

LECTURE 04 (01): PAGE LAYOUT

Web Programming



INSTRUCTOR: DR. HOSSAM ZAWBAA

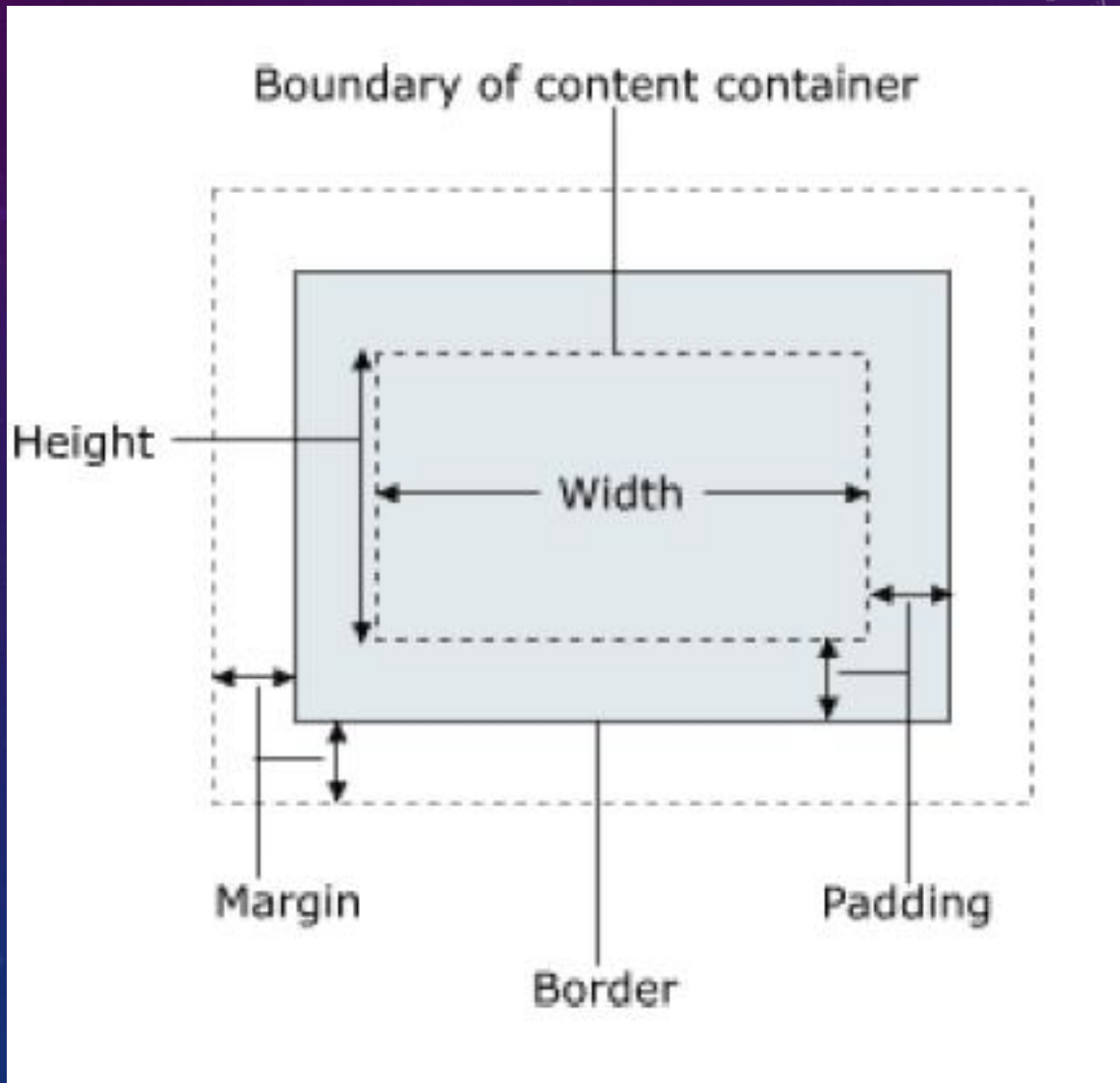
PAGE LAYOUT

THE CSS BOX MODEL

- for layout purposes, every element is composed of:
 - The **element's content**
 - a **border** around the element
 - **padding** between the content and the border (inside)
 - a **margin** between the border and other content (outside)
- $\text{width} = \text{content width} + \text{L/R padding} + \text{L/R border} + \text{L/R margin}$
- $\text{height} = \text{content height} + \text{T/B padding} + \text{T/B border} + \text{T/B margin}$

