

A Business Website for A New Interior Designer

by

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Abstract

This final project report documents the process and progress of Sarah Eunji Kim's work with LyndallWalker.com (Lyndall Walker Design) on creating a business website. It demonstrates the detail from planning the project, executing the project, managing the project and meetings, resolving conflicts, literature review, and supporting documents. This document serves as a reflection on this project. The final deliverable has been published under "LyndallWalker.github.io" and delivered to Lyndall Walker Design on time and accepted by Lyndall Walker Design.

Introduction

LyndallWalker.com (Lyndall Walker Design) is a small residential interior design business located in Brooklyn, New York. The client is a new starting business owner in the interior design industry. The client is offering her service in residential renovations and home improvement. She has successfully renovated two different apartments in Crown Heights, Brooklyn, which led to increased rent and popularity among tenants.

This project aims to create a professional website that provides information about her business and can be used as a daily blogging of her interest to attract more people to her business. The goal is to create a website that is easy to navigate for the clients and her customers. This website will help to promote her business by showing her previous projects and reviews from her customers.

For this project, I have worked as both project manager and web developer. As a project manager, I planned and set schedules for meetings with the client and managed the scope and the process of this project. As a developer, I built the website from scratch based on the client's requests, and I understood the clients' needs.

The projected benefits include 1) a professional website for a new residential interior designer, 2) easy access for business inquiries, and 3) building a brand as a new interior designer by sharing her previous projects and blogs.

To achieve the projected benefits, I have built a website for the client based on her design and functionalities preferences. The website includes different features such as biography, blog, contact page, and more. Due to the pandemic, I have mostly

communicated with the client via email, messenger, and phone calls every week to ensure the project process. Also, I have used video meetings every two weeks to check the project status.

There are three main project objectives, and metrics for measuring project success, including 1) complete and launch LyndallWalker.com by December 1, 2020, which is the end of the Fall semester of 2020, and the website is searchable online by the semester ends; 2) the website is mobile-friendly and includes different functions such as biography, previous projects, blogs, and contact page, and the website will have at least four other main pages including biography, previous projects, blogs, and contact page, and subpages depend on the client's requests by December 1, 2020, and 3) the website is easy to use and navigate, and the client can delete, write, and edit posts on her website.

The project started on September 3, 2020, and I delivered the final project on December 1, 2020; and an average of 10 - 18 hours per week, which is approximately 250 hours in total, was spent on this project. Because of the current pandemic, the meetings took place via online conferences such as using Zoom. The resource required was laptops and Zoom software.

The biggest challenge of the client I learned from the initial conversation with her was that she did not have good knowledge of how the website works or not familiar with computer technology other than Instagram. Additionally, she did not have a structured customer list now as she was only using social media such as Instagram to advertise her works.

Since the client is not familiar with how the website works or new technology, I ensured that the website is easily accessible, readable, and understandable. It was also necessary to update the client's customers' list into a more structured system using her new website and tools such as Excel.

I learned advanced technical skills from this project to build a website using HTML/CSS/JavaScript. Also, I used project management skills such as communicating with a stakeholder, documenting necessary works, and using different project methodologies (Agile, Waterfall, Kanban) that I learned from the classes in a practical setting.

Problem Description and Opportunity

As a sole proprietorship business, the client has been dealing with all transactions, including getting a new customer, hiring contractors, and handling garbage disposal. The client previously worked with a landlord in Brooklyn, renovating a few old apartments into brand-new modern apartments. The client's successful renovation attracted an unusual number of tenants, leading to increased monthly rent prices.

The client has been using social media such as Instagram to upload the parts of her design works; however, she always found it hard to increase the number of followers or likes. Despite her effort to communicate with potential customers, she could not market her business with more success. Moreover, the current pandemic has made it hard for the client to meet possible customers face-to-face.

The client can still use the social media platform for advertising her design works and communicating with the customer, but having a professional business website can improve the client's credibility as a legitimate business. Additionally, while social media platforms are limited in customized designs, the website can reflect the owner's character and personality.

Importance of the Project

The world has become a place where everything is and can be done online. Every day there are more online users, and it is common to see even the smallest businesses owning websites or social media accounts. Not only for e-commerce, but the website has become a place where individuals show off their characters, talents, and more.

The goal of this project is to build a quality business website for the client. For Lyndall Walker Design, the business website will be where the client shares her unique design principal, artworks, and thoughts in her personal space. Additionally, unlike social media platforms where an account or a post can be reported or deleted by force, the client can control and manage her website with ease from the restrictions.

The project is also essential for the client who is not tech-savvy to learn HTML and CSS's basic structure. The project includes teaching the client how to update, remove, and edit the website's posts. The project can be a good opportunity for her to learn how to manage the website.

Alternate Solutions Evaluated

The first alternate solution was to use the social media platform as a client's primary business platform. The client is currently using Instagram to upload her artworks, and some of her previous design works. Using Instagram is easy and convenient. Especially for social media such as Instagram and Facebook, there are business account options at no cost. For example, many small businesses use Facebook business pages for business information and reservations. Besides, Instagram also offers business accounts where customers can buy items directly through Instagram.

The pros of using the social media platform as the leading business platform are 1) easy to manage the posts, 2) easy access to the public or potential customers, and 3) no need for technical maintenances as the platform does them.

On the other hand, using the social media platform as the leading business platform has a few disadvantages, including 1) challenging to stand out from the identical platform, 2) challenging to reflect the personality and character, 3) limited spaces, and 4) less professional.

Solution Evaluation Criteria

The goal for Lyndall Walker Design is to have a platform where the client can maximize her capacity as a new residential interior designer by sharing her design philosophy, artworks, and thoughts with the current and potential customers. Below are a few solution evaluation criteria:

- 1) Purpose – Does the platform reflect the client's design philosophy and character? Can the platform differentiate the client from others?
- 2) Sustainable – Can the platform be used in the long term?
- 3) Accessible – Is the platform easy to access? Is the platform easy to navigate?
- 4) Security – Is the platform secure from malware or hacking?
- 5) Cost – Does the platform have an affordable price?

Selection Rationale

The following selection rationales have been considered.

- 1) Purpose – Does the platform reflect the client's design philosophy and character? Can the platform differentiate the client from others?
 - a. Social media platform: Although social media platforms can have some extent of uniqueness for an individual account, it is hard to differentiate the client's business from the others. Also, it is impossible to customize the social media platform to fit the client's design philosophy.
 - b. Business website: A personal website can be customized and designed to reflect the client's design philosophy and character. Having a legitimate business website can differentiate the client's business from the others.
- 2) Sustainable – Can the platform be used in the long term?
 - a. Social media platform: Any social media platform can be used as long as social media exists.
 - b. Business website: A website can be used as long as the owner does not take it down.
- 3) Accessible – Is the platform easy to access? Is the platform easy to navigate?
 - a. Social media platform: Most social media platform is easy to access and navigate. However, sometimes users must sign up and log in to see the contents of social media platforms. Additionally, if a person is not tech-savvy, navigating social media can be difficult.

- b. Business website: No sign-up or sign-in is required. A website can be easily accessed by typing the website address. A well-functioning website is easy to navigate.
- 4) Security – Is the platform secure from malware or hacking?
 - a. Social media platforms: Although social media platforms have a higher chance of malware attack or hacking, they have robust security and privacy rules kept by the company.
 - b. Business website: A business website will have low security if it was not built with security. An owner of a business website can purchase website security software such as SiteLock for protection.
- 5) Cost – Does the platform have an affordable price?
 - a. Social media platforms: Most social media platforms are free.
 - b. Business website: A business website hosting can cost from \$3 to \$750 per month depends on the use of a website. Any other services, such as a webmaster, can cost from free to \$150 an hour.

Based on the above rationales, building a business website was chosen as the final solution. Although there were pros for social media platforms, building a business website satisfied with more important selection evaluation criteria. A functioning business website can reflect the client's design philosophy and characters into the personalized web interface and give her more freedom to express herself.

Approach and Methodology

There were two methodologies I considered, which are the agile and the waterfall methodology. After comparison, I decided to use the waterfall methodology to complete this project. Contrary to the agile method, where there are a few short development iterations, I used the waterfall method by breaking down the project into linear sequential phases. I chose the waterfall method for the following benefits: 1) Clear development structure. The client can easily understand and follow the development process. 2) Avoid scope creep. Since the method determines the end goal early, it is easy to stay on track without getting lost in the details. 3) Can make small changes during the development cycle. 4) Easy to manage the project and measure the project process. On the other hand, a few disadvantages of using the waterfall method are, 1) One cannot frequently change the requirements. Fortunately, the client has finalized the website's requirements. 2) Small errors that arise in the completed website may cause additional problems. I have tested the website's response time and responsiveness, and it passed all the required tests.

Project Objectives and Metrics

Object 1 – Complete and launch LyndallWalker.com by December 1, 2020, which is the end of the Fall semester of 2020.

Measurement: The website will be searchable online by the semester ends.

Object 2 – The website is mobile-friendly and includes different functions such as biography, previous projects, blogs, and contact page.

Measurement: The website will have at least four different main pages, including biography, previous projects, blogs, and contact pages, and subpages depend on the client's requests by December 1, 2020.

Object 3 – The website is easy to use and navigate.

Measurement: The client can delete, write, and edit posts on her website.

Risk Analysis

Number	Risk	Probability Score	Impact Score	Total
A	Limited resources (no in-person help)	3	1	4
B	Scope creep in the website functionalities	1	2	3
C	Price change in Google webmaster	1	1	2

Risk Matrix

		RISK (exposure)		
Probability (of occurrence)		1.Slight	2. Moderate	3. High
	1. Very Unlikely	C	B	
	2. Possible			
	3. Expected	A		

Contingency Plan

I have looked at all possible risks; however, no risk has risen to the critical level that needs a contingency plan. All of the current risks are manageable and being controlled.

Issues Encountered

There have been a few issues encountered during the project due to the current pandemic COVID-19.

First and foremost, I could not meet the client face-to-face, and we had to carry out all meetings via Zoom. Additionally, with the pandemic's economic downturn, the client needed to focus on her work as a building manager. Another minor issue was the time difference as I have temporarily moved to Chicago while the client locates in New York City.

Another issue was the limited resources for getting technical helps to complete the project. Since the pandemic lockdown, there have been no in-person workshops or events for HTML. Therefore, the only resource for any technical difficulties is using an online forum such as StackOverflow.

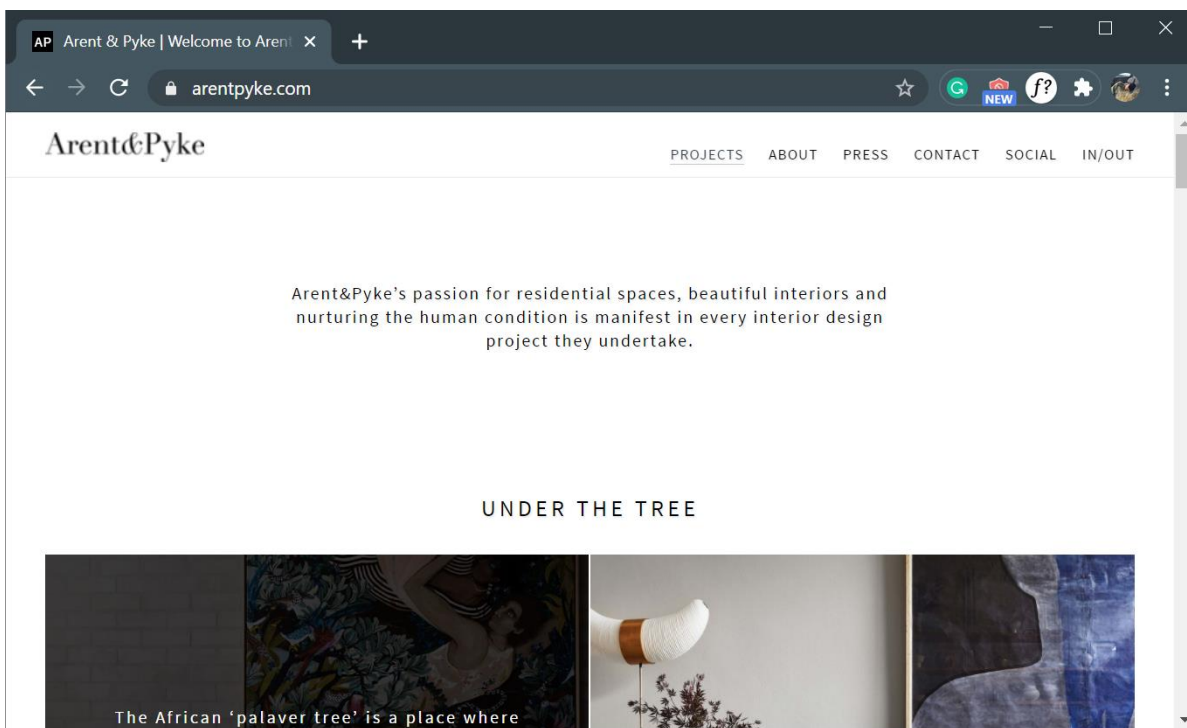
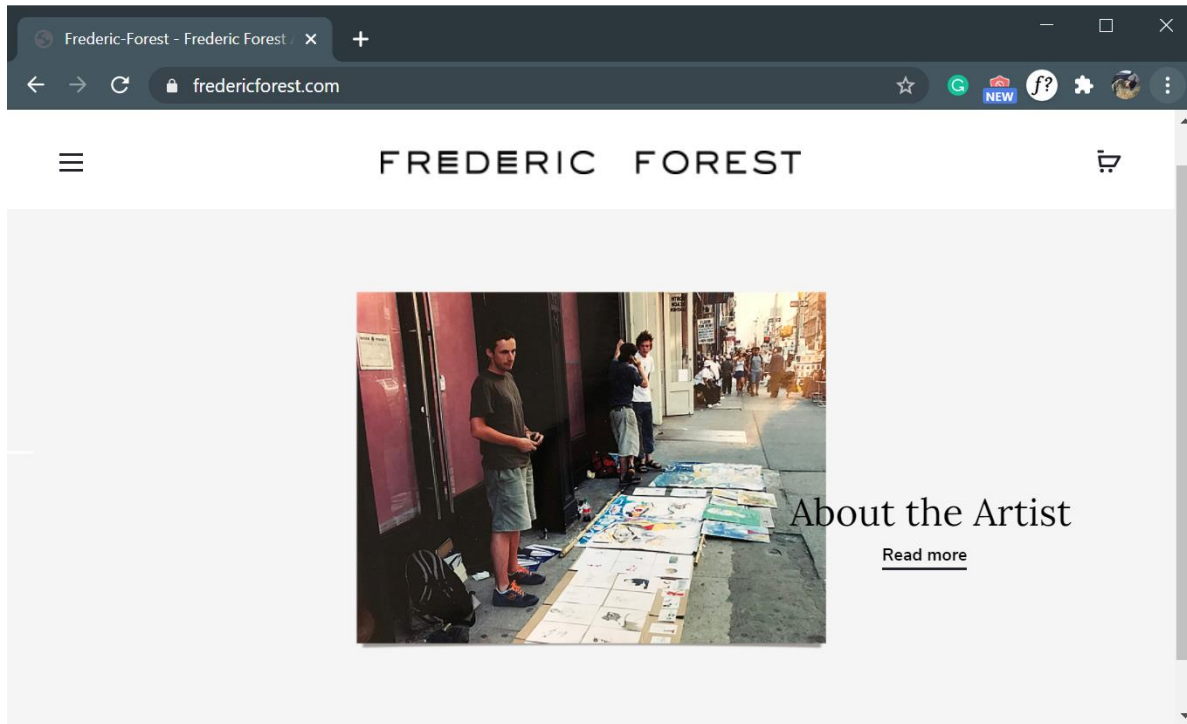
During the project, many small and large technical issues have been encountered, including not correcting the images' size and fixing the entire page to make it mobile-friendly.

Project Chronology and Critique

10/15 – Create a blueprint for the website interface and functionalities

In the previous communication via emails and text messages, the client shared a few example websites with me and explained her website's purpose. As a new residential interior designer, she wanted her website to show her design aesthetics, which is minimal and modern. The client will use the website to show her previous design works and share her artworks and daily life as an interior designer. To understand her requests better, I went through all the sample websites provided by the client. I noticed that all sample websites are simple and have minimal text writings but more visualizations. Also, from the sample websites showed in *figure 1*, all used muted colors such as grey and beige with enough whitespace. I have looked at the client's previous interior design works, as shown in *figure 2*, to understand better her design style and how she wants her website interface.

