CSCI-UA-4-005

Intro to Web Design + Computer Principles

Web Hosting + Domain Names

Professor Emily Zhao

M/W 12:30PM – 1:45PM

Agenda

- Final Exam Info
- Lecture
  - Domain Names
  - Web Hosting
  - Search Engine Optimization
  - Website Analytics
- Github Pages
- Open Workshop / Study / Practice Final

Final

Final

Date: Monday, May 13
12:00pm-1:15pm, Bobst LL138

Format: Multiple Choice

Topics Covered: First Half Topics + Accessibility, Page Layout, Responsive Design, Javascript, Audio + Video, Forms, Version Control, Web Hosting + Domains

- Paper exam; no laptops/internet
- Open note (bring in whatever you need)
- 65 questions total (5-10 per topic, ~20 for attached code)

Are there any other specific topics you would like to review?

Join by Web

PollEv.com/emilyzhao

Join by QR code

Scan with your camera app

Web Design Sp24 Final Exam Topics

0 surveys completed

0 surveys underway

First Half Topics

- Computer Principles
- The Internet
- Unix
- HTML
- CSS
- Raster Graphics
- Vector Graphics

Second Half Topics

- Accessibility
- Page Layout
- Responsive Design
- Javascript Basics
- The DOM and DOM Events
- Forms
- Audio + Video
- Version Control
- Web Hosting + Domain Names

Accessibility

- Accessibility definition
- Types of impairment
- Additional beneficiaries of accessibility
- Core principles of web accessibility
- Accessibility Tree
- Semantic HTML
- Best practices for accessible design

Page Layout

- Key principles of wireframing
- Importing custom fonts
- CSS Float
- CSS Positioning (static, absolute, fixed relative, sticky)
- CSS Flexbox
- CSS Grid

Responsive Design

- Foundations of responsive design
- Mobile-first vs desktop-first
- Units of length (absolute, relative, auto, inherit)
- %, em, rem
- Media queries
- Responsive Images

Javascript Basics

- Front-end language definition
- Naming variables in Javascript
- Data types in Javascript
- console.log()
- Math, relational, and logical operators
- Boolean expressions
- Conditionals
- Date object
- Math.random(), Math.floor()

The DOM + DOM Events

- DOM definition
- DOM nodes
- DOM queries
- DOM events
- Binding

Forms

The use of forms

Form syntax in HTML

Form validation

Form processing

Audio + Video

How to create media in HTML using video and audio tags

How to use an iframe

Version Control

Versson control system (VCS) definition

Centralized vs distributed version control

The history of git

The basics of git states (modified, staged, committed)

The use of Github

Web Hosting

- Domain names
- Top-level domains (TLDs)
- Web hosting
- Domain services
- SEO
- Semantic URLS
- Website Analytics

Domain Names

Domain Names

- Domain names serve as a more memorable reference to Internet resources.
- Domain names are used to identify Internet Protocol (IP) addresses.
- An IP address is an identifier for a node—a computer or device on a network.

Top Level Domain

Every domain name has a suffix that indicates which top level domain (TLD) it belongs to.

Top-level domains today are grouped as follows:

- Generic top-level domains (`.com .org .net`)
- Country-code top-level domains (`.us .uk .jp`)
- Infrastructure top-level domain (`.arpa`)
- Sponsored top-level domain (`.museum .cat .post`)
- Special-use top-level domain (`.localhost .example`)

Generic TLDs

Generic TLDs Generic top-level domains initially consisted of:

- GOV: Government agencies
- EDU: Educational institutions
- ORG: Nonprofit organizations
- MIL: Military
- COM: Commercial business
- NET: Network organizations

Some of these, such as .com and .net, are no longer restricted to their original intended usage.

More generic TLDs have since been added and are being added today.

Selecting a Domain Name

When you register a domain name, you are not its owner, rather you have the exclusive right to use it.

Some factors to consider when selecting a domain name:

- Relevance to site
- Communicability
- Availability

Here is a list of all domain name registrars: www.internic.net/alpha.html

The domain computers.com presents the opportunity for a brand, product, or service in any market segment to leverage a powerful and identifying domain name as a vehicle for growth and development.

The current asking price for this premium domain name is $3,000,000 USD.

For more information, please fill out the form. To see other domains for sale, click here.

Opportunity

This is a rare opportunity to own a highly desirable .com with tremendous branding potential and unparalleled marketing potential for any brand or product.

