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CSCI-UA-4-005

Intro to Web Design + Computer Principles

Review Unix + Introduce HTML
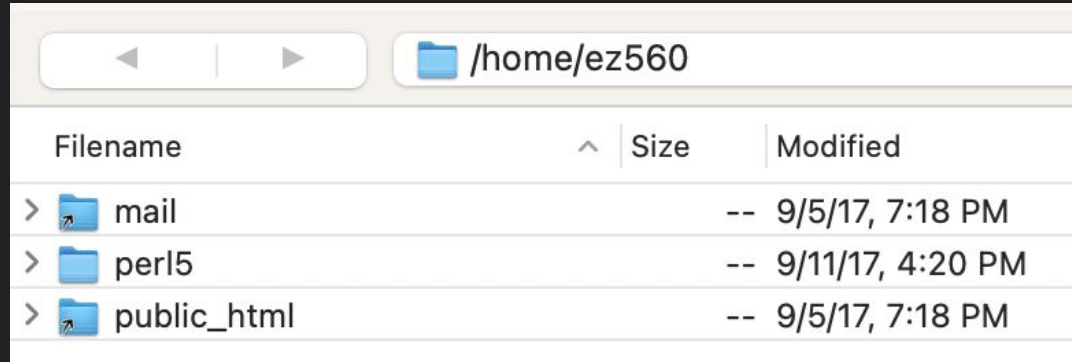
Professor Emily Zhao
M/W 12:30PM – 1:45PM

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Agenda

— **Review Unix/Assignment #1**
  — i6 accounts
  — Accessing servers
  — Setting permissions
— **Introduce HTML**
— **Assignment #1 Workshop**

i6 Services

`http://i6.cims.nyu.edu/~NETID`

— `i6.cims.nyu.edu` is a server that provides a Linux environment for students to develop and host their websites
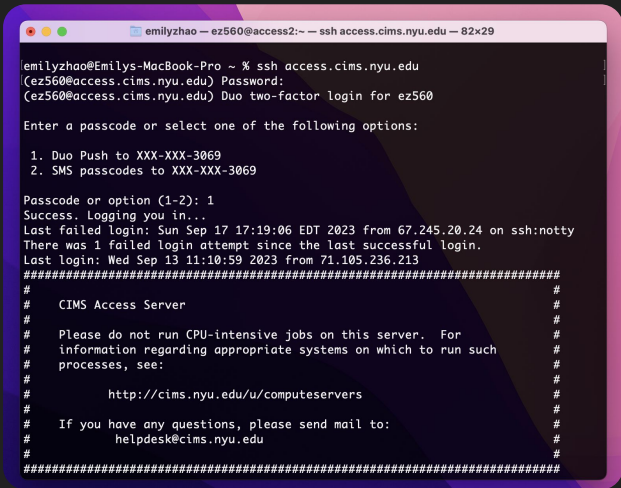— Each account is granted a home directory and a web directory:

SSH (Secure Shell)

Allows users to securely log into remote systems and execute commands on those systems