We have discussed a few functionalities such as biography, previous projects, blogs, and contact page. We decided to keep the minimum number of functionalities to keep the website simple and easy to navigate but add more functions later if needed. Based on the provided information, I decided to draw sketches of different web interface designs using the Paint application on my laptop, as shown in *Figure 3*.



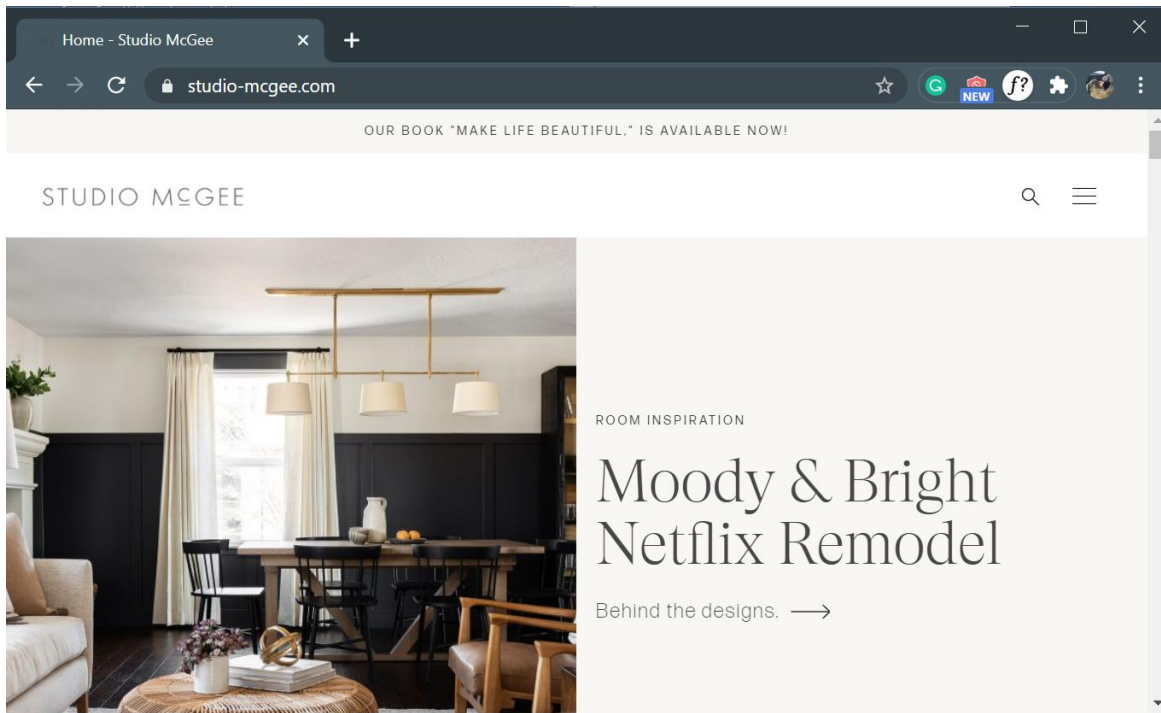


Figure 1 Sample Websites Shown by the Client



Figure 2 The Client's Design Works

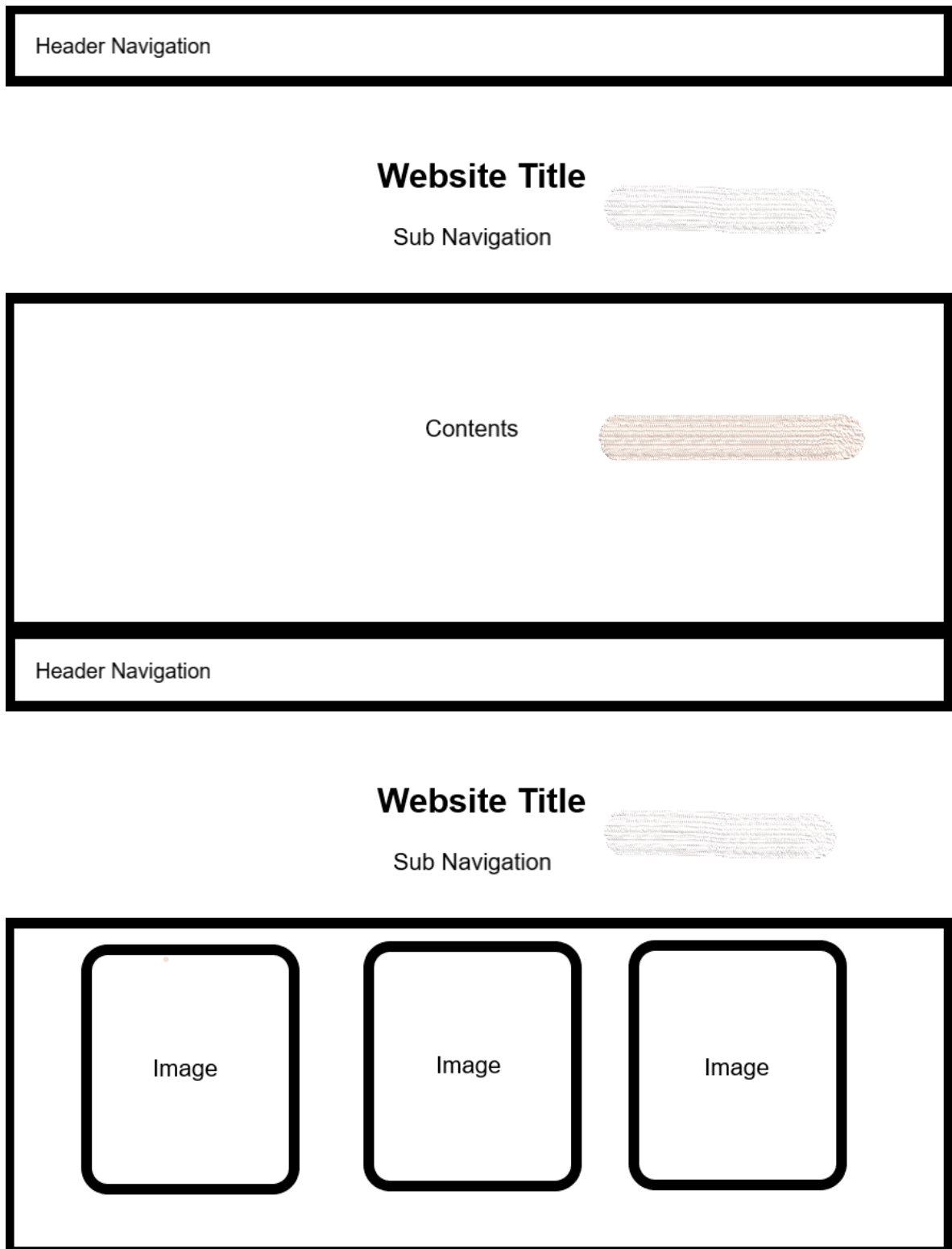


Figure 3 Web Interface Blueprints

10/16 – Project Kick-off Meeting

In this Zoom meeting, I showed multiple blueprints for the website interface I designed based on the last session, and we both agreed on the basic design. The client also decided to send over the pictures of her previous works and artworks and some writing samples for the website. We discussed in more detail the website functionalities and how I will position these functionalities on the website.

10/22 – Sitemap & Wireframe Creation

Based on the client's request, I created a sitemap and wireframe, as shown in *Figure 4* and *figure 5*. The current sitemap only has four different pages, including biography, previous works, blogs, and contact. I will update the subpages of the previous design works page and blogs as I receive the client's pictures and samples. The website will mainly include images rather than texts. Only the blog pages will have writing samples depends on the client's preference. This way, the client does not need to come up with lengthy writing whenever she wants to upload new images, and the website stays minimal and simple even after many uploads.

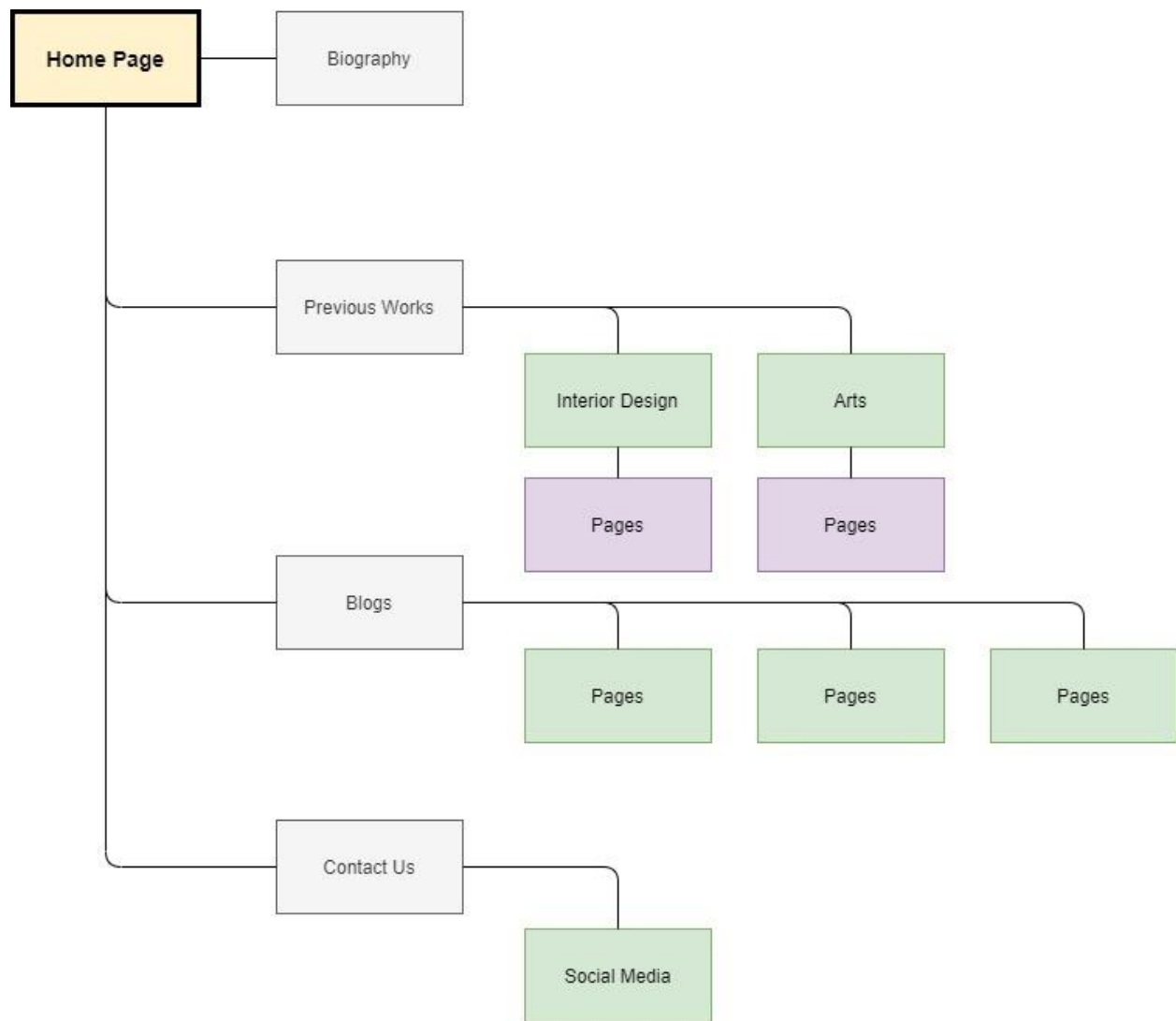


Figure 4 Sitemap

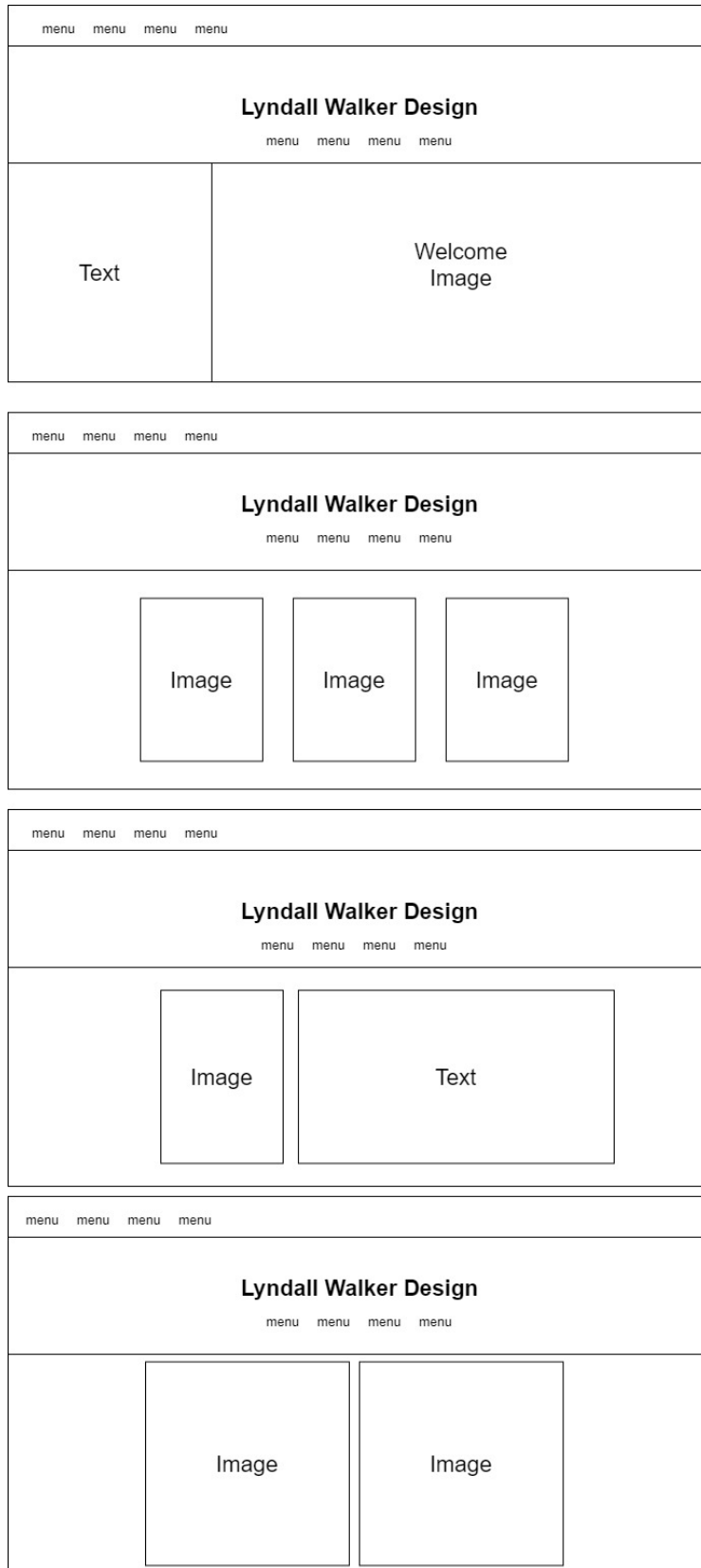


Figure 5 Wireframe

10/25 – Design Interface: Page Layout

For the web interface, the client chose a few colors and fonts. Also, based on the wireframe designs, she mentioned which part of the website will have background colors or not. As she wanted the website to be minimal and simple, we narrowed the number of colors to white, black, dark grey, as shown in *figure 6*. Also, to minimize the website's cost, we decided to use the Nunito Sans font from Google, as shown in *figure 7*. The website's title will have a bold-weighted font, and the rest of the website will have a normal-weighted font.

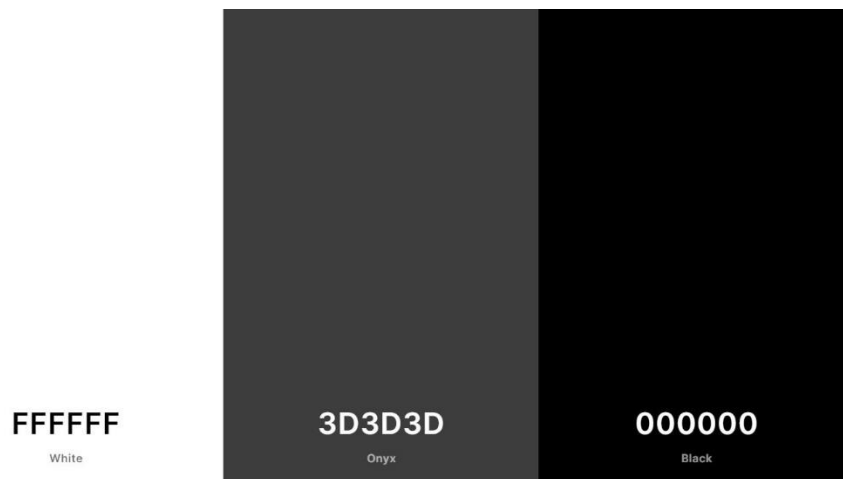


Figure 6 Color pallet for the website

Extra-light 200

Almost before we knew it, we had left the ground.

