

**COMSC-030**

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**Web Site Development-  
Part 1**



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# Lecture 1

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## Getting Started with HTML 5 and Web Pages

Are you interested in building your own Web pages? This chapter introduces you to basic HTML concepts and methods for creating your own Web content.

# Lecture 1 Topics: HTML and Web Page Basics

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- Internet Basics
- An Introduction to HTML
- Explore Web Browsers
- Explore HTML Editors
- Understanding HTML Syntax and Rules
- View HTML Code in a Browser



# Internet Basics

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- Internet brings users an unprecedented way to communicate and exchange data.
- Constructed of thousands of **network** and **computers** around the world, the Internet connects organizations, governments, businesses and individuals.



# Internet Basics

## Type of Connections

- Users connect to the Internet through a variety of sources.
- Individuals can connect through a modem and a phone line, cable or satellite.
- You can also use cable TV companies to connect to the Internet through a cable modem or through digital phone lines ISDN or DSL.



# Internet Basics

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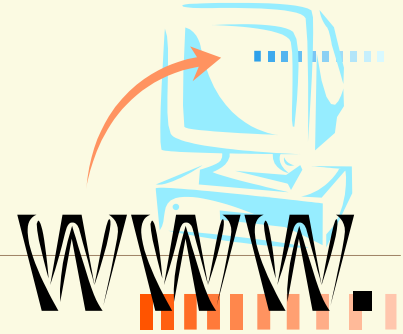
## TCP/IP (Transmission Control Protocol/ Internet Protocol)

- Internet connection relies on a collection of protocols that govern how computers and networks talk to each other.
- TCP/IP is simply a **set of rules** that control how information flows between computers.
- Allows individual computers to communicate with the Internet as if they are directly connected.



<http://>

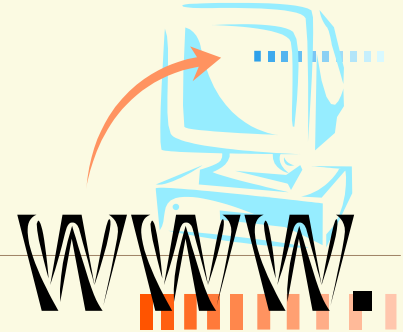
# Internet Basics



## The World Wide Web (www)

- The World Wide Web is a giant collection of documents, or pages, stored on computers around the globe.
- Commonly called the Web, this **collection of pages** houses a wealth of text, images, audio, video, and more.
- Web pages are stored on servers, which are computers designed for holding and transferring data.

# Internet Basics



## Part of a Web Page

- You can communicate your message on the Web in a variety of ways. The following are some of the common elements that appear on Web page.

**Text**

**Images**

**Hyperlinks**

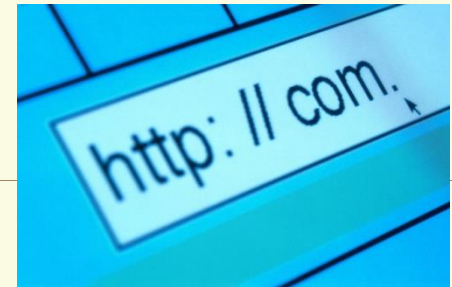
**Tables**

**Forms**

**Frames**

**Audio/  
Video**

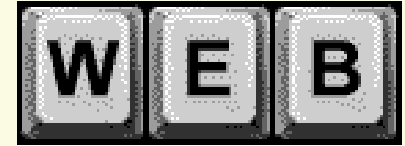
# Internet Basics



## URLs and Links

- Every page on the Web has a unique address, called URL (**Uniform Resource Locator**).
- If you know a page's URL, you can view it over the Internet.
- You can also view pages using links. **Hyperlinks** or links connect pages through embedded URLs presented as text or images on a page.
- Users can jump from one page to another by clicking links.

