

COMPSCI 345: Human Computer Interaction
Assignment 3 - High Fidelity Prototype
Design Justification Report – zsau467 675270401

Introduction

With the use of HTML, CSS, and JavaScript we've been tasked with designing and implementing a high-fidelity web prototype under the name 'Carbon Easy' with the goal of spreading awareness about carbon footprints and environmental impact. The design of this high-fidelity prototype requires some relative level of visual complexity and must have a colour scheme centred around a pre-defined colour provided by the client. The purpose of this high-fidelity prototype is to showcase competency in the application of visual design principles and therefore does not require any tangible functionality beyond aspects related to aesthetic. Our webpage will consist of two main elements, the home page, and the registration form; both of these elements will be defined based on the specifications of the client that have been made clear in the assignment document. This involves the use of special id tags for div elements to ensure that each requirement is met and can be clearly seen within the html index file.

Colour Design

The colour design for our webpage was formed around the pre-specified colour provided by the client before the website's creation. Our given colour element was #fcca00, which is called Himawari Yellow and could be described generally as a slightly muted light yellow. Using paletton.com, a resource provided to us by the teaching team in the assignment specifications, we experimented with some colour palettes that rely on our given colour and eventually settled on something we liked.

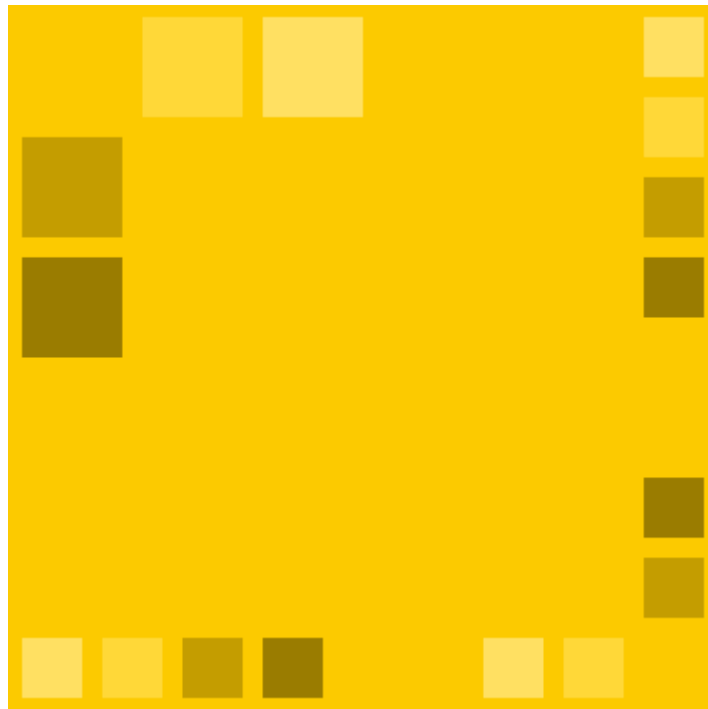


Figure 1 Generated Colour Palette for HFP

The palette that we generated relied entirely on our given colour and all aspects of the palette are derivatives of the colour yellow. The palette provides a good consistency and allows our main colour to flow well throughout the page but it is a bit limited in terms of contrast; because of this we decided to add some further colour variation such as black as well as varying shades of orange to add some depth to the design of our page.