Extra-light 200 italic

Almost before we knew it, we had left the ground.

Figure 7 Nunito Sans fonts used

First, I researched any resources I can use to build a website, as it is much easier and better in looks than building it only using HTML and CSS. I decided to use

the front-end framework called Bootstrap since I used it to build my website in my previous class. I chose not to use the themes because this will make it much harder to adjust according to the client's requests. I used a starter template in Bootstrap. Also, I used the PhpStorm IDE to work on the website. First, I worked on the header navigation and the title of the website. We discussed having the business name "Lyndall Walker Design" as the first thing the visitor will see. As shown in *Figure 8*, the header navigation includes biography, design service, blogs, and contact at the moment.



Figure 8 Header navigation

As discussed in the previous meeting, the business name will be in the middle of the website's upper section, as shown in *Figure 9*. Below the business name, I included the sub-menus to make it easier for the visitors to move to different pages.

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Figure 9 Business name on the main page

I used a carousel feature to show multiple images rather than one fixed image for the main page, as shown in *Figure 10*. Initially, I made the carousel half-sized of the

full screen; however, the client preferred to have a full-sized picture because the size of the client's photographs is large, and they have high qualities. Additionally, below the carousel, the main page will show three images of her most recent projects in each subpage, such as blogs and previous works.

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Welcome to Lyndall Walker Design.
The best design in Brooklyn, New York!



DESIGN SERVICES

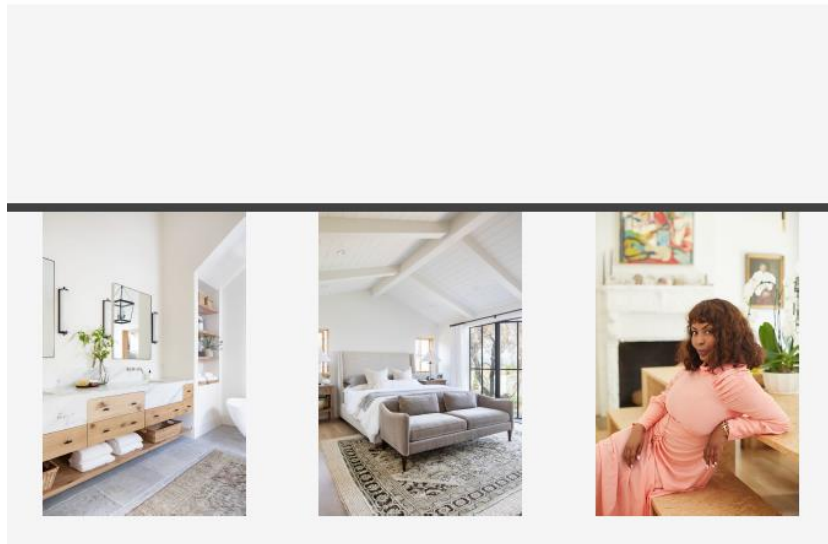


Figure 10 Main page

11/2 – Coding the website: biography and contact pages

This week, I worked on the biography and contact pages. The client wanted the visitors to quickly identify her interior design styles, which are minimal and modern for the biography page. So, we decided to insert one image on the left that could represent her and a short biography on the right. I temporarily used the grey color for the background to distinguish between the head navigation bar and the contents, as shown in *Figure 11*. At this time, I used a sample picture and text.

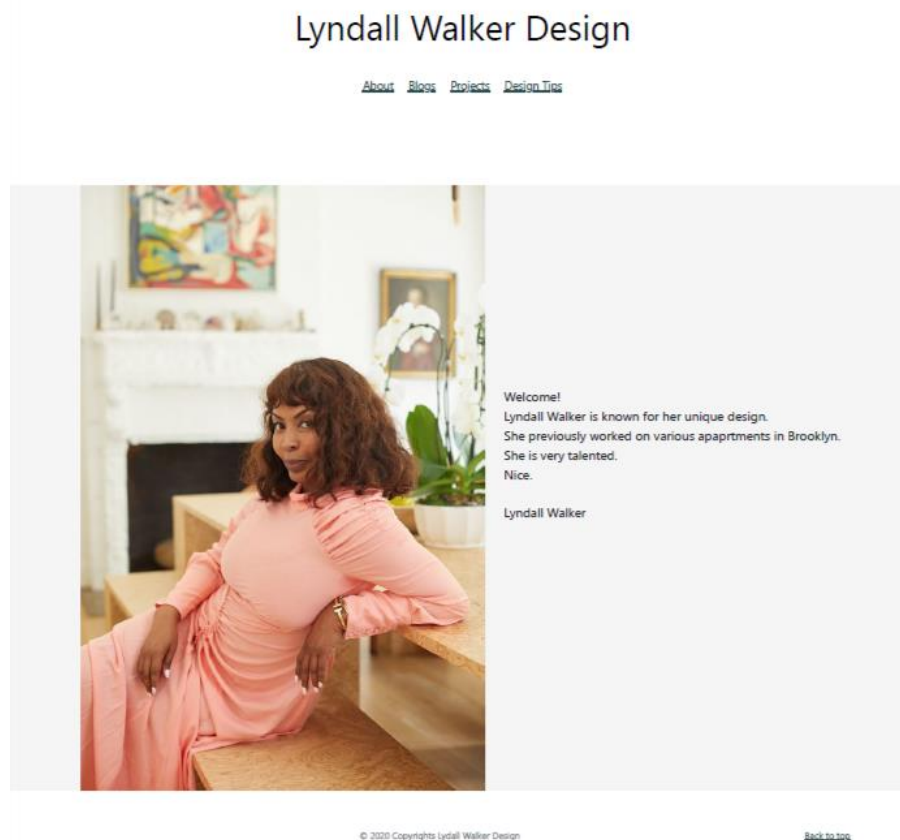



Figure 11 Biography page

Like the biography page, the contact page has one image on the left side and the form on the right, as shown in *Figure 12*. I used the HTML form to validate the visitor's information. The visitor can only leave the name and the message to the client, but

I plan to add the input space for the visitor's email address. Additionally, the form will send the visitor's message directly to the client's business email.

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Name

Message

Submit

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Figure 12 Contact form

11/4 – Coding the website: blog page

I researched a few sample blogs close to the client's design philosophy: minimal and modern. Since it is where the client writes about her daily life, I used the date as a title. As shown in *Figure 13*, instead of showing all blogs on one page, I used one main image for each writing. The visitors can scroll through the main pictures and click to read in more detail.

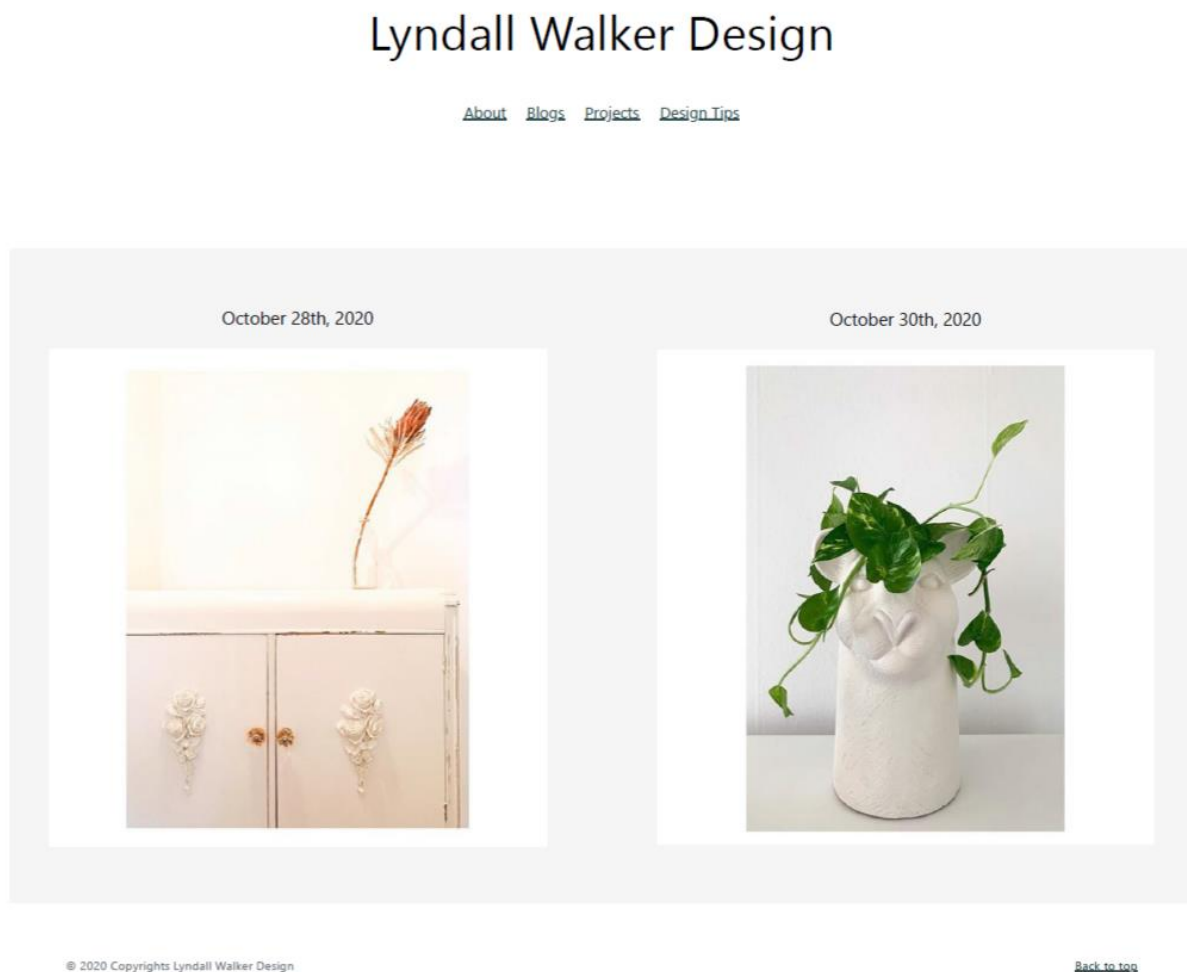


Figure 13 Blog

For consistency, I added the same background color to all pages. I will remove the individual images' white backgrounds when the client decides to use either a square or portrait size. There are currently only two images per line, and each image and date title is clickable. When the visitors click the image or title, the page will take to each subpage with more details called "blog pages," as shown in *Figure 14*.



Figure 14 Blog Pages

Similar to the blog page, each page has a grey background color for consistency. I used a small carousel slide to show multiple pictures. The title and the body of the blog writing are next to the slide. One issue that arose on the page is that the slide cannot adjust the multiple images to the same size. Instead, the client needs to have the same size for all photos in the slide for the website interface to stay balanced. Additionally, adjusting the slides' size was especially difficult, as it quickly changes the whole structure of the page. Therefore, I need to discuss the blog page's slide option with the client for a better option.

11/6 – Coding the website: main, footer, blog page, navigation bar, and logo

After the weekly zoom meeting on project status and update, the client gave some advice on the web interface and a new logo for her business, as shown in *Figure 15*. The logo is used in the navigation bar, and the visitor can click the logo anytime to go back to the main page.

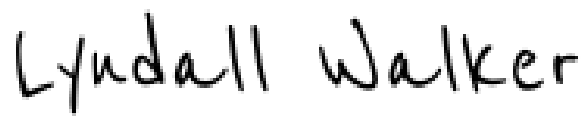
The image shows a handwritten logo in black ink. The text "Lyndall Walker" is written in a casual, cursive script. The letters are connected, and the overall style is informal and personal.

Figure 15 Lyndall Walker Design logo

Although the website was minimal and modern, it gave a gloomy impression rather than an uplifting impression. As the client's personality is cheerful and jolly rather than heavy and serious, we decided to remove the website's grey background to reflect her image. Additionally, instead of having the same navigation bars in two different places close to each other, there is only one navigation bar on the top of every page, as shown in *Figure 15*.

Lyndall Walker Design



Figure 16 Main page

Moreover, I also reduced the title space's size to get rid of extra whitespace and got rid of the welcome text on top of the carousel slide to make it simple.

Next, as shown in *Figure 17*, I changed the navigation bar from sticky to fixed style. Having a fixed navigation bar lets the visitors move around between different pages effortlessly without scrolling up. By giving transparency, the navigation bar does not block the visitor's view. Furthermore, I fixed the layout of preview images for the subpages. Instead of large gaps between photos, I centered all preview images.

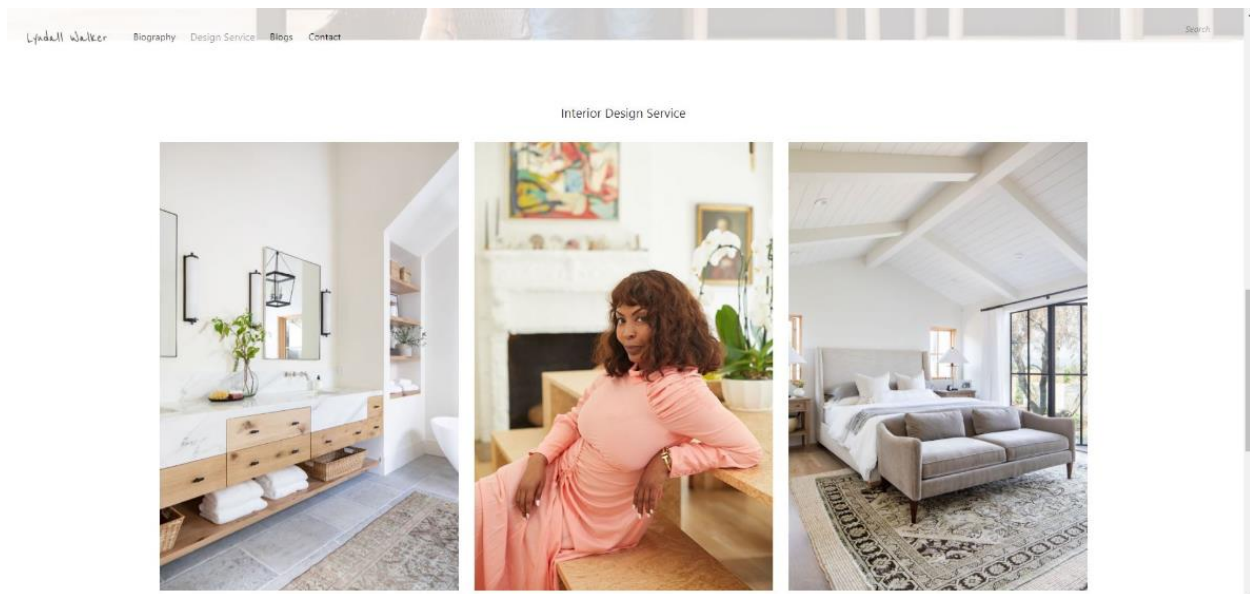


Figure 17 Main page continued

For the footer, as shown in *Figure 18*, instead of having a "back to top" button, I included the client's social media.