# Internet Basics



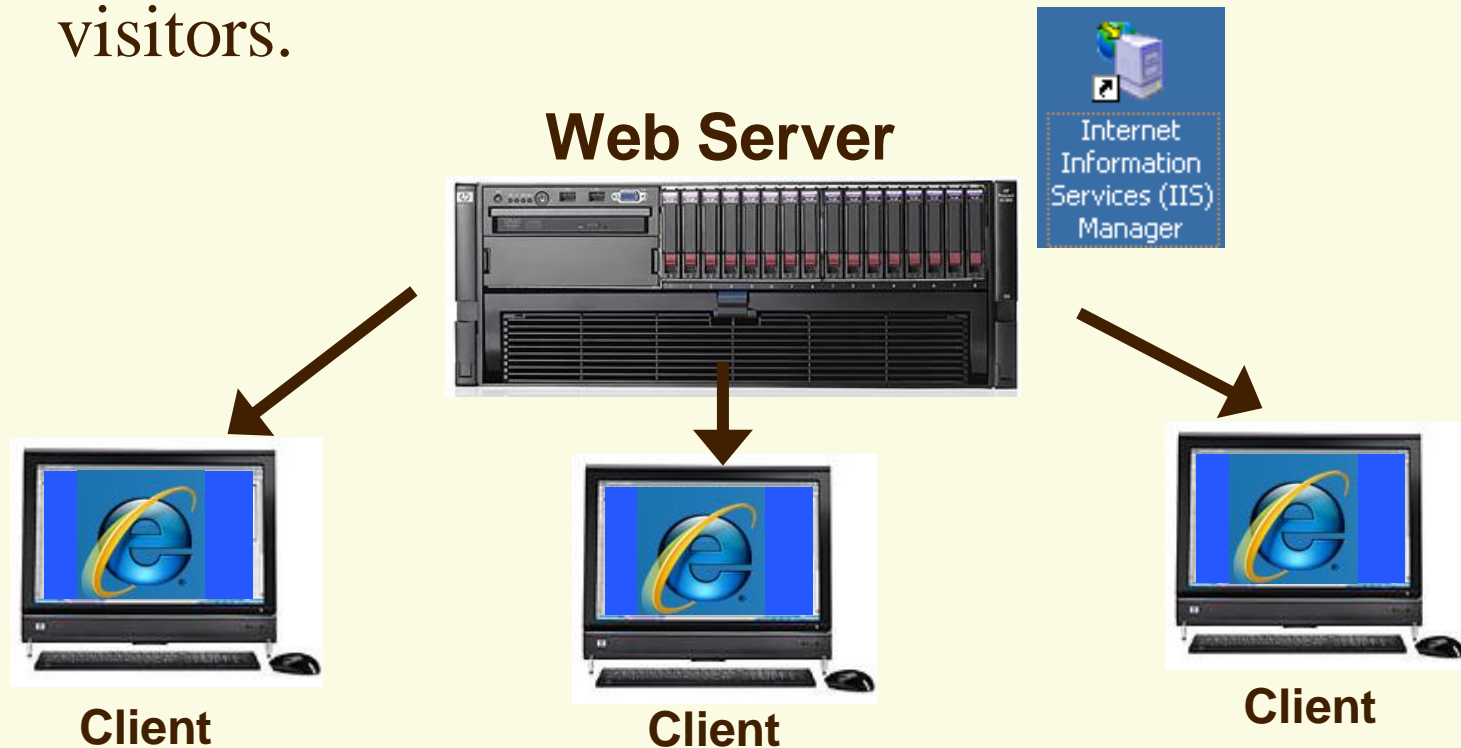
## Browsers

- To view Web pages, you must use a **Web browser**.
- Browsers are specialized programs that retrieve Web pages from servers and display them on a user's computer.
- Microsoft Internet Explorer , Netscape Navigator and Apple's Safari are the popular browsers used today.
- As you write HTML code, just remember that not all users have the most recent version of a particular browser

# Internet Basics

## Web Server

- A Web server is a computer that is connected to the Internet and has software that serves Web pages to visitors.



