P3: Project Coding

(50% of the project grade)

Keep in mind that these documents might be updated during the semester.

Last updated: 05.10.2023.

Due Date

Thursday, November 16th at 23:59. We do not accept late submissions (i.e., they will not be graded).

Overview

P3 is 50% of the project grade and is about coding your design and planning from other project tasks. It is also about how your team collaborates to develop this website, your contact with the client and project advisor. Reuse your stylesheet for the project documents in this course.

Description

Do this one piece at a time and test it as you go. Be sure to set time aside in your schedule. Start early and work often. Sometimes the simplest task takes the most time to complete.

Restrictions

The project is strictly a front-end project. Thus, databases or other back-end functionalities are not allowed. Your project can only be made of **pure** HTML, CSS, and JavaScript. Thus, jQuery and other web technologies are not allowed. Examples of web technologies are React, Angular, Elm, SASS, TypeScript, Node.js, Bootstrap and much more. If you are interested in learning or using other web technologies, you then have an opportunity to take IT2810 – Web Development in the 3rd grade. **CSS Flexbox and CSS Grid are allowed.**

Modularity

As mentioned in P2, you have to support modularity by not duplicating the same code in each file for repeated elements. You should handle repeated items by using shared files of JavaScript code. Repeated elements include things like:

- banners, navigation bars, and footers,
- navbar button rollovers in navbar code,

- style sheets (there should not be separate style file for each page, but a single "main" CSS style sheet).
- JavaScript functions - when the same JavaScript function is used on multiple pages, it should be defined in an external JavaScript file (rather than being included and redefined in each file through the use of SSI).

Note: Remember that PHP is not allowed in this project, not even to implement modularity.

Using other people's code

We teach you a lot, but only a small fraction of the many things you can do with HTML, CSS, and JavaScript. We love it when students go beyond what we learn in class, in order to add cool features to their websites, so we encourage you to do so. In addition to the resources on the IT2805 website, there are many websites out there with tricks and tips, tutorials and code to borrow and use. We'll call this **outside code**. Using those is fine, but there are some bounds on this:

- Always give credit to the source. You can do this just with a comment in your HTML, CSS or JavaScript, as appropriate, giving the URL of the website you got the idea, trick or code from.

- Understand the code. Do not just mindlessly copy/paste and cross your fingers that it will work. Take the time to understand what the code is doing and how it works. Simplify it if necessary. Remove extra features that you don't understand. Ask for help in understanding their code; we'll be glad to help. If we were to ask you about any code that you submit as part of your project, you should be able to comfortably explain it to us. If you can't, maybe you should drop that feature.

Our point here is not to scare you. We do want you to expand your capabilities, challenge yourself, build amazing things and have fun doing it.

Responsive Web Design

The website has to be responsive when the window scales. This means that the @media query in CSS has to be used. You are free to make a mobile version but is not mandatory as long as the website is responsive in smaller windows.

Browser Compatibility

For the purposes of the course, your pages must display properly in Google Chrome version 68 or later.

Project status

It is recommended to have regular status within the project group to see if you are on schedule.

Nevertheless, please contact your project advisor if your group has fallen behind schedule or encountered any problems. The project advisor is there to help you with anything, and the check-up will not be graded and provides no penalty. It is only the code and website that only matters after the due date, not your mistakes, and problems before the due date. The email to your project advisor should consist of time, date and a description of your problem.

Even though your group has not encountered any problems, it is still important to have a meeting with the project advisor. These meetings will give your project advisor an insight into your project, how your team works and whether or not you are on schedule. It is recommended to have at least 2 meetings with the advisor before the due date.

Moreover, you should review your code for errors before the coding deadline. Below is a list of things earlier students often forget to double-check

- Pages validate (HTML and CSS)
- No code errors (test each page with the Console)
- Clear navigation structure
- All features work correctly
- No broken links
- Appropriate comments (within CSS, JavaScript & HTML)
- Proper nesting of code (CSS, HTML, and JavaScript)
- No unnecessary duplication of code from page to page (use JavaScript to avoid this)
- Appropriate ALT attributes for all images
- All pages have appropriate titles
- Aesthetically pleasing layout/color/font
- Properly sized images with a correct aspect ratio
- The website is responsive

It is possible to ask your project advisor to have a quick look-over of your website since sometimes a more experienced pair of eyes can help.

Note: This list is not intended to be a guarantee of a perfect grade! It is simply a way to help you identify some common defects. Of course, there is more to a great site than just avoiding defects, just as a paper without typos and spelling errors is not necessarily a great paper. Still, we hope you will find it valuable to have this checklist and the opportunity for a checkup.

Deliverables

An HTML-file named P3_changes.html has to be made. This document should detail and justify all substantive changes from your design so that we will not think it was just a mistake or oversight. Although your site should match the design in most details, we understand that you are still learning web design, so you will probably discover that you will want to change some of your design decisions by the time you get to the coding phase. Similarly, your client may make some changes during this time. Your document does not need to be as long and

elaborate as your design document (P2), but it should clearly describe what changed. See the example for P3 below.

The P3_changes.html file should contain a LINK to the start page for your website. This will help the teaching assistant to know where to start on your site, because the project directory may consist of many files.

The P3_changes.html file should also include:

- How each of the team members fulfilled their minimum requirements. For example: *Rachel fulfilled her JavaScript requirements with a user-defined function on intro.html and rollovers on members.html. Tom validated form inputs on orform.html and implemented the pull-down menu for each page*

- Explicitly state (since it may have changed since the design document), which person worked on which files, including CSS and JavaScript files, and who produced the artwork (banner and button design, etc.).

- Indicate how the modularity requirement was handled and who was responsible for the implementation

All the folders, files and pictures of your website must be saved into one single folder on your web-server (you can select one of the team members). Moreover, this single folder has to be zipped and be delivered by the due date on Blackboard (mandatory). **Changes after the due date are not allowed.**

Example

Here is an example of a P3 changes document:

http://www.idi.ntnu.no/~michailg/IT2805/exampleproject/p3_changesexample.html

Grading

Grading will happen based on the zipped file.

Points will be awarded in the following categories:

- Basic site function
- Aesthetics, design, and readability
- Usability, navigation, accessibility
- Documentation
- JavaScript minimum requirements met
- Modularity
- Responsive
- Adequate update (p3_changes)
- Excellency

Excellence

The top 10% (10 out of 100 points) of the coding grade is reserved for teams who demonstrate conspicuous excellence in their project. How can you get those extra points?

You must, somehow, go above and beyond ordinary achievement. There are many ways, but there is no checklist, any more than there is a checklist for great writing, great science or great design. An excellent website may have clever coding (e.g. Javascript code that you wrote on your own, beyond examples seen in class or taken from the Web); extraordinary beauty, harmony and user-friendliness; unusual scale or some combination of all these. It is our expectation that we will award relatively few of these extra points - if you get any of these points, you should be very proud of yourself.

Delivery

Ensure to include all of the requested information in the file before delivering. Save the HTML file as P3_changes_GROUPNUMBER.html and publish it, on your website. It is recommended to save P1 to P4 files in the same folder called Documents to have a structured web-hierarchy. Also, deliver a zip-file of your project that includes all the files. Make sure to include a link to your website in the Blackboard delivery.

Deliver a zipped (.zip) folder including all relevant files for the delivery, the zip-files of the whole project **AND** a link to your website on Blackboard by **Thursday, November 16th at 23:59**. We do not accept late deliveries and you cannot change the file after the deadline.