First Name*

Last Name*

Phone Number*

Email*

Company Name*


https://www.sometimesredsometimesblue.com

Domain Name Registrars

- Network Solutions
- Google Domains
- GoDaddy

Whois

Whois is a protocol used for querying databases to obtain information about the registration of domain names and IP addresses, revealing details like ownership and registration dates.

ICANN

Internet Corporation for Assigned Names and Numbers is a nonprofit organization responsible for coordinating the global Internet's systems of unique identifiers, including managing the domain name system and IP address allocation.

Web Hosting

Web Hosting

- A web hosting service allows individuals and organizations to make their website accessible to others.
- The host usually provides storage space on a server as well as Internet connectivity.
- Theoretically, any computer can serve as a web host, but it needs to always be on and implement measures for security and stability.

Selecting a Web Host

- Dedicated vs. shared server space
- Disk space
- Bandwidth (data transfer)
- Up time (reliability)
- Overage
- Extras: databases, mailboxes, and types of customer support

Web Hosting Services

Free:

- GitHub Pages
- Glitch

Paid:

- Pair Networks
- Media Temple (now GoDaddy)
- Reclaim Hosting

Search Engine Optimization

Search Engine Optimization (SEO)

- Search engine optimization (SEO) is the process of making your site easy for others to locate.
- The more thoughtfully and selectively you add keywords to your pages, the better your search rankings.
- There are several factors that help your website to rise in search results.

On-Page Techniques of SEO

On-page techniques are the methods you can use to improve search results for your site.

This involves identifying and implementing keywords in seven particular places in your page.

1. Page title
2. URL
3. Headings
4. Text
5. Link text
6. Image alt text
7. Page descriptions

Rangefinder Site

```
<!-- descriptive text for SEO -->
    <meta name="description" content="History and distinctives of rangefinder cameras">
<!-- keywords for SEO -->
    <meta name="keywords" content="rangefinder, SLR, vintage, film, camera">
```

Off-Page Techniques of SEO

- Search engines also look at the number of other sites that link to yours to determine search ranking.
- This is especially so when the content of a referring site is similar to yours.
- It’s ideal when the words that appear in links to your site also appear in the text of the page that the site links to.
- Finally, as more people visit your site, the search ranking will also improve.

Semantic URLs

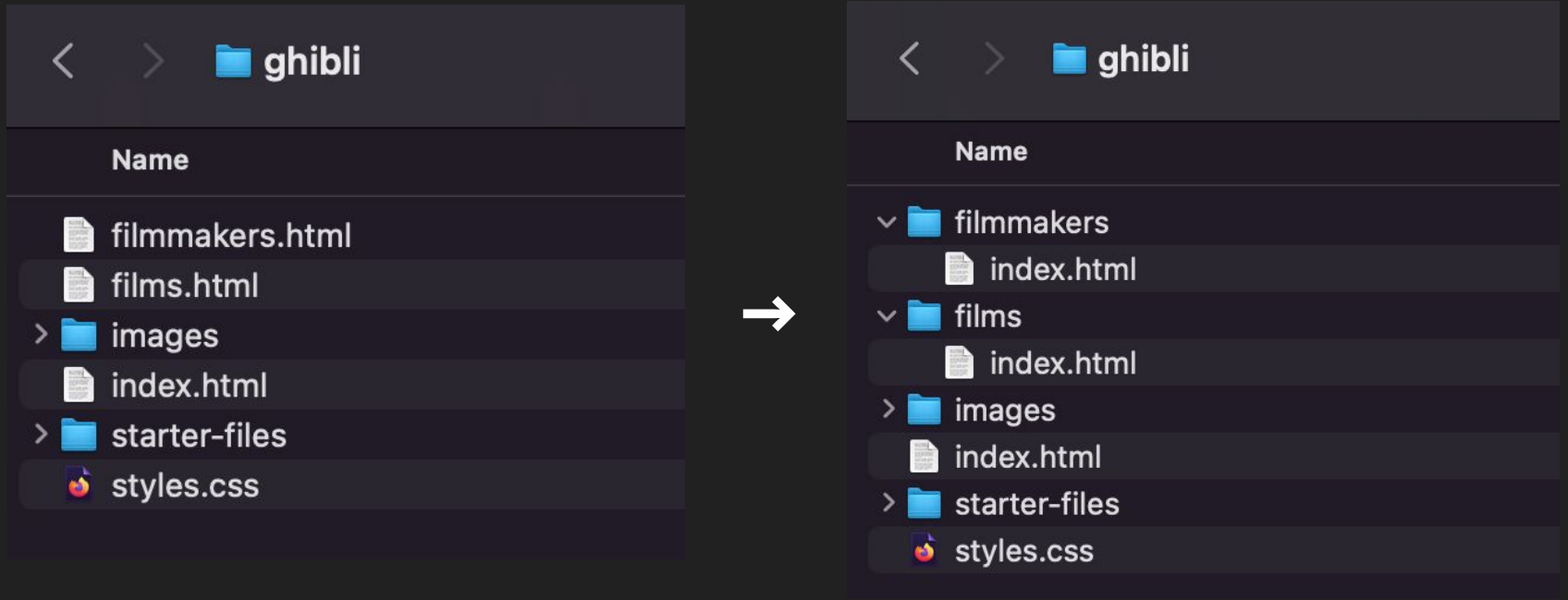
Semantic URLs, also known as "Clean URLs" or "SEO-friendly URLs," refer to web addresses that are designed to be easily readable and understandable by both humans and search engines.

