Carnegie Mellon University Dietrich College Information Systems

INFORMATION SYSTEMS MILIEUX (67-250)

Web Development Project :: Due April 4, 2017

OBJECTIVE

The objective of this project is to expand your web design and front-end web development skills. To accomplish this goal, you will create a real-world website for Prantl's Bakery.

BACKGROUND

Prantl's Bakery has been in business for over 100 years and is famous for its "Burnt Almond Torte" and sweets. With locations both downtown Pittsburgh and in Shadyside, Prantl's is a bakery in the German tradition, with old-fashioned fruit Danish and nut-filled coffee cakes. They have also been releasing new favorites as well, such as key lime pie and buttery croissants. After a Huffington Post article featuring Prantl's "Burnt Almond Torte," the bakery has a global presence and ships orders across the world.¹

As a freelance web development consultant, you have been hired to design and build a new version of their website. The new website should provide information about the bakery and remove all online order forms in order to create a simplified experience for visitors to navigate the website and learn about the products. The purpose of the website is to showcase Prantl's and promote their various products and offerings. Prantl's has provided you with a detailed overview of their expectations and requirements (see Appendix A), as well as some initial content for the website (see the supporting files). You have permission to develop and organize additional content as necessary. You may also use lorem ipsum placeholder text for page text but not for navigation or headings (these must have actual/real labels).

Note that some images and descriptions and most narrative are courtesy of Prantl's Bakery (see the supporting files). Because Prantl's may have limited photography available on their website, you are encouraged to use license-free stock images.² These and any additional materials you gather should be cited in your website. You may also create your own images, logos, text, etc. as needed.

You will work on this **assignment individually** and develop features that demonstrate your own creative abilities and contributions.

SUBMISSION DETAILS

The web development project is worth 15% of your final course grade. Faculty and teaching assistants will be available to assist with the project during the semester as well on an as-needed basis or during office hours. Keep in mind that significant time may be required outside of classroom to complete the project. Please consider Chrome the official browser of our class (e.g., your website will be graded in Chrome).

Submit your website to Canvas by 1:30 PM (noon) on Tuesday, April 4, 2017. Submit a zip file (appropriately named as webdevproject-lastname.zip (e.g., webdevproject-quesenberry.zip)) of all your webpages, stylesheets (.css), javascript files (.js), any necessary supporting files or graphics, and supporting documentation. A penalty of five percent will be applied if the html files use absolute addresses (excluding the external links) (e.g., unzipping the project MUST yield a functional website in a browser). Late submissions (with a ten percent daily penalty) will be allowed for a maximum of two days.

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¹ http://www.huffingtonpost.com/2014/04/14/prantls-torte-cake-almond_n_5133580.html

² https://search.creativecommons.org/

APPENDIX A - CLIENT CORRESPONDENCE



March 7, 2017

We are delighted to announce that you have been selected to develop our new Prantl's bakery website, focused on eliminating online ordering and improving our complex menu navigation. We also want the website to improve our look and provide an informational and engaging guide for our visitors.

As discussed in our kick-off meeting, below are the critical components we need in the new website.

Engaging and clean design

The website must remain consistent with the Prantl's brand but can depart in ways which will refresh our look to modern web design standards (additional details are in the brand manual). Logo usage and writing styles must adhere to the brand manual. You may alter design layouts, typography and color palettes where appropriate. The layout must follow a grid structure. We also require consistent, well-placed and informative navigation – something that allows visitors to easily navigate the site to learn about Prantl's.

Your design must be understandable and readable with clear headings, where appropriate, and sufficient "white space." The website should, at a minimum, use the following HTML tags: page title, lists (both ordered and unordered), headings and horizontal lines, which are appropriately styled. The home page must be named index.html. The website must consist of at least three individually linked pages.

All layout and design must be controlled with CSS (HTML table layouts are prohibited). Any formatting (colors, backgrounds, fonts, text control, borders, etc.) must be created with CSS (HTML styling is prohibited). The tag should NOT be used. You may create multiple stylesheets for your website, although your primary stylesheet must be named styles.css. Your stylesheets must be located in a subdirectory folder named css.

Incorporation of relevant content

Our current website has significant content about Prantl's and we want you to incorporate it where relevant (see the attached file of what we believe is the most critical content). Feel free to expand as needed. We hope you can organize the key information for new visitors, so that they can quickly navigate the material. We also require that you improve the read-ability of the content and include interactions such as tabs or accordions for easy reading.

We also believe rich images and videos of our facility will attract new visitors. We would like to see images incorporated in the website in some interactive way such as lightbox galleries or slideshows. All images must be located in a subdirectory folder named images. We would also like this video included in some meaningful way: https://www.youtube.com/watch?v=iLhlZciMfoQ.

