

Four main threads in the program

- Ethical and social issues in computing
- IS Application areas:
 - **information architecture** **Web design**
 - human-computer interaction
- CS Application areas:
 - artificial intelligence (natural language processing, information retrieval, machine learning)
- Computer programming

What does an “information architect” do?

Information architecture

- Construction of a structure or the organization of information
- **In a library:** combination of the catalog system and the physical layout that holds the books
- **On the web:** combination of organizing a site's content into categories and creating an interface to support those categories
- **For a database:** designing the categories and the relationships among them; designing an interface for effective query and maintenance

Information architecture

- Has origin in library science
- **Early**
 - need for organizing printed material
- **Now**
 - both printed and digital material
 - Large quantity of material
 - Frequent update to collection
 - Highly domain specific
 - E.g., university library system vs. the information system of a business corporation

Information architecture draws from many fields

- Library science
- Human-computer interaction
- Computer science
- Media and communication science
- Psychology
- Organizational behavior

What are the tasks involved in creating a website?

What are the tasks involved in creating a website?

- Define the purpose
- Define the audience
- Design the physical layout
- Design the outline of contents--categories
- Generate and gather materials (text, image, sound, video)
- Test

(more details to follow...)

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Five main types of Web sites

- E-commerce
 - Main goal is transactional
- Informational
 - Provide info about a company, organization, group, hobby, activity
- Entertainment
 - often subscription based
- Community
 - Often includes computer-mediated communication tools, such as list servers, newsgroup, chat rooms, etc.
- Intranet
 - E.g., an organization's internal networked documents

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<http://kids.yahoo.com>

<http://www.fidelity.com>

<http://www.noaa.gov>

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User-centered web development

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1. Define mission and target user population
 2. Collect user requirements
 3. Create and modify conceptual design
 4. Create and modify physical design
 5. Perform usability testing
 6. Implement and market website
 7. Evaluate and improve website

After Lazar, *Web Usability—A User-Centered Design Approach*

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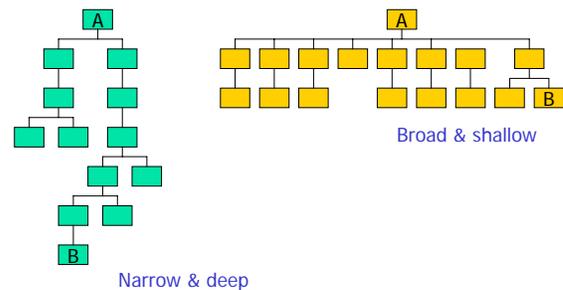
Focus on web design & evaluation

- Organizational & structural systems
 - What are the different ways in which digital content can be organized?
 - What kind of structural arrangements facilitate access and use?
- Navigation and labeling systems
 - What are the relationships among the chunks or containers

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Site hierarchy



After Lazar, *Web Usability—A User-Centered Design Approach*

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Navigation

- Dictionary:
 - Getting from one place to another
 - Figuring out where you are
- Website:
 - Where have I been?
 - Where am I?
 - Where can I go?

Four common navigational schemes (on a homepage)

- Topical navigation
 - www.kids.yahoo.com
- Audience-splitting navigation
 - Organize by who will use the information
 - <http://www.tc3.edu>
- Metaphor navigation

Metaphor-based navigation



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Four common navigational schemes (on a homepage)

- Topical navigation
 - www.kids.yahoo.com
- Audience-splitting navigation
 - Organize by who will use the information
 - <http://www.tc3.edu>
- Metaphor navigation
- Organizational structure navigation
 - Usually for intranet
- Sitemaps
 - Not technically a navigational scheme, but can be used as one
 - <http://www.delta.com/>

Navigation: basic elements

- Site ID
- Sections (and subsections)
- Utilities
- “You are here” indicator
- Page name
- Local navigation

<http://www.hertz.com>
<http://www.barnesandnoble.com/>

After Krug, *Don't Make Me Think*

Persistent navigation

- Navigation elements that appear on every page (except the home page and forms)
- Five important elements:
 - Site ID
 - A way home
 - A way to search
 - Utilities
 - Sections

Navigation: accessories

- Breadcrumbs
 - <http://www.barnesandnoble.com>
- Tabs



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Having arrived at a well designed page, you should be able to answer these questions almost immediately:

- What site is this?
- What page am I on?
- What are the major sections of this site?
- What are my options at this level?
- Where am I in the scheme of things?
- How can I search?

<http://quicken.intuit.com/basic-money-management/>

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The Home page has to accommodate many things...

- Site identity and mission
- Site hierarchy
- Search
- "Teases"—promos
- Timely content
- Deals
- Shortcuts
- Registration
- Show me what I'm looking for
- ... and what I'm not looking for
- Show me where to start
- Establish credibility and trust

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The message of the Home page

- Tag line
 - <http://www.refdesk.com/>
 - <http://www.netmarket.com/>
- Welcome blurb
- Where do I start?
 - Where to start if I want to search
 - Where to start if I want to browse
 - Where to start if I want to sample the best stuff

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Accessibility

- How do you make a webpage accessible to a broad spectrum of audience?
 - What are the advantages and disadvantages of scroll-over tabs/menus?
 - How should images interact with screen readers?

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