Team & Project Name: ClariNET

HTML, CSS, JavaScript Learning Platform

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Introduction

The basis of all resources available on the Internet boils down to HTML: the building block of the Web. When the Internet was first introduced, its primary function was to connect scholars' and their written documents, making the Internet a medium of sharing and communicating. HTML allowed for the display of these materials, and over time, design and presentation were added to these materials using Cascading Style Sheets (CSS), and further functionality and interactivity were added to the display using JavaScript.

The primary support and information website that contains almost all functions and features of the three languages (and more) are available on W3Schools, however, the design of that website is not made to optimize learning: there is too much information in too many places and is definitely too much on the eyes, and forces the user to continue scrolling if there is too much material. It can be extremely overwhelming for someone who just wants a place to start but has no idea where to begin.

This site aims to ease that process of visually searching for and studying materials that will help the student minimize the number of pages that needs to be visited in order to learn the 3 languages. The primary goal is to make the design as accommodating as possible, to contain all information effectively and ensure that viewers can comprehend the material without feeling overwhelmed.

Site Goals

Goal 1: To make an informational website that will help our users learn about HTML, CSS and Javascript

Goal 2: To design the site using principles to ease the user's visual search and leading them to desired information through simple but effective design

Goal 3: To explain the basics of the three languages to make sure users understand the advanced concepts by connecting the building blocks from the beginning

Goal 4: To optimize the learning experience through addition of multimedia (images, videos) and sufficient examples.

Design Goals:

Goal 1: Have sufficient indicators/signifiers to lead the user to their desired content

Goal 2: Have more than one color scheme available to user for accessibility purposes (primarily color blindness and memory retention)

Goal 3: Provide guided constraints and aptly summarized information in logical groups and subgroups so that the user does not get overwhelmed by too much info being presented at once.

Goal 4: Make sure there is sufficient navigation control so that the user doesn't feel that they have wandered too deep into the topic to move out without losing progress, by making sure the user can remember easily where the topic is contained (another helping addition to accessibility in terms of memory retention and attention).

Goal 5: When making the site responsive, we would have to reduce the size of the top nav text and make the icons more prominent within the navbar to mimic the appearance of an app.

Audience Definition

Persona 1:

Middle/High School Student

Recent studies show that across 24 states, only 35% percent of high schools in the US teach computer science, a report from Code.org. Many students who wish to explore computing during their secondary education have no access to computing courses through their institutions so their exposure to web design and concepts circulating the topic is very limited. This can be an issue since it can limit the field of studies students can pursue post secondary education. Lack of exposure to computing can also limit the opportunity for a student to explore a subject they might actually enjoy and excel in. With Clarinet, this issue can be resolved. Clarinet will provide basic web design education concerning markup languages such as HTML and CSS as well as the programming language Javascript.

Scenario: A high school student about the age of 16 is looking forward to learning HTML/CSS after a teacher taught her the detailed history of the Internet. However, all the sites she comes across require some form of payment, and W3 seems like copy-pasting a lot of code. She wants to learn from the basics and just came across ClariNET which is simpler but has a lot of information as well.

Persona 2:

College Student

Most college students who pursue a computing degree may have conceptual understanding of computer science foundations but may not be familiar with the semantics of all the programming languages they intend to learn. Especially those who major in a field such as computer science, they might be more familiar with theory and algorithm models but will not necessarily be equipped with

the knowledge of markup language. Clarinet introduces syntax and concepts relating to web design for beginners which can be helpful for a college student who wishes to advance their understanding of web design.

Scenario: A first year undergrad Computer Science student who has a lot of experience in Python still doesn't understand how his skills can be connected to a website. He's read about it online but still can't grasp how to connect the front-end components to his back-end expertise, and he thinks it's potentially an area of development that might interest him in the future and open up full-stack avenues. He tried watching videos on youtube but they seem either too basic or too complex and he had to speed through multiple videos to remain interested. He comes across ClariNET which has simple explanations as intro, as well as detailed explanations and links to other helpful sites without him having to endlessly scroll.