# An Introduction to HTML

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- Web pages are built using HTML (**HyperText Markup Language**).
- HTML documents are comprised of text and coding that instruct a Web browser how to display the information.
- HTML documents are identified by their **.HTML** or **.HTM** file extension.

# An Introduction to HTML

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## What is HTML?

- HTML stands for **Hyper Text Markup Language**
- HTML is not a programming language, it is a **markup language**
- A markup language is a set of **markup tags**
- HTML uses markup tags to describe web pages

Source: [http://www.w3schools.com/html/html\\_intro.asp](http://www.w3schools.com/html/html_intro.asp)

# An Introduction to HTML

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## HTML Documents = Web Pages

- HTML documents describe web pages
- HTML documents contain HTML tags and plain text
- HTML documents are also called web pages

Source: [http://www.w3schools.com/html/html\\_intro.asp](http://www.w3schools.com/html/html_intro.asp)

# An Introduction to HTML

## HTML Coding

- HTML coding consist of tags.
- **Tags** are individual instructions to the browser, and are surrounded by **angle brackets** `<>`.
- Many tags include an opening tag and closing tag.
- When writing tags, you can use upper or lowercase letters.
- Tags can also include **attributes** you can define, such as color values or measurements.

# An Introduction to HTML

## HTML Standards

- The **World Wide Web Consortium**, or W3C for short, sets HTML standards.
- This international group consists of the Web's founders and industry leaders including companies such as Microsoft and Netscape.
- Web developers look to the W3C to establish standards and introduce new Web technologies.
- The W3C is responsible for maintaining and guiding HTML standards



# An Introduction to HTML

## HTML 5

Source: <http://www.w3schools.com>



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### HTML Basic

- HTML HOME
- HTML Introduction
- HTML Editors
- HTML Basic
- HTML Elements
- HTML Attributes
- HTML Headings
- HTML Paragraphs
- HTML Formatting
- HTML Links
- HTML Head
- HTML CSS
- HTML Images
- HTML Tables
- HTML Lists
- HTML Blocks
- HTML Layout

## HTML5 Introduction

« Previous

Next Chapter »

### HTML5 is The New HTML Standard



### HTML5

- New Elements
- New Attributes
- Full CSS3 Support
- Video and Audio
- 2D/3D Graphics
- Local Storage
- Local SQL Database
- Web Applications

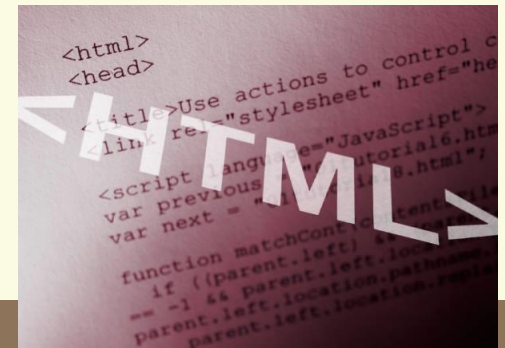
# An Introduction to HTML

## HTML Versions

- The most recent version of **HTML is version 5.0**
- Version 5 allows for separate formatting instructions, called “**cascading style sheets (CSS)**”, and other presentation controls.
- By moving all the formatting controls to style sheets, HTML 5 frees up the Web developer to assign formatting to text/ paragraphs as well as the entire pages for the Web site.
- Style sheets makes it easier to maintain other coding on the HTML document.

# Explore Web Browsers

- Web browsers are designed to **read HTML instructions** and display the content on your screen.
- You can use a browser to display HTML files you save on your computer, called local pages or HTML pages transferred through a Web server.
- You can also use a browser to test your HTML page.