PAGE LAYOUT

THE CSS BOX MODEL



CSS PROPERTIES FOR BORDERS

CSS

```
h2 { border: 5px solid red; }
```

Output

This is a heading.

property	description
<code>border</code>	thickness/style/size of border on all 4 sides

- **thickness** (specified in px, pt, em, or `thin`, `medium`, `thick`)
- **style** (`none`, `hidden`, `dotted`, `dashed`, `double`, `groove`, `inset`, `outset`, `ridge`, `solid`)
- **color** (specified as seen previously for text and background colors)

MORE BORDER PROPERTIES

property	description
<code>border-color</code> , <code>border-width</code> , <code>border-style</code>	specific properties of border on all 4 sides
<code>border-bottom</code> , <code>border-left</code> , <code>border-right</code> , <code>border-top</code>	all properties of border on a particular side
<code>border-bottom-color</code> , <code>border-bottom-style</code> , <code>border-bottom-width</code> , <code>border-left-color</code> , <code>border-left-style</code> , <code>border-left-width</code> , <code>border-right-color</code> , <code>border-right-style</code> , <code>border-right-width</code> , <code>border-top-color</code> , <code>border-top-style</code> , <code>border-top-width</code>	properties of border on a particular side

BORDER EXAMPLE

- each side's border properties can be set individually

CSS

```
h2 {  
  border-left: thick dotted #CC0088;  
  border-bottom-color: rgb(0, 128, 128);  
  border-bottom-style: double;  
}
```

Output

This is a heading.

CSS PROPERTIES FOR PADDING

property	description
<code>padding</code>	padding on all 4 sides
<code>padding-bottom</code>	padding on bottom side only
<code>padding-left</code>	padding on left side only
<code>padding-right</code>	padding on right side only
<code>padding-top</code>	padding on top side only

PADDING EXAMPLE 1

CSS

```
p { padding: 20px; border: 3px solid black; }  
h2 { padding: 0px; background-color: yellow; }
```

Output

This is the first paragraph

This is the second paragraph

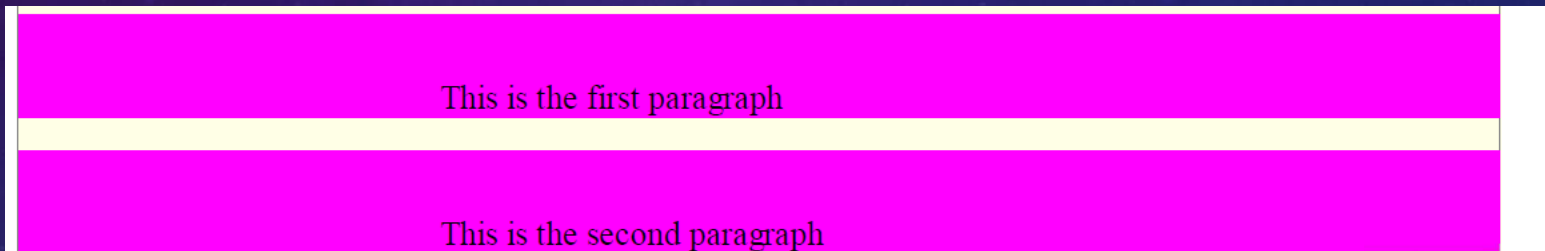
This is a heading

PADDING EXAMPLE 2

CSS

```
p {  
  padding-left: 200px; padding-top: 30px;  
  background-color: fuchsia;  
}
```

