Coursework 3

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Source repository: https://github.com/mmmarkyb/int-elligence
Published website: https://mmmarkyb.github.io/int-elligence/

Process

High Fidelity Designs

After drawing paper prototypes in coursework 2, we started creating the high-fidelity site designs, and realised that our initial colours (pink and blue) did not work well together with our product.

Figure 1: Initial colours

Because int elligence; is a learning platform, we wanted to use colours that reflected the product's purpose, and decided to use green for our main colour. Green represents growth, and is symbolic of users' learning and growth in skills and knowledge. It also is known to be calming and relaxing, which encourages users to feel at ease when learning to code. We chose the hue by using a colour generator (coolors.co) until we found one that would be versatile enough to work well as a main and accent colour.

To keep things simple, our second main colour was a black that wasn't quite black, so that it would have adequate contrast against a pure white background, but not too much.

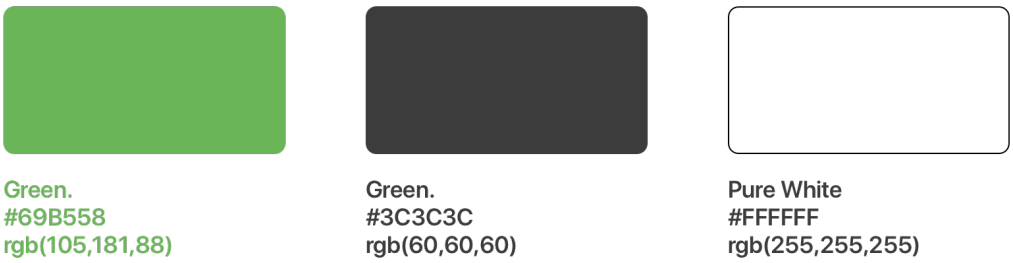
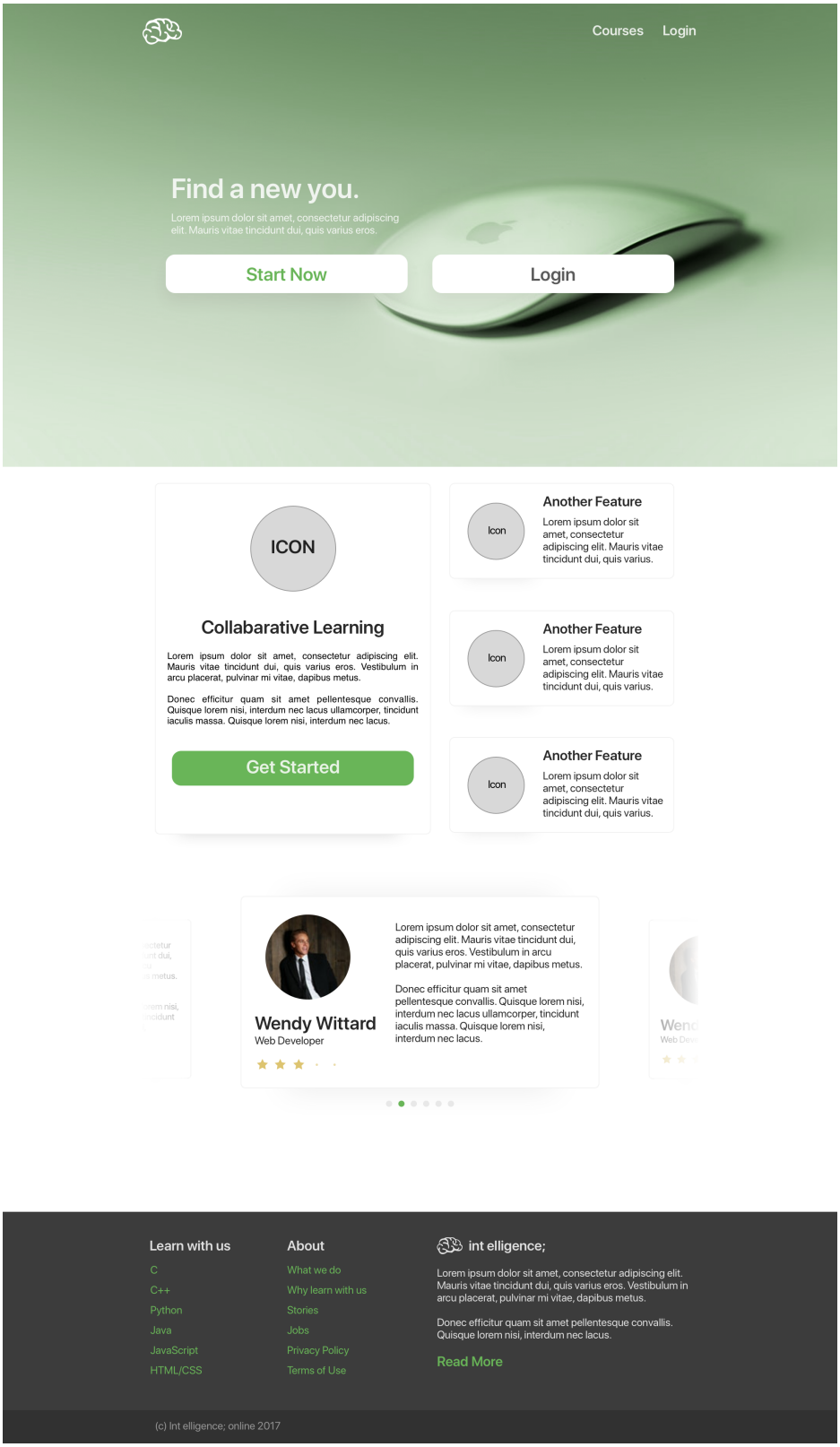