# Explore Web Browsers

- The purpose of a web browser (like Internet Explorer) is to **read HTML documents** and display them as web pages.
- The browser does not display the HTML tags, but uses the tags to interpret the content of the page:

```
<html>
<body>

<h1>My First Heading</h1>

<p>My first paragraph.</p>

</body>
</html>
```

## Example Explained

- The text between <html> and </html> describes the web page
- The text between <body> and </body> is the visible page content
- The text between <h1> and </h1> is displayed as a heading
- The text between <p> and </p> is displayed as a paragraph

# Explore Web Browsers

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## Browser Discrepancies

- There are many different Web browsers around today, and numerous version of each.
- Each browser **interprets HTML code** in its own way, which means Web pages do not always appear in the same from one browser to another.

# Explore Web Browsers

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## Browser Discrepancies

- HTML standardization helps alleviate some of the discrepancies, but not all.
- For this reason, you need to **write clean, well-formed** HTML code and be sure to test your pages in different browsers to see the varying results.

# Explore Web Browsers

## Finding Browsers

- Microsoft Internet Explorer and Google Chrome are the two most popular browsers available today..
- You should also test your pages in a few of the lesser-known browsers.



Internet Explorer 7+



Firefox 3+



Safari 3+



Opera 9.5+



Chrome 2.0+

# Explore HTML Editors

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**Simple Text  
Editor**

**Word  
Processor**

**HTML  
Editor**

# Explore HTML Editors

## Simple Text Editors

- Simple text editors, also called plain-text editors, are easy to find.
- Most computers come with one, such as Windows **WordPad** and **Notepad**.
- You can also find shareware and freeware versions on the Internet, such as TextPad, EditPad Lite and UltraEdit.
- Simple text editors offer no-frills word processing and are often the best choice for writing HTML code.

# Explore HTML Editors

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## Word Processing Programs

- You can also use word processing programs, such as Microsoft Word, to write HTML.
- Use caution, however, because commercial word processors can store extraneous information with your files, some of which interferes with HTML.



# Explore HTML Editors

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## HTML Editors

- HTML editors are dedicated programs for writing HTML code
- Microsoft FrontPage and **Adobe Dreamweaver** are examples of HTML editors.
- HTML editors can shield you from learning HTML code in detail by offering a GUI environment for building Web pages.
- However, most also allow you to switch to text-based editing as well.

# Explore HTML Editors

## HTML Editors

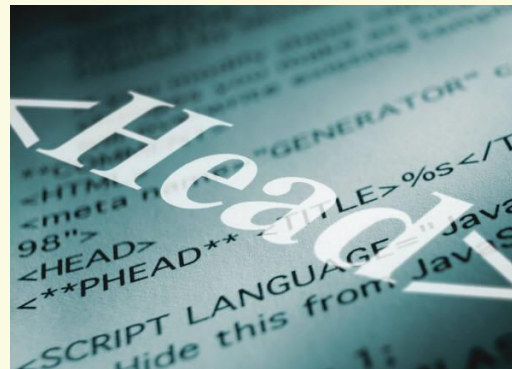
- **WYSIWYG** editors are HTML editors that attempt to display the Web page as it will show on the browser. They are visual editors, and you don't manipulate the code directly..

Adobe Creative Suite 5.5 Dreamweaver



# Understanding HTML Syntax and Rules

- The **HTML language** is simple language for describing Web page content.
- HTML rules, called **syntax**, govern the way in which code is written.
- Learning the right way to write your code can save you confusion and errors later.



# Understanding HTML Syntax and Rules

## Writing HTML

- The instructions you write in HTML are called **tags**.
- Tags are surrounded by angle brackets `< >`.
- You can write tags in **upper or lower case**.
- Many users prefer to write their tags in uppercase to make them easier to identify on the document page.
- If you create a page in XHTML, a stricter variation of HTML, you need to use lowercase letters for your tags.

