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Senior Seminar

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Project Concept

**I. Project Overview**

What is your goal? Why this topic area? Why is it interesting?

The goal for my project is to build and design a modern looking website that potentially has some sort of practical purpose and/or a web application. I am choosing this topic area because I am interested in furthering my minimal HTML & CSS skills to a higher level and learn new programming languages that can be used in web development.

This project will also tie into my interest for Graphic Design. I would love to expand my knowledge base further in this area, and this project presents a great opportunity to do so, while tying it into my interest in coding and web development.

I intend to learn about:

* The Web *Development* aspects, namely, how to code in the client-side languages of HTML, CSS, & JavaScript. Along with the server-side languages of SQL & PHP
* The Web *Design* aspects relating to the web and otherwise (general graphic design, along with some UX/UI design depending).

*Note that this is merely what I currently intend to learn at this early stage. The content I may research (what programming languages etc.) are subject to change as my project develops.*

Possible essential question:

An overarching goal for my senior project could be “*How Can I Effectively Design and Code a Website?*”.

How this project will push me:

I will be pushed to make meaning by using my own thinking to synthesize the research I do into a functioning website that I design.

**II. Experiential Component**

I am still developing ideas for my Experiential Component. My most solidified idea would be the suggested internship idea, which would apply to my project as an internship at a company or with a person who does Web Design or Development.

Due to the nature of my project, I am unsure I could use the actual creation (Designing and Coding) of my website as my ‘Experiential Learning’ under the criteria as defined by the senior project guidelines. I feel like this would be acceptable because of the longer process involved in the creation of my website, compared to other senior projects, as the website, which is the topic of my project, will be the actual Product. Whereas with many other senior projects their product is merely a reflection and synthesis of their Experiential Learnings.

**III. Product**

For my product I will be making a website, but I am not settled on content yet. My current thought is to make a website that showcases different features that you might find on a website (very meta, I know) and explains the graphic design process behind each one. For example, I might design some sort of web form, and explain what I did to make the form appealing and why I stylized it the way I did. If I went down that path I would also like to include some sort of small web application (so that I can still be doing some backend coding). I was thinking maybe for this simple web application, a widget that just pulls the weather from a database (weather.gov perhaps), and displays it in a simple, pleasing fashion.

Another possible option is to create a website that incorporates someone else’s senior project. An example of this would be making a gallery of photos for one of my peers doing photography work. This would require some reliance on the work of other students though, so I am hesitant to pursue this option, as if their project shifts at all during the process it chances negatively skewing my project.

I am not set on either of these ideas just yet (nor am I against them) and am still open to / trying to think of other possibilities. I’m struggling with this content aspect just because the possibilities are very much limitless, and I have nothing to narrow it down with. My main reason for not just settling on the aforementioned ideas is that I would not want to set out down that path and later regret it when a better idea comes to mind. To sum, I just want to brainstorm more possibilities before settling down on this one.

Luckily with my project the content of my site does not have to be fully decided on to effectively continue my research and foundational learning.

Once I have decided on my website’s content and have started in creating it, I plan to log my work somewhere so that I will have further presentable work besides the site itself. What format this log will be in (video log / screenshots / written log) is undecided.

**IV. Foundational Learning**

Learning to Date

As a start, note that Web *Development* is the coding and creating of the website, compared to Web *Design* which is the designing aspect and all that falls under that (I’m looking at both for my project, I just want to clarify the difference as I thought they were interchangeable in previous discussions and idea papers, but am now using them separately).

I have done some baseline learning about what the different aspects of web development are and how they will come into play in creating a website. Namely, client-side and server side. Client-side refers to the parts of the website that take place on your computer. When you view the source of a webpage this is the code you are seeing. It includes HTML, CSS, and JavaScript among others. Your browser is what interprets the client-side and gives you the completed visual output. Server side refers to the code that is run on the server and outputted into the client-side. It’s what forms parts of the client-side that you see. It includes languages like PHP and SQL. Server-side code is used in dynamic web pages. A dynamic web page is one that is constructed using server-side code. For example, when you are looking at a product on amazon, a developer did not code the exact page you are looking at. What was coded, was a template of sorts that pulls information from a database about that product. This templating process is the server-side aspect.