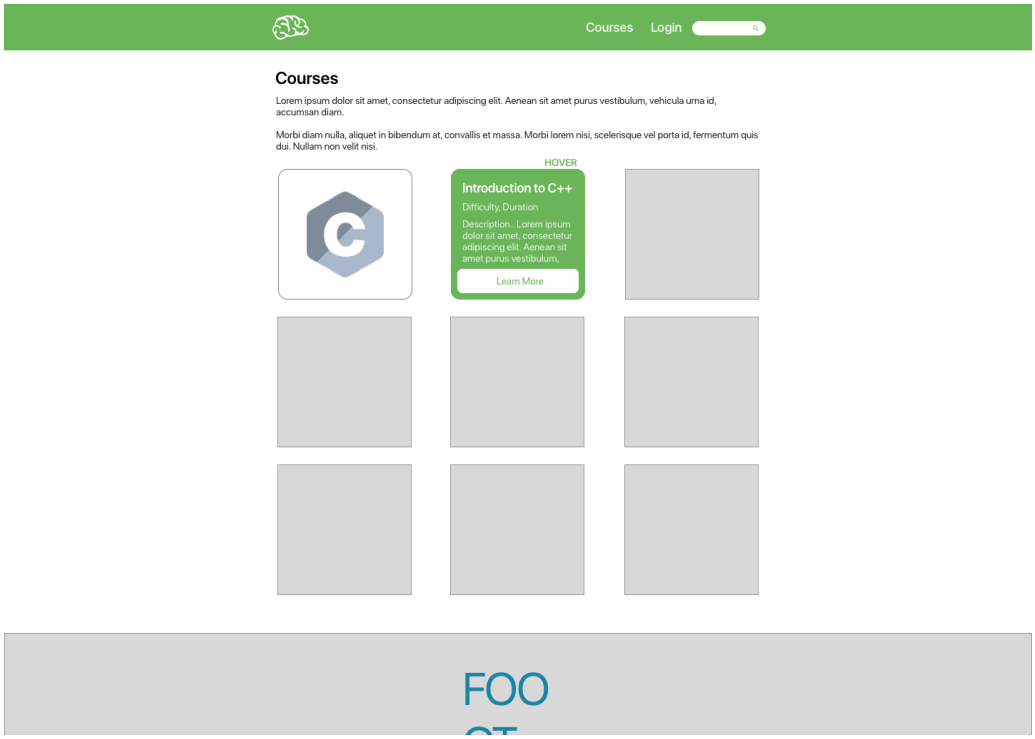
Figure 2: New colour scheme

In terms of typography, one sans serif font was chosen for all text elements to maximise clarity and effect. San Francisco, and the fallback Helvetica Neue, are both standard screen-friendly fonts that work well in various sizes across devices.

