REPORT

1. Introduction

We were tasked with developing and designing a website showcasing the basic skills we have learned in HTML and CSS. We were given two scenarios and settled on scenario 1. With scenario 1, we aim to design and develop a website for university alumni to let students check upcoming events. At Alumni Connect, we believe in fostering lifelong connections and providing a platform where former and current students can seamlessly engage with upcoming events, cultivate professional growth, and relish the memories of their campus days. Our mission is to create a vibrant online space that bridges the gap between the past and the present, ensuring that our university's legacy thrives through its alumni's achievements and endeavours.

By leveraging the expertise and knowledge of the team at Alumni Connect, you'll find a range of features catering to your needs, from exploring upcoming events to discovering professional development opportunities and reliving campus moments. The website's overall design and functionality will prioritise simplicity, ease of use, and responsiveness across different devices.

2. Project Overview

Target country: Rwanda

Target audience: International students and Alumni Students.

Aim of the project: To bring Events, Webinars, and Educational programs to students with easy access on their devices.

Constituents of the website

Home/Landing page
We aim to make students have a seamless experience by providing details on the best event & webinar that will take place in school.

Services
Connecting students with events and webinars

About
Profile of each group member and their roles/technical expertise

Contact us
A form where users can ask anything about the information provided on our website

3. Our thought process

- First meeting - 16th of February (7 pm - 9:16 pm): Brainstorming on the different scenarios and choosing to settle on the first scenario, then dividing tasks among individuals.

- Second Meeting -17th of February (12:30 pm - 2 pm): Working on the HTML skeleton

- Third Meeting - 19th of February (7 pm-11 pm): CSS Advanced, making the website responsive and finalising the report

- Fourth meeting(4 pm -6 pm): Reflecting on the highs and lows and learning from each other.

4. The use and implementation of CSS

CSS played a crucial role in styling and making our website visually appealing by controlling various aspects of the website's appearance, including colours, fonts, layouts, and Responsiveness.

The following CSS skills were utilised in styling our website

- **CSS Selectors**: We used simple CSS selectors, i.e., CSS Element Selector, CSS Id Selector, CSS Class Selector, CSS Universal Selector, and CSS Group Selector, to target specific HTML elements we want to style. This enabled us to define the look and feel of different elements on the website.

- **CSS properties**: We used several properties such as colour, font size, height, font weight, margin, font family, typeface, background attachment, letter spacing, border width, border spacing, word spacing, font-stretch, border-left width,border-right-width, font-size-adjust,border-bottom-style,border-left-style, border-right-style, flex-shrink,border-bottom-left-radius, and opacity. These properties enabled control over the visuals of each element.

- **Layout and Positioning**: CSS enabled us to define the website's layout, including the placement of headers, footers, navigation menus, and content sections. The Flexbox model enabled us to design and build responsive web pages without using tricky hacks and a lot of float and position properties in our CSS code. The

grid technique was used mainly for the website layout, while flexbox was used for alignment.

- **Styling Text and Typography**: CSS allowed us to control the appearance of text, such as font styles, sizes, colors, and alignments. By selecting appropriate fonts and adjusting typography settings, we enhanced the website's readability and visual appeal to improve ease of use and navigation.

- **Responsive Design**: CSS media queries enable us to define specific styles for different viewport widths, allowing the website to adapt its layout and appearance dynamically.
  By applying responsive design principles, we aim to provide an optimal user experience on various devices, from mobile phones to desktop computers.

5. Markup Development

Markup development helped structure and organise the website's content. Here are some key skills used in developing our website's markup:

- **Semantic HTML:** Semantic elements helped to provide meaning and structure to the content. By using elements like header>, '<nav>, <section>, <article>, and' <footer>, we enhanced accessibility and search engine optimization. Semantic HTML ensured the website's structure was well-defined, allowing assistive technologies and search engines to understand and navigate the content more effectively

- **HTML Forms*:*** HTML forms enabled user interaction, such as submitting queries or requests on the information provided on our website. By utilizing form elements like <input>, '<textarea>, and <button>, we were able to create a user-friendly form that captures necessary information accurately. Attributes such as required, max length, and pattern were employed to enforce input validation and improve data integrity.

- **Hyperlinks and Navigation:** The HTML anchor tag (<a>') was used to create hyperlinks, allowing users to navigate within the website or to external resources. By specifying appropriate href attributes, we could link different website sections and provide a seamless navigation experience.

6. Responsive Website Design:

Achieving a responsive website design involves implementing techniques and best practices to ensure that the website adapts and responds effectively to different screen sizes and devices. We used the following strategies:

- **Media Queries:** CSS media queries allowed us to define different styles based on the device's characteristics or viewport width. By specifying different CSS rules for different screen sizes, we tailored the layout, font sizes, and other visual properties to ensure optimal viewing experiences across devices. We used the '@media' rule and the desired breakpoints to target specific screen widths.

- **Fluid Layouts:** we added the attribute class=" works _on _smartphone" on the <body> tag in our index.html file, which made the layout degrade nicely as we resized the window. Instead of using fixed pixel-based widths for elements, relative units like percentages or viewport-based units (such as vw and vh) were employed. This allows the website's layout to adjust fluidly based on the available screen space, ensuring that content is displayed optimally on various devices.

- **Responsive Images:** We Implemented responsive images using CSS techniques, such as setting 'max-width: 100%' and 'height: auto,' to ensure that images scale proportionally and fit within their container. Additionally, we employed the 'sicset' attribute to provide multiple image sources at different resolutions, allowing the browser to choose the most appropriate image based on the device's capabilities and screen size.

- **Testing and Debugging:** We tested our design on various devices, browsers, and screen sizes to ensure consistent and optimal performance. In the future, we will consider using device emulators, browser developer tools, and real device testing to validate the website's responsiveness.

7. Challenges and Lessons Learned

Effective collaboration: We are in different time zones, so it was hard to decide on the time to meet. Also, we have different schedules, but adaptability helped us counter this challenge. We have different mastery of HTML and CSS, but we were able to complement each other. We were able to leverage the use of collaboration tools like Trello to ease and ensure flow in our project work.

- **Optimizing the performance of the website:** we had to constantly make changes to our code, like changing the image size, CSS styling, and use of minimal code to make our website lightweight, browser-compatible, and easy to navigate so that our users could have an enjoyable experience.

8. Technical Recommendations for improvement

Include a security feature to ensure our users are not scammed while on our site and that the data they fill in the form is secure.

Implementing a Content Management System (CMS) to simplify content updates and management, enabling team members to add or modify services easily. This reduces the reliance on technical expertise for routine content changes.

Use recommendation engines to enable personalized/customized suggestions according to user data and preferences.

Conclusion

In conclusion, we employed CSS styling, HTML markup, and responsive design techniques to create a user-friendly website for Alumni Connect.
CSS enhanced the website's visual presentation and controlled various styling aspects, including layout, typography, and responsiveness.
HTML markup provided structure and organization to the content, ensuring semantic and accessible representation.
Responsive web design enabled our website to adapt and respond effectively to different screen sizes and devices. We overcame the challenges we faced to make our project a success thanks to our complementary skills and teamwork spirit.
However, we can develop the website further as we learn more.