



# Hypertext Markup Language

# Block elements

- Block elements are the main building blocks of a web site and contain other elements.
- Each block element begins on a new line.
  - Heading tags: h1, h2, h3, h4, h5, h6
    - Creates a heading with content in bold at x % of base font size
  - Paragraph tag: p
    - Creates a paragraph of text at 100% of base font size.
- For details, visit [http://www.w3schools.com/html/html\\_headings.asp](http://www.w3schools.com/html/html_headings.asp)

# Block elements examples

```
<html>
<head>
<title></title>
</head>
<body>
  <h1>This is a heading level 1 at 200% of base font size</h1>
  <h2>This is a heading level 2 at 150% of base font size</h2>
  <p>The text is displayed at 100% of base font size</p>
  <h2>This is another heading level 2 at 150% of base font size</h2>
  <p>The base font size above and below headings and paragraphs are
determined by the browser./p>
</body>
</html>
```

**This is a heading level 1 at 200% of base font size**

**This is a heading level 2 at 150% of base font size**

The text is displayed at 100% of base font size

**This is another heading level 2 at 150% of base font size**

The base font size above and below headings and paragraphs are determined by the browser./p>

# Block elements for special types of text

- These block elements identify the type of content that they contain. That's consistent with the HTML 5 semantic elements that will be discussed later.
  - pre
    - creates a block of code in a mono spaced font.
  - blockquote
    - Used for quotation.
  - address
    - Used for contact information.

# Block elements for special types of text

```
<body>
  <p>This is an example of using pre element</p>
  <pre>
    int a, b, c;
    c = a + b;
  </pre>
  <p>This is an example of using blockquote element</p>
  <blockquote>: to bring forward or call to another's attention especially as an
example, proof, or precedent cited the weather as a reason for canceling the picnic.
</blockquote>
  <p>This is an example of using address element</p>
  <address>1-800-888-7777<br>
    <a href="mailto:support@npu.edu">support@npu.edu</a>
</body>
```

This is an example of using pre element

```
int a, b, c;
c = a + b;
```

This is an example of using blockquote element

: to bring forward or call to another's attention especially as an example, proof, or precedent cited the weather as a reason for canceling the picnic.

This is an example of using address element

1-800-888-7777  
[support@npu.edu](mailto:support@npu.edu)

# Inline elements

- An inline element is coded within a block element and doesn't begin on a new line. For details, please refer to <http://www.w3schools.com/tags/>

```
<html>
<head>
<title></title>
</head>
<body>
  <p>If you can complete two projects, <em>you will get at least A-.</em></p>
  <p>My class will start at 6:00pm, <strong>you cannot be late.</strong></p>
  <p>Here is an example of using pointers: <code>char* names[2];</code></p>
  <p>The Big-O of the bubble sort is O(N<sup>2</sup>)</p>
</body>
</html>
```

If you can complete two projects, *you will get at least A-.*

My class will start at 6:00pm, **you cannot be late.**

Here is an example of using pointers: `char* names[2];`

The Big-O of the bubble sort is  $O(N^2)$

# HTML character entities

- Character entities can be used to display special characters

**Note:** Entity names are case sensitive!

Result	Description	Entity Name	Entity Number
	non-breaking space	&nbsp;	&#160;
<	less than	&lt;	&#60;
>	greater than	&gt;	&#62;
&	ampersand	&amp;	&#38;
¢	cent	&cent;	&#162;
£	pound	&pound;	&#163;
¥	yen	&yen;	&#165;
€	euro	&euro;	&#8364;
§	section	&sect;	&#167;
©	copyright	&copy;	&#169;
®	registered trademark	&reg;	&#174;
™	trademark	&trade;	&#8482;

For a complete reference of all character entities, visit our [HTML Entities Reference](#).

# <div> and <span> elements

- Before HTML 5, div elements were used to define divisions within the body of a document. Now the HTML 5 semantic elements will be replacing div elements.
- Before HTML 5, span elements were used to identify portions of text that can be formatted with CSS. Today, a better practice is to use the elements such as <code>, <blockquote> to identify the content and to use CSS to format the content.