— Login, change password, change file permissions


```
emilyzhao — ez560@access2:~ — ssh access.cims.nyu.edu — 82×29

emilyzhao@Emilys-MacBook-Pro ~ % ssh access.cims.nyu.edu
(ez560@access.cims.nyu.edu) Password:
(ez560@access.cims.nyu.edu) Duo two-factor login for ez560

Enter a passcode or select one of the following options:

 1. Duo Push to XXX-XXX-3069
 2. SMS passcodes to XXX-XXX-3069

Passcode or option (1-2): 1
Success. Logging you in...
Last failed login: Sun Sep 17 17:19:06 EDT 2023 from 67.245.20.24 on ssh:notty
There was 1 failed login attempt since the last successful login.
Last login: Wed Sep 13 11:10:59 2023 from 71.105.236.213
################################################################################
#                                                                              #
#     CIMS Access Server                                                       #
#                                                                              #
#     Please do not run CPU-intensive jobs on this server.  For                #
#     information regarding appropriate systems on which to run such           #
#     processes, see:                                                          #
#                                                                              #
#           http://cims.nyu.edu/u/computeservers                              #
#                                                                              #
#     If you have any questions, please send mail to:                          #
#           helpdesk@cims.nyu.edu                                              #
#                                                                              #
################################################################################
```
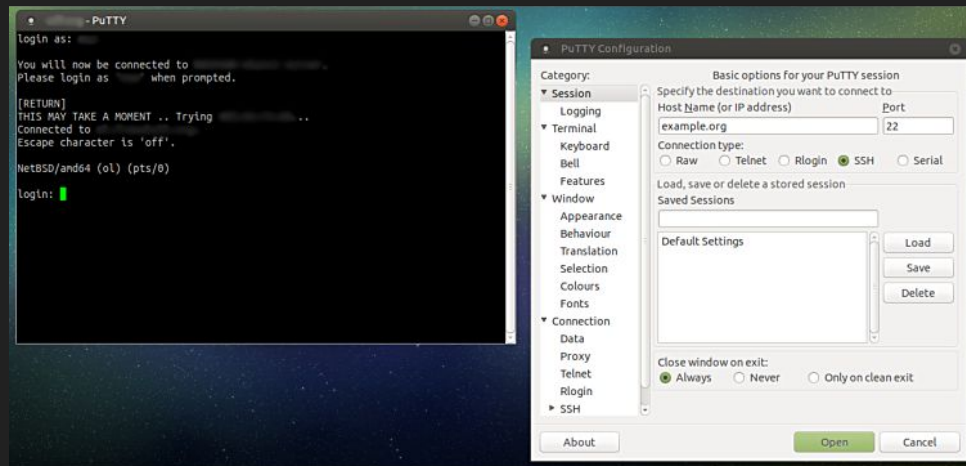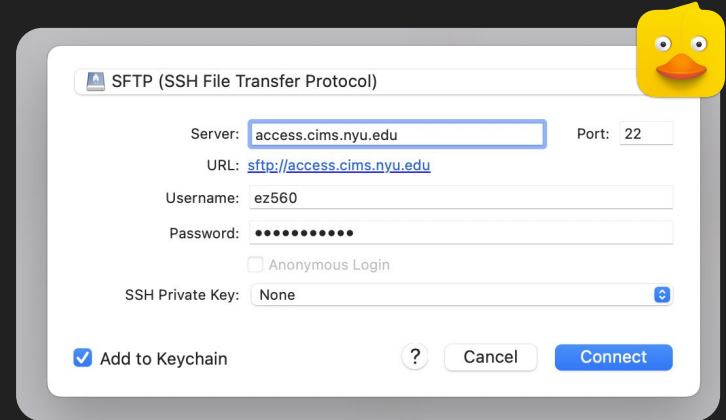
puTTY

an open-source terminal
emulator and SSH client for
Windows

Common Unix Commands

```
% ls          list directory files

% pwd         show current directory

% cd          change directory
% cd ~        go to home directory
% cd ..       go to parent directory

% touch       create, change, modify timestamp of file

% mkdir       create directory
```

SFTP (SSH File Transfer Protocol)

A file transfer protocol that operates over an SSH connection

— Used solely for transferring files between client and server
— File management capabilities such as uploading, downloading, renaming, and deleting files

chmod

Every file and directory has nine permissions associated with it

The Unix chmod command sets permissions of files and directories

Files and directories have three types of permissions (or none):

— r (read)
— w (write)
— x (execute)
— - (no permission)

The above permissions occur for each of the following classes or users:

— u (user/owner)
— g (group)
— o (other/world)

Standard Web Permissions

Permissions			Unix Commands
U	**G**	**W**	
rwx	rwx	rwx	% chmod 777 filename
rwx	rwx	r-x	% chmod 775 filename
rwx	r-x	r-x	% chmod 755 filename
rw-	rw-	r--	% chmod 664 filename
rw-	r--	r--	% chmod 644 filename

Standard **file** permission: 644

— owner can read and write file
— group can read file
— others can read file

Standard **directory** permission: 755

— owner can read, write + execute file
— group can read and execute file
— others can read and execute file

Assignment #1

1. Log into i6 account (`ssh`)
2. Change password (`ssh`)
3. Create HTML landing page (`text editor`)
4. Upload file to server (SFTP)
5. Change permissions of file/directory (`ssh`)

i6 server, Cyberduck, local computer

```
i6 Server

mail
perl5
public_html
— index.html
```

Think of them as two **SEPARATE** computers

Terminal/puTTY allows you to view and change file/folder permissions on the i6 server

Cyberduck (SFTP client) allows you to upload files to the i6 server.