Persona 3:

Instructor

Computing instructors aim to cover as much material as they can in a lecture or lab yet there will always be more information that could be useful to a students education that will not be covered in class. Maybe an instructor will suggest students do personal research on a topic to develop a deeper understanding of the material so an online tutorial or resource is useful in cases like this where an instructor can simply refer students to it. Referring students to an online resource may also save an instructor time from answering some basic or repetitive questions in office hours that can be answered online.

Scenario: A college instructor teaching UX Design got asked in class by her students about where they can learn more about web development basics so they can understand how to design them for future Web Design job prospects. She forwards them to 5 websites and ClariNET is one of them.

Persona 4:

Web Enthusiast Teaching Themselves

Many people unfortunately do not have the access or means to afford the time or money to attend a university or enroll in courses that can teach them computing concepts. Those who aspire to be web designers/developers but make up a portion of the population whose opportunities are limited due to financial and other personal reasons may find a website like Clarinet useful. Provided the website is free, anybody could educate themselves on the basic concepts of web design to start off their personal education and learning. This way, education is not only accessible but by all means affordable so that it can ease some financial concerns.

Scenario: A 22 year old who could not continue education beyond high school and has been teaching himself how to code, but gets stuck whenever he needs to buy access to learning sites that have sufficient information, and buffering YouTube videos with his slow internet connection is difficult as he can't afford a more expensive wi-fi connection. He likes that ClariNET does not require too long to load and is much simpler, and also contains a lot of information for him to learn from.

Persona 5:

Industry Professionals Referring to the Basics

Those working in the computing industry with substantial experience may be concerned with more advanced work and concepts concerning back end data and code yet there are going to be overlaps with front and back end developers when they work closely together. There is a chance professionals will run into html and css and have forgotten some of the functionality it serves to their work. An

online source with basic web design concepts will always be of use for these professionals who wish to review or seek a quick answer to ease some of their work and questioning.

Scenario: A 38 year old manager at a Web Development Freelance Company wants to teach her new intern about the basics although the intern is proficient in advanced concepts. She is having a tough time explaining to the intern about how the fundamental concepts are needed for him to pick up the new technology and jS libraries that they intend to use at their company. She refers him to ClariNET for a better understanding of simpler concepts from the beginning before attempting further difficult tasks.

Competitive Analysis

Site A: Codecademy | URL: https://www.codecademy.com/welcome/find-a-course/search

Strengths:

- Eye-catching sign in page ; Fun effects like falling confetti on the first page
- Users can make an account if they want
- Gives the user an option if they want help or explore on their own
- Clever design ; Consistent color scheme
- Search engine
- Consistent and simple navigation
- Complementary color theme/ very simple but effective
- Accepts reviews from the users
- Clickable logo that brings you back to the home page.
- Responsive design / media queries utilized
- Has challenges that keep the user engaged like the 30 day coding challenge
- Keeps track of your progress with the coding
- Has a good number of options for the user(building a web page, charts analyzing data, etc.)
- A notification bell to inform you when you have completed activities

Weaknesses:

- The site should have a basic verison for users who don't want to make an account. They can just try it out if they want.
- Should have some hover effects for the navigation bar and other parts of the page.
- Needs back to top clickable that takes the user back to the top of the page
- Could possibly have a chat box so that the users of the websites can chat with other people who also use the website.
- Could have a language selector

Similarities:

Our site will have our logo and give information to the user about the different types of programs. Our navigation bar will also have drop down options for the user to choose from. There will also be consistency throughout our website when it comes to our color scheme and content. The style of our website, with a mix of both dark and light color scheme is similar to codecademy that also utilizes both.

Site B: W3Schools | **URL:** https://www.w3schools.com/

Strengths:

- Great color scheme of green, white, and gray
- Search Bar
- Menu bar/navigation with sub clickables
- Language selector
- Menu bar is very descriptive and organized (Easy to follow)
- Side menu bar in alphabetical order
- Logo is noticeable and clicks back to home page
- Consistent material and navigation bar
- Hover effect, underlines the word

- Has demo pages where the user can run the program, and can also alter the code and change the outcome.
- Built-in color picker
- Has ads
- Color changes for the coding and gives different options
- Free templates

Weaknesses:

- Should have videos with subtitles for those who need a little extra help
- Should have a back to the top clickable

Similarities:

We will have clickable navigation bars(side bar and top bar) with drop down selections. There will be a clickable logo to get back home. There will also be demos for the user to try out what they have learned. We will also have hovering effects and consistent color themes and content.

