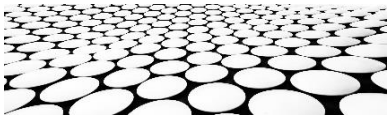
SEG3125 User Interface Design and Analysis



MODULE 2 – TUTORIAL/LAB

Construction of an Adaptive Online Grocery Site

GOALS

The purpose of this laboratory is to build a dynamic mini website allowing a user to purchase items in an online grocery store. Our focus will be on **functionality**.

During this lab, you will:

- Familiarize yourself with JavaScript for building dynamic web pages (responding to user actions).
- In connection with the theme of Module 2 of our SEG3125 course, which puts the user at the center of the design process, your online grocery store's UI will have to be personalized in response to various characteristics of personas.

SUBMISSION DEADLINE

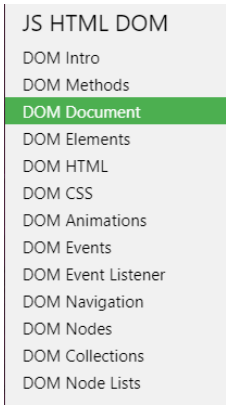
- Submission opens: Thursday May 20th
- Submission closes: Sunday, May 30th 2021, 11:30 pm
- Peer review opens: Monday, May 31rst, 12pm
- Peer review closes: Thursday, June 3rd, 11:30pm

SUBMISSION METHOD

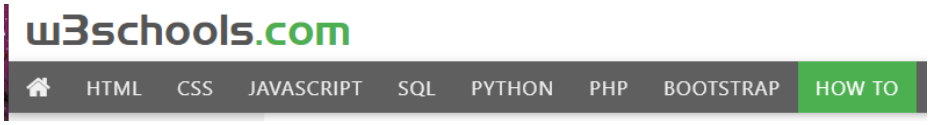
- Do your submission in peergrade. Lab 2 is listed there.
- Do not submit files. Submit only a link to your web page so that your colleagues and the teaching assistant can see the rendering of your online grocery and navigate in it.
- *ATTENTION: Any code or even "small piece of code" that you take from a website such as stack overflow or other sites should be acknowledged. It is important to site your sources. In your submission text, you must indicate "Code for X inspired by ……. (html link) ".*

INSTRUCTIONS / TUTORIALS

(1) You should familiarize yourself with JavaScript. The tutorial on the W3 School website, the same site we used last week for HTML/CSS, is really good. Take it step by step, but you will not be able to do everything, there are several items. Do not get discouraged because you will see that several elements of the tutorial relate to basic structures or operators contained in any programming language (arithmetic, Boolean operations, functions, Random, String, objects, etc.). You already have this knowledge, it is just a different syntax.

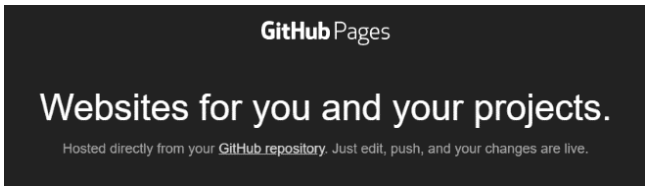


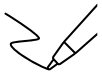
I invite you to consult the section on HTML DOM. The dynamic aspect of websites comes from a small part of JavaScript, which allows you to find and modify HTML elements. Read this section on the JS HTML DOM, more particularly the DOM Document sections (showing how to access an HTML element) and the DOM Events section showing that it is possible to listen (addition of "listener") to events (mouse click for example) and react to them.



The HOW TO section also contains navigation examples. The navigation code that I provide you with this lab comes in part from this example on tabs.

(2) Your demonstration space will still be useful this week (and throughout the semester). Use GitHub Pages which will allow you to have your own website at *username.github.io*. I suggest that you put your projects in separate directories, and thus have *username.github.io/SEG1525-LabX* as a directory for each laboratory.





DESIGN

In connection with the task-based model, I have provided you with brief information about two typical users. Here are 2 personas and their goals.

Nara, 22, is lactose-intolerant. She would like to be able to do her grocery shopping without being offered any dairy products. Nara is a student on a limited budget, so she likes to see the items in order of price to be able to buy the cheapest items. Nara has vision problems as well, so she appreciates when the information on the screen is in larger fonts.
Yao, 45, is severely allergic to nuts. He would like to do his grocery shopping without being offered items containing any kind of nuts. He prefers to buy organic products unless they are very expensive.

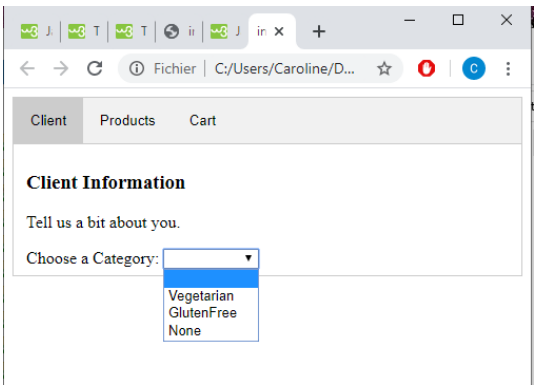
In a real design situation, you could now think of a list of tasks to be performed so that Nara and Yao would be productive, and this list would lead you to the requirements for design. But… as we are in the context of a university course, I will provide programming requirements to consider these personas goals, but also to lead you to learn elements of JavaScript.