If you want to update a file on the i6 server, you must edit it from Cyberduck or re-upload from your computer.

```
Your Computer

desktop
documents
web_design
— A1
  — index.html
```

HTML

```html
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <title>Your name goes here</title>
  </head>
  <body>
    <h1>Introduction to Web Design</h1>
    <p>Your self introduction goes here</p>
    <ul>
      <li>HTML</li>
      <li>CSS</li>
      <li>Raster Graphics</li>
      <li>Vector Graphics</li>
      <li>Page Layout</li>
      <li>Responsive Design</li>
      <li>JavaScript</li>
      <li>Final Project</li>
    </ul>
  </body>
</html>
```

HTML
Add and orders elements on a webpage. Like the *skeleton* of a webpage.
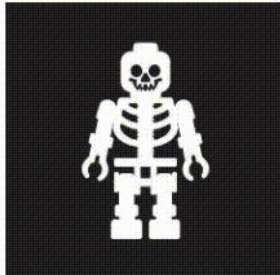
CSS
Handles the styling of your website. For example, fonts, colors, sizing, etc.

JavaScript
Adds action and allows user interactions. For example, buttons and text input fields.

| HTML structure | CSS presentation/appearance | JavaScript dynamism/action |

	HTML	CSS	Javascript
Language	**HTML**	**CSS**	**Javascript**
Purpose	Structure, Objects, Things	Looks, Style	Actions
Syntax	\<p\> \<h1\> \<br\>	P {color: red;}	var x = 5;
Grammar	nouns	adjectives	verbs
Building	Walls, structure	Paint, curtains	Electrical, Plumbing, AC

Hypertext Markup Language (HTML)
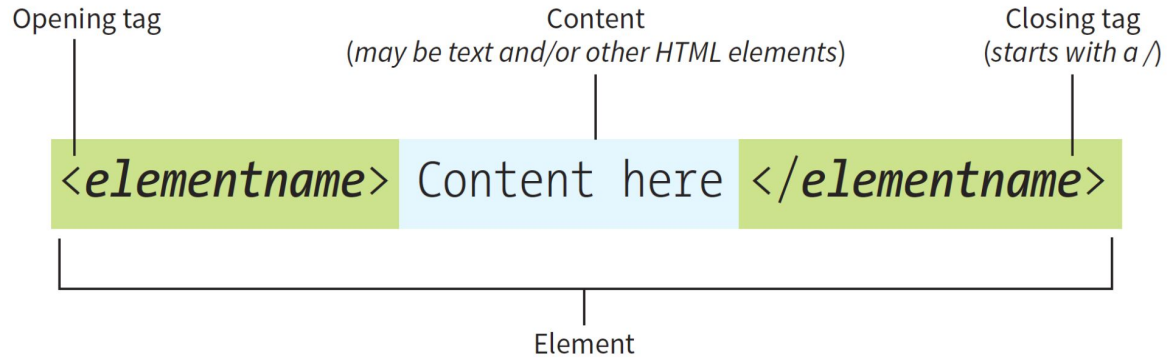
A language for describing Web pages

Hypertext: links that connect web pages to another

Markup Language: uses tags to define text structure and formatting

not a programming language!

Hypertext Markup Language (HTML)

A language for describing Web pages

Hypertext: links that connect web pages to another

Markup Language: uses tags to define text structure and formatting

                    not a programming language!

HTML Element

Opening tag | Content (*may be text and/or other HTML elements*) | Closing tag (*starts with a /*)

`<elementname>` `Content here` `</elementname>`

Element

Example: `<h1>Black Goose Bistro</h1>`

FIGURE 4-6. The parts of an HTML container element.

```
<h1> Why Coding Your Own Website Rocks </h1>
<p> There are many reasons why coding your
own website is better than using a website
builder </p>
<ul>
    <li> Low cost </li>
    <li> Rewarding </li>
    <li> Flexibility </li>
</ul>
<h2> Low Cost </h2>
<p> It's much cheaper than Squarespace!</p>
```

Why Coding Your Own Website Rocks

There are many reasons why coding your
own website is better than using a website builder.

- Low Cost
- Rewarding
- Flexibility

Low Cost

It's much cheaper than Squarespace!