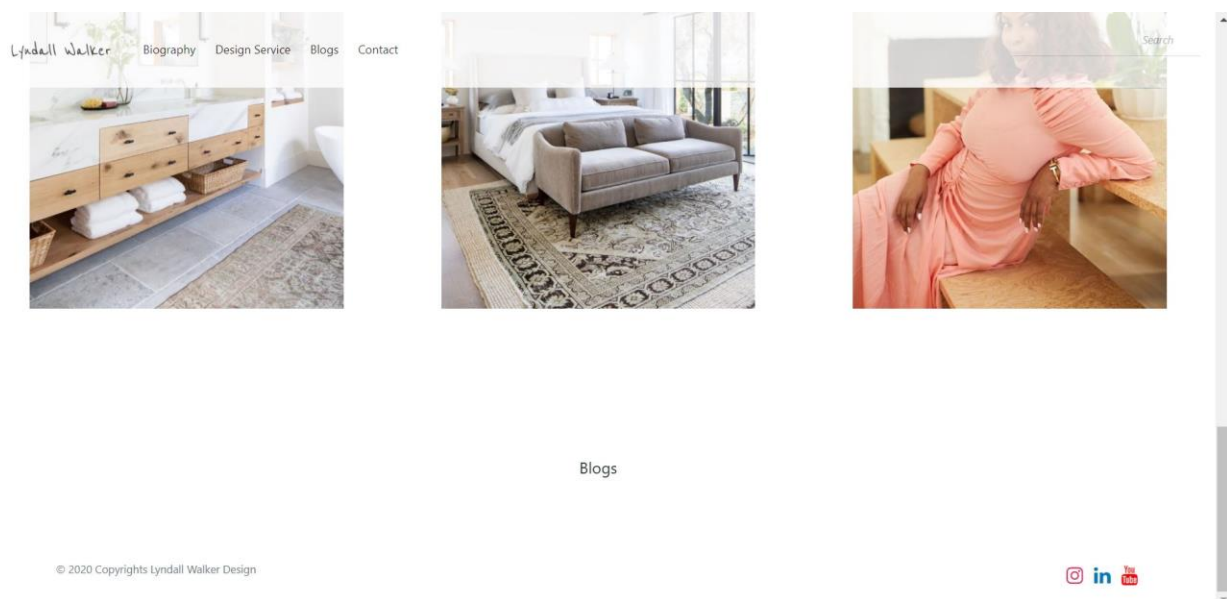


Figure 18 Footer

The client requested the blog title to be hidden from the blog page but show when the visitor clicks the image. As there is no background color for the pictures, I changed the layout to have no space between the photos, as shown in *Figure 19*. The client preferred using a square frame for the blog images than a portrait frame, so I used the sample images with the same structures.

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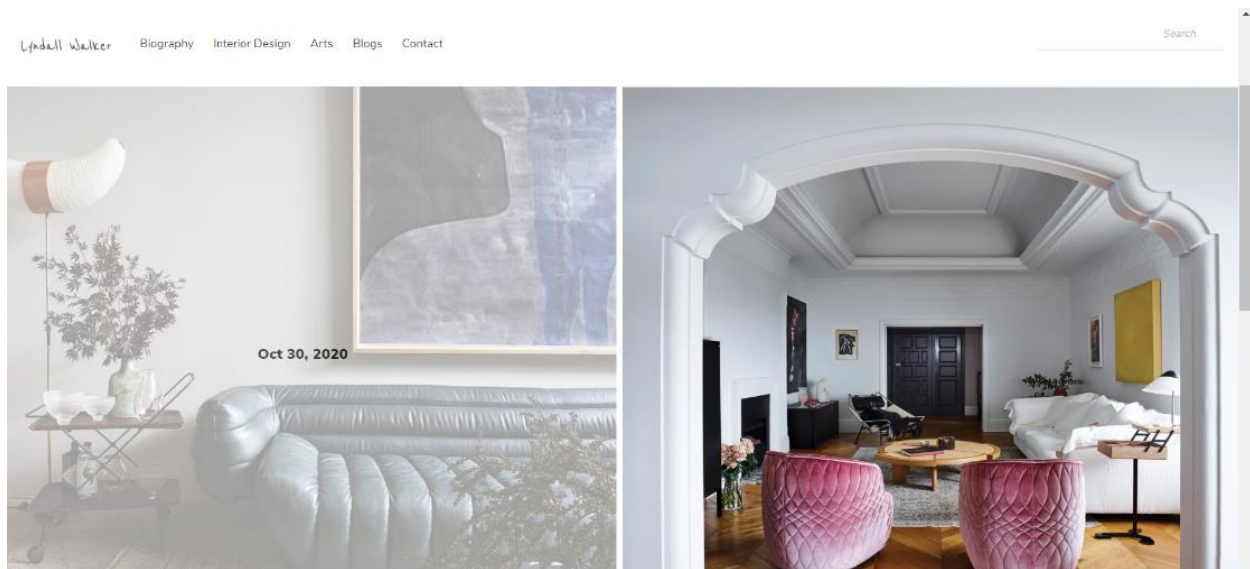


Figure 19 Updated blog page

I used an overlay effect to show the title when the visitors hover their mouse on top of the image. The client can simply leave the date as the title, or she can write a summary for each blog. There was no Bootstrap function for the overlay effect, so I used CSS to create an overlay effect class. This CSS class can apply to many different images to show the same impact.

Additionally, we discussed using the mini carousel slide in the subpage for the blog. We decided to remove the slide instead of having multiple images on the bottom because the slide next to the writing can easily distract the visitors from focusing on reading. I made a container on the bottom section of the page to show multiple images. Each subpage has one medium to a large-sized image on the top area, the writings with a date in the middle, and various pictures on the bottom, as shown in *Figure 20*.

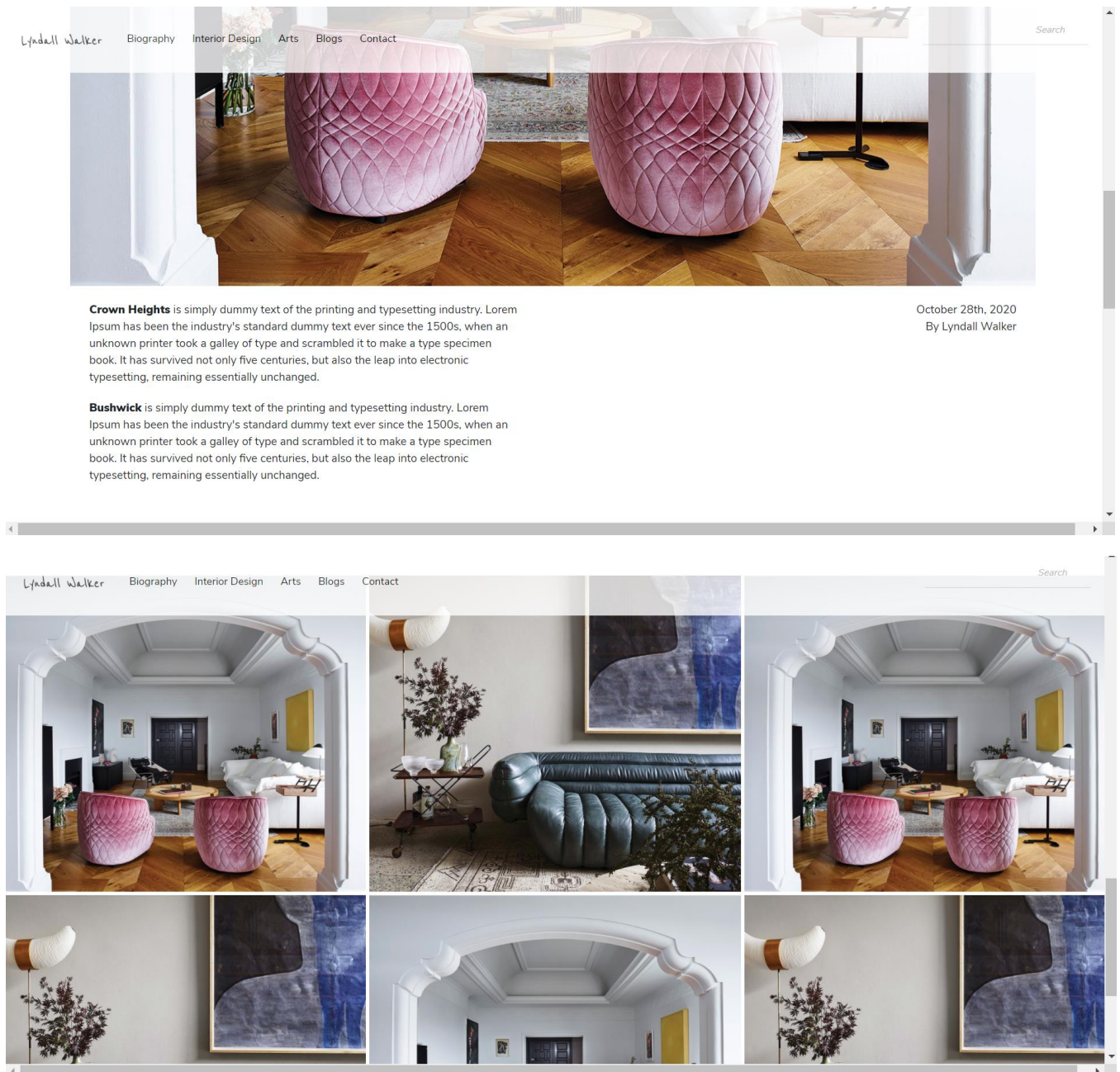


Figure 20 Updated blog page

11/10 – Coding the website: interior design service

The page for the client's previous interior design project was the most challenging part of the project. Since this page is the website's purpose, the client and I spent the entire weekly meeting on this subject. Similar to the blog page, there are subpages to each interior design project. I coded to have three images per line for the interior design page, but later it was changed to have two pictures and one text block per line. This way, the client can write a summary of her design, and the visitors can quickly identify which images belong to which project. The visitors can also click the summary text to open the subpage.

As shown in *Figure 21*, the overlay effect has been used only for one image. The client and I discussed setting the text summaries on different columns, but she has not yet finalized. Also, on the interior design page, the portrait sized images have been used because the client takes most of the interior design process pictures with her iPhone. Therefore, when she updates her page, she can use her original images rather than photoshop them into specific frames.

Each interior design project's subpage needs to present the client's design works vividly and with impact. In the beginning, the client wanted all the images to fill the screen to show details of her design works. However, the visitors can be easily overwhelmed by multiple full-sized images depends on their monitor sizes. Although a full-sized image might help visitors notice the design's details, the visitors can overlook the big picture of the design. Therefore, we decided to include one full-sized image that shows the leading interior design and medium-sized photos that show different parts of the design work, as shown in *Figure 22*.

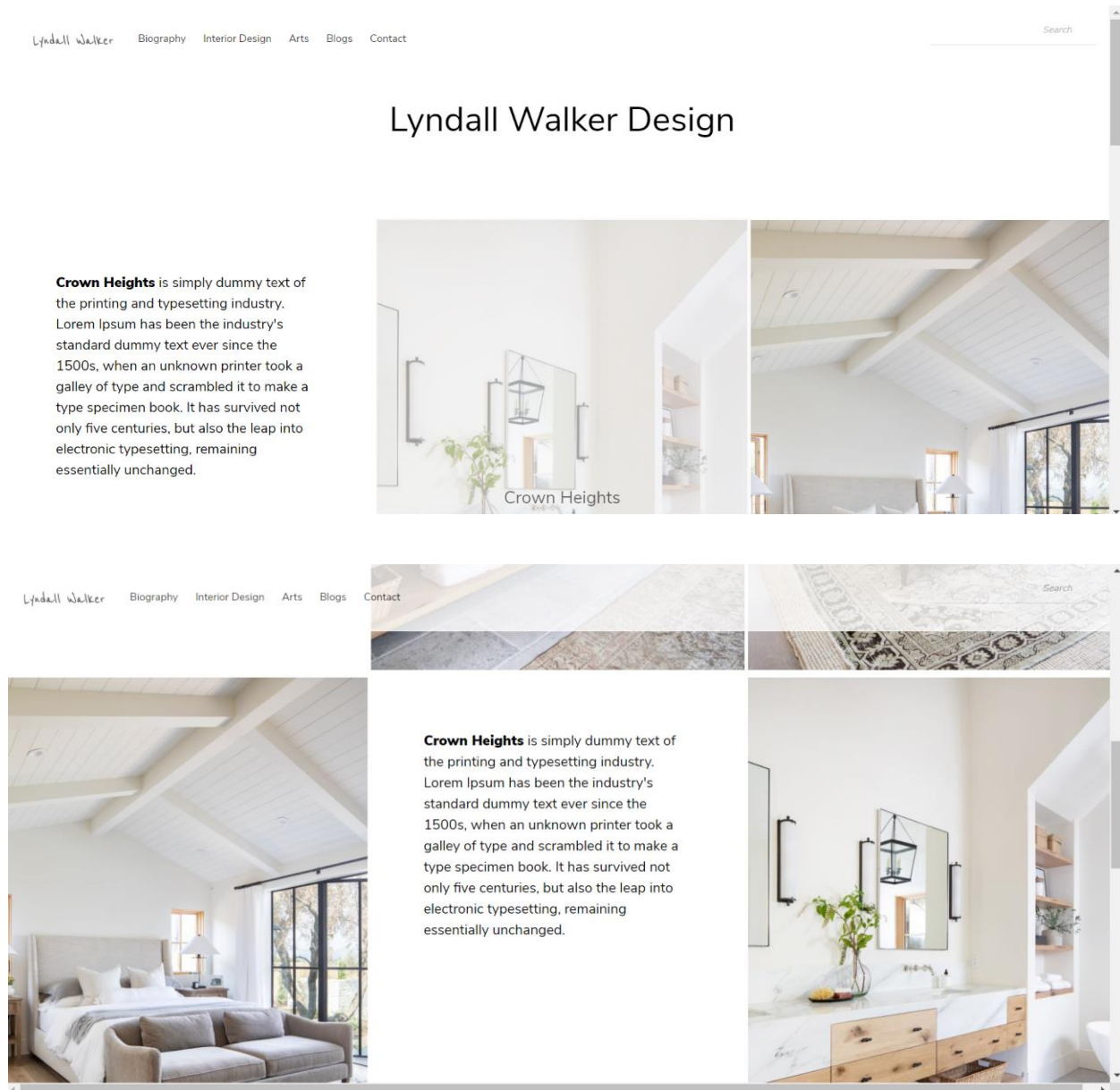
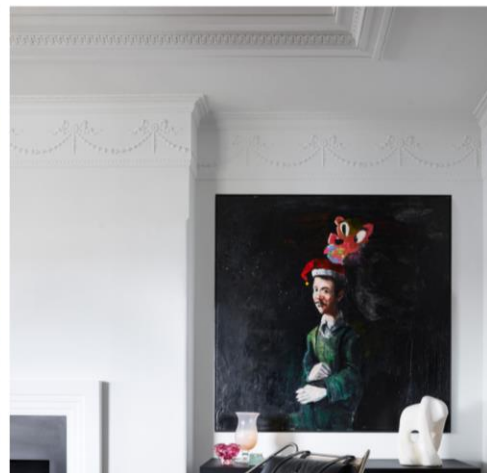


Figure 21 Interior design page

Lyndall Walker Design



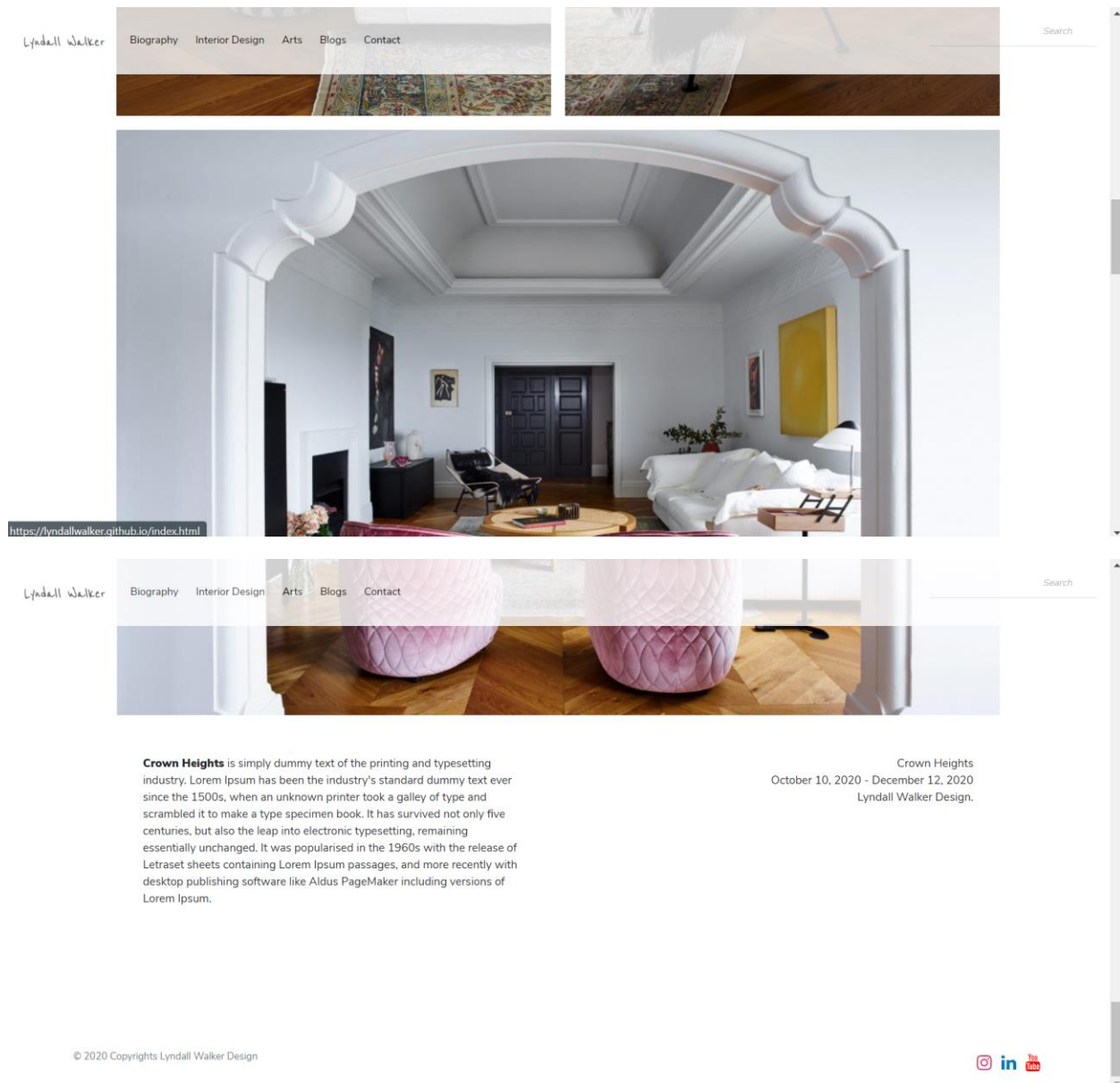


Figure 22 Interior design page

The subpage includes a design description, the name, and the date at the bottom of the page.

