

# CSC 213: Web Application Development

## Web and Web Interface Design

### Lecture 2

# Web Interface Design

- Website interface design involves making decisions on the look and feel of the website
- User interface is the space where interaction between humans and website occurs.
- The goal of interaction between a human and a website at the user interface is effective operation and control of the website and feedback from the website which aids the user in make certain decisions

- User interfaces provide a means of:
- 
- **Input**, allowing the users to manipulate a website
- 
- **Output**, allowing the website to indicate the effects of the users' manipulation

# Web Design

- Web design is the process of designing websites - a collection of online content including documents and applications that reside on web servers
- The site itself can be divided into its main page, also known as the home page, which cites the main objective as well as highlights of the site's daily updates; which also contains hyperlinks that functions to direct viewers to a designated page within the site's domain.

# Website Design Basics

- Create a Welcome/Index/first page of your web site.
- Avoid use of heavy graphics in the first page from the user's point of view.
- Page should be descriptive and interactive

# Basic minimum technical requirements

- Fast loading of pages
- Presentation with clarity and readability - with or without graphics
- Validation of the contents
- Easy and clear navigation
- Instruction on how to use the site

# Web page guidelines: Design Considerations

- 1. Follow a simple and consistent design.
- Complex designs can confuse people, so keep it simple.
- A consistent design will let your readers concentrate on content, without having to waste time figuring out how to maneuver your layout.

## 2. Don't create gratuitous graphics.

- Graphics are one reason for the interest in the Web by both publishers and readers and should definitely be included on your Web page if possible.
- Still, it's important not to overuse them.
- Blinking text and other excessive decorations can be distracting; background colors and textures can affect download time.



### 3. Give users cross links.

- Visitors should be able to move from one major page to another on your site without having to go back to your home page.
- Put cross links to all your major pages at the bottom of all major pages

## 4. Be careful about "over-linking."

- While linking to the work of others in your organization and throughout the world can help your readers, it can also lead to information overload.
- It's important to balance linking within your page design.
- Too many links can be a visual eyesore on the page and a distraction from the original information you want your readers to concentrate on.

# Principles of User Interface Design

- **1. *The structure principle*:** Design should organize the user interface purposefully, in meaningful and useful ways based on clear, consistent models that are apparent and recognizable to users, putting related things together and separating unrelated things, differentiating dissimilar things and making similar things resemble one another.
- The structure principle is concerned with overall user interface architecture.

## ***2. The simplicity principle:***

- The design should make simple, common tasks easy, communicating clearly and simply in the user's own language, and providing good shortcuts that are meaningfully related to longer procedures.

### ***3. The visibility principle:***

- The design should make all needed options and materials for a given task visible without distracting the user with extraneous or redundant information.
- Good designs don't overwhelm users with alternatives or confuse with unneeded information.

## **4. *The feedback principle:***

- The design should keep users informed of actions or interpretations, changes of state or condition, and errors or exceptions that are relevant and of interest to the user through clear, concise, and unambiguous language familiar to users.

## ***5. The tolerance principle:***

- The design should be flexible and tolerant, reducing the cost of mistakes and misuse by allowing undoing and redoing, while also preventing errors wherever possible by tolerating varied inputs and sequences and by interpreting all reasonable actions.

## ***6. The reuse principle:***

- The design should reuse internal and external components and behaviors, maintaining consistency with purpose rather than merely arbitrary consistency, thus reducing the need for users to rethink and remember.



# Web usability

- Web usability is an approach to make web sites easy to use for an end-user, without the requirement that any specialized training be undertaken.
- The user should be able to intuitively relate the actions he needs to perform on the web page, with other interactions (s)he sees in the general domain of life e.g. press of a button leads to some action.

# The broad goal of usability can be:

- Present the information to the user in a clear and concise way.
- To give the correct choices to the users, in a very obvious way.
- To remove any ambiguity regarding the consequences of an action e.g. clicking on delete/remove/purchase.
- Put the most important thing in the right place on a web page or a web application.

# Key Elements of a Good Website

- The objective of any website is to get viewed and read as much as possible.
- here are several factors that go/ into making a successful website.
- Besides its use, the appearance and user-friendliness are the most important factors that help make a website popular.
- Following are the key elements of a good website:

# 1. Content

- The most important element in any website is good content. Your content is the reason users visit your site.
- If it is superficial or badly written, you can be sure that they will leave fast and won't come back again
- The copy for your website should be well framed and helpful Truthful information about your company, products, services, etc is a must
- ensure that the content on your website is updated and does not contain any grammatical or spelling mistakes, for it is a direct reflection on your company's image

## 2. Visual Appeal

- The first impression school of thought extends to websites too. The decision to go through the content of a website is likely to be based on how a visitor responds to its appearance
- Your website design should be clean and simple, but all the same - eye-catching. A tasteful website isn't flashy. Blinking letters and flashing pictures are disturbing, and will turn away most readers instead of attracting them