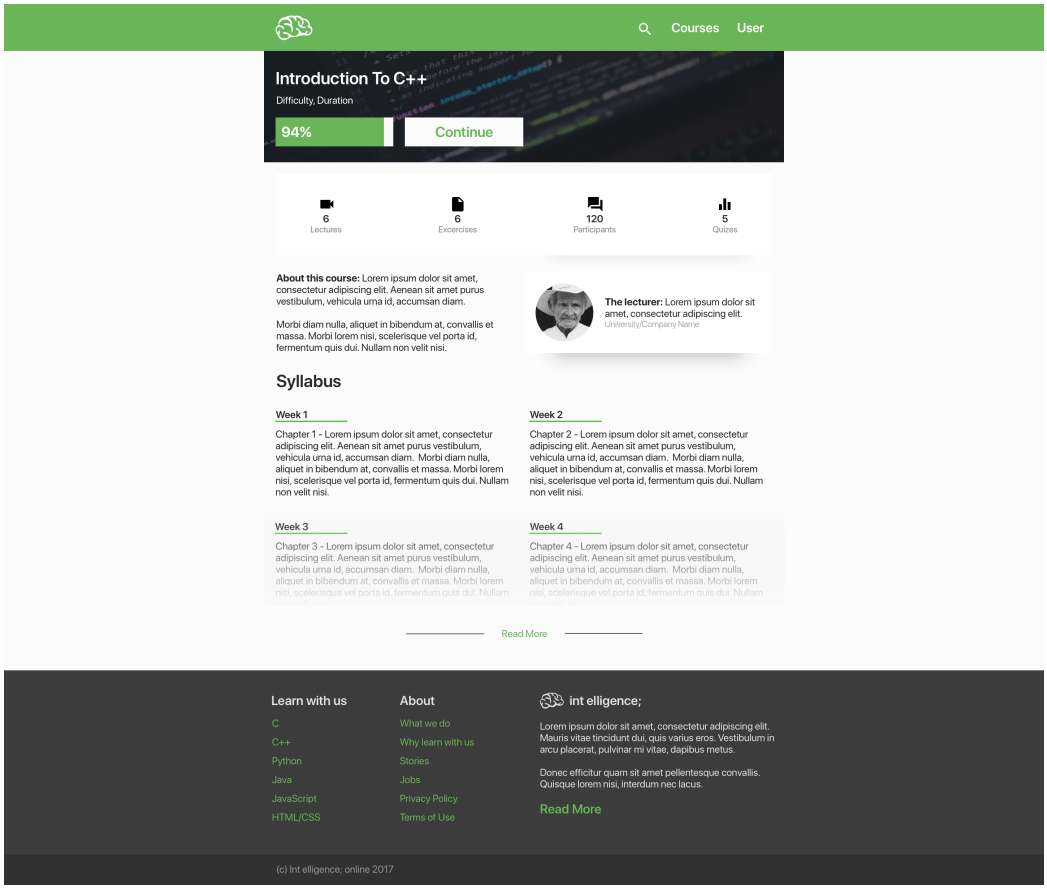
Home page (index.html)



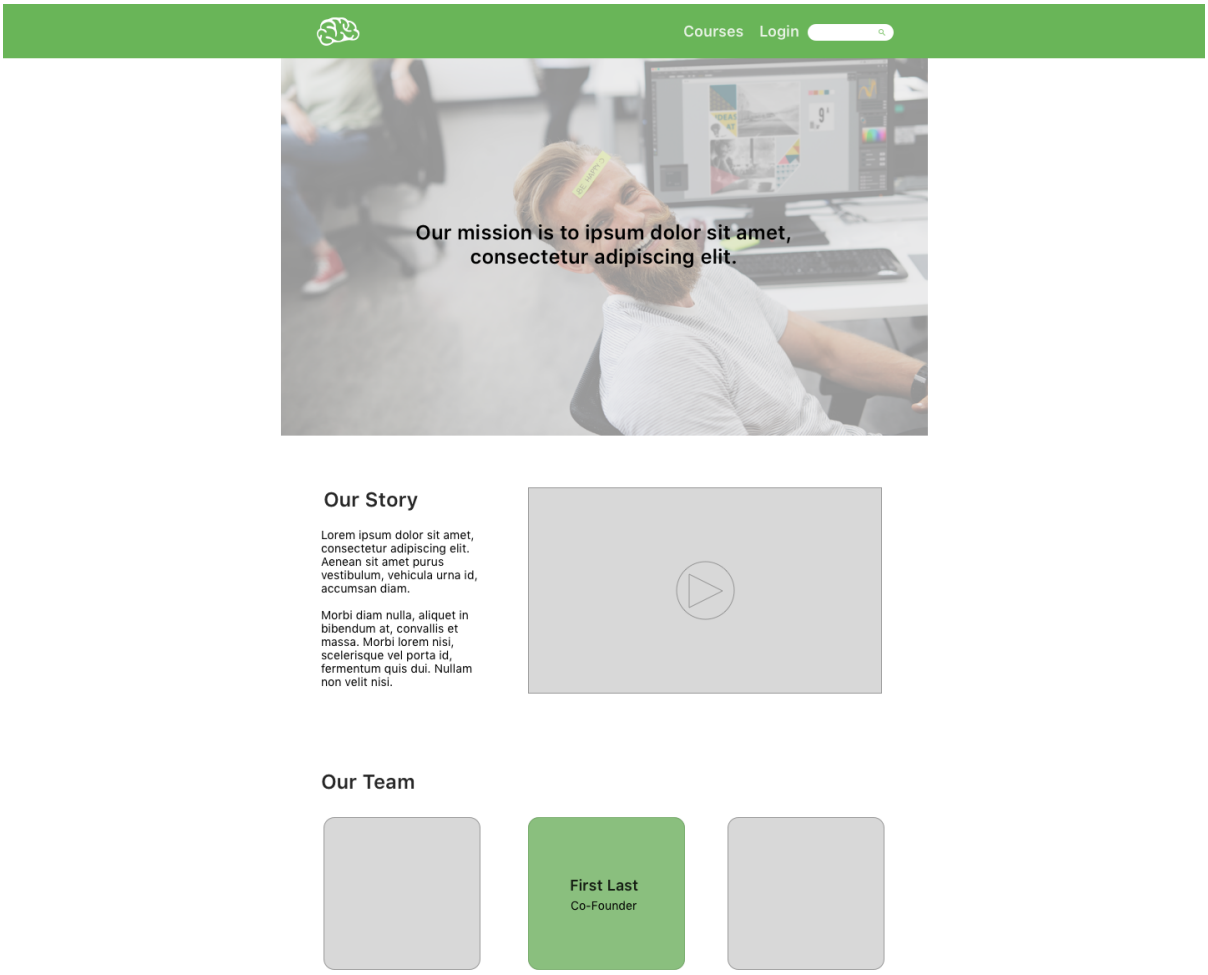
Course Library page (courseLib.html)