# Understanding HTML Syntax and Rules

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**Elements**

**Attributes**

**Values**

**Entities**

# Understanding HTML Syntax and Rules

## Elements

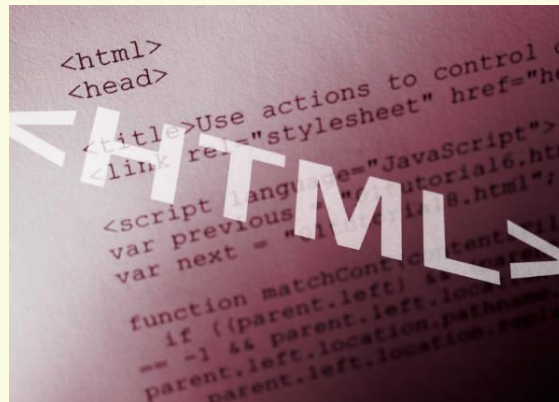
- Elements identify the different parts of your HTML document.
- For example, **<BODY>** and **</BODY>** are tags defining the body text element on a page.
- The browser reads any text between the two tags as part of the body element.



# Understanding HTML Syntax and Rules

## Elements

- Many elements use **tag pairs**, an opening and closing tag, such as `<P>` and `</P>`, while others, such as the Image tag `<IMG>` do not.
- **Closing tags** must always include a **slash (/)**.



# Understanding HTML Syntax and Rules

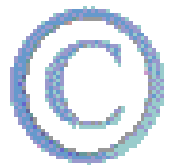
## Attributes and Values

- Each element has unique attributes you can assign.
- Many attributes require that you set a **value**, such as a measurement or specification.
- For example, you can set a paragraph's alignment on the page use the **ALIGN attribute** and set a value for the alignment by specifying the value as left, right or center.
- ```
<P ALIGN="center">My paragraph text.</P>
```
- Values are always enclosed in **quotation marks** and appear within the element's start tag.

# Understanding HTML Syntax and Rules

## Entities

- Any **special characters** you add to a page, such as a copyright symbol or a fraction, are called entities.
- HTML use entities to represent characters not readily available on the keyboard.
- All entities are preceded with an ampersand (&) and ended with a semicolon (;).
- For example, to add a copyright symbol to your page, the code looks like this: `&copy;`



# Understanding HTML Syntax and Rules

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## Avoid Syntax Error

- To avoid HTML errors, always take time to **proofread** your code.
- Make sure you have brackets on your tags and that your closing tags include a slash.
- You must surround any values you define for attributes with **quotation marks**.
- It also helps to write your closing tags in reverse order of the opening tags.

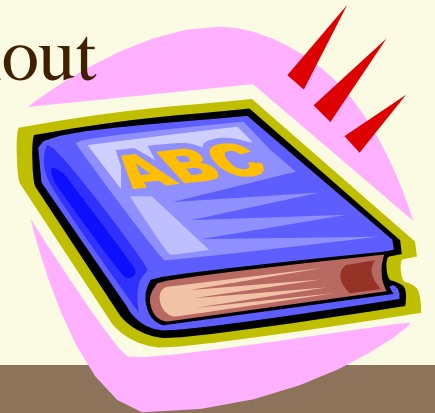
# Understanding HTML Syntax and Rules (pg 11)

## Avoid Syntax Error

- It also helps to write your closing tags in reverse order of the opening tags. For example

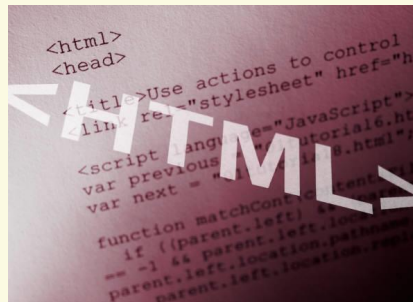
```
<P> ALIGN="center"><B>My Text</B></P>
```

- To help make your HTML readable, consider using new lines to enter code instead of running everything together on one long line.
- Using white space can also help, without increasing the file size.