Output



CSS PROPERTIES FOR MARGINS

property	description
<code>margin</code>	margin on all 4 sides
<code>margin-bottom</code>	margin on bottom side only
<code>margin-left</code>	margin on left side only
<code>margin-right</code>	margin on right side only
<code>margin-top</code>	margin on top side only

MARGIN EXAMPLE 1

CSS

```
p {  
  margin: 50px;  
  background-color: fuchsia;  
}
```

Output

This is the first paragraph

This is the second paragraph

- notice that margins are always transparent (they don't contain the element's background color, etc.)

MARGIN EXAMPLE 2

CSS

```
p {  
  margin-left: 8em;  
  background-color: fuchsia;  
}
```

Output

This is the first paragraph

This is the second paragraph

CSS PROPERTIES FOR DIMENSIONS

CSS

```
p { width: 350px; background-color: yellow; }  
h2 { width: 50%; background-color: aqua; }
```

Output

This paragraph uses the first style above.

An h2 heading

property	description
width,height	how wide or tall to make this element (block elements only)
max-width,max-height, min-width,min-height	max/min size of this element in given dimension

PAGE LAYOUT

SECTIONS OF A PAGE: <DIV>

- a section or division of your HTML page (block)
- a tag used to **indicate a logical section** or area of a page
- has no appearance by default, but you can apply styles to it

HTML

```
<div class="standout">  
  <h2>Spatula City! Spatula City!</h2>  
  <p class="special">See our spectacular spatula specials!</p>  
  <p>We'll beat any advertised price!</p>  
</div>
```

Output

Spatula City! Spatula City!

See our spectacular spatula specials!

We'll beat any advertised price!

INLINE SECTIONS:

- has no on screen appearance, but you can apply a style or ID to it, which will be applied to the text inside the span

HTML

```
<h2>Spatula City! Spatula City!</h2>  
<p>See our <span class="special">spectacular</span> spatula specials!</p>  
<p>We'll beat <span class="standout">any advertised price</span>!</p>
```

Output

Spatula City! Spatula City!

See our **spectacular** spatula specials!

We'll beat **any advertised price!**

CSS CONTEXT SELECTORS

applies the given properties to *selector2* only if it is inside a *selector1* on the page

applies the given properties to *selector2* only if it is *directly* inside a *selector1* on the page (*selector1* tag is immediately inside *selector2* with no tags in between)

CSS

```
selector1 selector2 {  
  properties  
}
```

```
selector1 > selector2 {  
  properties  
}
```


CONTEXT SELECTOR EXAMPLE

HTML

```
<p>Shop at <strong>Hardwick's Hardware</strong>...</p>
<ul>
  <li>The <strong>best</strong> prices in town!</li>
  <li>Act while supplies last!</li>
</ul>
```

CSS

```
li strong { text-decoration: underline; }
```

Output

Shop at **Hardwick's Hardware...**

- The **best** prices in town!
- Act while supplies last!

MORE COMPLEX EXAMPLE

HTML

```
<div id="ad">
  <p>Shop at <strong>Hardwick's Hardware</strong>...</p>
  <ul>
    <li class="important">The <strong>best</strong>
    prices in town!</li>
    <li>Act <strong>while supplies last!</strong></li>
  </ul>
</div>
```

CSS

```
#ad li.important strong { text-decoration: underline; }
```

Output

Shop at **Hardwick's Hardware...**

- The **best** prices in town!
- Act **while supplies last!**

PAGE LAYOUT

SECTIONS OF A PAGE: <DIV>

```
<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
  <title> Page Title</title>
</head>
<body>
<div id="container" style="width:500px">
  <div id="header" style="background-color:#7f81f6;">
    <h1 style="margin-bottom:0;"> Title of Web Page and Logo</h1>
  </div>

  <div id="menu" style="background-color:#c6c6f7;height:200px;width:100px;float:left;">
    <ul>
      <li class="first selected"><a href="index.html">Home</a></li>
      <li><a href="about.html">About us</a></li>
      <li><a href="services.html">Services</a></li>
      <li><a href="solutions.html">Solutions</a></li>
      <li><a href="contact.html">Contact</a></li>
    </ul>
  </div>

  <div id="content" style="background-color:#EEEEEE;height:200px;width:400px;float:left;">
    The body here
  </div>

  <div id="footer" style="background-color:#dedefa;clear:both;text-align:center;">
    Copyright © xyz.com
  </div>
</div>
</body>
</html>
```

