>      // Header 2
  </tr>
  <tr>            // Row 2
    <td></td>      // Column 1
    <td></td>      // Column 2
  </tr>
</table>
```

# <th>...</th> Example

Table	Header	Row
Content 1	Content 2	Content 3
Content 4	Content 5	Content 6

<tr>

<th>

Table

</th>

<th>

...

</th>

</tr>

# <caption>...</caption>

- Provides a summary of the table's purpose
- MUST immediately follow <table>
- Attributes:
  - align
  - summary

# <caption>...</caption> Example

Hexadecimal Conversion Chart								
DEC	0	1	2	3	4	5	6	7
HEX	0	1	2	3	4	5	6	7
DEC	8	9	10	11	12	13	14	15
HEX	8	9	A	B	C	D	E	F

*Figure 1: Hexadecimal Conversions*

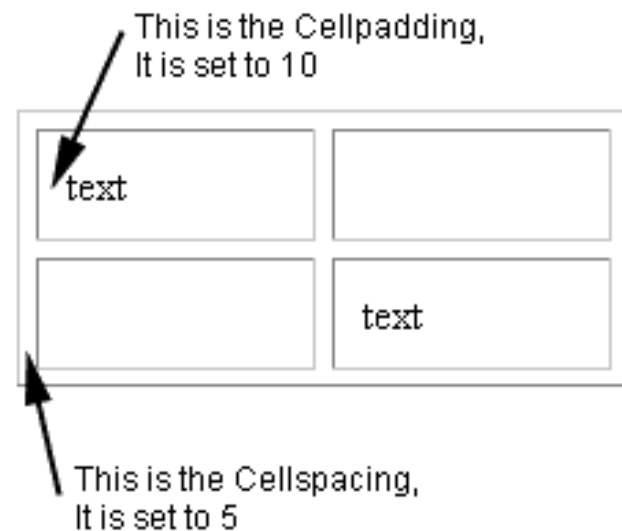
```
<caption      align="center"
              summary="Long Description goes here"
              valign="bottom">
```

Figure 1: Hexadecimal Conversions

```
</caption>
```

# HTML Table Padding & Spacing

- Cell padding is the space between the cell edges and the cell content.
- By default the padding is set to 0.
- Cell spacing is the space between each cell.
- By default the space is set to 2 pixels



# What is Cellpadding?

- It only associates with individual (single) cells.
- Using Cellpadding, one can easily control the white space present between a cell border and the content present in it.
- It is a very effective method.

# What is Cellpadding?

- It has a default value of 1.
- One can create Cellpadding using the tag of HTML `<table>`.
- Here, we set the type of attribute to *cellpadding*.



# What is Cellspacing?

- It associates with multiple cells- not just a single one.
- Using Cellspacing, you can set the spaces between various cells.
- It is comparatively less effective than the process of cell padding.

# What is Cellspacing?

- In this case, the spacing value by default becomes 2.
- One can easily create Cellspacing by using the tag of HTML `<table>`.
- Here, we set the type of attribute to *cellspacing*.

# Practical

That's all for  
now...