The website must include information about two occasions that Prantl's caters toward (including text content and media such as icons, images, videos, etc.). We do have a clear idea of how this should be presented and we are open to suggestions. We also want a special feature on our Burnt Almond Torte Cake somewhere on the website.

External Links

We think it would be useful to include a list of helpful links to relevant information, such as online articles about our bakery or our social media pages. The website must include at least five links to external websites. One link must be a graphic/image. The rest can be text or graphics/images. These must open in new tabs/windows.

Visitor Inquiry Form

We also want to provide a contact form where visitors can submit their names (required), zip code (not required but if entered must be a five digit code), email address (required as an email address), what their inquiry is, and if they would like to subscribe to Prantl's mailing list (not required as a checkbox). All fields should be appropriately sized and include information to the user (e.g., if required or not). We conduct most of our correspondence via email. The form can be submitted to us via email to mailto:infoneeded@prantlsbakery.com.

Prantl's Bakery Visiting Hours

We have also found that visitors have difficulty finding our hours of operation for both of our locations. The website must include contact information for Prantl's two locations: address (with city, state and zip code), phone number, email address (should be clickable to send email (mailto:), website, and photo (appropriately sized for the page). This information must be included in a HTML table. Our hours of operation must be included. We would like to use Google Maps so visitors can see a map of our two locations on the website.

We hope that including statistical information on our busiest hours might inform new visitors of our most popular / crowded times. We have tracked visitors by hour for both our flagship store in Shadyside and our store downtown, and would like to include two interactive graphs on the website to help visitors decide the best time to come depending on which store they would like to visit. Details on working with Highcharts effects for graphing can be found at: http://www.highcharts.com/

Additional Features

We have discussed additional tasks that we would like to improve on our site, but due to the limited scope of time, are requesting you to pick one that you would like to do. Time allowing, you may choose to do one additional feature (worth 5 points extra credit).

Mobile Responsive

With the increasing number of mobile phone users, we would like to develop our website to be responsive for multiple devices. If you choose to complete this task, please develop our front page so that it is viewable / easy to navigate on a standard smartphone. We also want you to create one high-fidelity wireframe for each additional page showing the mobile responsiveness, so that we can develop our website to be fully responsive in the future.

Data Visualization

With so much data coming from our store, as a local bakery, we do not have the means to easily keep track of our most popular items and sales. We would like for you to develop a fourth page (included on the navigation bar) for internal use only. Assume that we will eventually password protect this page in the future, when we continue to develop the website. On this page, create an internal tool visualizing product sales. You will need to generate your own sample data to populate your visualization. You may continue to use Highcharts, but you must use a different visualization than a bar graph or any visualization methods that you have covered in your labs.

User Testing

In order to gauge the effectiveness of your design, we would like to test our website to see if our users can navigate effectively and efficiently through the pages. To do so, please prepare written protocol for how you will be interviewing users and questions to ask your interviewees. Then, interview 5 people to navigate through 5-7 of your user stories. Each interview should last between 3-5 minutes. Have someone record the interview, while you ask each user talk out loud (say what they are thinking) as they navigate through the website. Take notes on the process, marking times when users are uncertain or hesitant. Please submit URL links to the 5 videos (post the videos online such as Google Drive or YouTube - do not submit the video with your project as the file size is too

large), notes for each interview, and a brief paragraph explaining what your results were and what you changed in your design to reflect your user testing results, and what you would change if you had more time.

Documentation

We would like you to submit all of your work in one zipped folder. This folder should contain all of your web development code (HTML files, CSS files in a folder named css, JavaScript files in a folder named js, images and media in a folder named images). All HTML, CSS and JavaScript should be organized, clear and commented.

We also require that you include several additional pieces of documentation:

- The task breakdown for the project (including all tasks, due dates (planned and actual)). You may use our template (in the supporting files) or create your own.
- A brief paragraph of how your design is intended for new visitors navigating the site for the first time. Explain the intent of your information architecture on your site.
- A list of at least 10 user stories organized by priority. You may use our template (in the supporting files) or create your own.
- Low-fidelity wireframes (include a photo of a hand-drawn wireframe of each page in your website).
- Mid-fidelity wireframes (include mid-fidelity wireframes that were created using a wireframing tool of each page in your website).

Please do not hesitate to contact me with questions or concerns.. I look forward to receiving your project materials on Tuesday, April 4, 2017.