Site C : Hackr | URL: https://hackr.io/

Strengths:

- Has 2 Search Bars
- Language selector
- Menu bar is very descriptive and organized(
  Easy to follow)
- Logo is noticeable and clicks back to home page
- Consistent material and navigation bar
- Has ads
- Gives the option to sign in
- Has a wide variety of different types of programming
- Programming Blog

- Roadmaps that show the path of what it takes to be a good programmer

Weaknesses:

- Should have videos
- Should have videos with subtitles for those who require extra help
- Needs more hover effects
- Lacks a defined color scheme

Similarities:

Our websites will not be as similar to this website as the others. There will be a clickable logo to get back home. We will also have images to represent the different types of programming.

Identified Problems That We Intend to Avoid:

Some of these websites do not focus on just teaching the basics of web development so it can be overwhelming and intimidating for some. For example, Hackr.io is a website that can be overwhelming if some just want to learn javascript. The color scheme seems bland and with our website we will be using color to help assist our viewers. It looks like a job application site and we will ensure that our website can be distinguished as a learning tool.

We also intend to avoid our tendency of rigid design, as accessible design is just as important. We will keep in mind the factors involving learning limitations, memory retention and attention span, color blindness, and other accessibility factors within our design capabilities for the material.
Oftentimes what we've seen that limits the user from feeling motivated to get help is that many sites

require them to open an account to use the website entirely. We want the user to be able to access the website freely without barriers, and only be required to enter their name+email if they are filling out surveys, saving quiz results, or are asking for extra help from the ClariNET team.

Site Content

For our website, it will be HTML, javascript, and CSS intensive for users to learn how to do the basics. It will have two types of navigation bars, a top and a side one. It will give the user the chance to demonstrate what they have learned, and have videos to teach them as well. Our goal for the website is for it to be user friendly and make it easy for people to learn the material and for them to enjoy themselves. By the time they are done using our websites they will be able to teach the material to others.

The site is designed to contain HTML, CSS, JS pages, and within those there are larger topics as mentioned in the content grouping and pages below, and each page will have further sub-topics in expandable boxes. For example, HTML (page) > Basics (page) > Elements (sub-topic, not an additional page, but shows info from expanded box upon clicking. Shown in Design Sketch).

Content Grouping and Labeling:

HOMEPAGE

Provide Feedback (not an additional link)

Contact for Extra Help (not an additional link)

About ClariNET

HTML

Introduction & Syntax

Basics: Elements, Tags, Attributes

Formatting & Style: Colors, CSS

Multimedia: Graphics

Tables & Forms

APIs

References & Examples

TAKE QUIZ!

CSS

Introduction & Syntax

Box Model

Responsive Design

Multimedia

References & Examples

TAKE QUIZ!

JavaScript

Introduction & Syntax

Variables

Data Types

Operators

Functions

Style & Formatting

References & Examples

TAKE QUIZ!

Explanation of additional content material within the HOMEPAGE when you scroll down:

(wireframe available below)