# 3. User Interface

- The user interface should be the kind an average user will find easy to use, and enable him or her to find whatever they want with ease
- One way to achieve this is to have links to the key areas of your site in the top half of your website.
- A good user interface will offer the same options in the footer, or even a few extra links. Larger websites with lots of pages should have a site map

## 4. Content Layout

- Placing text over backgrounds makes reading difficult.
- Dark background colors do not make reading any easier.
- Studies have shown that black text on a white background is the best combination for reading and remembering

# Content Layout

- Ensure that your page contains sufficient white space, for clarity and neatness.
- Every page should have the same margins. There should be consistency throughout the website, so only one set of fonts, colors and layout should be used on all pages.
- Multiple scroll bars annoys most users. Keep them at a minimum and try to avoid the side-to-side scroll bars.



## 5. Search Tool

- Good websites containing many pages have a search field to assist their readers.
- This feature is very helpful, and enables potential customers to find whatever they want with ease.
- One can make use of use a Google Search on their site, or WordPress (or another blogging platform or CMS / Content Management System).

## 6. Separate Design from Content

- The best developed sites on the Internet combine the use of XHTML and CSS (Cascading Style Sheets), which create a separation of design vs content
- Updating is easy and the pages load faster
- Minimize your utilization of flash animations, music, or video or anything that is going to make your site take a long time to load since surfers have very little patience and a short attention span.

# 7. Cross Browser Compatibility

- A good website displays well in as many of the mainstream web browsers as possible and is also compatible across platforms.
- Although most Internet users utilize Firefox, you don't want to leave out those using Internet Explorer and the other few browsers.
- Also, the success of your website can be hinged on how well it is optimized for search engines.

## 8. Web Optimized Images

- Good picture quality on a website instantly leaves a user impressed.
- Most people save all their images in a compressed format.
- So be careful while doing this as your images will appear pixelated when you upload them on your site.

# Web Site Organization

- A well organized web site will increase its usability resulting in your visitors staying on your site longer and coming back more frequently.
- The main page of your site, also referred to as the home or index page, is the first page visitors will see when going to your domain.
- On this page there should be navigation linking to each of the major subpages of your site.
- These navigation links can be either text links or image buttons

# Example

- Imagine a fictional company who wants a web site as a sort of online brochure. They have 3 products to sell, they don't want to sell them online, but would like detailed information about each of them to be available on their site. They also want an About Us, a Contact Us, and a Photos page.
- A products page could be set up that gives an introduction about their products, and then links to 3 separate pages each of which describes one of the products in detail.
- The main page could be referred to as level one, the Our Products, About Us, Contact Us, and the Photos page as level 2, and each of the individual product pages as level three.