STARTING POINT

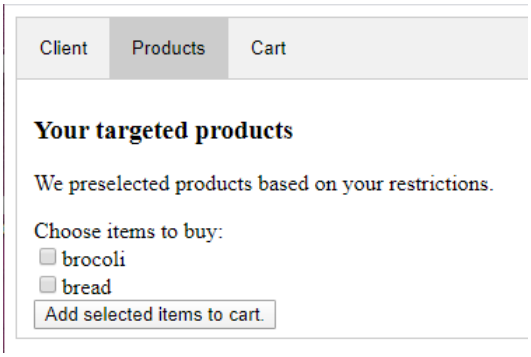
For those who wish to use it, I provided you with some starting code. The SEG3125-Module2-Grocery directory contains a starting point to work with. You can view the rendering of the site here. In last year's lab, the characteristics were vegetarian/gluten intolerant. For this year, I changed the personas to rather be lactose-intolerant and having nut allergy. Make sure you adapt the code and the list of grocery items to contain the relevant information.

This is a small 3-page site that you will need to modify. A navigation bar (Client, Products, Cart) allows you to move from one page to another. Look in the main.js file for the JavaScript of this navigation.

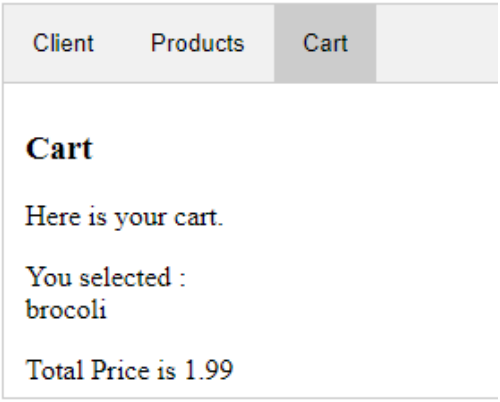
(1) The Customer page allows the user to select whether he/she is vegetarian or allergic to gluten. This needs to be adapted for lactose intolerance and nut allergies.



(2) the product page shows a subset of products according to users' dietary restrictions.



(3) The basket page shows what is in the basket and the total.



Suppose we have 3 grocery items: yogurt, almond granola, salmon. An “adaptive” grocery store that meets Nara and Yao's needs should limit the selection for Nara to almond granola and salmon, and the selection for Yao to yogurt and salmon. It would increase their productivity to not have to skim through items that they will never want to buy anyway.

As you can see, so far, the site is very basic. It will be up to you to modify my code (or create your own) and incorporate elements that will meet the goals of Nara and Yao.

CODING

You will need to generate; using HTML/CSS/JavaScript, a small, dynamic website, allowing a user to shop online.

Our focus for this week will be to have a site with proper functionality. As many of you are new to JavaScript, that will be enough.

Your site should contain :

- The name of the grocery store *(this is not present in the code provided)*
- At least 10 possible products in the product list *(I have provided 3)* described in terms of features appropriate to the user's needs (containing lactose, containing nuts).
- Navigation between three zones (personal data, products, cart)
- A personal data entry area
    - A user must be able to filter between lactose-intolerant and/or nut allergies
    - Each user can indicate a preference for organic products or not. *(This is not taken into account in the code provided, so it is to be added in the options, and also to add a characteristic for this purpose in the list of products).*
- An area for choosing items
    - Items should have their price indicated. *(to add to the code provided)*
    - Items should be in price order. *(to add to the code provided)*
- An area giving the basket view
    - the contents of the basket and its total
- Your signature (Website designed by ...) at the bottom of the page.
- The use of external CSS (separate file) to define styles for titles, divisions, and your signature at the bottom of the site. Explore font, color, alignment, etc. changes to make the site look a little nicer. Although, for this particular lab, your evaluation will be on functionality, so don't waste too much time here if you're just starting out in JavaScript.
- The use of JavaScript (separate files) to contain the script associated with the site.

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EVALUATION

- This laboratory is worth 3.5%.
- Peer evaluation will be based on your website following the requirements given above. In peergrade, you can preview the questions included in the peer evaluation.
- Any delay beyond the deadline will have a penalty of 10% per day.

QUESTIONS

- You can ask your questions in the Module 2 discussion forum on Brightspace.
- You can also send your questions directly to the TA you are assigned to. If your last name starts with a letter between A and J - please send mail to Abdorrahim (abahr010@uottawa.ca), otherwise send an email to Xinyi (xhe068@uottawa.ca).