- Option to fill out a survey or provide feedback *

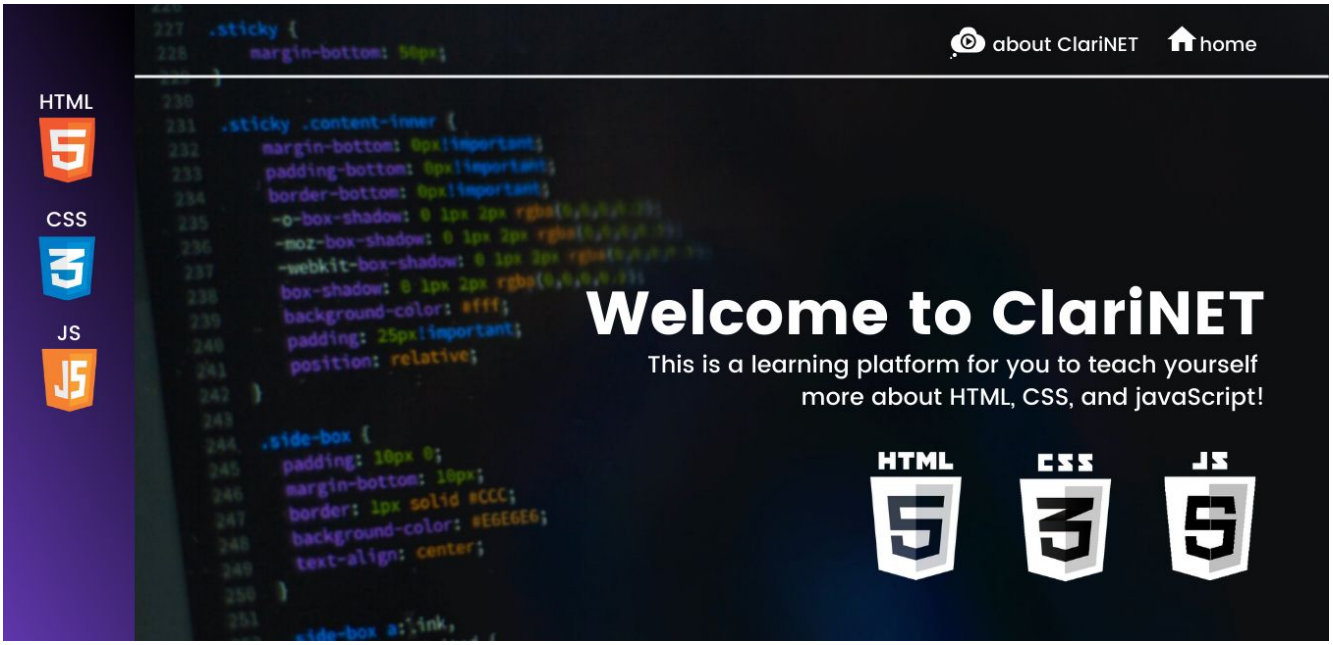
- Option to ask for additional help from the ClariNET team *