# **<div> and <span> examples**

```
<body>
  <div id="header">
    <h1> CS526 Advanced Web Programming </h1>
  </div>
  <div id="main">
    <p><span id="welcome">Welcome to CS526 Class.</span>
    You will be learning a lot of new web technologies</p>
  </div>
  <div id="footer">
    <p>&copy; Copyright 2013 Northwestern Polytechnic University</p>
  </div>
</body>
```

## **CS526 Advanced Web Programming**

Welcome to CS526 Class. You will be learning a lot of new web technologies

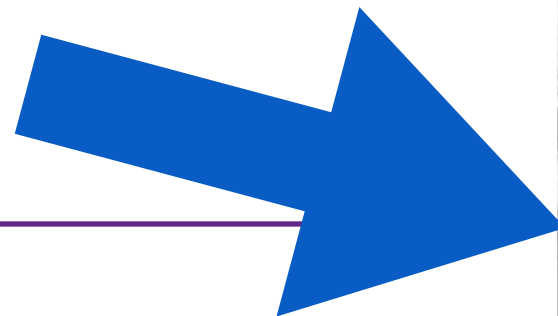
© Copyright 2013 Northwestern Polytechnic University

# HTML 5 semantic elements

- HTML 5 provides new semantic elements that you should use to structure the contents of a web page.
  - **header**
    - The header for a page
  - **section**
    - A generic section of a document that doesn't indicate the type of content.
  - **article**
    - A composition like an article in the paper, a blog page, user forum post etc.
  - **nav**
    - A section of page that contains links to other pages or placeholders.
  - **aside**
    - Contains content that is supplemental to the page content, like a fallout or sidebar.
  - **footer**
    - The footer for a page.

# HTML 5 semantic elements examples

```
<!doctype html>
<html>
  <head>
    <title>HTML5 semantic elements</title>
    <meta charset=utf-8" />
  </head>
  <body>
    <div id="page">
      <header>
        <h1>CS526 Web Programming</h1>
      </header>
      <section>
        <p>Welcome to CS526!</p>
      </section>
      <footer>
        <p>&copy; Copyright 2013 Northwestern Polytechnic University.</p>
      </footer>
    </div>
  </body>
</html>
```

