



## Dreamweaver: Getting Started

Library Instructional Services

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### Overview

- **Introduction to the Internet**
  - What is the Internet?
  - What is the World Wide Web?
  - How does the Internet work?
- **Web content: sites and pages**
  - Locating content: URLs
  - What is a web page?
  - Static vs. dynamic pages
- **Web authoring: Using Dreamweaver**
  - Static page authoring: HTML, CSS
  - Dynamic page authoring: Forms, CGI, PHP
  - Other Instructional Services web authoring workshops

## Internet & World Wide Web - The same?

- The Internet and the Web are not the same thing.
- The Web is just one of many services that make use of the internet.

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## Internet Protocols

- **TCP/IP** (Transmission Control Protocol / Internet Protocol).
- Internet protocols are **standardized**, allowing different types of computers to “talk” to each other.
- Different services work within the TCP/IP framework.

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## Internet Services with Protocols

- World Wide Web (HTTP, HTTPS)
- Email (SMTP, IMAP, POP3, MAPI)
- Directories (LDAP)
- File transfer (FTP, SFTP, SCP)
- Command line login (Telnet, SSH)
- Instant messaging / Chat (ICQ, Jabber, AIM, .NET Messenger Service, Yahoo! Messenger)
- Streaming audio/video (RTP, RTSP, SMIL)
- Voice (VoIP)

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## TCP/IP Details

- Each computer or device connected to the Internet is given a **unique** numeric address called an **IP address**.
  - Example: 129.237.33.3
  - Allows information to be sent to a specific computer.
- Information is transmitted in small pieces (called **packets**), which each include addressing information.
  - Packets can be sent across the Internet along the fastest possible route.

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### TCP/IP in action: Web Surfing/Browsing

1. **You “request” a web page.**
  - a. Type address in the address bar.
  - b. Click a link.
2. **The remote computer receives the request and sends the data to your computer (by means of your computer’s IP address).**
  - a. The software that sends you the information is called the **server**, which listens for and responds to such requests.
3. **Your browser renders and displays the web page.**

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### “But when I browse the Web, I don’t see IP numbers…”

- **Most of the time, you see mnemonic names in Web addresses, not IP numbers.**
  - E.g., [www.ku.edu](http://www.ku.edu), [www.google.com](http://www.google.com)
  - These are **hostnames**, human-readable aliases for numeric IP addresses.
- **Registered hostnames and their equivalent IP addresses are stored in a DNS (Domain Name Server)**
  - When a web page is requested, the hostname is sent to the DNS, which **resolves** it into an IP address.

➤ For example: [www.ku.edu](http://www.ku.edu) = [129.237.33.3](http://129.237.33.3)

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## Deconstructing a hostname

- **Hostnames...**
  - “Most of the time,” the structure gives hints about the organization that owns the name.
  - consist of three basic parts:
    - The local hostname (e.g., “www”, “raven.cc”, “mail”)
    - The organization domain name (e.g., “ku”, “yahoo”)
    - The top-level domain (TLD) (e.g., “com”, “edu”, “gov”, “us”)

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## Locating content: URLs

### **URL (Uniform Resource Locator)...**

is an Internet resource address

- In general, URLs are written as follows:
  - scheme:scheme-specific-part*
  - The **scheme** identifies the internet service used
    - E.g., http, ftp, mailto
  - For the Web, the scheme-specific part consists of:
    - a **hostname**
    - the **path** to a **file**

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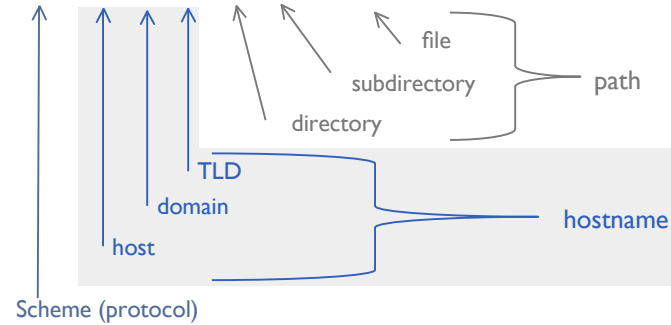
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## Deconstructing a web URL