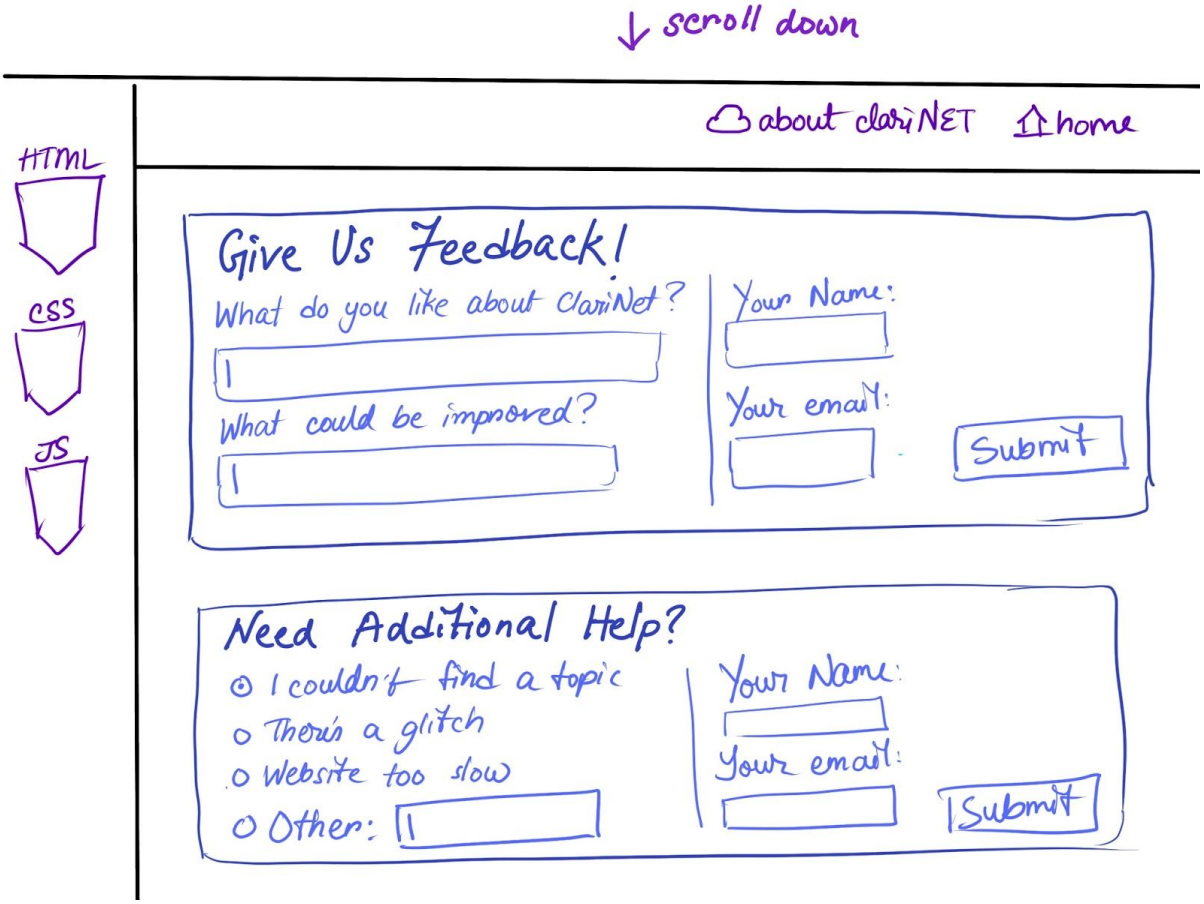
* Not included in sitemap as it is not an additional page to be linked to, rather within the homepage itself when user scrolls down