# Viewing HTML Code in a Browser

- You can view the **HTML code** for any Web page using your browser window.
- Viewing other Web developers code is a good way to learn how to write your own code
- It can help you generate new ideas for your own pages.
- You can also save a Web page to study later.



# Viewing HTML Code in a Browser

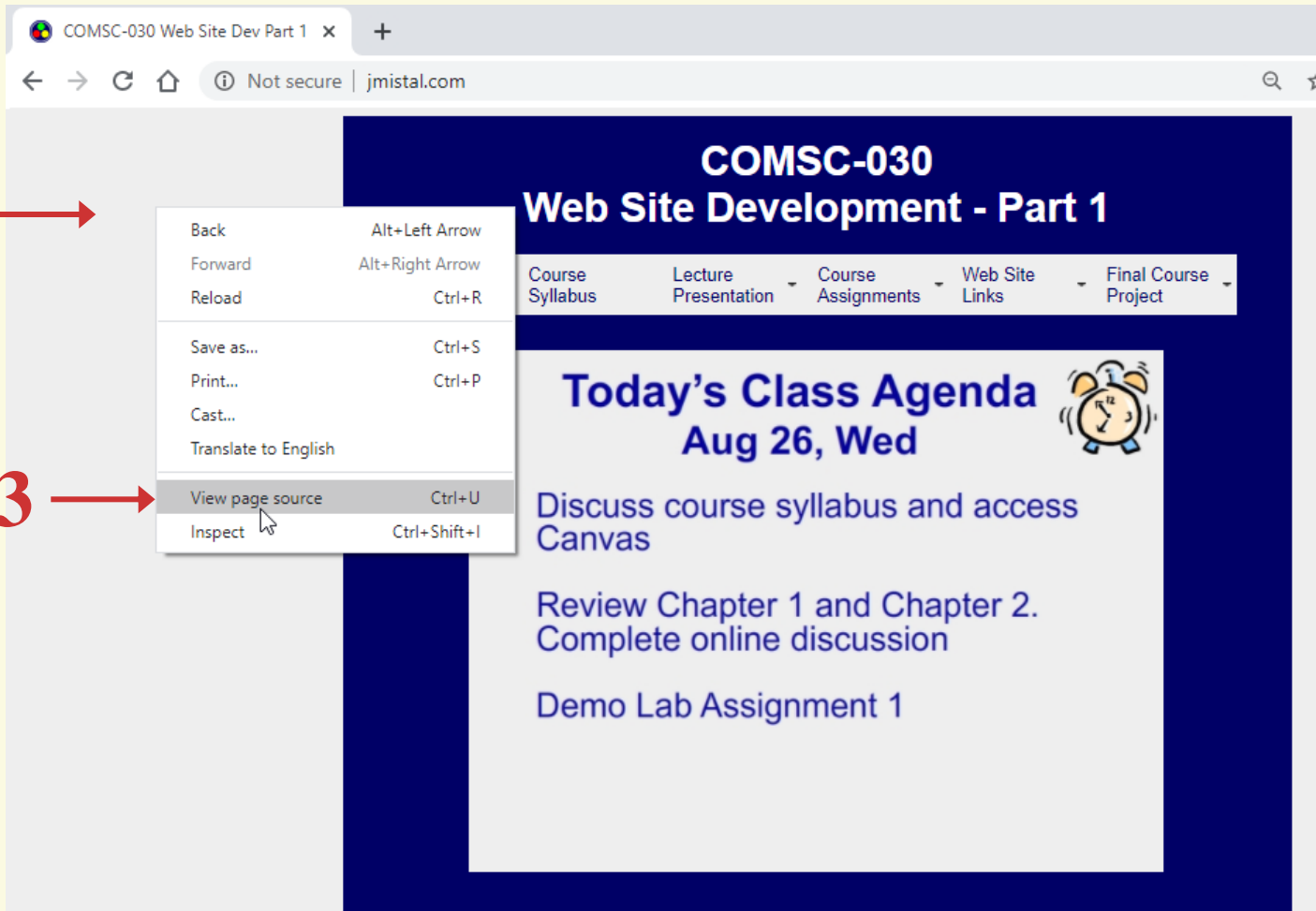


## View the Source Code

1. Open your Google Chrome and go to [www.jmistal.com](http://www.jmistal.com)
2. **Right click** on page
3. Select **View Page Source**