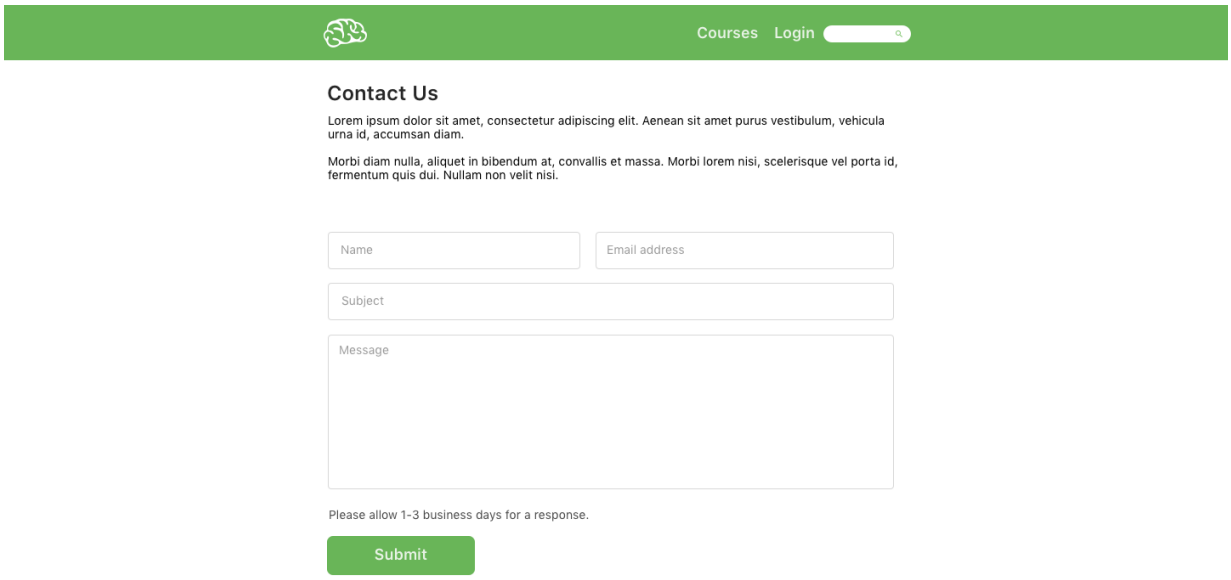
Course (course.html)



About Us (about.html)



Contact Us (contact.html)



Implementation

For each of these pages we wrote the HTML and started the CSS after we had a few pages marked up. This helped to identify where styles would be reused to keep our CSS as minimal as possible.