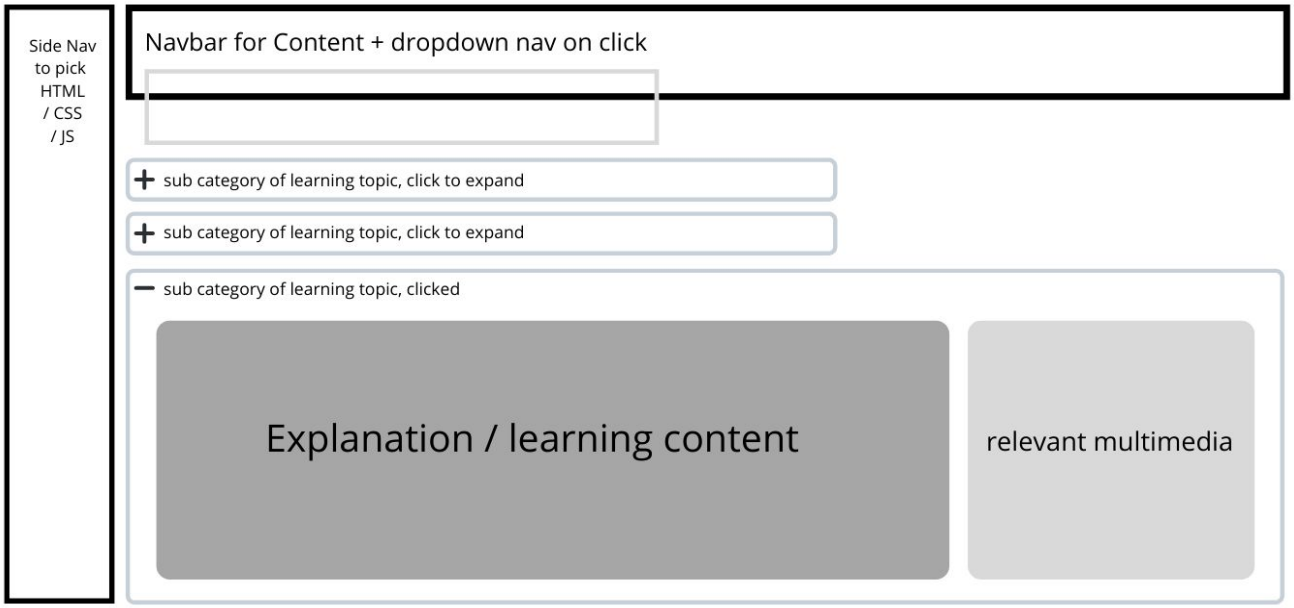
Site Map


Home Page
About
HTML
CSS
JavaScript
Introduction & Syntax
Introduction & Syntax
Introduction & Syntax
Basics: Elements, Tags, Attributes
Box Model
Variables
Formatting & Style: Colors, CSS
Responsive Design
Data Types
Multimedia: Graphics
Multimedia
Operators
Tables & Forms
References & Examples
Functions
API's
Quiz
Quiz
Reference and Examples
Quiz

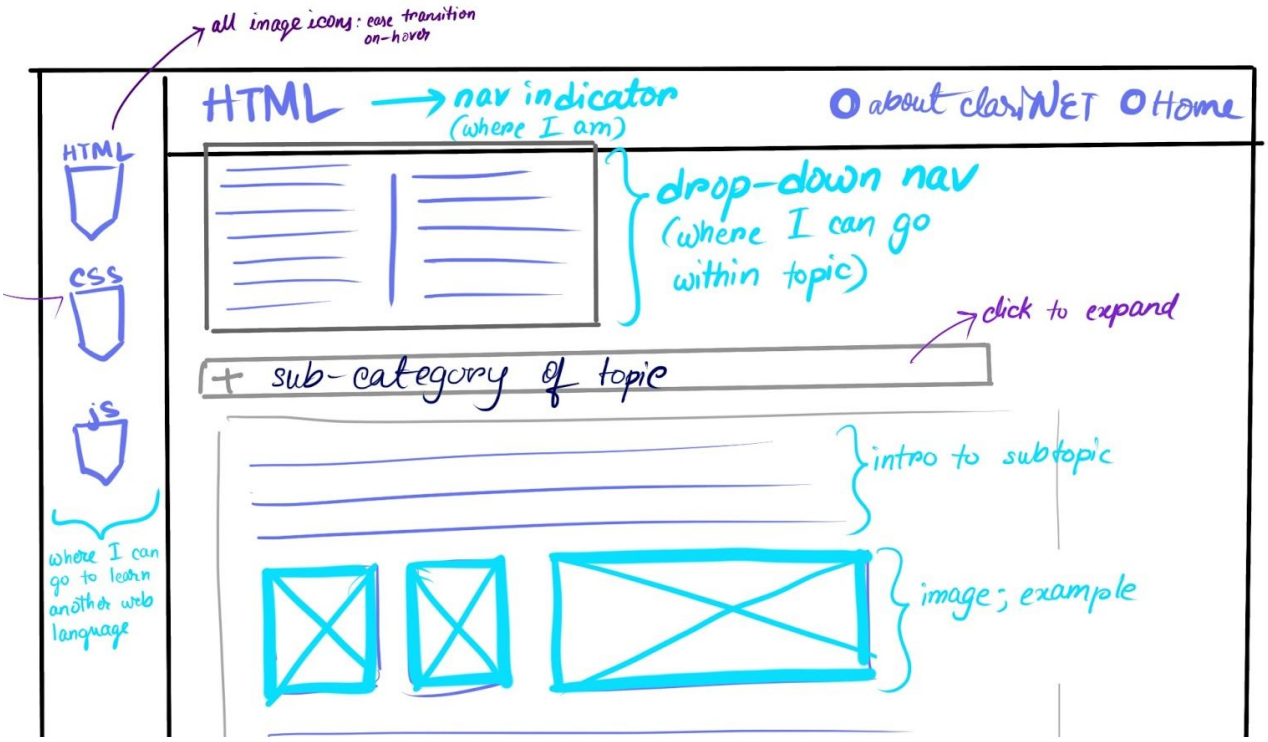
Design Sketches






Side Nav to pick HTML / CSS / JS
Navbar for Content + dropdown nav on click
+ sub category of learning topic, click to expand
+ sub category of learning topic, click to expand
− sub category of learning topic, clicked
Explanation / learning content
relevant multimedia