PAGE LAYOUT

SECTIONS OF A PAGE: <DIV>

Title of Web Page and Logo

The body here

- [Home](#)
- [About us](#)
- [Services](#)
- [Solutions](#)
- [Contact](#)

Copyright © xyz.com

USING TABLE <TABLE>

```
<html xmlns="http://www.w3.org/1999/xhtml">
<head id="Head1" runat="server">
  <title> Page Title</title>
</head>
<body>
  <table width="500">
    <tr>
      <td colspan="2" style="background-color:#7f81f6;">
        <h1>Title of Web Page and Logo</h1>
      </td>
    </tr>
    <tr>
      <td style="background-color:#c6c6f7;width:100px;" valign="top">
        <ul>
          <li class="first selected"><a href="index.html">Home</a></li>
          <li><a href="about.html">About us</a></li>
          <li><a href="services.html">Services</a></li>
          <li><a href="solutions.html">Solutions</a></li>
          <li><a href="contact.html">Contact</a></li>
        </ul>
      </td>
      <td style="background-color:#EEEEEE;height:200px;width:400px;">
        The body here
      </td>
    </tr>
    <tr>
      <td colspan="2" style="background-color:#dedefa;text-align:center;">
        Copyright © xyz.com
      </td>
    </tr>
  </table>
</body>
</html>
```

PAGE LAYOUT USING TABLE <TABLE>

Title of Web Page and Logo

- [Home](#)
 - [About us](#)
 - [Services](#)
 - [Solutions](#)
 - [Contact](#)
- The body here

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LECTURE 04 (02): HTML FORMS AND SERVER-SIDE DATA

Web Programming



INSTRUCTOR: DR. HOSSAM ZAWBAA

HTML FORMS AND SERVER-SIDE DATA

- Some web pages allow us to submit our own new data
- Most server-side web programs accept **parameters that guide their execution**

FORM EXAMPLE: CREATING EMAIL ACCOUNT



إنشاء حساب

الاسم الأول

اسم العائلة

اسم المستخدم

أو الحصول على عنوان بريد إلكتروني جديد

إنشاء كلمة مرور

8 أحرف كحد أدنى، متحسسة لحالة الأحرف

إعادة إدخال كلمة المرور

البلد/المنطقة

الرمز البريدي

البلد أو المقاطعة التي تقيم بها

FORM EXAMPLE: CREATING EMAIL ACCOUNT

تاريخ الميلاد

يوم شهر السنة

النوع

حدد واحدًا

ساعدنا في حماية معلوماتك
يساعدنا رقم هاتفك في الحفاظ على أمان حسابك.

رمز البلد

مصر (+20)

رقم الهاتف

إنشاء حساب

QUERY STRINGS AND PARAMETERS

URL?name=value&name=value...