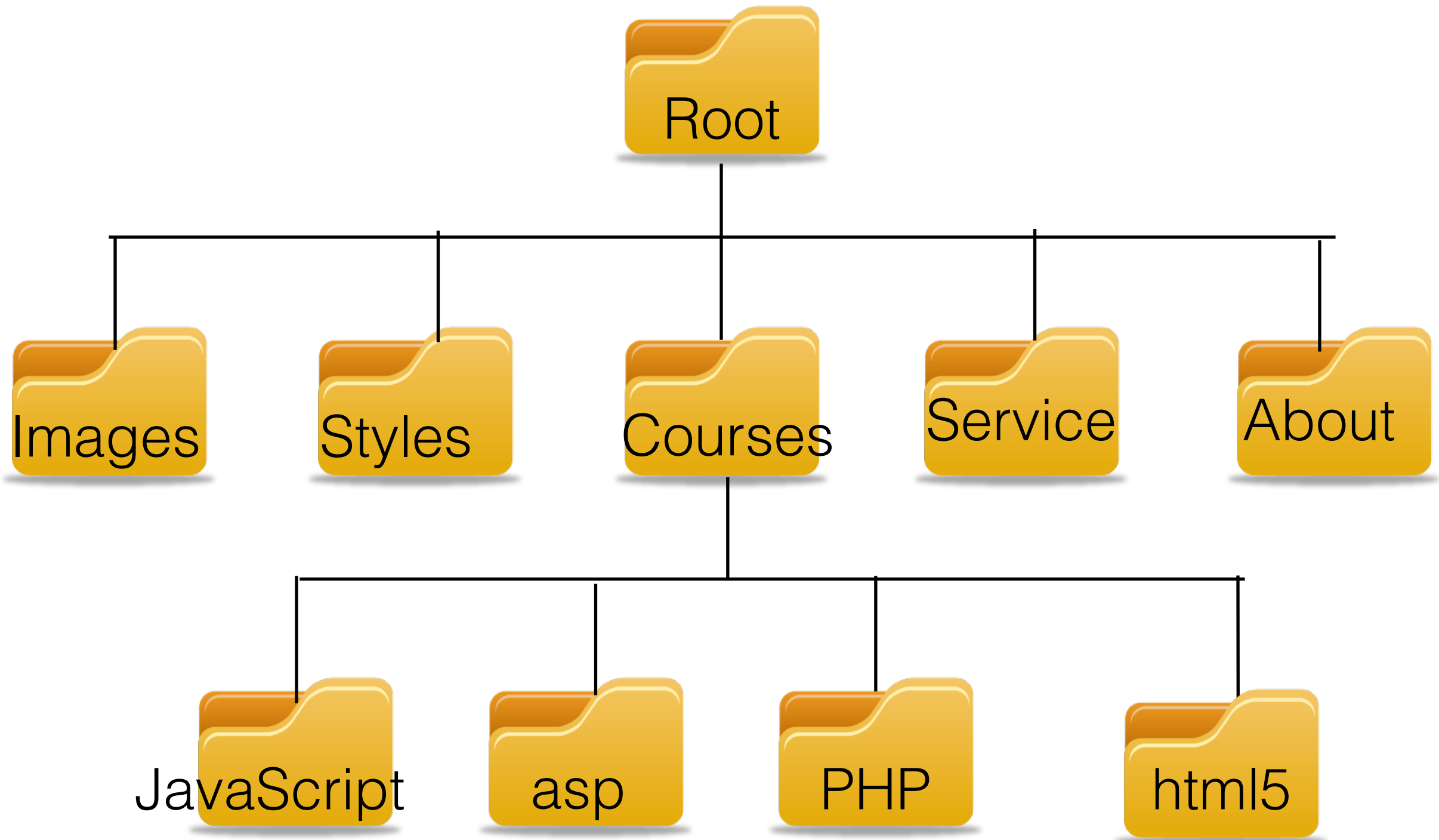


## CS526 Web Programming

Welcome to CS526!

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# A simple website folder structure



# Absolute and relative URLs

## Examples

- Absolute URLs
  - <http://www.npu.edu/default.html>
  - <http://www.npu.edu/courses/faculty.html>
- Root-relative paths
  - </login.html> (Refers to root/login.html)
  - </images/logo.gif> (Refers to root/images/logo.gif)
- Document-relative paths that navigate down from the root folder
  - <images/logo.gif> (Refers to root/images/logo.gif)
  - <courses/html5/details.html> (Refers to root/courses/html5/details.html)
- Document-relative paths that navigate up from the root/courses folder
  - <../default.html> (Refers to root/default.html)
  - <../images/logo.gif> (Refers to root/images/logo.gif)

# Coding links <a> element

- Use the <a> element to create a hypertext link to another web page.
- The content of the <a> element becomes clickable in the web page.
- The href attribute tells the browser the destination of the link

```
<!doctype html>
<html>
  <head>
    <title>Links</title>
    <meta charset=utf-8" />
  </head>

  <body>
    <p>Go view our <a href="courses.html">product list</a>.</p>

    <p>Read about the <a href=" ../company/services.html">services we
    provide</a>.</p>

    <p>View your <a href="/applications/cart.html">shopping cart</a>.</p>

    <p>To learn more about JavaScript, visit the
    <a href="http://www.javascript.com/">official JavaScript web site</a>.</p>
  </body>
</html>
```

Go view our [product list](#).

Read about the [services we provide](#).

View your [shopping cart](#).

To learn more about JavaScript, visit the [official JavaScript web site](#).

# Creating ordered and unordered lists

```
<!doctype html>
<html>
  <head>
    <title>Lists</title>
    <meta charset=utf-8" />
  </head>

  <body>
    <p>We have books on a variety of languages, including
    <ul>
      <li>JavaScript</li>
      <li>PHP and MySQL</li>
      <li>Servlets and JSP</li>
      <li>ASP.NET</li>
    </ul>

    <p>You will need to complete the following steps:
    <ol>
      <li>Enter your billing information.</li>
      <li>Enter your shipping information.</li>
      <li>Confirm your order.</li>
    </ol>
  </body>
</html>
```

■ We have books on a variety of languages, including

- JavaScript
- PHP and MySQL
- Servlets and JSP
- ASP.NET

You will need to complete the following steps:

1. Enter your billing information.
2. Enter your shipping information.
3. Confirm your order.