For example, a non-semantic URL might look like www.example.com/page?id=123, whereas a semantic version of the same URL could be www.example.com/products/. The latter is more descriptive and user-friendly.

"Pretty" URLs

You can organize web pages into directories and rename them as `index.html` so that the URL becomes cleaner and more semantic:

example.com/about.html → example.com/about/


ghibli
Name
filmmakers.html
films.html
images
index.html
starter-files
styles.css
ghibli
Name
filmmakers
index.html
films
index.html
images
index.html
starter-files
styles.css

Website Analytics

Website Analytics

Once people start visiting your site, it’s helpful to know!

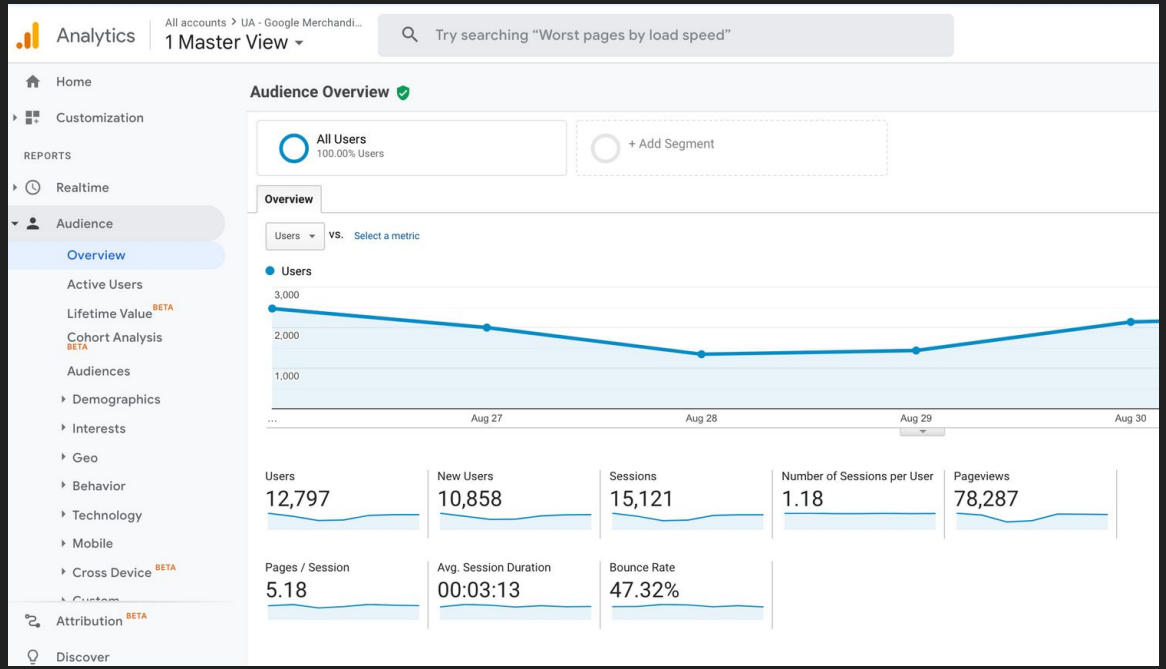
Analytics tools allow you to observe data about the traffic your site receives.

This can include the following information:

- Number of visits
- Geographic location of visitors
- Time spent on pages
- Referring web page
- Browser information
- Real-time activity

Google Analytics

https://analytics.google.com/



[Demo] Github Pages

Homework

- Final Website (due Monday)
- Complete Practice Final
- Bring review questions