11/12 – Coding the website: art, biography, contact pages

For the art page, I applied a Masonry-style layout that lays out several contents of different sizes without leaving gaps between using the Bootstrap Cards option, as shown in *Figure 23*.

Lyndall Walker Design

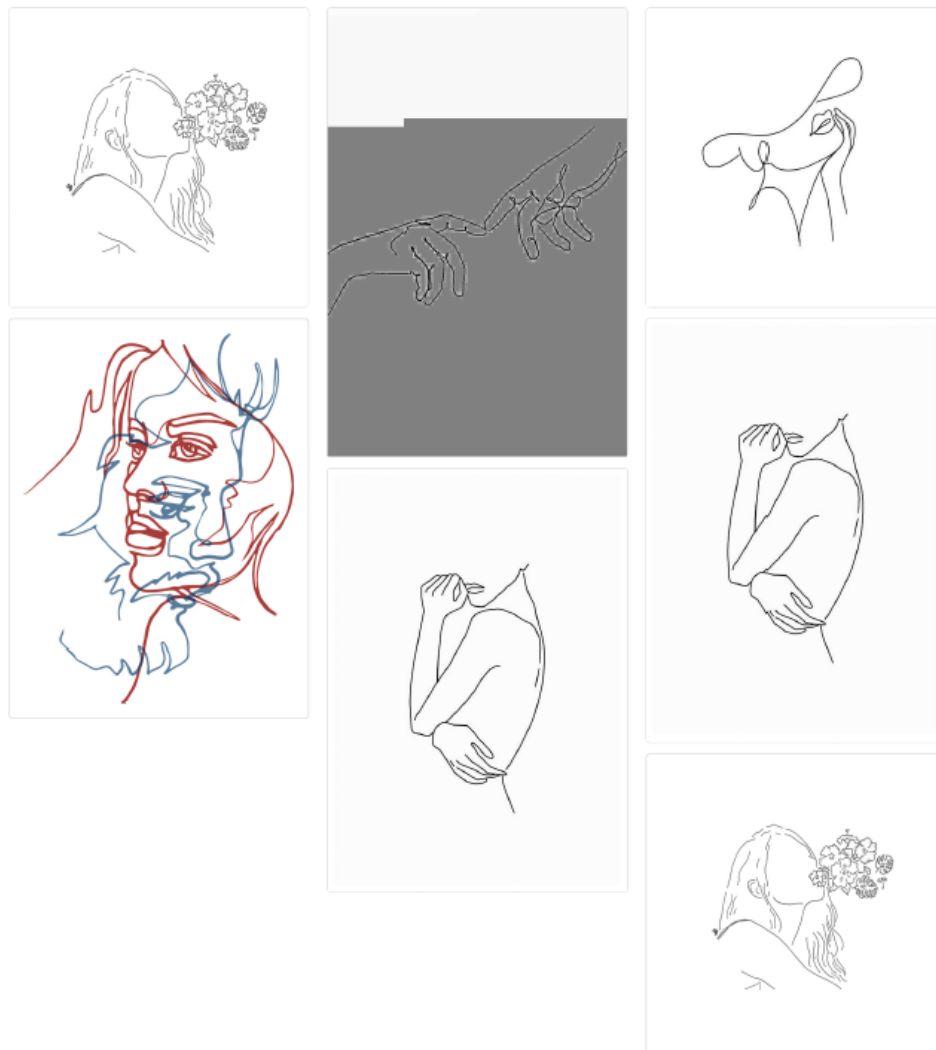


Figure 23 Art page

Previously, I coded the page to have a multiple square frame image. However, after looking through the artworks the client shared at the meeting, I noticed most of them had different sizes and shapes. Although adding a new image to the Masonry-style layout is slightly more complicated than the traditional structure, the diverse style layout can make the website more fun and unique.

The visitors can click on the image to view the full size, the title, and the date of the drawing, as shown in *Figure 24*.

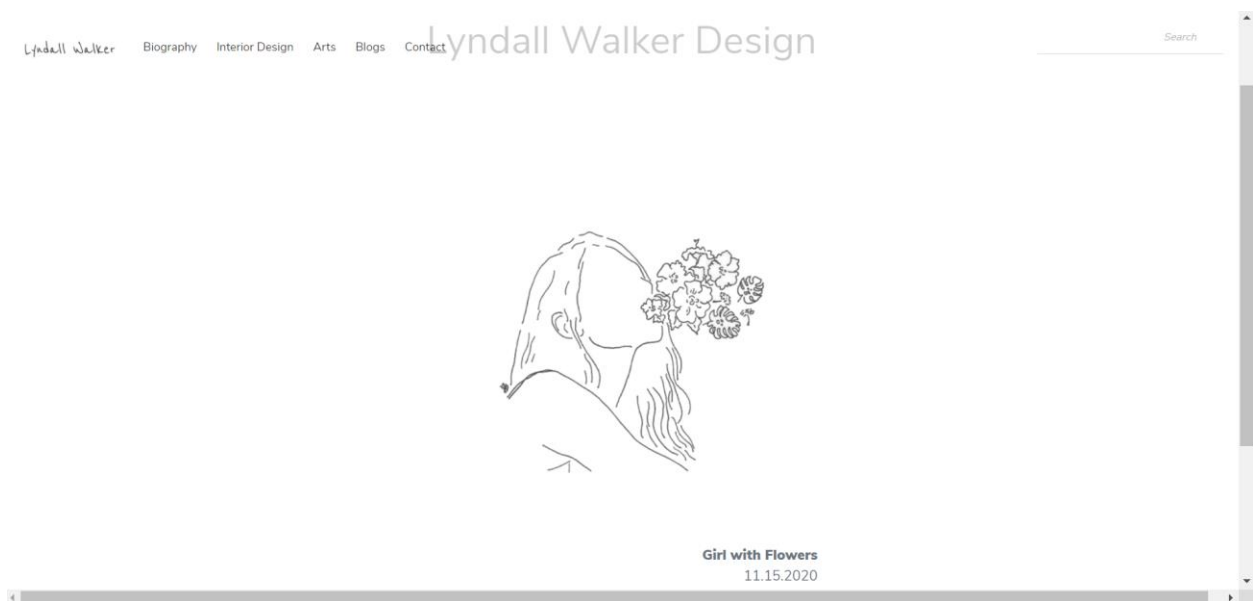


Figure 24 Art pages

Also, I updated the biography page by getting rid of the background color and changing the layout, as shown in *Figure 25*. Instead of having the image on the left, I changed the structure to have the biography on the left. I aligned the text and the image to be centered vertically and horizontally. To avoid being too plain, I increased the biography's width and bolded the client's name.

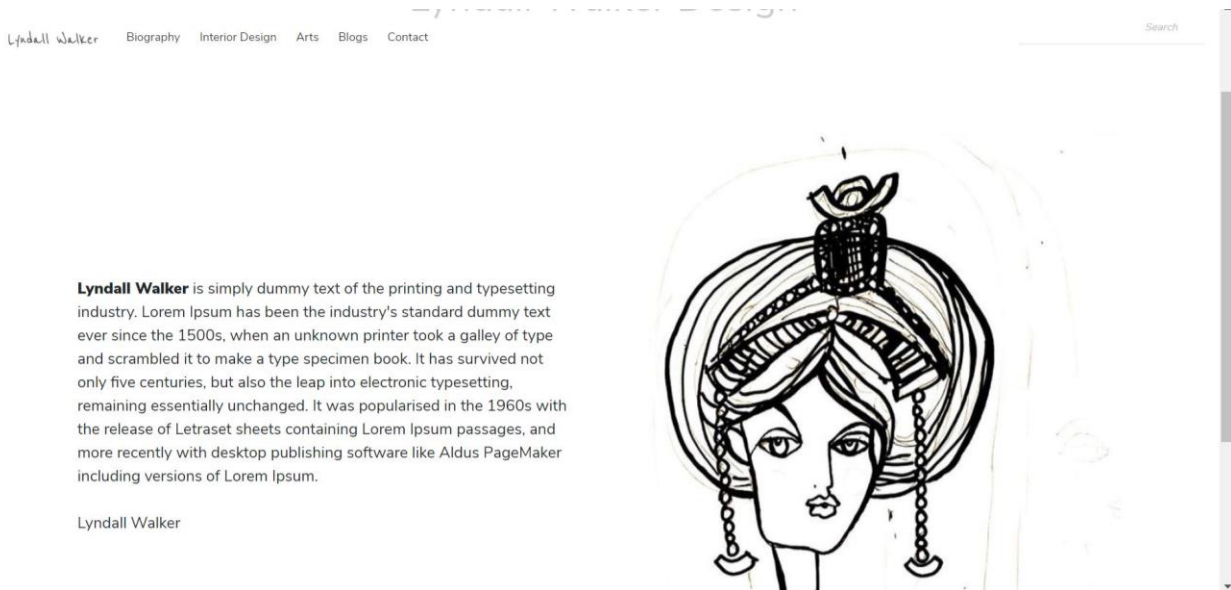


Figure 25 Updated biography page

The contact page also has been updated by removing the background color and changing the layout. Like the biography page, I changed the image's position and the contact form, as shown in *Figure 26*.

Figure 26 Updated contact

11/14 – Coding the website: main page, a mobile responsive, search function

I updated the section under the main carousel slide where shows the latest posts on the website. I set all the texts on the far left block to make it readable for the visitors, as shown in *Figure 27*. For instance, if the visitors click the "Latest Blogs" part, it will take them to the blog page, and if the visitors click the image, it will take them to that specific blog page. All photos have the overlay effects and show the title when hovered.

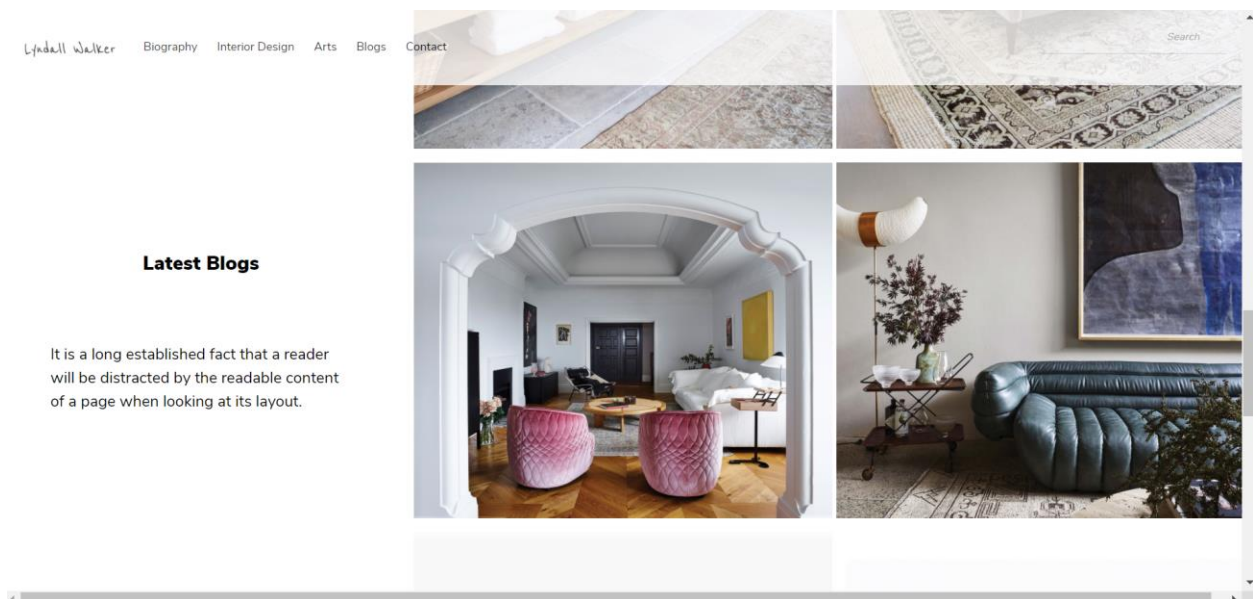


Figure 27 Updated main page

Before, I tried using the CSS media for mobile responsive design. However, I took advantage of the Bootstrap4 grid system, especially for the mobile and tablet screens, as shown in *Figure 28*. Because there is a significant difference between a laptop screen and a mobile screen, I needed to make sure the website is responsive

to different screens. I adjusted the website to have only one image per line on the small screen size, such as a mobile screen. The navigation bar is still fixed and collapsed on top; the visitors can easily navigate between pages. Also, the logo in the navigation bar still works as returning to the main page.

Additionally, the client and I decided to remove the search function on the website. The visitors can easily find the client's previous design works and artworks; we predicted the search bar would not be critical.

Finally, I removed any unused codes and unnecessary comments from the HTML and CSS pages.

