Website Design

Team Project

Website Design & Development

Due Date: February 20, 2024

Purpose

This project is to design, develop, publish, and support a bilingual website, in French and English, using recommended design practices.

You will work in a team to prepare a final project based on a case problem. You should use all techniques covered in this course such as HTML, Cascading Style Sheets (CSS), a CSS framework such as Bootstrap, Bulma, Foundation, Tailwind.

To help Web designers rise to the new challenges, you will use an IDE that incorporates a set of tools focused and emphasized on standard-based and accessible design using HTML and CSS. Media Queries let you target your designs for multiple devices by specifying different CSS rules for each device.

Planning for a new Web site involves understanding in two key areas: knowledge of the applications you will be using (the logical side), and knowledge of what direction you want to take this new Web project (the creative side). Begin with a plan, create a visual mind map, create sample page sketches and wireframes (mockups), generate a timeline, assemble the site, create a marketing plan, and create a storyboard.

Web Standards

Web standards play an increasingly integral role in the web's realizing its full potential as a global interactive medium. Web users are becoming increasingly diverse, and their diversity is manifested in the technologies they use to access the web. For example, a growing number of people use non-traditional devices such as wireless phones and handheld computers. Also, individuals with disabilities use interfaces that differ, sometimes significantly, from the traditional combination of monitor, keyboard, and mouse. In order for web designers to deliver web content that is perceivable, operable, and usable by all users, they must design in accordance with web standards, particularly those developed by the World Wide Web Consortium (W3C) http://www.w3.org/ and Web Hypertext Application Technology Working Group (WHATWG)

Responsive Design

You must adapt your new website design so that it changes in response to the device type (mobile, tablet, and desktop devices). There are four key components that make responsive design work. They are:
1. Creating a flexible grid (or flexbox) based layout.
2. Setting viewports via the <meta> tag.
3. Customizing the CSS for different viewports using media queries.
4. Scaling images to the viewport size.

You work on a web project of your own choosing during the entire program or choose the Web project sample explained at the end of this document. You will work in a team of 3 to 5 members, for the team term project Web site.

Your final project should prove your understanding of **TRUE** web design. You will develop awareness and appreciation of the myriad ways that people access the web and will be able to create standards-based websites that are accessible and usable by a full spectrum of users.

Website Design and Development

Website development is the process of planning and creating a website. Planning includes finding the website's purpose, audience, navigation structure, content, and page layout.

Consider the two stages in website development: planning and implementation:

Planning
1. Define the purpose and target audience.
2. Decide the web pages that will be on the website by sketching the navigation structure. Review and revise the sketches as needed.
3. Get the content for each web page.
4. Design the web pages by sketching the page layouts.

Review and revise the sketches, keeping in mind the four design concepts: appropriateness, placement, consistency, and usability.

Implementation
5. Define the website and organize the files and folders.
6. Create the web pages using an IDE.
7. Review the website in a browser and review a printed copy of each web page.
8. Make changes or corrections.

Defining the Purpose and Target Audience

Purpose
The first step in planning a website is to define the purpose and target audience. The *purpose* is the intent of the website. For example, the purpose of a restaurant's website could be to share the phone number, location, hours of operation, and menus. Clearly defining the purpose helps to make decisions about the website navigation structure and the content for each web page.

Purposes for a fast-food restaurant's website is to provide:
- the location and contact information.
- the hours of operation.
- a fun page for kids.
- the menus.
- information about specials and promotions.

Target audience
Once the purpose is to find, the next step is to define the target audience of the website. To define the target audience, describe the intended users. Ask questions such as how old they are, where do they live, what are their interests, and what is their level of education. Answers to these and other questions related to the site can become the characteristics which define the target audience, as in the following examples:

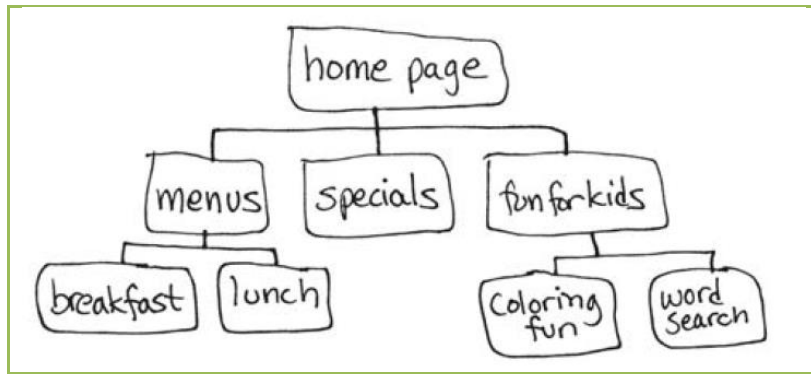### *Target audience characteristics for a fast-food restaurant website:*
- Adults, residents, and travelers.
- Children who already know and like the restaurant.
- People looking for the foods offered at the restaurant.
- People in a hurry.
- People on a budget.

Determining the Web Pages and Navigation Structure

Navigation structure
The web pages of a website are determined based on the purpose and target audience. The home page usually contains links to web pages on specific topics. The organization of a website's pages defines its *navigation structure*. A sketch usually goes through a series of revisions before it can be released.

The arrangement of the pages in a navigation structure should be from general to specific. For example, the menus page is more general than the specific pages for breakfast and lunch. The hierarchy should not be too deep or too shallow and each page should be about one topic.
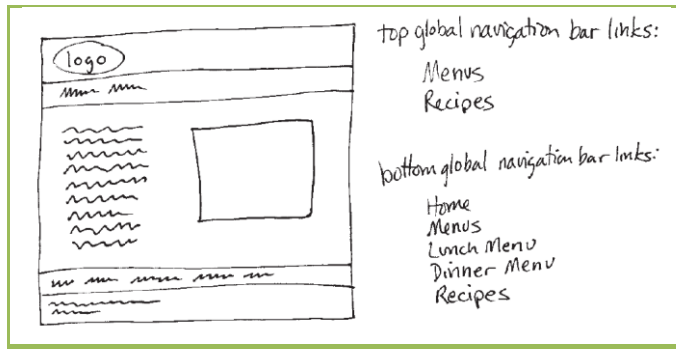
Gathering the Content

The *content* of a web page is the text, images, and other objects such as multimedia movies that are presented to the user. Content is decided using the navigation structure of a website as a guideline, and then the text and objects for each page are listed on paper. For example, the content of the web pages for a fast-food restaurant's website may be:

- **Home page –** Location, hours of operation, contact information, and a brief introduction about what this website offers. Objects include the restaurant's logo and a picture of the restaurant.
- **Menus page –** The hours for breakfast and lunch and links to the breakfast and lunch pages. Objects include the restaurant's logo and pictures of food.
- **Specials page –** A listing of the current specials. Objects include the restaurant's logo.
- **Fun for kids' page –** A brief description of the kid's web pages and links to the coloring fun page and word search page. Objects include the restaurant's logo and perhaps a cartoon.
- **Breakfast page –** The breakfast menu. Objects include the restaurant's logo and pictures of breakfast menu items.
- **Lunch page –** The lunch menu. Objects include the restaurant's logo and pictures of lunch menu items.
- **Coloring fun page –** An image that kids can color on a printout of the web page. Objects include the restaurant's logo and the coloring image.
- **Word search page –** An image of a word search puzzle that kids can complete on a printout of the web page. Objects include the restaurant's logo and the word search image.

The Web Page Layout

A *web page layout* refers to the arrangement of the elements on the page. *Elements* can be in the form of text, images, multimedia audio and video, or other media and include navigation bars, a logo or heading, copyright information, and content. A web page layout should be based on usability standards, which dictate the placement of navigation bars and other elements:

Task One

This is not an opportunity for you to just "breeze" through the next few weeks. It's also not about a quick fix and "I'm done" project nor is it a take home test. It's about form and design. It's more about integrity, discipline and thought. The lab time is your time. A time to think, struggle, experiment, create, and learn about web design. You should be frustrated at times, and it is in those emotional experiences where you make the choice to learn or quit. Think of frustration as "I haven't figured it out...YET".

If your final project is just a pure fun project without purpose your grade will reflect that purpose. Once again, I want to make it clear that I need a map and a defined purpose and audience before you begin the final.

Building a Web Site Development Team

Although one person can support small Web sites, larger sites require groups of people filling a variety of roles [5]. Of course, the line between these roles can be blurred, and many aspects of site design require collaboration to solve a problem. The following are examples of the types of talent necessary to build a larger, well-conceived site.

Project management – The project management team manages planning, scheduling, and integrating tasks that it takes to create a Web site. They create the milestones for deliverables and balance the staffing resources to keep the project on schedule and within budget. The project manager coordinates communication among team members and keeps the focus on the deliverables promised to the client.

HTML developers – These are the people responsible for creating the HTML code, conforming to standards, troubleshooting the site, and evaluating the site across different operating systems and Web browsers.

Designers – Designers are the graphic artists responsible for the look of the site. They use graphic design software such as Adobe Photoshop or Adobe Illustrator. Designers oversee the wireframes/mockups, page template design, navigation icons, color scheme, and logos. If your site uses photographic content, the designers are called upon to prepare the photos for online display. They might also create animations and interactive content.

Writers and information designers – Writers prepare content for online display, including taxonomies, hypertext linking conventions, and navigation paths. In addition, writers handle creating a site style guide and defining typographic conventions, as well as consistency, grammar, spelling, and tone. They also collaborate closely with the designers to develop page templates and interactive content.

Application developers—Developers write the software programs and scripts you need to build interaction into your site. They may write a variety of applications in different programming languages for user interaction or write back-end applications that interact with a database.

Database administrators – The people that support the databases play a key role in commercial Web sites. Databases store all the information for customer transactions and e-commerce. Database administrators, application developers, and HTML developers work together when designing front-end forms used to collect data from the user.

Database administrators are also responsible for data security backup and data recovery.

Server administrators – Get to know and appreciate the technical people who run your Web server. They take care of the sticky technical issues such as firewalls, ports, internal security, file administration, and backup procedures. Consult with them to figure out your Web site's default filename and directory structure. They also can manage the server logs that contribute to your Web analytics reporting to find out the number of visitors your site is attracting, where the visitors are coming from, and what pages they like best.

Project Milestones

Web Site Topic Approval: The topic of your web site must be approved by your instructor. Your instructor must approve your topic before you begin to work on the next phase. Send a message to your instructor about your website topic.

Before starting to create a Web site, it is particularly important to spend time designing the site, just as you should write an outline prior to drafting a report or drawing a flowchart before writing a computer program.

Find out the Objectives and Intended Audience of the Site:
Using a word processor, write a Planning Analysis Sheet that includes the following headings:
- Overall Goal – What is the primary message of this Web page? What is this organization trying to communicate?
- What is the purpose of the site? Why do you think this organization wants to share this information? What do they have to gain?
- Who is the intended audience? Will the audience consist of potential customers, current customers, or employees of a particular company or industry? Whom do you think this organization's message is directed to? Who would want to know this information? Do any of the following factors relate to your audience: age groups, social-economics, geography, gender, education, culture?
- What are the goals of the site? To advertise a company or organization, supply a service, or process orders?
- What do you want the website to deliver? What results do you want to see?
- What information do you need?
- What opportunity, problem, or issue is your site addressing?
- List the working title of each page on your Web site.
- List where you will obtain the content (facts, text, graphics, sounds, and video) for the web pages you listed above.

Creating the Website Template
> A website template (structure) illustrates the relationships between the pages on the site starting with the **Home** page.

Sketching a Tentative Page Layout:
A Page layout includes one tentative layout to be used for the home page and one general tentative layout to be used for all the content pages (the rest of the pages on the Web site).

List at least two websites related to the same topic.
Visit other Web sites that are like your proposed site. What do you like about these sites? What do you dislike? Look for inspirational ideas. How can you make your Web site better?

Requirements for Final Project
Your team project is to include as many of the HTML5, CSS, and JavaScript features that we have discussed and used in class. It should have a minimum of 5 webpages. You will create as many webpages as possible,

banners, links, that you deem necessary. Everything you create must be based on coherent organization; concision; clarity.

Deliverables

- The Web site and other pertinent files.
- Project description (word document/text file): describe the major points of your Web application that make it the best in the class!
- Web site flowchart (wireframes, mockups, …)

Content pages will include, but not limited to:
- One page containing a form.
- Appropriate meta tags.
- One page utilizing tables effectively.
- One animated image.
- One thumbnail image.
- One e-mail link.
- One link outside your site.
- One page utilizing different types of lists.

Your team must submit only one copy of the final project. Be sure to list all team members' names and IDs.

Grading Rubrics

Category		
Project organization	Please follow the Search Engine Optimization Starter Guide (pdf document)	5%
Web page contents	Page content refers to all the information contained in a website. Document and website structure: The header, navigation menu, main content, welcome text, image sidebar, footer, etc.	10%
HTML code	The HTML code is fully valid W3 standard http://www.w3.org/ and Web Hypertext Application Technology Working Group (WHATWG)	15%
CSS main code & SASS	The CSS rules code is fully valid W3 standard	15%
Responsive layout design	Adapt to different screen resolutions	10%
sResponsive images	Automatically adjust to fit the size of the screen.	5%
Multimedia elements	It can be almost anything you can hear or see, like images, music, sound, videos, records, films, animations, and more.	10%
CSS Frameworks	Form validation and other behaviors	15%
Search engines optimization topics	Create unique, accurate page titles and descriptions, quality content and services, optimize your use of images, use heading tags appropriately, etc.	5%
Wireframe/mockup	wireframe is a blueprint, and a mockup is a visual model. A mockup typically includes additional visual details such as: Colors, styles, graphics, and typography. Styled buttons and text.	10%

References:

- 27 common types of websites 27 Common Types of Websites (With Templates To Get You Started) (wix.com)
- How to make a website
- The Web Design Best Practices Checklist (http://terrymorris.net/bestpractices/)

- Project Team Roles and Responsibilities https://www.usability.gov/how-to-and-tools/methods/project-team.html
- The Site Development Team: http://www.webstyleguide.com/wsg3/1-process/2-development-team.html
- 6 Roles Every Successful Web Design Project Needs: http://savvypanda.com/blog/beginner-level/6-roles-every-successful-web-design-project-needs.html
- Web Design & Development: https://www.customfitonline.com/building/
- 6 Phases of Web Site Design and Development Process: https://www.idesignstudios.com/process/
- The Step-by-step Guide to Website Project Management: https://www.teamwork.com/blog/website-project-management/
- Planning More Effective Milestones in Web Design Projects: http://www.projectsmart.co.uk/planning-more-effective-milestones-in-web-design-projects.html
- Internet Marketing, SEO & Web Design Company: http://www.eplatformmarketing.com/index.html
- How to create a bilingual website: A complete guide https://weglot.com/how-to-create-a-bilingual-website/
- Bootstrap 5 Tutorial - Bootstrap 5 Tutorial (w3schools.com)
- Introduction · Bootstrap v5.0 - Introduction · Bootstrap v5.0 (getbootstrap.com)
- Top 20 Best CSS Frameworks for Front-End Developers in 2023 (hackr.io)
- Wireframes vs mockups: Determining the right level of fidelity for your project Wireframes vs Mockups Explained | Lucidchart Blog
- Design, content, technical, and quality guidelines from Google https://developers.google.com/search/docs/essentials
- How to Evaluate Websites: How to evaluate websites https://libguides.starkstate.edu/websites
- Document and website structure https://developer.mozilla.org/en-US/docs/Learn/HTML/Introduction_to_HTML/Document_and_website_structure#:~:text=main%20content%3A,vary%20from%20page%20to%20page!
- Structuring a page of content https://developer.mozilla.org/en-US/docs/Learn/HTML/Introduction_to_HTML/Structuring_a_page_of_content
- Schema.org is a collaborative, community activity with a mission to create, maintain, and promote schemas for structured data on the Internet, on web pages, in email messages, and beyond. Schema.org - Schema.org