# Carnegie Mellon University Dietrich College Information Systems

# **INFORMATION SYSTEMS MILIEUX (67-250)**

Web Development Project :: Due March 28, 2018

# **OBJECTIVE**

The objective of this project is to build 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 in downtown Pittsburgh, and Shadyside, PA, 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, 2]

As a freelance consultant, you have been hired to design and build a new version of their website. Their current website is at: <a href="http://www.prantlsbakery.com/">http://www.prantlsbakery.com/</a>. The new website should provide information about the bakery 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).

Many images and descriptions and most narrative are courtesy of Prantl's Bakery (see the supporting files). Prantl's has limited photography available on their website, therefore you are encouraged to use license-free stock images.<sup>[3]</sup> These and any additional materials you gather should be cited in your website (as a footer or a standalone citations page). 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 on an as-needed basis or during office hours. Keep in mind that significant time may be required outside of the 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 before class begins on Wednesday, March 28, 2018.

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.

#### APPENDIX A - CLIENT CORRESPONDENCE



March 7, 2018

We are delighted to announce that you have been selected to develop our new Prantl's bakery website, focused on 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. You may create your own grid structure or use the Twitter Bootstrap grid structure available in the starter materials. 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 <font> 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: <a href="https://www.youtube.com/watch?v=iLhlZciMfo0">https://www.youtube.com/watch?v=iLhlZciMfo0</a>.

The website must include information about two occasions (e.g., weddings) that Prantl's specializes in (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: <a href="http://www.highcharts.com/">http://www.highcharts.com/</a>

# Mobile Responsiveness

With the increasing number of smartphone users, we would like to develop our website to be responsive for multiple devices. Please develop one page in your website 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 in your website showing how the page can be responsive, so that we can enhance our website in the future.

#### **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).

# **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.

# Customer Online Order Form

Our current online ordering system is inefficient and difficult to use. We would like you to develop a new page where customers can place an order for ONLY the Burnt Almond Torte cake (8"x 3") (ignore our other products for now). The new page should contain a form with the following information: customer name (first and last), billing address, email address, phone number, quantity of cakes that will be purchased (as a dropdown with values between 1 and 10), pickup location (as a dropdown with Downtown or Shadyside as the two options) a pickup date, and a pickup time. The form does not need to function - it is only a prototype (e.g., nothing happens if the user clicks submit). The form must be styled using Twitter Bootstrap (<a href="http://getbootstrap.com/2.3.2/">http://getbootstrap.com/2.3.2/</a>).

#### **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.

#### **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 list of at least 10 user stories organized by priority. 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 information architecture approach used.
- 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).
- One high-fidelity wireframe (include high-fidelity wireframes that were created using a wireframing tool of each page in your website to show responsiveness).

Please do not hesitate to contact me with questions or concerns. I look forward to receiving your project materials on Wednesday, March 28, 2018.

Sincerely,

Tane Doe

Store Manager Prantl's Bakery

<sup>[1] &</sup>lt;a href="http://www.huffingtonpost.com/2014/04/14/prantls-torte-cake-almond">http://www.huffingtonpost.com/2014/04/14/prantls-torte-cake-almond</a> n 5133580.html

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<sup>[3] &</sup>lt;a href="https://search.creativecommons.org/">https://search.creativecommons.org/</a>