HTML
about ClariNET
home
Introduction
Basics
Formatting & Style
Tables & Forms
Multimedia
Responsive
APIs
References
Examples


all image icons: ease transition on-hover
HTML
CSS
JS
where I can go to learn another web language
HTML → nav indicator (where I am)
about clariNET
Home
drop-down nav (where I can go within topic)
click to expand
+ sub-category of topic
intro to subtopic
image; example

Conclusion

Our goal is to design and create a professional HTML,CSS, and JavaScript tutorial website that provides straightforward information, convenient navigation, and fun user interaction. Our current design model contains site navigation that connects our homepage, HTML, css, and JavaScript contents. Within each language, we created a content outline and grouping the content that will be displayed on the site. Our web page follows the C.R.A.P. design principle (Contrast, Repetition, Alignment, Proximity) making sure our design can optimize user experience.

Our next approach is to turn our design document into a fully functional website. Tian is our interaction designer responsible for our navigational structure, and sitemap design. Essence is our graphic designer and responsible for visual design of our webpage. Stephanie is our Information Architect and responsible for organizing materials and site content. Lea is our content creator and responsible for site content, the writer of the site. Lastly, Nuzhat is our team leader and responsible for creating agenda and monitoring team progress, and making wireframes to guide us in the proper direction for coding out the website. Every member of the team worked closely together on every obstacle we faced. In the future, we can implement PHP and database to our website. It will serve as a data organization purpose, able to handle user saved data, storing quizzes or surveys results.

Updates on the conclusion: As the second part of the group project has been eliminated owing to changes in course delivery, we attempted to incorporate more details into the Design Document to bring it one step closer to how it would be if we did have to build a website out of it, using more detailed wireframes and feature descriptions.

Appendix B:

Print Out + Upload to Gibson Server Link

https://people.rit.edu/nxm1137/iste240/Project/index.html

Appendix C:

Meeting Updates Posted on MyCourses Discussion by Nuzhat Minhaz

FIRST PROGRESS REPORT!

Feb 11, 2020 1:14 AM

Hello, Team Leader Nuzhat Minhaz reporting!

Progress we've made:

- Sketched a wireframe first time we met in class

- Made a mockup image of how we want our site to look (homepage, HTML page, CSS page, JavaScript page)

- Decided on interaction of site: where content will go to make it easier for user to access

- Decided on multimedia we will include on the site to make learning easier! [e.g videos, images, notes, where they will appear and how]

- Dividing sections for each of us to write and work on [for the first submission as a group] : In progress

- Coding out a skeleton basic of the site : In progress

SECOND PROGRESS REPORT!

Feb 23, 2020 5:38 PM

We successfully completed the Design Document Homework for the Group Project by dividing up the writing tasks among our strengths of being content creator/graphic designer/interaction

designer/information architect. The last issue was a logo, and we just completed one and included in both the document and the index page that is uploaded on the Gibson server as per Appendix B.

- We do have mockups and sketches but we know that once we start coding and writing all of it out, we may have to add a lot more content than we are anticipating as of now.

Link: https://people.rit.edu/nxm1137/iste240/Project/index.html

Group Meeting Attendance So Far

Feb 23, 2020 5:41 PM

We only schedule meetings when all members are present. We usually get most of our work done in class time after the professor finishes his lecture. All members present! :)

Updates during Coronavirus Crisis:

We've continued communicating over GroupMe App to re-submit a better version of our initial design document by adding one more design sketch and design goals right below the site goals.

Design Document Credits, as we are not going to be building the website anymore:

Introduction and Site Goals by Lea; Audience Definition by Lea and Stephanie; Site Content Grouping/Labels and Site Mapping by Stephanie; Competitive Analysis and Problems to Avoid by Essence; Design Goals, Sketches/Wireframes and Appendices by Nuzhat; Conclusion and Additional Features by Tian; other sections done together.