# Viewing HTML Code in a Browser

2 →



The screenshot shows a web browser window with the address bar displaying "COMSC-030 Web Site Dev Part 1" and "jmistal.com". The page content includes a header "COMSC-030 Web Site Development - Part 1" and a navigation menu with items like "Course Syllabus", "Lecture Presentation", "Course Assignments", "Web Site Links", and "Final Course Project". The main content area features "Today's Class Agenda Aug 26, Wed" with an alarm clock icon, followed by a list of tasks: "Discuss course syllabus and access Canvas", "Review Chapter 1 and Chapter 2. Complete online discussion", and "Demo Lab Assignment 1". A context menu is open over the page, with "View page source" highlighted. A red arrow labeled "2" points to the menu, and another red arrow labeled "3" points to the "View page source" option.

|                         |                 |
|-------------------------|-----------------|
| Back                    | Alt+Left Arrow  |
| Forward                 | Alt+Right Arrow |
| Reload                  | Ctrl+R          |
| Save as...              | Ctrl+S          |
| Print...                | Ctrl+P          |
| Cast...                 |                 |
| Translate to English    |                 |
| <b>View page source</b> | <b>Ctrl+U</b>   |
| Inspect                 | Ctrl+Shift+I    |

3 →

# Viewing HTML Code in a Browser



## Save an HTML Document

4. With the source code window open, **right click** on the page.
5. Click **Save As**. The Save As dialog box appears

# Viewing HTML Code in a Browser

The screenshot shows a web browser window with the address bar displaying "view-source:jmistal.com". The page content is the raw HTML source code. A red arrow labeled "4" points to the opening tag of a `<style type="text/css">` element. A second red arrow labeled "5" points to a context menu that is open over the code, with the "Save as..." option highlighted. The context menu includes options like "Back", "Forward", "Reload", "Print...", "Cast...", "Translate to English", "View page source", and "Inspect", each with its corresponding keyboard shortcut.

```
1 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-
2 <html xmlns="http://www.w3.org/1999/xhtml">
3 <head>
4 <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
5 <link rel="icon" type="image/x-icon" href="images/favicon.ico" />
6 <link rel="shortcut icon" type="image/x-icon" href="images/favicon.ico" />
7 <title>COMSC-030 Web Site Dev Part 1</title>
8 <style type="text/css">
9 <!--
10 #apDiv1 {
11     position:absolute;
12     left:36px;
13     top:522px;
14     width:821px;
15     height:132px;
16     z-index:1021;
17     font-weight: bold;
18     text-align: center;
19     font-family: Arial, Helvetica, sans-serif;
20     font-size: 36px;
21 }
22 body,td,th {
23     color: #FFF;
24 }
25 body {
26     background-color: #EEEEEE;
27     margin-top: 5px;
28 }
```

|                      |                 |
|----------------------|-----------------|
| Back                 | Alt+Left Arrow  |
| Forward              | Alt+Right Arrow |
| Reload               | Ctrl+R          |
| Save as...           | Ctrl+S          |
| Print...             | Ctrl+P          |
| Cast...              |                 |
| Translate to English |                 |
| View page source     | Ctrl+U          |
| Inspect              | Ctrl+Shift+I    |

# Viewing HTML Code in a Browser



## Save an HTML Document

6. Navigate to the folder where you want to store the page.
7. Type a name for the page – chapter1.html  
**NOTE: The file extension should be .html**
8. Select Save as type- **Webpage, HTML only**
9. Click **Save**

# Viewing HTML Code in a Browser