- **General form:**

*scheme://host.domain.tld/directory/file*

<http://www.ku.edu/site/how/index.shtml>



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## URL example

<http://www.ku.edu/webservices/index.shtml>

`index.html` is a file in the `webservices` directory on the computer identified as `www.ku.edu`. This file can be accessed via `HTTP`, i.e., it is a Web resource.

- (“Directory” is synonymous with “folder”.)

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## Abbreviated Addresses

- URLs are often abbreviated, e.g., [www.lib.ku.edu/instruction](http://www.lib.ku.edu/instruction).
- This is actually, [www.lib.ku.edu/instruction/index.html](http://www.lib.ku.edu/instruction/index.html)
- If no page filename is specified, the index page is sent to the browser by the server.
  - Different servers use different index page file names, e.g., [index.html](#) and [default.html](#).
  - KU's web servers use [index.html](#).

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## What is a web page?

A **plain text file** with specific coding or markup for display by the web browser.

- Markup used to create web pages is [HTML/XHTML](#) (HyperText Markup Language / Extensible HyperText Markup Language).
- HTML markup provides for page [structure](#). For example:
  - o Define text as a heading.
  - o Define text as a paragraph.
  - o Define placement of an image.
- HTML should be supplemented by [CSS](#) (Cascading Style Sheets), a language that specifies the [presentation](#) of the page. For example:
  - o Define that a particular heading is Large, Bold and Maroon in color
  - o Define a particular paragraph as using italics
- HTML files can also include [script](#) code (such as ECMAScript/JavaScript) to be executed by the browser.
- Web pages usually have the filename extension [.html](#) (or [.htm](#)) to indicate that they are HTML files.

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## Browser display of HTML

- The browser **interprets the markup** (HTML, CSS) in the web page to display its content.
- **Not all browsers display web pages the same way!!**

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## Web content types

- **HTML markup may direct the browser include other files:**
  - Images and animations.
  - Browsers can also be made to hyperlink directly to other types of files; e.g. Word document or PDF file.
  - CSS Formatting and Layout.
- **Each file on the web has a filename extension, which identifies the files “type” to your computer.**
- **The browser handles different types of files in different ways:**
  - Displays directly (HTML, images, etc.)
  - Launches a **plug-in** and relies on it to display the file (PDF, Flash, etc.)
  - Launches a **helper application** to display the file externally. (Word, Excel, etc.)
  - Downloads the file without displaying it.

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## Static vs. dynamic web pages

- **Static pages**
  - always contain the same information (so long as the source code is unchanged);
  - are modified by opening the file and changing the content or HTML.
- **Dynamic pages**
  - can contain different information at different times (from the same source code);
  - are produced on-the-fly by a computer program or [script](#) on the web server.

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## Dynamic web page technologies

- .shtml = HTML with SSI (server-side includes)**
- .cgi = Common Gateway Interface**
- .php = PHP scripts**
- .pl = Perl scripts**
- .cfm = Macromedia ColdFusion**
- .asp = Microsoft Active Server Pages**
- .jsp = JavaServer Pages**

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## What is a web site?

- A collection of individual web pages,
- organized into a directory structure,
- stored on a **web server**, so they are accessible via the web.
  - The **directory structure** of the site is reflected by the URLs of the various pages.