Main  
Page

level one

About  
Us

Our  
Products

Photos

Contact  
Us

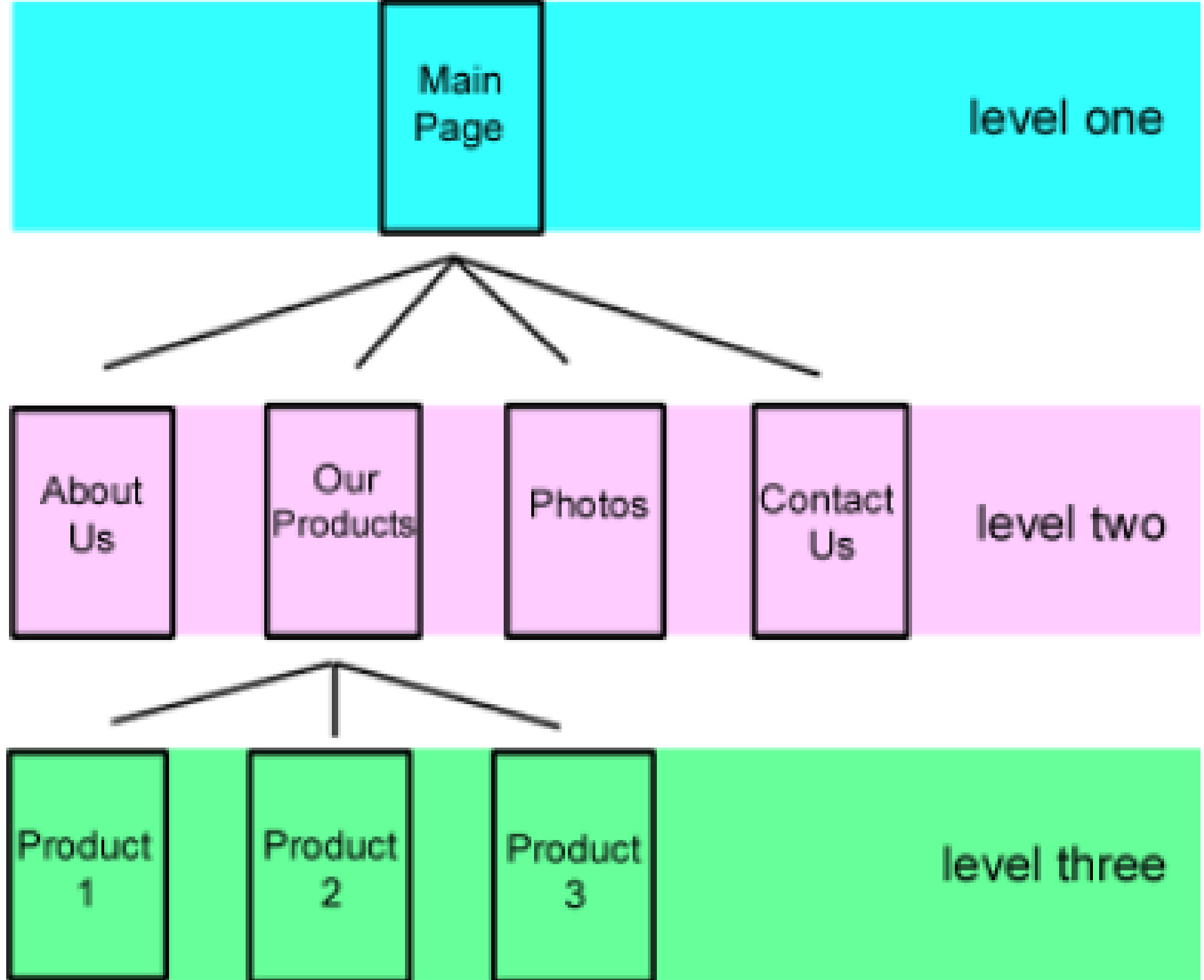
level two

Product  
1

Product  
2

Product  
3

level three



- There would then be five main navigational links for this site:

- Main page
- About Us
- Our Products
- Photos
- Contact Us



- These five links should appear on each of the eight pages of the site.
- The header and title on the top of each page should either be the same as or similar to the text on each of the navigation links.
- In this way whichever page of the site a visitor finds themselves on, either through moving around the site on their own, or by entering the site on any of its eight pages through a search engine link, they should be able to easily figure out exactly where on the site they are.

# Website wireframe

- A website wireframe, also known as a page schematic or screen blueprint, is a visual guide that represents the skeletal framework of a website.
- The wireframe depicts the page layout or arrangement of the website's content, including interface elements and navigational systems, and how they work together.

# Website wireframe

- The wireframe usually lacks typographic style, color, or graphics, since the main focus lies in functionality, behavior, and priority of content. Website wireframe focuses on what a screen does, not what it looks like
- Wireframes focus on:

- The kinds of information displayed
- The range of functions available
- The relative priorities of the information and functions
- The rules for displaying certain kinds of information
- The effect of different scenarios on the display

# Uses of wireframes

- Developers use wireframes to get a more tangible grasp of the site's functionality, while designers use them to push the user interface (UI) process.
- User experience designers and information architects use wireframes to show navigation paths between pages.
- Business stakeholders use wireframes to ensure that requirements and objectives are met through the design

- Wireframes may have multiple levels of detail and can be broken up into two categories in terms of fidelity, or how closely they resemble the end product.
- 1. Low-fidelity Resembling a rough sketch or a quick mock-up, low-fidelity wireframes have less detail and are quick to produce. These wireframes help a project team collaborate more effectively since they are more abstract, using rectangles and labeling to represent content.
- 2. High-fidelity High-fidelity wireframes are often used for documenting because they incorporate a level of detail that more closely matches the design of the actual webpage, thus taking longer to create.

# Elements of wireframes

- The skeleton plan of a website can be broken down into three components:
  - information design,
  - navigation design, and
  - interface design.
- Page layout is where these components come together, while wireframing is what depicts the relationship between these components.

- **1. Information Design** - Information design is the presentation—placement and prioritization of information in a way that facilitates understanding.
- Information design is an area of graphic design, meant to display information effectively for clear communication.
- For websites, information elements should be arranged in a way that reflects the goals and tasks of the user.



- **2. Navigation Design** - The navigation system provides a set of screen elements that allow the user to move page to page through a website.
- The navigation design should communicate the relationship between the links it contains so that users understand the options they have for navigating the site.
- Often, websites contain multiple navigation systems such as a global navigation, local navigation, supplementary navigation, contextual navigation, and courtesy navigation.

- **3. Interface Design** - User interface design includes selecting and arranging interface elements to enable users to interact with the functionality of the system.
- The goal is to facilitate usability and efficiency as much as possible.
- Common elements found in interface design are action buttons, text fields, check boxes, radio buttons and drop-down menus.

- **HTML PAGE LAYOUT  
DESIGN**