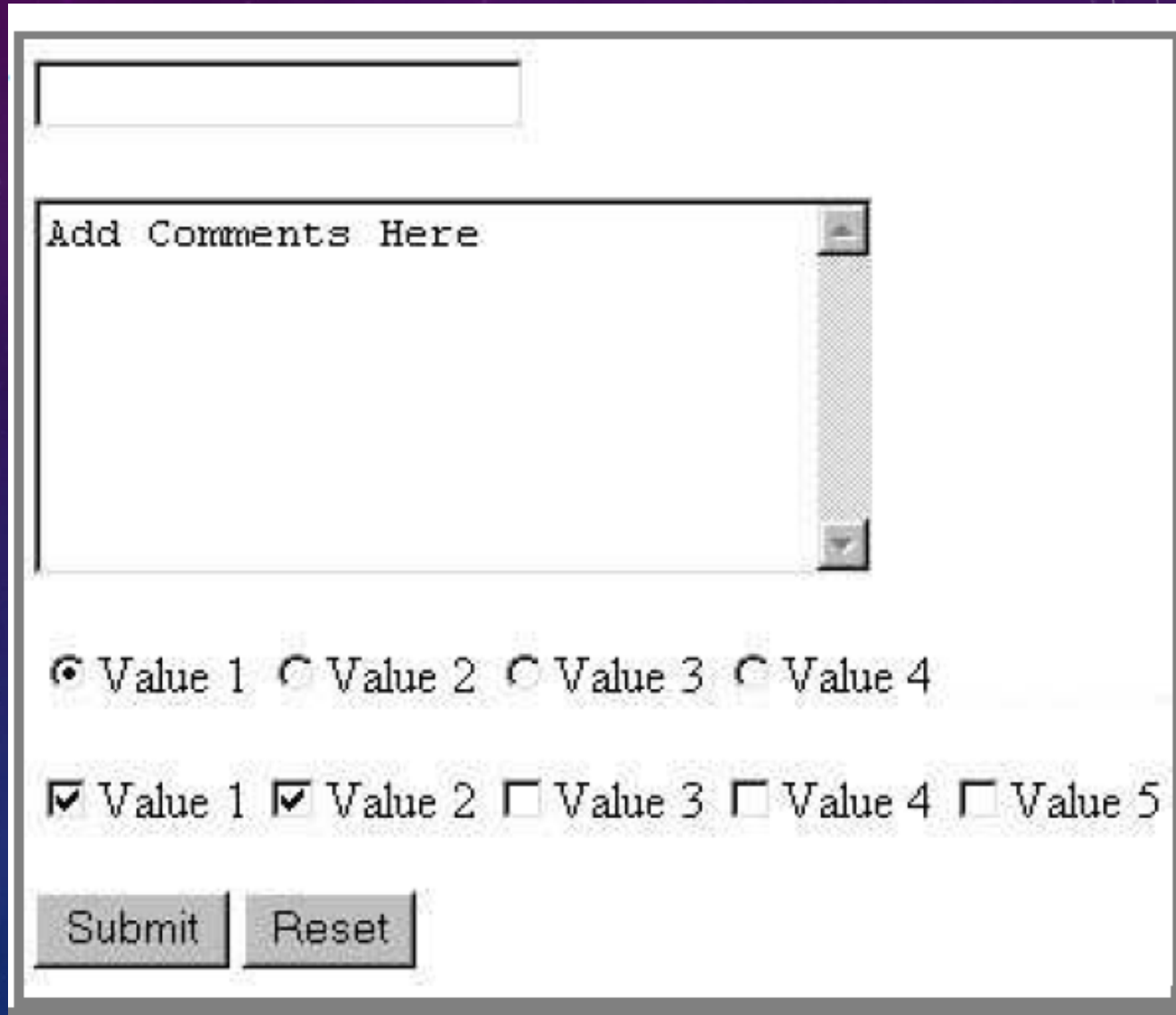
`http://example.com/student_login.php?username=stepp&sid=1234567`

- query string: a set of parameters passed from a browser to a web server
 - **often passed by placing name/value pairs at the end of a URL**
 - above, parameter username has value stepp, and sid has value 1234567
- PHP (or ASP or ASP.net) code on the server can examine and utilize the value of parameters

HTML FORMS

- **Form is a group of UI controls that accepts information from the user and sends the information to a web server.**
- forms use HTML UI controls (buttons, checkboxes, text fields, etc.)
- **the information is sent to the server as a query string**
- **JavaScript can be used to create interactive controls**

HTML FORMS



A screenshot of an HTML form with a white background and a thin black border. At the top is a single-line text input field. Below it is a larger text area with the placeholder text "Add Comments Here" and a vertical scrollbar on the right side. Underneath the text area are two rows of radio buttons. The first row contains four radio buttons labeled "Value 1", "Value 2", "Value 3", and "Value 4", with "Value 1" selected. The second row contains five radio buttons labeled "Value 1", "Value 2", "Value 3", "Value 4", and "Value 5", with "Value 1" and "Value 2" selected. At the bottom of the form are two buttons: "Submit" and "Reset".