From my interview with Besart Bytyqi I pulled together more resources and learned of some software I can use in coding the website. Besart said that he primarily used Sublime Text as his text editor. The main languages that he suggested to code in were HTML, CSS, PHP, Some SQL. He recommended Drupal as a good CMS (Content Management System). He gave me the idea of looking at a site I like and trying to mimic the look by coding it on my own, without looking at the original code of the site, as a way to practice/further my skills. He told me that the MDN docs are a good source of reference for languages when coding, along with Stack Overflow to ask/find answers to questions not answered by the MDN docs. He told me about CSS-Animations, which I had not heard of before. They are, as the name suggest, animations, which I had not previously known was possible to do in CSS. CSS-Animations and/or JavaScript could be used to make something interactive/responsive.

I’ve also done some initial learning on graphic design and have, along with my October book (*Draplin Design Co.*), learned about some specific elements of design and their application in the web. The biggest thing I’d say I’ve learned so far in terms of the UI/UX is the idea of a hierarchy of importance. How you want to rank the parts of the webpage by importance and make designs around that. You want to stress the more important stuff and put less, or even remove, emphasis from elements of lesser importance.

Next Steps

My overall next steps for foundational learning will, in no particular order, be:

* Actually learning the programming languages I want to use.
* Finding out what software is commonly used to design websites.
* Learning more about web design, and UX/UI design.

As for specific sources where I can look at to find this, I will be continuing to use the Mozilla Web Docs, along with a book on design coming out “this fall,” called *Refactoring UI*, that I’m hoping will actually come out soon, as it is fall already (the book was recommended to me by Besart Bytyqi, the Web Developer working at WPI that I interviewed).

**V. Collaboration**

I haven’t yet looked into any specific persons that I might collaborate with or enlist to be my mentor for this project, but I am planning to look for any willing web designers/developers or graphic designers. My choice here might depend on whether my decided product will be more design focused or coding focused.

**VI. Timeline**

I am planning to start with a focus on the graphic design stuffs and then move into learning the programming languages I plan to use afterwards. Hopefully the book I talked about in my foundational learning next steps, *Refactoring UI*, will come out during this period and I can use it as a resource. During the research I will continue to be thinking about possible options for the content of the website I will produce. I have yet crafted a week by week calendar.

**VII. Source Evaluations & Bibliography**

Mozilla Developer Network Web Docs

The MDN Web Docs are a resource for developers, cataloging information on many different aspects of web development and references for different web programming languages.

Created by the Mozilla Foundation, a non-profit organization made to support developers and members of the Mozilla Community.

Mozilla Foundation, MDN Web Docs developer.mozilla.org/en-US/docs

Draplin Design Co.: Pretty Much Everything

Centered around Mr. Draplin and his work and life as a designer. Includes examples of his work with explanations around his process for designs.

Aaron Draplin is the founder of Draplin Design Co. and has created designs for reputable companies such as Patagonia & Nike.

Draplin, Aaron. *Draplin Design Co.: Pretty Much Everything*, Abrams Books, 2016.

Interview with Besart Bytyqi

The content of this interview was around software use, effective resources for further learning, and introductory information on web development. Bytyqi also gave me some explanation of what his job at WPI entails and gave me some tips for pursuing my project.

Besart Bytyqi is a Web Developer for Worcester Polytechnic Institute.

Bytyqi, Besart. Personal interview. 24 October 2018.

Refactoring UI: The Book

Book is not yet released, but I plan to use it as a source once it is. The content of the book is advertised to be graphic design explained from a developer’s point of view. Book is set to release this Fall.

One of the authors is an experienced full stack developer and the other is a designer.

Adam Wathan & Steve Schoger. *Refactoring* *UI*. www.refactoringui.com