



UNIVERSITY OF DIYALA

Principles of Internet Technologies

Lecture 5:

Applications of the Internet (Web Technology/ HTML)

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Links and Navigation

- *A webpage can contain various links that take us directly to other pages and even specific parts of a given page. These links are known as **hyperlinks**.*
- *Hyperlinks allow visitors to navigate between Web sites by clicking on **words, phrases, and images**. Thus we can create hyperlinks using **text** or **images** available on a webpage.*
- *A link is specified using HTML tag **<a>**. This tag is called **anchor tag** and anything between the opening **<a>** tag and the closing **** tag becomes part of the link and a user can click that part to reach to the linked document. Following is the simple syntax to use **<a>** tag*

5/22/2022

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Links and Navigation



- It's also good practice to use the **title** attribute on a link, as this will be displayed in a tooltip (a little bubble that appears stating the title).

```
<a href="http://www.Google.com/" title="Search the Web with Google">Google</a>
```

- To create a link to an **e-mail address**, you need to use the following syntax with the `<a>` element:

```
<a href=mailto:name@example.com >mailto </a>
```



Linking to a Page Section

- If we have a long web page, we might want to link to a specific part of that page. We will usually want to do this when the page does not fit in the browser window, and the user might otherwise have to scroll to find the relevant part of the page.
- The destination anchor allows the page author to **mark specific points in a page that a source link can point to**. Common examples of linking to a specific part of a page that we might have seen used on web pages include:
 - "Back to top" links at the bottom of long pages**
 - A list of contents for a page that takes the user to the relevant section**
 - Links to footnotes or definitions**



Linking to a Page Section

- To create a destination anchor using the `<a>` element, it must carry an **id attribute**. Before we can create links to each section of the page (using the source anchors), we have to add the destination anchors. Here we can see the subheadings of the page, each containing an **<a> element** with the **id attribute** whose value uniquely identifies that section:

```
<h1>Linking and Navigation</h1>
```

```
<h2><a id="URL">URLs</a></h2>
```

```
<h2><a id="SourceAnchors">Source Anchors</a></h2>
```

```
<h2><a id="DestinationAnchors">Destination Anchors</a></h2>
```

```
<h2><a id="Examples">Examples</a></h2>
```



Linking to a Page Section

- With destination anchors in place, it's now possible to add source anchors to link to these sections, like so:

```
<p>This page covers the following topics:
```

```
<ul>
```

```
<li><a href="#URL">URLs</a></li>
```

```
<li><a href="#SourceAnchors">Source Anchors</a></li>
```

```
<li><a href="#DestinationAnchors">Destination Anchors</a></li>
```

```
<li><a href="#Examples">Examples</a></li>
```

```
</ul> </p>
```



Linking to a Page Section

- If someone wanted to link to a specific part of this page from a **different web site**, he would add the **full URL** for the page, followed by the **hash sign** and then the value of the **id attribute**, like so:

<http://www.example.com/HTML/links.html#SourceAnchors>

- The value of a **name or id attribute** should be **unique within the page**, and source anchors should match the case of destination anchors.



Adding Images to Your Site

- Images and graphics can really bring our site to life. but we should be careful when using images on the Web because if we don't prepare images correctly, they can really slow down the speed it takes for a page to load.
- So choosing the right format for our images and saving them correctly will help make our site faster.
- Images are usually added to a site using the ** element**. It must carry the **src** attribute indicating the source of the image For example:



Adding Images Using the `` Element

- *Images for our site should always reside on **our server**. It is not good practice to link to images on other sites because if the owner of the other site decides to move that image our users will no longer be able to see the image on our site.*
- *The **alt** attribute is required to specify a text alternative for the image in case the user cannot see the image. it is important that the value of this attribute really **describes the image**.*
- *The **height and width** attributes specify the height and width of the image: **height="120" width="180"**. The values for these attributes are always shown in **pixels**.*



Tables

- *Tables are commonly used to display all manner of data, such as **timetables, financial reports, and sports results**. So when we want to display information in **rows and columns**, we need to use the markup to create a table.*
- *The names of elements in HTML refer to the type of markup they contain. So to create a table in HTML we use the **<table> element**.*
- *Inside the **<table> element**, the table is written out **row by row**. A row is contained inside a **<tr> element**, which stands for **table row**. And each cell is then written inside the row element using a **<td> element**, which stands for **table data**.*



Tables

- The following is an example of a very basic table :

```
<table border="1">
  <tr>
    <td>Row 1, Column 1</td>
    <td>Row 1, Column 2</td>
  </tr>
  <tr>
    <td>Row 2, Column 1</td>
    <td>Row 2, Column 2</td>
  </tr>
</table>
```

Row 1, Column 1	Row 1, Column 2
Row 2, Column 1	Row 2, Column 2



Basic Table Elements and Attributes

- The align Attribute:** the **align** attribute is still frequently used with tables. When used with the **<table>** element, it indicates whether the table should be aligned to the **left** (the default), **right**, or **center** of the page.
- The bgcolor Attribute:** the **bgcolor** attribute sets the background color for the table. The value of this attribute should be either a **six-digit code** known as a **hex code** or a **color name**. For example **bgcolor="#rrggbb"**
- The border Attribute:** If we use the border attribute, a border will be created around both the table and each individual cell.



Basic Table Elements and Attributes

4. **The cellpadding Attribute:** The cellpadding attribute is used to create a gap between the edges of a cell and its contents. As we can imagine, if two cells both contain writing, and there is no gap between the edge of the cells and the writing, the contents can become hard to read. `cellpadding="5"` or `cellpadding="2%"`
5. **The cellspacing Attribute:** The cellspacing attribute is used to create a space between the borders of each cell. The value for this attribute can be either the amount of space you want to create between the cells in pixels or a percentage value (as a percentage of the width of the table). `cellspacing="6"` or `cellspacing="2%"`



Basic Table Elements and Attributes

6. **The dir Attribute:** The dir attribute is supposed to indicate the direction of text that is used in the table. Possible values are `ltr` for left to right text and `rtl` for right to left (for languages such as Arabic): `dir="rtl"`
2. **The <tr> Element Contains Table Rows:** The `<tr>` element is used to contain each row in a table. It can carry five attributes. `Align`, `bgcolor`, `char`, `charoff`, `valign`
3. **The <td> and <th> Elements Represent Table Cells:** Every cell in a table will be represented by either a `<td>` element for cells containing table data or a `<th>` element for cells containing table headings.



The <table> Element's Other Attributes

- *Now that we've seen the basics behind creating tables, but there is some more advanced issues, such as the following:*
- ❖ *Using the **rowspan** and **colspan** attributes to make cells stretch over more than one row or column.*
- **Homework :** *discuss the mentioned issue with example for each.*



The End