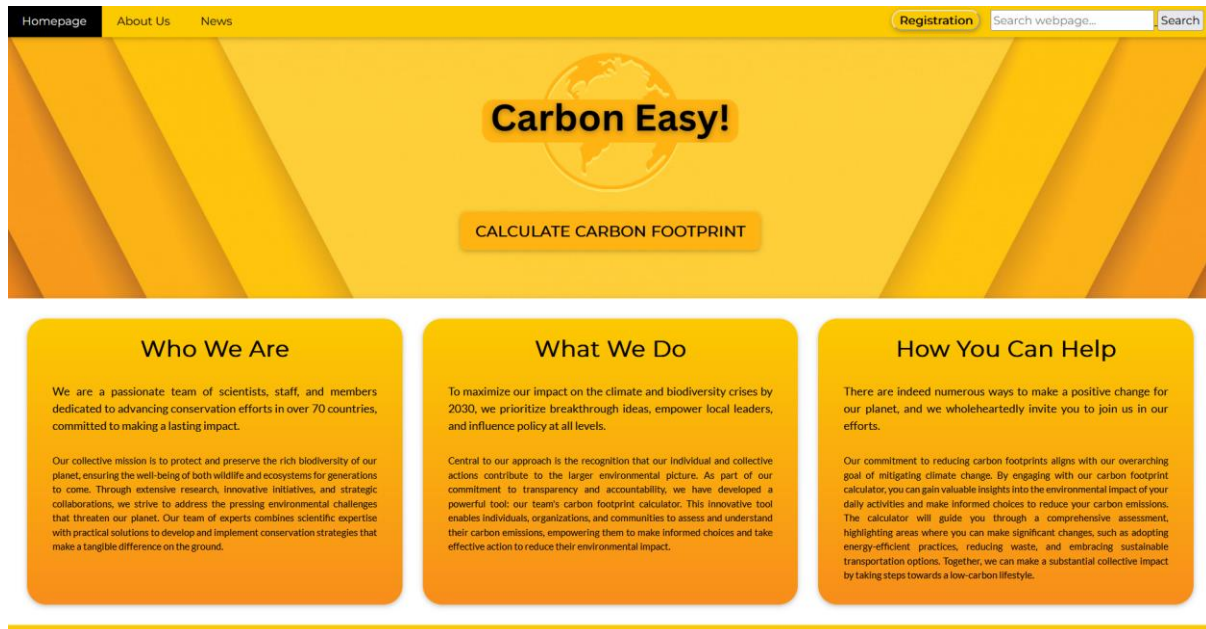


Figure 2 Our finalized web prototype

The above image is a screenshot of our completed web prototype and as is clear, the page adheres partly to the palette we generated prior to the development with some added flavour to enrich the design. Given the opportunity to work with variations of yellow and orange was good because it allowed us to lean more into warm colours that made our website feel more open and expansive, despite it being fairly limited in content and functionality. The welcoming colours used throughout our webpage provide a kind of calming effect, we tried to exemplify this with the use of colour gradients on the main content section of the webpage. Using two of the main colours from our palette we created a gradient to add a glow to the content sections, drawing the user in without the harsh side effects of more vibrant colours.



Figure 3 Orange and Yellow Colour Gradient

The highlights of our links and all text on the page was coloured using our black accent. This use of black really stands out among our other palette colours and draws the user to the important aspects of the page e.g., the links, logo, register button, carbon footprint calculator, and the content section.

Visual Structuring

The visual structure of our finalized high-fidelity prototype can be broken up into four different sections, the navigation section, the centre section (e.g., logo element), the content section, and the registration section.

The navigation section is essentially just a custom navigation bar containing five different elements, three navigation links, a registration button, and a general search-bar. The three general purpose links are grouped to the left side of the navbar, and the more functional elements are grouped on the right side. This grouping is not arbitrary and serves two purposes, firstly it puts the proximity principle into play grouping the left elements with navigation and the right elements with function; secondly, it adds to the pages overall symmetry and prevents either side from appearing more dominant.



Figure 4 The navigation section

The centre section contains the logo, a button, and an abstract background. The background is neat and creates a nice blend of our colour palette, the design of the background also ties into our symmetry very well and exemplifies the logo and button by adhering to the reflection symmetry principle focusing the user on the centre of the page. The smoothness of the background alongside the colour choices of the navigation bar and centre elements adhere to the continuity law and ensure that the top half of the page is seen as a continuous element.



Figure 5 The centre section

Sporting three content containers and one very minimalist footer, our content section is distinguished by its simplicity. Each of the containers is highlighted with a subtle glow using the gradient background discussed earlier and the softness of the colours is complemented with the softness of the containers, particularly their curved borders and slight back shadow. The elements are grouped together via the proximity principle as well as the similarity law (e.g., rows of similar objects). The text inside the containers is simple and is justified to the centre to cleanly present information.



Figure 6 The content section

Our registration form is handled using a modal container that is accessed via the 'registration' button in the navigation bar. The form itself is broken up into five discrete elements, the title, user details, location details, contact details and submit button. Although each of the form elements are technically separate, they are symbolically linked via the common fate law, similarity law, and proximity principle. The background of the registration element is abstract and follows the colours of the main page very closely, the submit button is also congruent with the design of the other form elements but is made to stand out with its lack of symmetry. The 'X' button is also strikingly obvious because of the contrast of colours.

Registration Form

Given name:

Surname:

Username:

Password:

Home Address:

Work Address:

Mobile Number:

Email:

SUBMIT

Figure 7 The registration section

Accessibility & Further Requirements

The design of our high-fidelity web prototype follows the guidelines and requirements for general web accessibility regarding font-sizes, form layouts, page-title, contrast, and colour blindness. When

it comes to all text present on the website, a minimum font size of 16px is enforced on each element with most text being above that size. All text is a strong black colour, and most sections have high levels of contrast between background colour and text colour.

Our registration form follows the accessibility conventions with clearly titled input boxes as well as helpful placeholder text to assist the user in entering information. The button to close the registration form has high contrast with surrounding colours and we have added the functionality to allow the user to exist the form by clicking outside of the form's border.

We have also used a relevant page title and ensured that our colour scheme is readable for varying levels of colour blindness.