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📁 folder	
📄 index.html	<a href="http://server.com/folder/index.html">http://server.com/folder/index.html</a>
📄 page1.html	<a href="http://server.com/folder/page1.html">http://server.com/folder/page1.html</a>
📄 page2.html	<a href="http://server.com/folder/page2.html">http://server.com/folder/page2.html</a>
📁 subfolder	
📄 page3.html	<a href="http://server.com/folder/subfolder/page3.html">http://server.com/folder/subfolder/page3.html</a>

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## Error messages

- Sometimes, something goes wrong while browsing the web, or while verifying that your own web site works.
- Depending on what happened you may get different error messages:
  - 400 - Bad request
  - 403 - Forbidden
  - 404 - File not found
  - 500 - Server error
  - 503 - Service not available

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## Troubleshooting Errors

- **404 - File not found**
  - Usually, you get this message because either the URL has a typo, or someone removed the page from the Web server.  
**Check your URL for typos.**
- **403 - Forbidden**
  - In this case, the file exists, but the Web author forgot to make it publicly accessible.
- **500 - Server error and 503 - Service not available**
  - Both of these problems are problems with the Web server. Your best bet is to try again later.

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## Web page creation... The basics

- **The basics of web authoring are HTML and CSS**
  - HTML (Hypertext Markup Language): markup that provides structure to web page content.
    - Used to specify structural elements like heading, paragraphs, links, etc.
  - CSS (Cascading Style Sheets) are used to give pages—or entire sites—a consistent presentation.
    - Used to specify design properties like fonts, colors, sizes, borders, spacing, etc.
  - Important: **Content and structure** of a web page are kept **separate** from its **presentation**.
- **Dreamweaver Creates, Edits and Error Checks HTML and CSS.**

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## Web page creation... The basics (con't)

- **Considerations**
  - **Editing tools:** Many web page editors are available (such as Adobe [formerly Macromedia] [Dreamweaver](#), Adobe GoLive, and Microsoft FrontPage), as well as text editors such as Notepad
  - **Design:** What do you want your site to look like? How should it be organized? What kind of colors, images, and fonts should you use?
    - For KU sites, see the KU Web Standards Guide ([www.identity.ku.edu/web](http://www.identity.ku.edu/web)).
  - **Accessibility:** Will your site be accessible to those using non-traditional browsing methods? (e.g., text-to-speech readers, non-graphical browsers, etc.)
    - KU sites are required to be by the Web Content Accessibility Guidelines for the State of Kansas ([da.state.ks.us/itec/WASPriorities011303.htm](http://da.state.ks.us/itec/WASPriorities011303.htm)).

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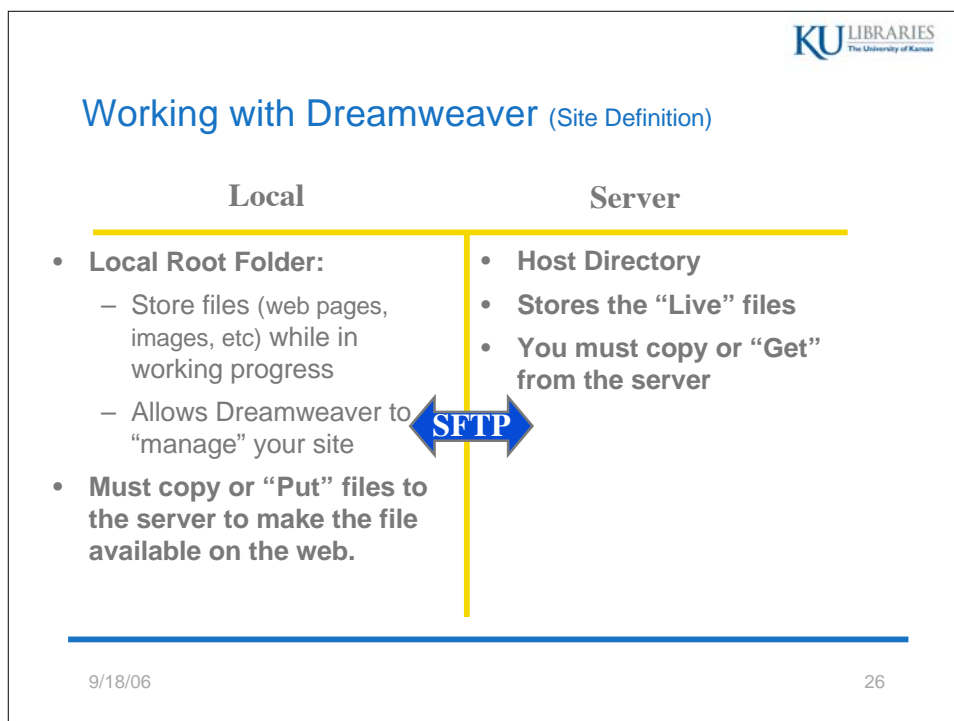
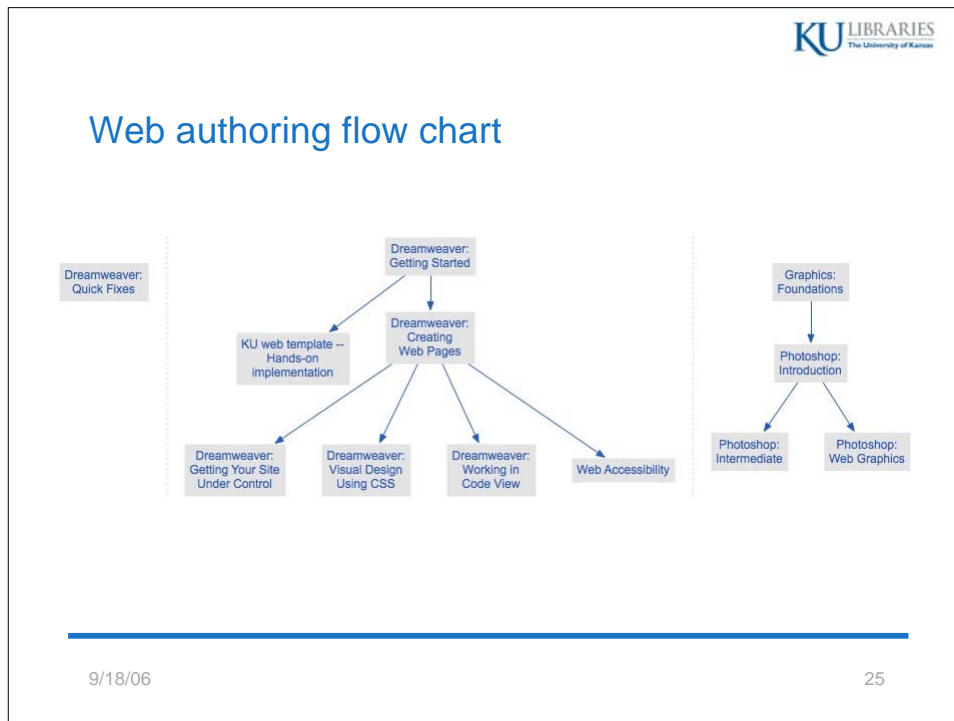
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## Dynamic web page authoring

- **Creating dynamic web pages is rather technical and involved, depending on what you wish to do.**
  - HTML forms allow users to submit information through a web page (such as an email address or other contact information).
  - CGI (Common Gateway Interface) is the common term given to programs that are run by the Web server in order to generate dynamic pages.
  - There are various languages in which these CGI programs can be written. The most common are Perl, ASP, and PHP.
- **Dreamweaver has built-in capabilities for creating dynamic web pages. However, it is beyond the scope of our workshops.**

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## Additional information

- **How Web Servers Work:**
  - <http://www.howstuffworks.com/web-server.htm>
- **HTML Tutorial**
  - <http://www.w3schools.com/html/default.asp>
- **Sign up for KU Online Services (including web site space)**
  - <http://www.ku.edu/computing/services>

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*Thank you for attending!*

Please evaluate this workshop at  
[www.lib.ku.edu/instruction/evaluation](http://www.lib.ku.edu/instruction/evaluation)