Changes

Some features and sections designs were adjusted during the CSS phase due to either being too complex to implement, or not matching the rest of the site. Instances of these changes include:

- Changing the navbar from being green to dark grey, due to the green being too bright
- The testimonials slider was changed to a simpler click slider as it was too complex to implement well. Gradients and fades were removed to match the rest of the page.
- Search was not implemented
- Using a dark instead of a light overlay on the header section of the about page

Interactivity

Once we were happy with layout, design and structure, we added JavaScript for the more interactive functionality. Specifics are detailed in the 'Technical Aspects' section.

Accessibility

To make our site accessible we included the relevant HTML attributes such as "title" and "alt". We also made sure that people with visual or colour impairments could still use the site effectively by running the colour scheme through a colour-blind test. The mark-up was also validated with W3C, which indicates that all accessibility features browsers offer should work with our site.

Technical Aspects

To make our site more usable and interactive we used a variety of technical components including JavaScript, CSS and Bootstrap.

Scrolling Navbar Animation

We have used JavaScript to implement the scrolling navigation animation, which changes the background opacity based on the yScroll position. This is a simple function which has an event listener which responds to the scroll event and the calculates the position of the DOM within the browser window and uses that value as an input for the alpha.

Initial State

Scrolled State

Hiding and showing elements

Int elligence; also used JavaScript in other places including the testimonial and course syllabus sections to hide or show the contents of an element by changing the display or height property.

scrollTo Function

We wanted to implement a scroll.To functions for buttons such as “go to top” on the courseLib.html page to smoothly transition to a specified element. Due to time constraints, we omitted this feature.

Media Queries

Int elligence; also uses a great deal of CSS3 specific features such as @media queries to modify the layout and element properties whilst the DOM’s properties match a certain criterion. As the majority of elements are anchored to their parent element using percentage values, responsive design is easily achieved by manipulating the width value of that parent (in our case width: calc(100% - 32px);) .

Interactivity

Throughout our CSS have a used many different selectors, one common occurrence is the :hover pseudo selector. This is used on all of our buttons to identify interactivity. Other less obvious selectors and combinators we have used include;

- “>” Child (to isolate a particular element)
- “+” Adjacent sibling (selects the adjacent element of a specified sibling)
- ::after (creates a pseudo-element after the selected element)

Initial State

Hover State (right button only)

Login modal and Contact Form

The login modal and contact form were large and had slightly more complex features we wanted to include but felt that we couldn’t write all the code required to achieve this ourselves. These are the only instances where we sourced code from a 3rd party - Bootstrap.

Bootstrap is an open source framework that provides templates for typography, forms, and other interface components to easily generate aesthetically pleasing and well-designed websites. Pre-made form control classes made generating the login and contact forms straight forward.

For the login modal, we used Bootstrap’s modal component via data attributes, so that we could activate the modal without JavaScript. To use bootstrap, we included the compiled CSS and JS scripts on every page, and followed their documentation.

Organisation and Site Structure

Int elligence; uses a standard site structure which places all major HTML pages in the root directory, this helps when creating a template that uses references to other documents such as images and stylesheets. All CSS styles are found in one document located under css/style.css whilst images and icons are found under various paths within the assets/ folder.

Well-structured and validated HTML and CSS

Int elligence; code has been structured in a way that makes it easy to read and understand with appropriate indentation that contributes to its legibility. The meta tags that we have included is the viewport tag , which changes the browser width to match the device (this is essential for a truly responsive design), and the description meta tag. Other common meta tags such as keywords etc. have been omitted from our code as they are deemed obsolete from most search engines.

We use sematic mark-up throughout the HTML to better identify the elements of the page and create a better context for search engines, these include but are not limited to:

- title tags
- h1, h2 and h3
- p
- a
- section
- nav
- header
- footer

All of our HTML and CSS validate through the W3C validation service; however, some errors do still occur as the included bootstrap CSS does have several errors and warning of which we cannot edit. int elligence; has a single CSS file titled main.css, we chose to have one file as this make the users experience more fluid, 1 file equates to 1 download.

As mentioned earlier the only place we sourced code from is the login and contact bootstrap. We did this as we felt that it would be unrealistic to write the required functions and styles in the time given. These features also need to be reliable and provide a smooth experience of which Bootstrap provided with little effort.

Contributions

Each row adds up to 100 and represents what each group member thought the percentage of work done by each other were. 25% would be the expected contribution by each member.

	Mark	Vincey	Karla	Nimah
Mark	49	49	2	0
Vincey	49	49	1.9	0.1
Karla	41	41	16	2
Nimah	35	35	20	10
Average	43.5	43.5	10.0	3.025