Common HTML tags

`<h1> to <h6>`	Headings that define the hierarchy of section titles
`<p> … </p>`	Defines paragraphs of text
` `	A line break element to create new line
`<hr>`	"Horizontal rule", used to insert a visual break in content
`<ul> … </ul>`	Defines an unordered (bulleted list)
`<li> … </li>`	List element
`<blockquote> … </blockquote>`	Defines a block of text that is a quotation

```html
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <title>Your name goes here</title>
  </head>
  <body>
    <h1>Introduction to Web Design</h1>
    <p>Your self introduction goes here</p>
    <ul>
      <li>HTML</li>
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      <li>Vector Graphics</li>
      <li>Page Layout</li>
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      <li>Final Project</li>
    </ul>
  </body>
</html>
```

Common HTML tags

`<!DOCTYPE>`	Declares the document type
`<html>` … `</html>`	Container for all other HTML elements (except <!DOCTYPE>)
`<head>` … `</head>`	Contains metadata about the document, such as page title and links to stylesheets or scripts
`<title>` … `</title>`	Sets the title of web page, which is displayed in browser's title bar or tab
`<meta>` … `</meta>`	Contains metadata information about the document, including character encoding and viewport settings

HTML Boilerplate

```html
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <title>HTML 5 Boilerplate</title>
  </head>
  <body>
  </body>
</html>
```

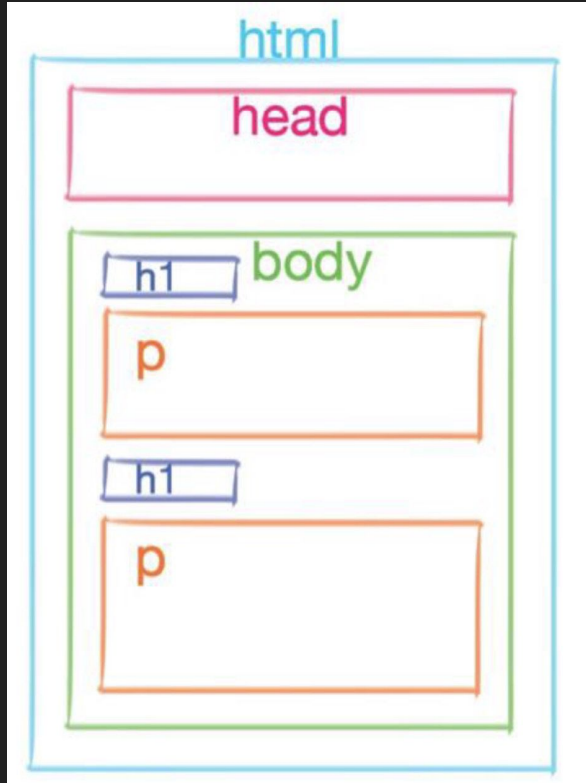# Can you nest HTML elements with each other?

Yes, you can!


```html
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<html>
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    </ul>
  </body>
</html>
```
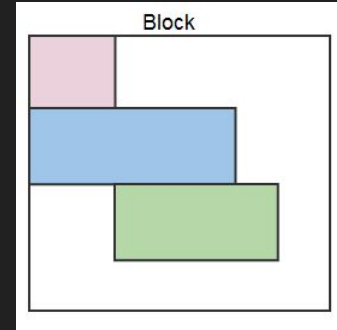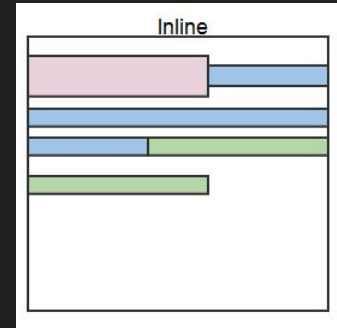
Block Element

— Starts on a new line
— Takes up the full width available (stretches out to the left and right as far as it can).
— Examples: `<h1>, <p>, <ul>, <blockquote>`

Block

Inline element

— Doesn't create line breaks
— Occupies only necessary width
— Examples: `<a>,<strong>, <em>, <img>, <br>`

Inline

Workshop

Today's Attendance
(via PollEverywhere)

pollev.com/emilyzhao

→ Did you finish Assignment 1 yet?

For next time

— Complete Ed Lesson: HTML Basics
— Assignment #1
— Chapter 6: Adding Links
— Chapter 7: Adding Images