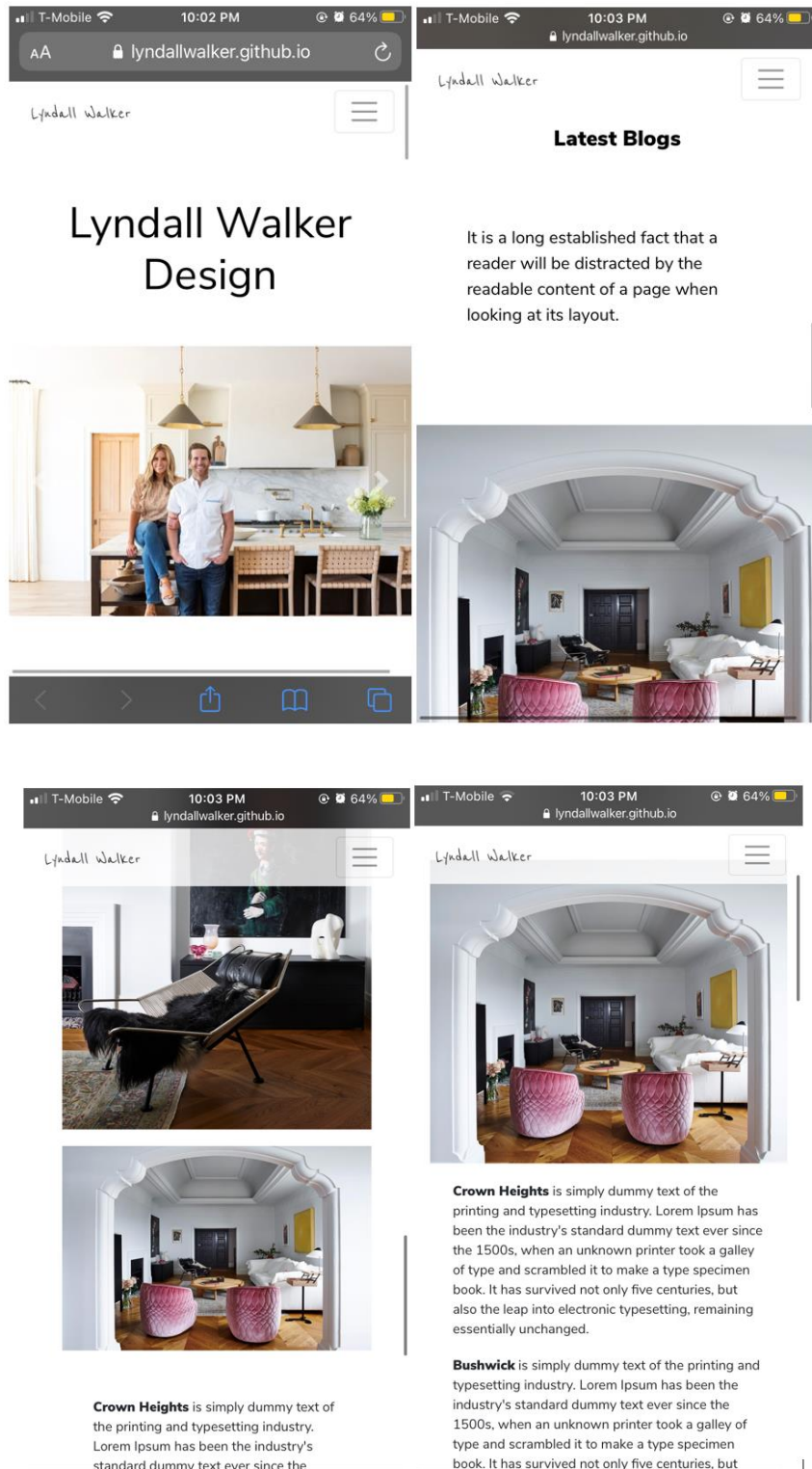


Figure 28 The website on a mobile screen

11/15 – Coding the website: contact information page, added functions.

Instead of leaving the removed search box blank, I added the client's Instagram account as a button. Because the client does not use any other social media other than Instagram, I got rid of two different social media icons from the footer. Additionally, once more content is added to the pages, the pages can be lengthy. So, I inserted the back-to-top button back to the footer, where the social media icons used to be located, as shown in *Figure 29*.



Figure 29 Updated navigation bar

Additionally, although the visitors can easily send emails to the client using the form on the contact page, I added a simple page to show her contact information, email address, and the location with a Google map. The visitors can simply reach this page by clicking the phone icon in the navigation bar.

The client's email address is embedded with the HTML mail function for the contact information page, which opens up individual email applications. The address is also clickable, and it takes the visitors directly to the client's location on Google map. The client's address is already embedded in the Google map; the visitors can easily find the direction from their places, as shown in *Figure 30*.

Lyndall Walker Design

Contact us here.

+1 646 706 1344
LyndallWalker@gmail.com
1289 Dean St



Figure 30 Contact information page

Lesson Learned

I have learned great lessons from the initiation to the completion of the project. Mainly, I have learned the responsibilities and the skills needed as a project manager and a web developer.

First, as a project manager, I have learned to manage the entire project from the start to the end on my own. Unlike the projects that I previously worked on in the classes, I needed to plan my project using the knowledge I have acquired from the studies without the professor's supervision and specific due dates for different parts of the project. I have learned to create various analyses such as risk analysis and management, cost-benefit analysis, and situational analysis for the project from this project.

Second, I learned to communicate efficiently with the client, understand her needs and wants, and separate them from her requests. During the client meetings, I updated the project status and tracked down the client's advice and suggestions using different methods that I learned from the project management class.

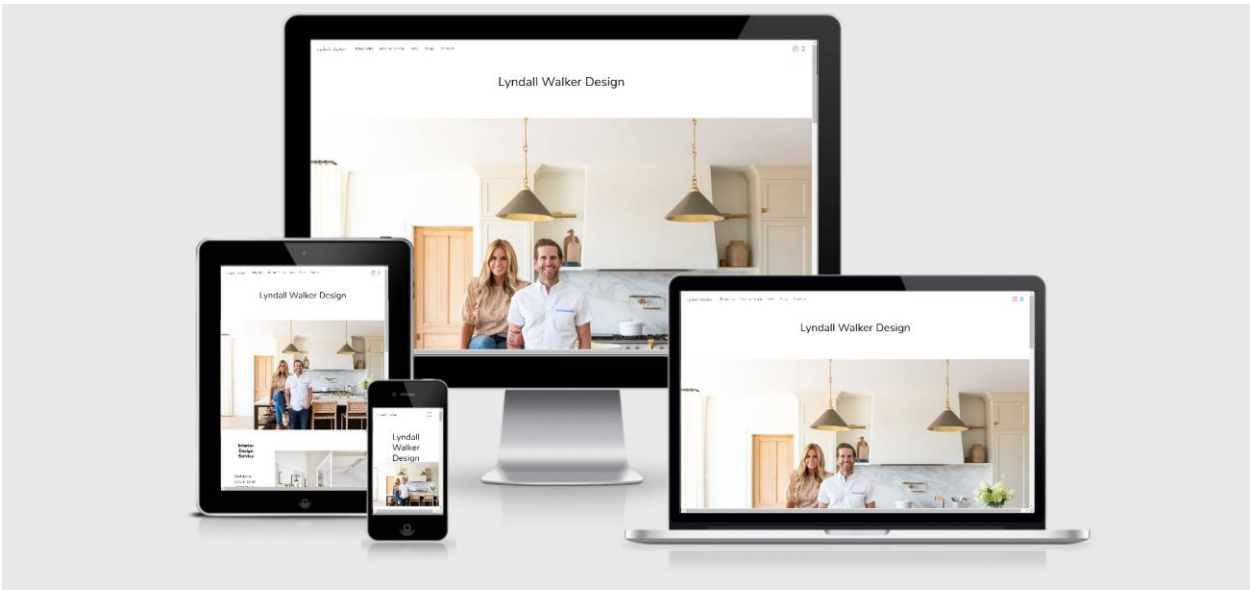
As a web developer, I have learned various technical skills to build a well-functioning website using HTML, CSS, and Bootstrap4. To meet the client's requests on web interface design, I needed to learn more advanced CSS. Also, I have learned to write code as clean and straightforward as possible since the client plans to manage the website in the future. Explaining the basic structure of HTML and CSS and writing a simple code to upload and remove the post to the client who does not have any prior knowledge of web development have given me the chance to understand website structure better. Lastly, I have learned about the web development process. When I created my project website, I did not plan, but I built

the website as I go. Since it was for myself, I could change the design or the functionalities whenever I wanted to. But working with a client, I followed the web development process by creating the sitemap and wireframe for the website to prevent any confusion or scope creep.

Overall, this project gave me many challenges and obstacles, but also solutions and learning opportunities.

Conclusions and Summary

LyndallWalker.com, a website owned by Lyndall Walker Design, was planning to publish a business website for her residential interior design service in Brooklyn, New York. The project successfully created a personalized business website with pages, including the contents such as biography and previous interior design service. The website has passed the responsive test and the response time test, as shown in *Figure 31*.



Tester: webpagetest.nyi.net-66.111.3.74

First View only

Test runs: 3

Re-run the test

[View JSON result](#)

[Raw page data](#) - [Raw object data](#)

[Export HTTP Archive \(.har\)](#)

[View Test Log](#)

Performance Results (Median Run - SpeedIndex)

	First Byte	Start Render	First Contentful Paint	Speed Index	Web Vitals			Document Complete			Fully Loaded			
					Largest Contentful Paint	Cumulative Layout Shift	Total Blocking Time	Time	Requests	Bytes In	Time	Requests	Bytes In	Cost
First View (Run 2)	0.155s	1.500s	1.481s	1.503s	1.481s	0	≥ 0.000s	2.789s	20	1,447 KB	2.847s	21	1,452 KB	\$\$\$--

[Plot Full Results](#)

Figure 31 Website responsive, response test

The project and deliverables were delivered on time and accepted by the client. The client is satisfied with the business website and plans to use the website as a leading business platform for her company in the future.

Limitations, Recommendations, and Scope for Future Work

The project's limitation is that the website only used HTML/CSS and Bootstrap4, and no JavaScripts/jQuery. For example, a website with JavaScripts can show more complex features on pages such as an interactive map, displaying timely contents and videos. There are a few recommendations and improvements that can be made. The client can develop the website with Javascript/jQuery to implement more complex features on the pages. Second, at the moment, the website does not have protection from outside attacks such as malware. As I do not have any network security experience, the client will need to work on website security to prevent any information or data leak further. Lastly, the client can improve the website by adding functionalities such as subscription services. Having a subscription service can increase the website traffic and bring in more customers.

Literature Survey

Introduction

As technology advances, a business website has become a crucial factor in the business's marketing program. A website is where a business can show who they are, what they do, and build a brand image globally. Nowadays, e-commerce businesses and brick-and-mortar businesses such as local clothing stores often have business websites, even though they may not offer any online transactions. A newly started business usually begins with a business website since building and maintaining a website is relatively inexpensive compared to many other marketing methods such as a television advertisement. Additionally, a business website can become a place where a company and its customers communicate and further improve business.

The purpose of this literature review is to examine the current findings of the effectiveness of a website for a business, a well-designed web interface, and its effect on customer trust, and how a website should be designed depends on the target customers. Moreover, these findings will be used as a foundation for this project to deliver a useful business website.

A business website and its effectiveness. According to Kaplan (2020), a business website increases credibility by standing out from the crowd as there could be multiple businesses offering a similar product or service. Additionally, a website can help a company build a brand by distinctly establishing who they are, what service they are providing, how they will deliver the service and more. However, a website that does not have the most updated information or is never visited would

be ineffective. Schaupp, Fan, and Belanger (2006) noted that one of the success factors in a website is information quality, which measures accuracy, relevancy, and completion of information produced by the website. The study also found that information quality is to be a significant predictor of user satisfaction. Website speed is another critical factor in a business website. Website load speed predominantly affects a website's success, including site bounce rate, search ranking conversion, reader satisfaction, and a business's revenue (Cruz, 2020). The study implies that customers can easily find similar business websites to fulfill their goals without waiting.

A web interface and customer trust. A web interface is probably an essential factor in building a useful website. Although a well-designed website can successfully build a brand image and customer trust, not all websites effectively build a brand image or bring more customers. Furthermore, customers can see a poorly designed business website as unprofessional and lack of credibility. A business needs to consider several things to build a useful website for a business.

Karimov, Brengman, and Van Hove (2011) found that incorporating social presence into a web interface such as embedding facial photos or trust-inducing video clips of business owners, or live-help functions increased customers' initial trust. For example, it is easy to find live chats on many trusted organizations' websites such as Google, Amazon, and USPS. Additionally, according to the study done by Lowry, Wilson, and Haig (2014), "We have shown that credibility-based logo design and credibility-based site design quickly trigger positive perceptions regarding the credibility of the firm sponsoring the website, which produces trusting beliefs and intentions" (p.26). The study shows how important a business website is to have a

good logo design and web interface to gain customer trust. The importance of a well-designed web interface can also be found in the non-profit industry. According to the study done by Huang and Ku (2016), various information communicated via a website can help create the organization's brand image. Furthermore, specific images on the website have more impact on users' intention to donate.

Lastly, small details in a web interface can improve or impair the effectiveness of a website. For instance, Search Engine Optimization (SEO), a way of increasing website traffic quality and quantity, is vital in websites. In HTML and CSS: Visual quickstart guide (Castro & Hyslop, 2014), the authors state the following:

SEO – that is, your page's ranking in search engine result – can improve, because search engines put an emphasis on the portions of your content that are marked up in a particular way. For instance, the headings tell the search engine spider the primary topics of your page, helping the search engine determine how to catalog (or index) your page's content. (p. 23)

A web interface and target customers. A business must design a web interface based on its target groups, such as gender, age, and interest, to build a useful website. A business web interface and functionalities for an interior designer would differ from a consumer electronics store or a supermarket. For example, a supermarket web interface will include lots of pictures of fresh food and item descriptions so that customers can easily find grocery items. On the other side, a web interface for an interior designer will include fewer images and texts than the supermarket website. In another example, the article "Effective website design for experience-influenced environments: The case of high culture museums. Information & Management" (Paulld & Straub, 2014) found that esthetics seemed to be the most

critical design criteria for museum experiential interfaces. The web interface design would be entirely different for a government website that emphasizes functionality and practicality.

Also, the websites dominated by one gender need to be designed differently to be effective. The research done by Moss, Gunn, and Heller (2016) found that there are differences when male and female are designing their websites, such that female shows the greater likelihood of seeking ease navigation than man, females more likely to use rounded shapes, more colors, informal images and certain specific colors such as yellow and pink for typography.

Web and mobile usability. Another crucial factor of a useful website is web usability. According to the International Organization for Standardization (ISO), web usability refers to measuring efficiency, effectiveness, and satisfaction with which users can achieve their goal on a website. The study by Hernández, Jimenéz, and Martin (2009) reported that the navigability and usability make users feel secure and comfortable when using the website, hence increasing the probability of completing the transactions.

Even if a website has the most admirable interface design, if a user cannot find what they were looking for in a reasonable time, the website would no longer be useful. Tan and Wei (2006) noted, ". . .where Websites change frequently, a user is constantly faced with new designs of a Website that it may be pointless for a user to remember what information is located where within the Website" (p.269). Hence, even a website has a well-designed interface, it can reduce effectiveness if it negatively affects web usability. Additionally, Belanche, Casaló, and Guinaí (2012) stated the following:

First, due to the influence of usability on consumer behavior, management should not give priority to the design of complex websites full of multi-media effects but concentrate instead on designs and structures that are simple and easy for the user to understand. (p.130)

For example, Cheiw and Salim (2003) commented that display space on a website should not be divided into many small sections to improve readability. A mobile website has a significant advantage in that a user can access a website at any time without needing a computer. As more people own smart devices such as smartphones and tablets, a website owner must consider mobile usability. Wong (2012) found that people tend to use a website both on PC and mobile, and therefore it is worth developing a mobile website on top of an existing website. It is also essential that a mobile website is in proper formation, for example, not having cluttered items squeezed on a mobile screen.

There are many specifications to improve usability, including user interface attractiveness, emotional effect, and user control, and these should be thoroughly investigated.

Conclusions

The existing research around the web interface and usability emphasizes user experience and how easy and quick it is for users to understand and navigate the website. The current research especially demonstrates how web interface and usability are closely interconnected, and both need to be elaborated together. Numerous studies show that a well-designed web interface can increase initial customer trust. For example, a website with a business owner's face can improve its

credibility and customer trust. A website and logo design can also positively affect customer trust—additionally, small details such as search icons and images in web interface matter. Therefore, website creators must consider all designs and select them carefully. Secondly, a business should design its web interface based on its target group. A web interface and functionality will be different based on target groups. Lastly, web and mobile usability is crucial in a website. A business owner should thoroughly design a mobile website since it is difficult to contain all website information into a smaller interface without cluttering items. There are many specifications for web usability, and a website creator must consider including those mentioned above.

There are thousands of websites on the internet, and more websites are created every day. E-business has become more competitive as technology advances. The customers can quickly move on to the next business if they find difficulties browsing their business website. In conclusion, building a useful business website is not a simple process, but it requires thorough research on a target group, web interface design, web usability, and more.

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Appendices

Project Charter

Project Manager: Sarah Kim

Sponsor: Lyndall Walker

Prepared by October 19, 2020

Name and Location of Client Organization:

LyndallWalker.com

1289 Dean St, Brooklyn NY 11216

Revision History

Revision date	Revised by	Approved by	Description of change

Project Goal

The client is a new starting business owner in the interior design industry. The client is offering her service in residential renovations and home improvement. She has successfully renovated two different apartments in Crown Heights, Brooklyn, which led to increased rent and popularity among tenants.

This project aims to create a professional website that provides information about her business and can be used as a daily blogging of her interest to attract more people to her business. The goal is to create a website that is easy to navigate for

the clients and her customers. This website will help to promote her business by showing her previous projects and reviews from her customers.