Add Comments Here

Value 1 Value 2 Value 3 Value 4

Value 1 Value 2 Value 3 Value 4 Value 5

HTML FORM: <FORM>

HTML

```
<form action="web service URL">  
  form controls  
</form>
```

- required action attribute gives the URL of the server web service that will process this form's data

FORM EXAMPLE

HTML

```
<form action="http://www.google.com/search">  
  <div>  
    Let's search Google:  
    <input name="q" />  
    <input type="submit" />  
  </div>  
</form>
```

OUTPUT

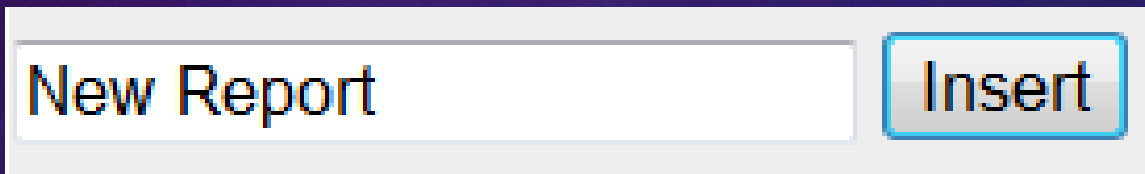
Let's search Google:

FORM CONTROLS: <INPUT>

HTML

```
<input type="text" name="q" value="New Report" />  
<input type="submit" value="Insert" />
```

OUTPUT



The screenshot shows a rendered HTML form. It consists of a text input field with the text "New Report" and a submit button labeled "Insert".

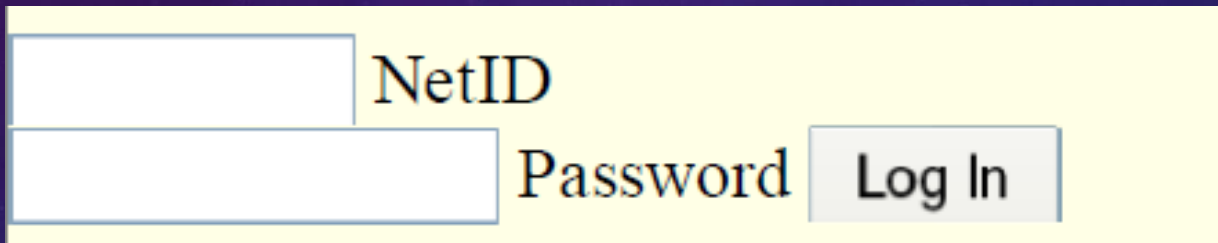
- **input** element is used to create many UI controls
 - an inline element that **MUST** be self-closed
- **name** attribute specifies name of query parameter to pass to server
- **type** can be button, checkbox, file, hidden, password, radio, reset, submit, text, ...
- **value** attribute specifies control's initial text

TEXT FIELDS: <INPUT>

HTML

```
<input type="text" size="10" maxlength="8" /> NetID<br />  
<input type="password" size="16" /> Password  
<input type="submit" value="Log In" />
```

OUTPUT



The screenshot shows the rendered output of the HTML code. It features a form with three elements: a text input field with a width of 10 characters, a password input field with a width of 16 characters, and a submit button labeled "Log In". The text "NetID" is positioned to the right of the first input field, and "Password" is to the right of the second. The "Log In" button is a rectangular button with a light gray background and a dark border.

- input attributes: disabled, maxlength, readonly, size, value
- size attribute controls onscreen width of text field
- maxlength limits how many characters user is able to type into field