Sincerely,

Jane Doe

Store Manager Prantl's Bakery

APPENDIX B - GRADING RUBRIC

	Excellent	Good	Satisfactory	Needs Improvement
Content (40%)	All information provided on the website is accurate and all the requirements of the assignment have been met. In other words, there is sufficient content in the website to learn about Prantl's and build stronger connections with their customers.	Almost all the information on the website is accurate and all requirements of the assignment have been met. Or all the information is accurate but not all of the requirements of the assignment were met. Information is not complete.	Almost all of the information on the website is accurate and almost all of the requirements have been met. If there is little information on the website, then it is satisfactory. If users cannot find what they need on your website, it is satisfactory.	There are several inaccuracies in the content OR many of the requirements were not met. Not enough content, very incomplete.
Layout (5%)	The website has an exceptionally attractive and usable layout. It is easy to locate important elements. White space, graphic elements and/or alignment are used effectively to organize material.	The webpages have an attractive and usable layout. It is easy to locate important elements.	The webpages have a usable layout, but may appear busy or boring. It is easy to locate most of the important elements.	The web pages are cluttered looking or confusing. It is often difficult to locate important elements.
Navigation (5%)	Links for navigation are clearly labeled, consistently placed, allows the reader to easily move from a page to related pages (forward and back), and take the reader where s/he expects to go. A user does not become lost.	Links for navigation are clearly labeled, allows the reader to easily move from a page to related pages (forward and back), and internal links take the reader where s/he expects to go. A user rarely becomes lost.	Links for navigation take the reader where s/he expects to go, but some needed links seem to be missing. A user sometimes gets lost.	Some links do not take the reader to the sites described. A user typically feels lost.
Background and Fonts (5%)	Background is exceptionally attractive, consistent across pages, adds to the theme or purpose of the site, and does not detract from readability. The fonts are consistent, easy to read and point size varies appropriately for headings and text. Font style is consistent and improves readability.	Background is attractive, consistent across pages, adds to the theme or purpose of the site, and does not detract from readability. The fonts are consistent, easy to read and point size varies appropriately for headings and text.	Background is consistent across pages and does not detract from readability. The fonts are consistent and point size varies appropriately for headings and text.	Background detracts from the readability of the site. A wide variety of fonts, styles and point sizes were used.
Graphics (10%)	Graphics are related to the theme/purpose of the website, are thoughtfully cropped, are of high quality and enhance reader interest or understanding. There are no broken images. Creative uses of lightboxes or image galleries were implemented.	Graphics are related to the theme/purpose of the website, are of good quality and enhance reader interest or understanding. There are no broken images. Basic uses of lightboxes or image galleries were implemented.	Graphics are related to the theme/purpose of the website, and are of good quality. There may be a few broken images. Initial uses of lightboxes or image galleries were implemented.	Graphics seem randomly chosen, are of low quality, OR distract the reader. Many images are broken. No lightboxes or image galleries were implemented.

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User Centered Design (10%)	There is an exceptional attempt to	There is an attempt to make the	There is a lots of information in the	Only the minimum amount of
	make the content of this website	content of this website interesting	website but there is little evidence	information is included and has not
	interesting to the people for whom	to the people for whom it is	that the information is present in an	been made more interesting to the
	it is intended. The documentation	intended. The documentation	interesting way. The documentation	audience. The documentation is
	demonstrates depth of thinking	demonstrates some thinking about	demonstrates initial thinking about	missing or does not demonstrate
	about user needs, information	user needs, information	user needs, information	consideration about user needs,
	architecture, and wireframe design.	architecture, and wireframe design.	architecture, and wireframe design.	information architecture and
				wireframe design.
Additional	All required tasks for one additional	Most required tasks for one	Few required tasks for one	An additional feature is not
	feature is provided. The supporting	additional feature is provided. The	additional feature is provided. The	included.
	code and/or documentation	supporting code and/or	supporting code and/or	
Features (10%)	demonstrates depth of thinking.	documentation demonstrates initial	documentation is limited or not fully	
		analysis.	executed.	
	Exceptional understanding of the	Good understanding of the skills	Fair understanding of the skills used	The code or the supporting
Research	skills used to create the website. The	used to create the website. The	to create the website. The code	documentation do not give much
Orientated	code comments and supporting	code comments and supporting	comments and supporting	information about the procedures
Development	documentation detail the	documentation give some insight	documentation give little insight into	used to create the website.
(10%)	procedures used to make the	into the procedure used to create	the procedure used to create the	
	website.	the website.	website.	
General Presentation (5%)	Every webpage contains authorship	Almost all webpages contain	Most (75-80%) webpages contain	Several webpages do not contain
	and date in the comments of your	authorship and date in the	authorship and date in the	authorship or date in the comments
	code. Fair use guidelines are	comments of your code. Fair use	comments of your code. Fair use	of your code. Borrowed materials
	followed with clear, easy-to-locate	guidelines are followed with clear,	guidelines are followed with clear,	are not properly documented OR
	and accurate citations for all	easy-to-locate and accurate citations	easy-to-locate and accurate citations	material was borrowed without
	borrowed material. There are either	for almost all borrowed material.	for most borrowed material. There	permission. There are maybe many
	no spelling or grammatical errors.	There are a few spelling and/or	are several spelling and/or	spelling and/or grammatical errors
		grammatical errors in the entire site.	grammatical errors in the entire site.	in the entire site.