Problem/Opportunity Definition

Due to the current pandemic, most businesses, including interior designers, offer their services using online platforms. Although this time can give challenging times to the business owners, especially those who are not in essential business such as grocery stores, the client will have a better competitive position in the interior design industry by having a legitimate business website.

Proposed Project Description

The project manager will build a website for the client based on the client's preferences in the design and functionalities. The website will include different features such as biography, blog, contact page, and more. Due to the pandemic, the project manager will be mostly communicating with the client via email, messenger, and phone calls every week to ensure the project process. Also, the project manager will be using video meetings every two weeks to check the project status.

Project Sponsor

- Lydall Walker
- The business owner is responsible for all projects she is involved in, including communicating with new customers and planning to hire external services.
- The sponsor (supervisor) will supervise and monitor the project process every week and advise when needed.

Objectives:

Technical Objectives:

- Finish and launch the business website with a minimum of 4 functionalities, mobile-friendly, and response time less than 3.5 seconds.

Timing objectives

- Complete the entire project by December 1, 2020.

Resource objectives:

- I utilized the required resources to complete the project.

Budget objectives

- The cost of the entire project is not to exceed \$7,300.

	Planned	Actual
Salaries	7,000	
Web Hosting Service	300	
Total	\$ 7,300	

Scope objectives:

- Build a professional website according to the client's request on design and functionalities. The website will include a minimum of 4 different functionalities, including biography and previous projects pages. The website will be available by December 1, 2020.

Project Selection & Ranking Criteria

Project benefit category:

☐ Compliance/Regulatory ☒ Efficiency/Cost reduction ☐ Revenue

increase

Portfolio fit and interdependencies

The project will not affect the client's current works. However, all of her business is relevant to the project.

Project urgency

High

Cost/Benefit Analysis

Benefits	Tangible		
	Revenue		\$30,000
		Total	\$30,000
	Intangible		
	Build a brand image		
	Better competitive position		
	Easy communication with customers		
	Build and maintain customer relationship		
	Possibility for business expansion		
		Total	\$30,000
Costs	Tangible		
	Project manager fee	\$100/hr * 70 hrs	\$7,000
	One year web hosting service		\$300
	Webmasters service		\$0
	Laptops (using the project manager's own)		\$0
		Total	\$7,300
	Intangible		
	Not able to meet in person due to pandemic		
	Extra meetings for any delay and issues		
	Poor maintenance of website		
		Total	\$7,300
Offset			\$22,700

The tangible benefit from the project for the client will be the revenue. I estimated the revenue to be approximately \$30,000 based on the client's previous projects. However, the amount of income can be disparate depends on the size of the project she works on, the economic situation, and other external factors. The client will build a brand image through her professional website for the intangible benefit, putting her in a better competitive position than before. The website will make it easy for her to communicate with her customers, building and maintaining a valuable customer relationship. Lastly, this project can increase the probability of business expansion.

The project's highest tangible cost for the client will be the project manager's fee of \$7,000. I calculated the project manager's price based on a website consultant's market hourly rate multiplied by 70 hours spent on the project. Additionally, one year of web hosting services is estimated to be between \$200 and \$300 a year depends on the brands. The project will utilize Google Webmaster Tools provided by Google at no cost, and the cost of a laptop used to build the website is at no cost as the project manager is using her own. The intangible cost includes not holding in-person meetings due to the pandemic; therefore, the client and the project manager need to spend more time communicating; otherwise, this will bring delays and issues. Lastly, low website maintenance, such as having outdated information on the webpage, can significantly cost the business.

In conclusion, the offset for the project will be approximately \$7,300.

Other Business Benefits

This project can benefit the client in using online marketing efficiently. The future training on the website, such as writing, editing, and removing posts, will help her become familiar with the web environment.

Assumptions

1. The client fully supports the project and will provide necessary data such as blog content and previous projects on time.
2. The client will learn to maintain the website, including writing, editing, and removing posts.
3. If there is any confusion or disagreement, the client and the project managers are willing to work together to solve the issue.

Scope

■ Quality

- Build a business website with a minimum of 4 functionalities, mobile-friendly, and the web responsive time less than 3.5 seconds.

■ Time

- Finish the blueprint by October 25, 2020
- Finish the entire project by December 1, 2020
- Submit the final report by December 7, 2020

■ Resource Allocation

- Utilize various successful interior designers' websites to learn the trends and web-interface designs.
- Utilize the free Google Webmaster service.
- Use online resources to understand the better web interface design and functionalities.

Out of scope activities

- Help the client get familiar with HTML by teaching her how to write, edit, and remove posts.

Constraints

1. Due to the current pandemic, we must carry out all meetings online. Online sessions build a weaker business relationship and less straightforward communication than face-to-face meetings.
2. The client has previously never had a personal website or worked with HTML/CSS.
3. There are limited resources for building a website. For example, no HTML workshops, meetups, but only online help is available.

Risks and Mitigation Strategies

1. There is not much risk in the process of building a business website. The client has already been working on a project, and the website will not negatively affect her current works.

Communications Plan

1. Frequency: once or twice per week.

2. Method: email, phone calls, text messages, and Zoom meetings
3. Content: project status report, project update, project milestone status, and any assistance.

Schedule Overview

Project Start Date: September 3, 2020

Estimated Project Completion Date: December 1, 2020

Major Milestones

Project Kick-Off: define specific objects for the project - October 12, 2020

Milestone 1: create a blueprint for the website based on the client's requests – October 15, 2020

Milestone 2: finalize and launch the website – December 1, 2020

Deliverable: report and submit the final report – December 7, 2020

External Milestones Affecting the Project

Maintain and update the website regularly afterward.

Impact of Late Delivery

The project cost may go over the budget if the project does not deliver on time. Additionally, the delay of the website can have an impact on losing potential customers.

Resources Required

Role	Responsibilities	Duration of work	Qualifications needed
Website Developer	Build an official website for LyndallWalker.com	17 weeks	Programming in HTML/CSS/JavaScript

Facilities, Software, Hardware, and Other Resources

Laptop and Sublime Text editor

Procedures/ Methodology

Work Breakdown Task Definition and Schedule

Level	WBS Code	Element Name	Definition	Due By
1	1	A business website for a new interior designer: LyndallWalker.com	All work to create a business website.	12/1
2	1.1	Initiation	The initiation of the project	N/A
3	1.1.1	Find a Sponsor	Find a sponsor who can sponsor my project.	7/30
3	1.1.2	Evaluate Needs & Recommendation	Evaluate the client's need and provide a potential solution for the need.	8/1
3	1.1.3	Project Proposal	Create and submit a project proposal, including deliverables, goals, and outline of the project.	8/20
3	1.1.4	Project Charter & Sponsor Agreement	Create a project charter and sponsor agreement.	10/9
3	1.1.5	Project Charter Signed & Approved	Both charter and agreement are approved and signed by the sponsor.	10/12
2	1.2	Planning	The planning phase of the project	N/A
3	1.2.1	Draft Literature Review	Create a literature review on the project.	9/28
3	1.2.2	Search for Potential Platform Solution	Search for the possible solution and platform that can be used for the project.	9/30
3	1.2.3	Situational Analysis and Cost-Benefit Analysis	Create a report on situational analysis and cost-benefit analysis for the sponsor's business.	10/5
3	1.2.4	Work Breakdown Structure and Schedule	Create a WBD chart for efficiency.	10/5
3	1.2.5	Change Management Plan	Create a management plan.	11/2
3	1.2.6	Risk Management Plan	Create a risk management plan.	11/16
3	1.2.7	Communication Management Plan	Create a communication management plan.	11/23
3	1.2.8	Create Blueprint of the Website Interface & Functionalities	Design a blueprint of the website interface and create a list of website functionalities.	10/15
2	1.3	Execution	The process of executing the project	N/A

3	1.3.1	Project Kick-off Meeting	Present a blueprint based on the sponsor's need and get feedback.	10/12
3	1.3.2	Verify & Validate User Requirements	Verify all the requirements for the project.	10/20
3	1.3.3	Sitemap & Wireframe Creation	Create a diagram for the sitemap based on the sponsor's request.	10/22
3	1.3.4	Design Interface: Page Layout	Design the website interface based on the sponsor's request.	10/25
3	1.3.5	Contents Writing and Assembly	Gather the sponsor's previous projects and articles for the website.	11/7
3	1.3.6	Coding	Code the website.	11/15
3	1.3.7	Testing & User Training	Test the website and train the sponsor on using the website, such as edit, delete, and write posts.	11/25
3	1.3.8	Review & Maintenance	Review the website with the sponsor and sign up for a Webmaster to maintain the website.	11/30
2	1.4	Closeout	The process to close the project	12/7
3	1.4.1	Adjust Interface If Needed	Final adjustment if requested by the sponsor.	11/30
3	1.4.2	Draft Final Project Report	Draft the final project report.	11/30
3	1.4.3	Submit Final Report	Submit the final report in NYU Classes.	12/7

Project Evaluation

1. Project schedule

Check the WBS for a weekly schedule and amend if anything needs to be updated.

Report the current status and any updates to the sponsor to ensure the weekly plan to complete on time.

2. Project weekly status report and dashboard

Confirm project process every week, send out weekly project status reports to the sponsor, and mark any critical project milestones.

3. Project communication plan, issues log, risk register

Confirm that the communication plan is feasible for both the project manager and the sponsor.

4. Project monthly status report

The project manager and the sponsor must attend the monthly status meeting, and a thorough status report is required. The session focuses on the status of the project; any amendments and improvements needed.

Project Plan

Project Tasks Outline

- 1.1 A business website for a new interior designer: LyndallWalker.com
 - 1.1.1 Find a Sponsor
 - 1.1.2 Evaluate Needs & Recommendation
 - 1.1.3 Deliverable: Project Proposal
 - 1.1.4 Project Charter & Sponsor Agreement
 - 1.1.5 Project Charter Signed & Approved
- 1.2 Planning
 - 1.2.1 Draft Literature Review
 - 1.2.2 Search for Potential Platform/Database Solution
 - 1.2.3 Situational Analysis and Cost-Benefit Analysis
 - 1.2.4 Work Breakdown Structure and Schedule
 - 1.2.5 Change Management Plan
 - 1.2.6 Risk Management Plan
 - 1.2.7 Communication Management Plan
 - 1.2.8 Create Blueprint of the Website Interface & Functionalities
- 1.3 Execution
 - 1.3.1 Project Kickoff Meeting
 - 1.3.2 Verify & Validate User Requirements
 - 1.3.3 Sitemap & Wireframe Creation
 - 1.3.4 Design Interface: Page Layout
 - 1.3.5 Contents Writing and Assembly
 - 1.3.6 Coding
 - 1.3.7 Testing & User Training
 - 1.3.8 Review & Maintenance
- 1.4 Closeout
 - 1.4.1 Adjust Interface If Needed
 - 1.4.2 Draft Final Project Report
 - 1.4.3 Submit Final Report

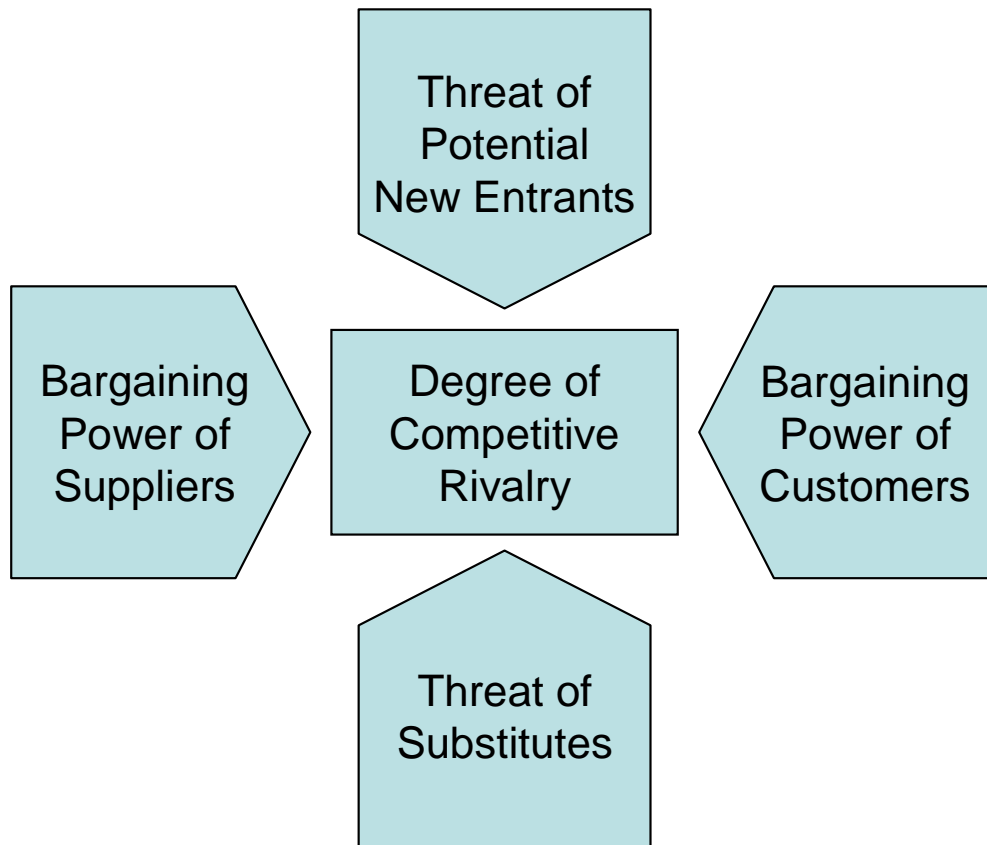
Work Breakdown Task Definition and Schedule

Level	WBS Code	Element Name	Definition	Due By
1	1	A business website for a new interior designer: LyndallWalker.com	All work to create a business website.	12/1
2	1.1	Initiation	The initiation of the project	N/A
3	1.1.1	Find a Sponsor	Find a sponsor who can sponsor my project.	7/30
3	1.1.2	Evaluate Needs & Recommendation	Evaluate the client's need and provide a potential solution for the need.	8/1
3	1.1.3	Project Proposal	Create and submit a project proposal, including deliverables, goals, and outline of the project.	8/20
3	1.1.4	Project Charter & Sponsor Agreement	Create a project charter and sponsor agreement.	10/9
3	1.1.5	Project Charter Signed & Approved	Both charter and agreement are approved and signed by the sponsor.	10/12
2	1.2	Planning	The planning phase of the project	N/A
3	1.2.1	Draft Literature Review	Create a literature review on the project.	9/28
3	1.2.2	Search for Potential Platform Solution	Search for the possible solution and platform that can be used for the project.	9/30
3	1.2.3	Situational Analysis and Cost-Benefit Analysis	Create a report on situational analysis and cost-benefit analysis for the sponsor's business.	10/5
3	1.2.4	Work Breakdown Structure and Schedule	Create a WBD chart for efficiency.	10/5
3	1.2.5	Change Management Plan	Create a management plan.	11/2
3	1.2.6	Risk Management Plan	Create a risk management plan.	11/16
3	1.2.7	Communication Management Plan	Create a communication management plan.	11/23
3	1.2.8	Create Blueprint of the Website Interface & Functionalities	Design a blueprint of the website interface and create a list of website functionalities.	10/15
2	1.3	Execution	The process of executing the project	N/A

3	1.3.1	Project Kick-off Meeting	Present a blueprint based on the sponsor's need and get feedback.	10/16
3	1.3.2	Verify & Validate User Requirements	Verify all the requirements for the project.	10/20
3	1.3.3	Sitemap & Wireframe Creation	Create a diagram for the sitemap based on the sponsor's request.	10/22
3	1.3.4	Design Interface: Page Layout	Design the website interface based on the sponsor's request.	10/25
3	1.3.5	Contents Writing and Assembly	Gather the sponsor's previous projects and articles for the website.	11/7
3	1.3.6	Coding	Code the website.	11/15
3	1.3.7	Testing & User Training	Test the website and train the sponsor on using the website, such as edit, delete, and write posts.	11/25
3	1.3.8	Review & Maintenance	Review the website with the sponsor and sign up for a Webmaster to maintain the website.	11/30
2	1.4	Closeout	The process to close the project	12/7
3	1.4.1	Adjust Interface If Needed	Final adjustment if requested by the sponsor.	11/30
3	1.4.2	Draft Final Project Report	Draft the final project report.	11/30
3	1.4.3	Submit Final Report	Submit the final report in NYU Classes.	12/7

Situational Analysis

Applied Project Situation Analysis



Porter's Five-Forces Model

Porter's Five Force Analysis
The Competitiveness of a New Interior Designer

Threat of New Entry:

- Low barriers to entry
- Low initial capital investment needed
- Business initiation is not difficult

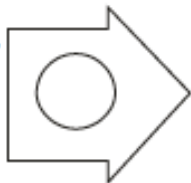
**Threat of
New Entry**



Competitive Rivalry:

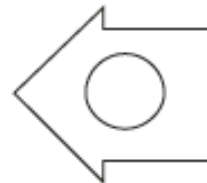
- High number of competitors
- Low industry growth rate
- Low exit cost

**Supplier
Power**



- High quality and unique service

**Competitive
Rivalry**



**Buyer
Power**

- Numerous options to choose from

**Threat of
Substitution**



- Lots of experienced designers available
- High switching cost
- Lower costs than the competitors
- One-on-one projects, better quality service

Industry Analysis

Interior design is a multi-dimensional industry that offers various designing services to modify or finish an interior environment to the customers' specific requests. The interior design industry consists of companies and individual interior designers who provide services in various residential, commercial, and lighting designs. According to the U.S Bureau of Labor Statistics (2020), the national estimates of the mean annual wage in 2019 for interior designers were \$60,990, approximately \$7,500 higher than the mean yearly salary of all occupations. The interior design industry is in the maturity/decline phase. The industry job outlook rate from 2019 to 2029 is expected to be -5% (U.S. Bureau of Labor Statistics, 2020). Additionally, due to the current pandemic situation, the project manager expects the ongoing global economic downturn will last throughout the next year.

