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Technical Report

Community Science Museum website

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Semester Project #1

Word count
Summary: **132** words --- Main text: **1817** words

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1 - Summary

The delivery for the first semester project is a website for a newly opened Community Science Museum. The museum has a target audience of mostly school children and families with young children. Over an 8 week period I have researched different endemic website, designed a responsive layout to present the content and refined all the images from the media assets packet so they would fit in my vision for the site.
I have also tried my hand at some basic javascript (without using jQuery), and finally tested the website on several different devices with different viewports. Both the HTML and the CSS is validated using the w3-validator.
Link to Community Science Museum website: https://semester01.kstavem.no/

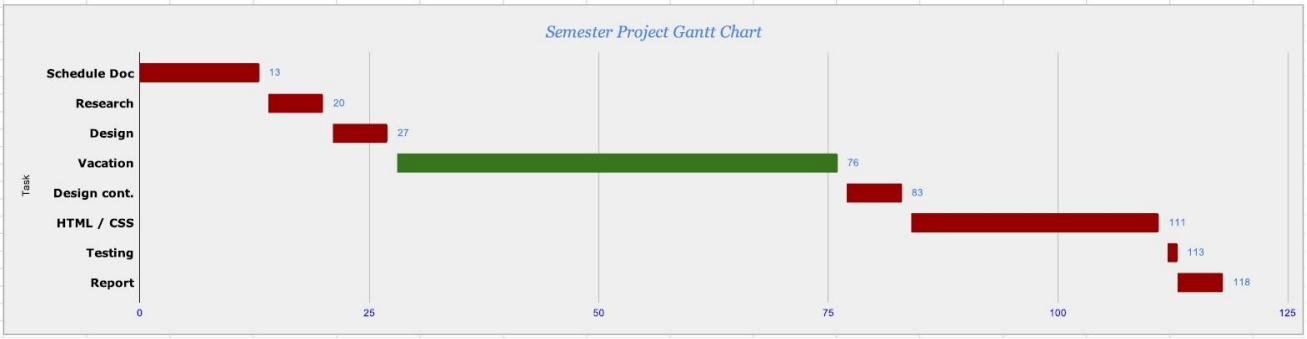
Below is a gantt-chart I made in excel, to outline the expected workload and timing.

Semester Project		
Start date	End date	Task
18.05.2020	31.05.2020	*Schedule Doc*
01.06.2020	07.06.2020	*Research*
08.06.2020	14.06.2020	*Design*
15.06.2020	02.08.2020	*Vacation*
03.08.2020	09.08.2020	*Design cont.*
10.08.2020	06.09.2020	*HTML / CSS*
07.09.2020	08.09.2020	*Testing*
08.09.2020	13.09.2020	*Report*

Semester Project		
Task	Start on day	Total days
Schedule Doc	0	13
Research	14	6
Design	21	6
Vacation	28	48
Design cont.	77	6
HTML / CSS	84	27
Testing	112	1
Report	113	5

This is a rough outline of how I expect to execute my semester project. The research phase has started, alongside writing this schedule document / gantt-chart, but given the fact that we have summer vacation smack dab in the middle I must admit I've been quite relaxed thus far.
The timing was very nice, as I'm in the process of moving into a new apartment, so having the freedom to catch up a bit later couldn't be resisted.
That being said, I've read the semester project delivery brief, read the filler text and viewed the images, so I've got some design ideas brewing, though not formalized. For now, the my research has been looking at some museum web pages online (not just scientific) and planning some image editing.
I also tried my hand at making the gantt-chart in Excel, feedback welcomed.

Have a great summer!
Kristian

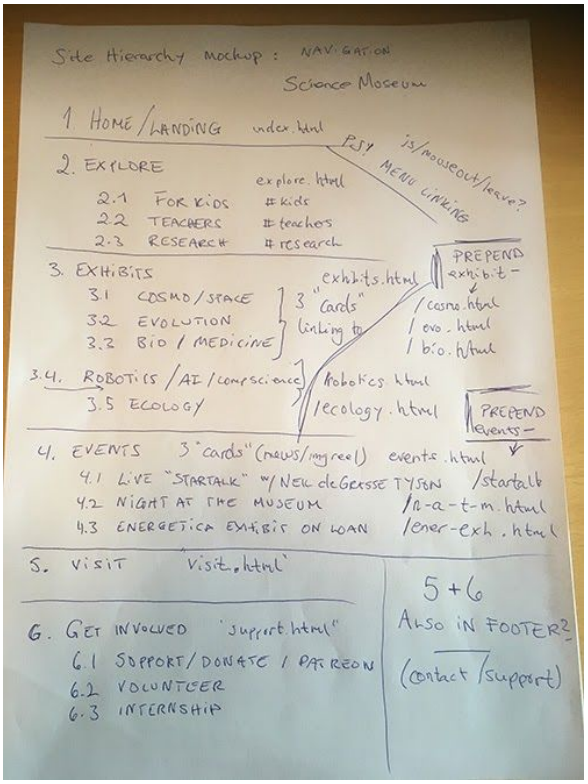


2.1 - Introduction

The project goal is to create a website for the “Community Science Museum”, an interactive science museum with a target audience of primary and middle school children, and families with young children. A media asset packet containing logo, images and text has been provided, however they need some work in photoshop to manage both file size and design space. I’ve also included additional images and some original text.

The semester project delivery puts to the test everything we’ve practiced this semester, and we’re expected to show proficiency in design, HTML/CSS, project management and communication technology. Given the 8 week timespan, and adding a summer holiday in the middle, I took it upon myself to include some simple javascript in the mix as well.

2.2 - Process

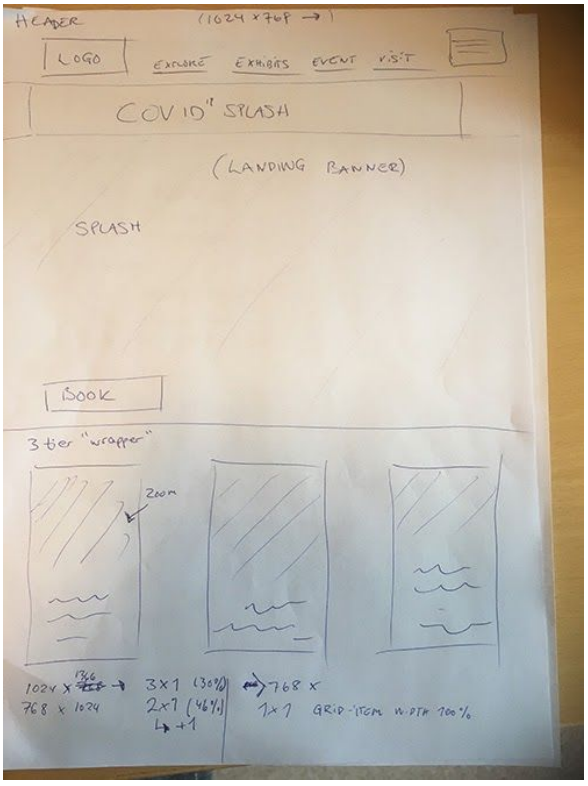


Getting a complete overview of the project was the first part of my process. Reading and re-reading all the text provided and trying to tie them together with the images. What should go where in the design hierarchy, and how would the navigation / site map function? I wrote down my initial list, and more or less stuck to it in the design. The picture included also shows additional later scribbles regarding naming and systemizing of .html-files and some html#ids.

The logical next move was to conduct some research and look for good design inspirations and solutions on different museum websites, particularly the scientifically inclined. While there is a more comprehensive list of websites I’ve gleaned some inspiration from in the references below, I would like to tip my hat to the London Science Museums webpage. Of all the web pages I viewed, this was by far the most professional and enticing of the bunch.

Having gotten a greater overview and some ideas to implement, I shifted my focus to the design part of the project. Choosing a color scheme and finding a few fonts that would complement the scientific, and dare I say nerdy (in a good way!) goal of the museum. Knowing that the target audience heavily favours school kids and families with young

children, my initial thought was to include lots of bright colors. However, given the scientific and more sciency nature of the museum I pulled back a bit on the color-throttle. A lot of the images included were very colorful, so I decided to let them be the main “warmth” of the page, and let the navigation and menus go in a bit more “colder” and retro direction.
When I found a font named “TR2N”, based on the old science fiction movie “Tron”, it was the final piece of the puzzle. The navigation took on a very retro “outer space” kind of look, with a starry black sky and a cold light blue text. It might walk a fine line between “cool retro” and “hopeless myspace look”, but I hope it falls on the right side (at least there is no autoplaying MIDI-music included).



The font chosen for all headers is called “Marko One”, originally designed for children's literature, which would suit the target audience. I also feel the calligraphic letterform fits the vibe of the museum, invoking thoughts of old scientific papers housed in the Royal Society.

The final font is a simple sans-serif called “Open Sans”, which I’m sure we’re all familiar with. Easy to read paragraphs and looks very good on screen, especially mobile.

The next part of my process revolved around “refining” the image assets we were provided. Learning from the last html/css course assignment where I had different image sizes placed as -backgrounds, I decided to try another approach in the semester project. I cropped and resized all the images to 300x450 pixels. This means a mobile device with a 300+ px viewport can have one image displayed at a time, with text in a column underneath it. On the larger devices, either a landscape ipad or on an ipad pro (1024px) I can fit 3x300px flexboxes in a 960px wrapper. This made coding the actual responsiveness of the website much less work, as the images (except the front page main museum image) does not change size, just the amount of images visible in each column changes.

Later on in the project I also did some changes to the SVG and adobe illustrator logos. The “keyhole” logo underwent some color changes so the circling electron paths would be visible on a dark background. I also added a translucent background to the scientist looking through his telescope, and removed any other background disturbances. This allowed me to position the svg neatly overlapping the bottom part of the <main> and the top of the <footer> (position:absolute). Unfortunately the scientist only makes an appearance on larger devices.

The final part was doing the actual coding, but before I wrote a single line of code I decided to set up my entire workspace. The root folder got the index.html, and I made sub directories for /img, /css, /js and /views. The views folder holds all the subpages like explore.html and support.html etc. I then initialized a git repository on the root folder, used the command line to mkdir/touch all the subdirectories and .css .js .html files, before making the first commit, and pushing the workspace to github. Every day after a few hours of coding a new commit and push with that day's changes and ongoing ideas was made.

For the actual HTML/CSS coding, I estimate 80% of the workload to have gone into the first page. Once index.html, with the navigation, footer and a working flexbox for presenting the content neatly were in place, all I had to do was replace the content in <main> with new content pertaining to *that* page. Pretty straight forward.

All the different .html files have different meta tag descriptions, for SEO-reasons. Every image also has a unique alt attribute.

Finally I decided to try my hand at some javascript, and given we're not able to use bootstrap, I figured I would refrain from using jQuery for this task as well.
Since I had already made the navigation open/close using the checkbox/label "hack" I decided to just marry it all with some javascript, instead of rewriting the entire thing. I coded a loop running over the buttons in the menu to open/close the submenus, also giving them a black rgba background with 40% opacity. This made reading the menu easier on smaller devices, as the spacey background could get a bit bright in some spots. Clicking a button also functions by closing all submenus before opening the new submenu, thus only allowing one menu to be open at a time.

There was also an issue with actively resizing the window while having the menu open on mobile/tablet, where going from the dropdown menu being open via the checkbox, since the checkbox was technically still :checked when you reached 1024px width, you had the burger menu showing on top of the fixed-top menu.I solved this by having an eventListener on *resize* that checked if the checkbox was checked, and did a click() if it returned true. This means all menus close if you resize the window.
I also wanted to add a way to close the menu if you click outside the menu area, but I wasn't confident in finishing it in time, as I had some final testing to do before writing the report.

Testing has been done on my personal laptop / desktop, mobile phone and my mother's tablet, and has as far as I can tell rendered correctly. I have also put every .html-file and the .css through the w3-validator, and it has returned without errors.

2.3 - Conclusion and evaluation

Finishing the biggest project to date was demanding, but rewarding. I'm grateful that we technically had 4 additional weeks to complete the assignment, given the summer holiday. Even though I took a good vacation, having done the initial reading and research early, having the plan marinating in the back of my mind, looking for inspiration almost unknowingly for almost a month felt like cheating. Once I came back to the project it was easy to pick back up and formalize the ways I had been structuring it in my head for quite a while. The summer was quite hectic, as I've moved apartments twice in a 30 day period, so having the extra time to let my ideas simmer on a slow burn before diving deep was an immense burden off my shoulders.

As for self-evaluating, I would not be too critical. I feel the site performs better than what I initially envisioned. The part I'm most self-critical about will always be the design choices, not the implementation of the code to make it so. I have a hard time agreeing with myself, and I'm by no means ever going to end up doing digital marketing / graphic designing. Another area I could use some more structure in would be time management. Being part time, and having a more free schedule where I can do the work needed in the evenings or sometimes substitute a few days for an 8 hour session on a sunday, has proven to perhaps be a blessing in disguise. Thankfully I work well in a "time crunch", but I do find it ironic (and moronic) having to apply that *skill* in a project I initially had 130 days to complete.
That being said, I'm very proud of the finished product, especially in the functionality.

3 - References

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