A typical entry-level education requires a bachelor's degree in interior design-related fields to work in the interior design industry. Also, the occupation does not need on-the-job training. Although no U.S. states require a license to work in the interior design industry, many U.S. states offer the National Council for Interior Design Qualification (NCIDQ) Examination to become a licensed interior designer. Interior designers and firms must be aware of the design trends and health and safety and relevant regulations, such as building codes for every project.

According to Lauren (2020), the new interior design trends in 2020 include a home design that reflects a personality, emphasizes developing a personal style, using sustainable materials, easy-to-use fixtures, neutral colors, and patterned items. Due to the current pandemic, it is expected to see people trying to significantly reduce their spending on the things that are not daily necessities.

Competitors

There are many big and small competitors in the industry, including firms and individual designers. Mostly, big trendy cities such as New York City have higher competition than other locations. As you can see in Table 1, New York has the second-highest employment level in the interior design industry with 5,250 jobs and an annual mean wage of \$68,940 next to California. Other states with high employment levels include Texas, Florida, and Colorado.

State	Employment	Employment per thousand jobs	Location quotient	Hourly mean wage	Annual mean wage
California	9,420	0.54	1.31	\$34.10	\$70,920
New York	5,250	0.55	1.34	\$33.15	\$68,940
Texas	4,830	0.39	0.94	\$28.25	\$58,750
Florida	4,410	0.50	1.21	\$25.40	\$52,820
Colorado	2,370	0.88	2.14	\$27.76	\$57,740

Table 32 States with the highest employment level in this occupation

A new interior designer who does not have ample previous experience in the field, like the project manager's client, will face very high competition. The client specializing in residential design will compete with local interior designers who offer similar design services, such as modern interior design. To overcome the challenges, the client should focus on advertising her works and interests via her business website, leading to building a brand image and relationship with new customers. The business website must reflect her design style, work ethics, and personality, which will differentiate her from competitors. Also, due to the current pandemic situation, most interior designers are offering services online. For example, one interior

designer located in Brooklyn has been offering E-design consulting and E-design package services for the customers who hesitate to come in-person due to the pandemic. Therefore, having an online consulting service might be needed as a function of a website.

Stakeholders

LyndallWalker.com is a residential interior design business owned by Lyndall Walker based in Brooklyn, New York, that offers a unique, modern, and minimalist design service. The client has managed multiple apartments in Crown Heights, Brooklyn, where she previously renovated two units successfully. As a sole proprietorship business, the client handles the entire project by herself, including hiring external services for a waste removal service. Currently, she is managing the apartments and renovating a new loft in Bushwick, Brooklyn. The client has received all projects from acquaintances who have seen her previous renovation works or heard through neighbors. Keeping her previous customers is very important and a great way to publicize her business website in the future. Therefore, the business must provide continuous superb services, especially during this pandemic time.

Due to the current pandemic, she has been spending more time managing the apartments and the residents, putting her at a higher risk of illness. Therefore, I will only carry out client meetings virtually. The project manager and the client must frequently communicate for any updates and news to efficiently accomplish the project. The project's blueprints must also be delivered in advance to ensure the project gets delivered on time.

References

1. Lauren, A. (2019, December 24). 12 Interior Design Trends We'll See In 2020. Retrieved September 29, 2020, from <https://www.forbes.com/sites/amandalauren/2019/12/23/twelve-interior-design-trends-well-see-in-2020/>
2. 27-1025 Interior Designers. (2020, July 06). Retrieved September 29, 2020, from <https://www.bls.gov/oes/current/oes271025.htm>

Cost/Benefit Analysis

Benefits	<u>Tangible</u>		
	Revenue		\$30,000
		<hr/>	
		Total	\$30,000
	<u>Intangible</u>		
	Build a brand image		
	Better competitive position		
	Easy communication with customers		
	Build and maintain customer relationship		
	Possibility for buisness expansion		
		<hr/>	
		Total	\$30,000
Costs	<u>Tangible</u>		
	Project manager fee	\$100/hr * 70 hrs	\$7,000
	One year web hosting service		\$300
	Webmasters service		\$0
	Laptops (using the projet manager's own)		\$0
		<hr/>	
		Total	\$7,300
	<u>Intangible</u>		
	Not able to meet in person due to pandemic		
	Extra meetings for any delay and issues		
	Poor maintance of website		
		<hr/>	
		Total	\$7,300
Offset			\$22,700

Figure 1 The Cost-Benefit Analysis

The tangible benefit from the project for the client will be the revenue. I estimated the revenue to be approximately \$30,000 based on the client's previous projects. However, the amount of income can be disparate depends on the size of the project she works on, the economic situation, and other external factors. The client will build a brand image through her professional website for the intangible benefit, putting her in a better competitive position than before. The website will

make it easy for her to communicate with her customers, building and maintaining a valuable customer relationship. Lastly, this project can increase the probability of business expansion.

The project's highest tangible cost for the client will be the project manager's fee of \$7,000. I calculated the project manager's fee based on a website consultant's market hourly rate multiplied by 70 hours spent on the project. Additionally, one year of web hosting services is estimated to be between \$200 and \$300 a year depends on the brands. The project will utilize Google Webmaster Tools provided by Google at no cost, and the cost of a laptop used to build the website is at no cost as the project manager is using her own. The intangible cost includes not holding in-person meetings due to the pandemic; therefore, the client and the project manager need to spend more time communicating; otherwise, this will bring delays and issues. Lastly, low website maintenance, such as having outdated information on the webpage, can significantly cost the business.

In conclusion, the offset for the project will be approximately \$7,300.

Other Business Benefits

This project can benefit the client in using online marketing efficiently. The future training on the website, such as writing, editing, and removing posts, will help her become familiar with the web environment.

Project Change Management Plan

Project Name	Website for a New Interior Designer
Prepared by	Sarah Kim
Date	October 30, 2020

1. Purpose	
<i>The purpose of this Change Management Plan is to:</i>	
<ul style="list-style-type: none"> • Ensure that all changes to the project are reviewed and approved in advance • All changes are coordinated across the entire project. • All stakeholders are notified of approved changes to the project. 	
<i>All project Change Requests (CR) must be submitted in written form using the Change Request Form.</i>	Change Request Form.docx
<i>The project team should keep a log of all Change Requests.</i>	Change Request Log.xlsx

2. Goals
<i>The goals of this Change Management Plan are to:</i>
<ul style="list-style-type: none"> • Give due consideration to all requests for change • Identify, define, evaluate, approve, and track changes through to completion • Modify Project Plans to reflect the impact of the changes requested • Bring the appropriate parties (depending on the nature of the requested change) into the discussion • Negotiate changes and communicate them to all affected parties

3. Responsibilities	
<i>Those responsible for Change Management</i>	<i>Their Responsibilities</i>
• Project Manager	Developing the Change Management Plan
• Project Manager	Facilitating or executing the change management process. This process may change the scope, schedule, budget, and/or quality plans. Additional resources may be required.
• Project Manager	Maintaining a log of all CRs

3. Responsibilities	
<i>Those responsible for Change Management</i>	<i>Their Responsibilities</i>
<ul style="list-style-type: none"> Project Manager 	Conducting reviews of all change management activities with senior management periodically
<ul style="list-style-type: none"> The Project Sponsor 	Ensuring that adequate resources and funding are available to support execution of the <i>Change Management Plan</i> Ensuring that the <i>Change Management Plan</i> is implemented

4. Process
<p><i><The Change Management process may be simple or complex. The following text is provided as an example of how change requests can be handled in your project. Supplement with a graphical flowchart if that will help your stakeholders understand the process. Modify as necessary.></i></p> <p>The Change Management process occurs in six steps:</p> <ol style="list-style-type: none"> 1. Submit written Change Request (CR) 2. Review CRs and approve or reject for further analysis 3. If approved, perform analysis and develop a recommendation 4. Accept or reject the recommendation 5. If accepted, update project documents and re-plan 6. Notify all stakeholders of the change. <p>In practice, the Change Request process is a bit more complicated. The following describes the change control process in detail:</p> <ol style="list-style-type: none"> 1. Any stakeholder can request or identify a change. He/she uses a <i>Change Request Form</i> to document the nature of the change request. 2. The completed form is sent to a designated member of the Project Team who enters the CR into the <i>Project Change Request Log</i>. 3. CRs are reviewed daily by the Project Manager or designee and assigned one four possible outcomes: <ul style="list-style-type: none"> <i>Reject:</i> <ul style="list-style-type: none"> • Notice is sent to the submitter • The submitter may appeal (which sends the matter to the Project Team) • Project Team reviews the CR at its next meeting.

4. Process

- *Defer to a date:*
 - The Project Team is scheduled to consider the CR on a given date
 - Notice is sent to the submitter
 - The submitter may appeal (which sends the matter to the Project Team)
 - Project Team reviews the CR at their meeting.
- *Accept for analysis immediately (e.g., emergency):*
 - An analyst is assigned, and impact analysis begins
 - The Project Team is notified.
- *Accept for consideration by the project team:*
 - Project Team reviews the CR at its next meeting.

4. All new pending CRs are reviewed at the Project Team meeting.

Possible outcomes:

- *Reject:*
 - Notice is sent to the submitter
 - The submitter may appeal (which sends the matter to the Project Sponsor and possibly to the Executive Committee)
 - Executive Committee review is final.
- *Defer to a date:*
 - The Project Team is scheduled to consider the CR on a given date
 - Notice is sent to the submitter.
- *Accept for analysis:*
 - An analyst is assigned, and impact analysis begins
 - Notice is sent to the submitter.

5. Once the analysis is complete, the Project Team reviews the results.¹

Possible outcomes:

- *Reject:*
 - Notice is sent to the submitter
 - The submitter may appeal, which sends the matter to the Project Sponsor (and possibly to the Executive Committee)
 - Executive Committee review is final.

¹ Note: Sponsor participates in this review if the analysis was done at Sponsor's request.

4. Process

- *Accept:*
 - Project Team accepts the analyst's recommendation
 - Notice is sent to Project Sponsor as follows:
 - Low-impact CR – Information only, no action required
 - Medium-impact CR – Sponsor review requested; no other action required
 - High-impact CR – Sponsor approval required.
- *Return for further analysis:* Project Team has questions or suggestions that are sent back to the analyst for further consideration.

6. Accepted CRs are forwarded to the Project Sponsor for review of recommendations. Possible outcomes:

- *Reject:*
 - Notice is sent to the submitter
 - The submitter may appeal to the Executive Committee
 - Executive Committee review is final.
- *Accept:*
 - Notice is sent to the submitter
 - Project Team updates relevant project documents
 - Project Team re-plans
 - Project Team acts on the new plan.
- *Return for further analysis:*
 - The Sponsor has questions or suggestions that are sent back to the analyst for further consideration
 - Notice is sent to the submitter
 - Project Team reviews the analyst's recommendations (return to *Step 5*).

5. Notes on the Change Control Process

<Modify Sections 3 and 5 to meet the needs of your project.>

1. A Change Request is:

- Included in the project only when both Sponsor and Project Team agree on a recommended action.

2. The CR may be:

5. Notes on the Change Control Process

- *Low-impact* – Has no material effect on cost or schedule. Quality is not impaired.
- *Medium-impact* – Moderate impact on cost or schedule, or no impact on cost or schedule, but the quality is impaired. If the impact is negative, Sponsor review and approval is required
- *High-impact* – Significant impact on cost, schedule, or quality. If the impact is negative, Executive Committee review and approval is required

3. For this project:

- *Moderate-impact* – Fewer than *four* days change in schedule; less than \$100 change in the budget; one or more major use cases materially degraded
- *High-impact* – More than *seven* days change in schedule; more than \$100 change in the budget; one or more major use cases lost.

4. All project changes will require some degree of an update to project documents:

- *Low-impact* – Changes likely require update only to requirements and specifications documents
- *Moderate- or high-impact* – depending on the type of change, the following documents (at a minimum) must be reviewed and may require update:

<i>Type of Change:</i>	<i>Documents to Review (and update as needed):</i>
------------------------	--

- | | |
|--|--|
| <ul style="list-style-type: none"> ▪ Scope | <ul style="list-style-type: none"> ▪ Scope Statement and WBS ▪ Budget ▪ Project Schedule ▪ Resource Plan ▪ Risk Response Plan ▪ Requirements ▪ Specifications |
| <ul style="list-style-type: none"> ▪ Schedule | <ul style="list-style-type: none"> ▪ Project Schedule ▪ Budget ▪ Resource Plan ▪ Risk Response Plan |
| <ul style="list-style-type: none"> ▪ Budget | <ul style="list-style-type: none"> ▪ Budget ▪ Project Schedule ▪ Resource Plan ▪ Risk Response Plan |

5. Notes on the Change Control Process

- | | |
|---|---|
| <ul style="list-style-type: none"> ▪ Quality | <ul style="list-style-type: none"> ▪ Budget ▪ Project Schedule ▪ Resource Plan ▪ Risk Response Plan ▪ Quality Plan ▪ Requirements ▪ Specifications |
|---|---|

5. Project documents:

Whenever changes are made to project documents, the version history is updated in the document, and prior versions are maintained in an archive. Edit access to project documents is limited to the Project Manager and designated individuals on the Project Team.

- For this project, all electronic documents are kept in (select one of the following and describe it in the adjacent space provided):

☒ Version Control System:

☐ Central storage available to the Project Team:

☐ Other:

- For this project, all paper documents are kept in (select one of the following and describe it in the adjacent space provided):

☒ Project file maintained by the Project Manager:

☐ Other:

- The following individuals have edit access to project documents:

Role	Documents
▪ Project Manager	▪ All current documents
	▪ Project archive
▪	▪
▪	▪
▪	▪
▪	▪

6. Project Change Management Plan / Signatures			
Project Name:	Business Website for a New Interior Designer		
Project Manager:	Sarah Kim		
<i>I have reviewed the information contained in this Project Change Management Plan and agree:</i>			
Name	Role	Signature	Date (MM/DD/YY YY)
Lyndall Walker	Project Sponsor		11/01/2020

The signatures above indicate an understanding of the purpose and content of this document by those signing it. By signing this document, they agree to this as the formal Project Change Management Plan.

Project Change Request Form

Project Name		Change Number	
Requested By		Date of Request	
Presented To			

Change Name	
--------------------	--

Description of Change:

Reason for Change:

Effect on Deliverables (including a list of any affected deliverables):

Effect on Organization:

Effect on Schedule (including Estimated Completion Date for this change):

Effect on Project Cost:				
Item Description	Hours		Dollars	
	Reduction	Increase	Reduction	Increase
Analysis		0		\$ 0.00
Development (Code and Unit Test)		0		\$ 0.00
Total Net Change in Cost:			\$ 0.00	

Effect of NOT Approving this Change:

Reason for Rejection (if applicable):

Project Manager

☐ **Approved**

Signature:

☐ **Rejected**

Title:

Date

:

Sponsor

☐ **Approved**

Signature:

☐ **Rejected**

Title:

Date

: