

COMPSCI 345 / SOFTENG 350

High-Fidelity Prototype

Landing page and registration form for a freecycling program, and a report.

30 marks for 30% of your final grade.

This assignment is individual.

Each student should plan to spend 20 hours on this assignment.

For submission instructions please see the section on submission below.

Due May 3rd 2024, 7:00pm

Aim

The aim of this assignment is to develop a high-fidelity prototype as a mock-up Web interface. The assignment allows you to practice skills in high fidelity design, Web technology, HTML, CSS, and JavaScript. This assignment aims to give you familiarity with foundational web technologies. It will require you to put the visual design principles discussed in class into practice. Lastly, the assignment demands that you adopt an inclusive design practice by taking web accessibility into consideration.

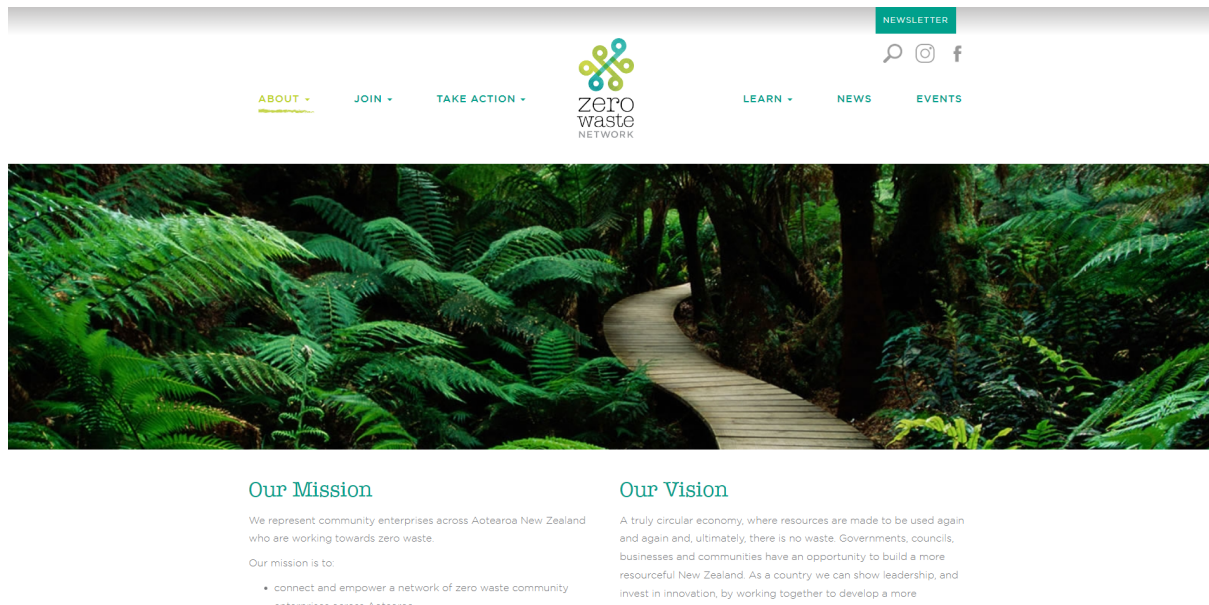


Figure 1 - Screenshot taken from a freecycling themed website. Your prototype should have comparable visual complexity to this example.

Background

Imagine that you have been asked to design a website called “Freecycling!” including its registration form. *Freecycling!* intends to use this website to enable users to sign up for a freecycling network in their local community, where individuals can give away items they no longer need for free.

A combination of usability, visual appeal and accessibility will make sure the visitors get the most out of your site, building the foundation for an exceptional user experience. The account creation or registration form is a typical part of websites that provide personalized services. The user experience of the website and such online forms supports the relationship between the service and its audience.

You are tasked with developing their website. It should include a registration form which will allow new members to fill up their details and submit the form. The business will then handle future freecycling initiatives and other member activities.

For this assignment, you will have to prototype only:

1. the homepage and
2. the online registration form

You are designing for a high-fidelity prototype therefore, it does not need to be fully functional (i.e., the prototype does not connect to a database, nor does it actually submit the form field input). Error checking for format of addresses, passwords, mobile number, is out of scope.

High-Fidelity Prototype

Part 1. Main page

Design a homepage for *Freecycling!*. There are no restrictions as to what you can include in the homepage, as long as you stay with the topic of freecycling. You are NOT required to actually include a functional browsing page, rather, you just need an informative and appealing homepage.

You should also include a navigation bar, a supporting image and a primary call-to action, in this case a button or link for registration. Make use of the visual design principles discussed in class and take into account the basic accessibility guidelines.

The screenshot in [figure 1](#) shows an example of a website similar to what *Freecycling!* wants. Your solution should have a similar visual complexity and use Gestalt principles and other Design principles where appropriate, and this should be described in the report.

Your design should be suitable for a 1920x1080 screen, more specifically you should check that it looks as you intend it with the Google Chrome tool to test a custom screen size as described in [Q10 of the Q&A](#), and that it is readable if it is displayed on a 14 inch screen, a typical business laptop. Your design does not need to be responsive.

Both the home screen and the form should be useable without scrolling at this resolution. This is important for both the homepage and the form to showcase the visual design in this exercise.

The organisation has a particular brand colour that they are known for and that they want used in the website for brand recognition, and this is sent to you via your UPI email. Your design should use the colour in an appropriate way that ensures the customer aim of brand recognition through that colour. It must be present in multiple html elements in the homepage, and it must adhere to the more specific specifications below.

Because this assignment aims to give you familiarity with foundational web technologies, the implementation is limited to vanilla Javascript and the stylesheet w3.css and Fontawesome and necessary google fonts.

Your website has to meet accessibility guidelines including colour contrast.

Part 2. Registration form

Design a registration form for a *Freecycling!* member. The form should be in a modal window that pops up as an overlay on top of the homepage. The modal window only appears if you click the registration button or link from the homepage.

The modal window should also have a close button (usually a button labelled "x") that closes itself and restores the homepage. This can be achieved using a simple JavaScript code. The button or link that you click to trigger the opening of the modal window must have an id of "trigger-modal".

For example:

```
<a href="#" id="trigger-modal">Register</a>
```

Your form should have exactly 3 sections with all of the 8 following input fields (each is exactly only 1 input field):

- User Details
 - Given name
 - Surname
 - Username
 - Password
- Addresses
 - Home Address
 - Work Address
- Contacts
 - Mobile Number
 - Email

For the purposes of this assignment, do not add any additional sections or form fields to the registration form which differ from the above specified sections and fields.

For simplicity, your form should keep these three sections within ONE column, with the fields directed towards one common fate. The visual subdivision into the three sections should only use the principle of proximity.

Furthermore we assume that your design team requires that the three sections have the **exact div ids**:

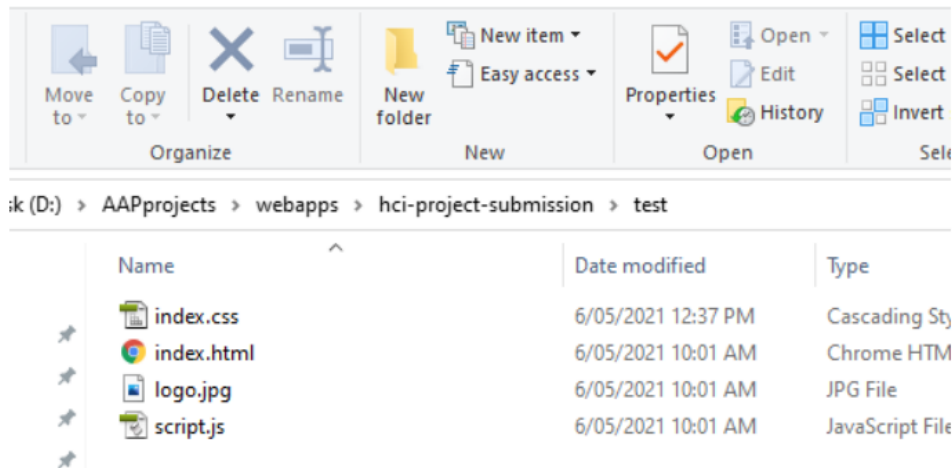
- user-details (For example: `<div id="user-details">`)
- address-details (For example: `<div id="address-details">`)
- contact-details (For example: `<div id="contact-details">`)

Remember to use these **exact** div ids for each section.

Your design team also requires that you enclose the entire form with a div html element with the id "form-ct". Thus, the form contents should be within `<div id="form-ct"><form>...</form></div>` In general, the HTML should be well-formed. This can be achieved by using some of the free IDEs that check markup.

Assignment File Structure/Folder Requirements

While folders are common for web file organisation, for the purposes of this assignment **you must not have any folders**. All of your files, such as your CSS and image files, should be in the same folder where your index.html file is located. Do not put any files in subfolders. Your directory structure should be similar to the file structure below for example:



The examples below show you how you call local files from your html:

`<link rel="stylesheet" href="index.css">`

(correct)

`<link rel="stylesheet" href="https://www.w3schools.com/w3css/4/w3.css">`

(correct)

`<link rel="stylesheet" href="css/index.css">`

(incorrect because it is in a subfolder)

`<script src="scripts.js"></script>`

(correct)

`<script src="js/scripts.js"></script>`

(incorrect because it is in a subfolder)

For questions see section 12 to 14 of the Q&A.

The Report

You will also need to submit a report, that will consist of a series of annotated screenshots. In the annotations, you will describe the rationale behind your visual design choices.

You will be marked on the quality and clarity of your justification of design decisions in regards to user experience, Gestalt principles, balance, emphasis, unity, and colour scheme, for the main page and form.

Rather than an essay format, we're seeking 5-8 **annotated screenshots**. At least two screenshots should be complete screen views of your main page and form. The remainder should be particular framings and closeups of page elements. The total length of the text in annotations should be 800-1000 words and not exceeding 1000 words (including titles and figure captions, excluding references).

Submission Instructions

Use the Validation Prior to Submission

The submission system <https://hci-submissions.researchprogrammerhub.cloud.edu.au> will help you ensure that your submission meets certain technical specifications. (After each upload, a validator will check most but not all of the technical requirements in this assignment). You can submit a .zip file. You will need to login using your university email (i.e. your_upi@aucklanduni.ac.nz)

There are no restrictions as to how many times you use the validator. You can validate your assignment as many times as you need to before the deadline.

We reserve the right to reduce marks for any technical specifications not followed. Passing all the Validator Syntax tests is an important indicator that your assignment meets technical specifications, but you are responsible to check for all specifications.

In case of issues with the submission system, please contact d.dimalen@auckland.ac.nz.

Submission Overview

You will need to submit in two places.

1. to Canvas all files including the Report in PDF format, as a zip file
2. to the submission system

<https://hci-submissions.researchprogrammerhub.cloud.edu.au>
as a zip file except the report.

This submission system will accept your last submission before the deadline as the final submission.

You need to submit in **BOTH** places. All of your files, such as your CSS and image files, should be in the same folder where your index.html file is located. Do not put any files in folders or subfolders. We reserve the right to apply a late penalty if the assignment is not correctly submitted to both places.

Submission Marking Scheme

For evaluating the compliance of the submission, e.g., with accessibility guidelines, we will use manual marking and we may use tools to check, e.g., colours. Please recall that only W3 CSS is allowed.

Report

Quality, clarity of annotations and justifications for user experience, Gestalt principles, balance, emphasis, unity, colour scheme for main page and form. Correct number of screenshots. (10 marks)

Visual design

Overall quality of user experience, Gestalt principles, balance, emphasis, unity, colour scheme for main page and form. (5 marks)

Common Fate Form follows the Gestalt principle of Common Fate. (2 marks)

Proximity Form visual subdivision only uses the Gestalt principle of Proximity. (2 marks)

Colour Assigned colour is emphasised and present in multiple screen elements. Colour contrast meets accessibility guidelines. (5 marks)

Functionality

Accessibility Submission follows accessibility guidelines presented in lecture. (5 marks)

Functional correctness Form pops up and closes as specified. No bugs. (1 marks)

Technical Specifications

All instructions and specifications have been followed. No errors from Validator. The HTML is well-formed. (Up to -4 marks, as deduction if not fulfilled)

Q & A

This section includes common questions regarding the projects. If you still have any questions don't hesitate to ask on Piazza.

Q1: Can I use other colours?

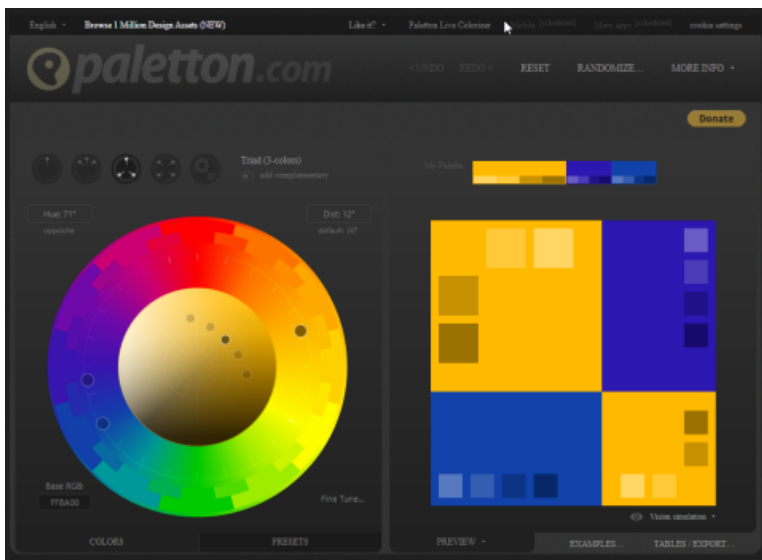
A:

Yes, you can, but you need to include the exact brand colour you were given a few times on the website, and also theme your colour scheme around said colour.

You can use a colour scheme such as complementary or analogous colour scheme that contains your colour.

Remember, the intuition behind the assigned colour is that this is the brand colour of our customer. So the customer wants to receive a solution that fits to the brand in terms of colour.

E.g., if my colour was **#FFBA00** I would play around with <https://paletton.com>. And find similar/complementary shades I could use.



Q2: Can I use inline styles?

A:

Yes.

To clarify, inline CSS is having the styling code inside the HTML file, and not in a separate CSS file. You are allowed to either have a separate CSS file or use inline styles.

Q3: Will I get full marks if my project passes the validator?

A:

No, the validator is a tool to help catch any errors related to a subset of technical specifications and specified naming conventions; it will not mark your project.

Q4: Can we use Google Fonts?

A:

Yes.

Q5: Can we use templates?

A:

You may browse for templates only from w3school's w3.css templates.

https://www.w3schools.com/w3css/w3css_templates.asp.

But you need to ensure that you modify the template substantially, to make it your own. You also need to indicate your code contribution.

No other templates other than the ones mentioned are allowed. You are not allowed to use anything that generates code for you. The reason for this approach is that downloading a template that sets the colour scheme, the font scheme or has a creative layout isn't your own work. Intrinsically, this assignment does not require elaborate toolkits, given the super-limited functional requirements of the system. The assignment focuses on making good design choices rather than implementing maximum functionality.

W3schools template recommended to study popup functionality:

https://www.w3schools.com/w3css/tryw3css_templates_mail.htm

Q6: Can we use External Style Sheets?

A:

You may only use w3.css and Fontawesome and necessary google fonts. No other stylesheets are allowed in this assignment (i.e. bootstrap). The intuition behind this is that the assignment builds a familiarity with foundational web technologies, and that you will use this familiarity to better understand current and future frameworks that build upon these foundations.

Q7: Does the website need functionality?

A:

No, the only functionality you need is to open and close the pop-up modal. You do not need to include anything more complex.

Q8: Do we get better marks for responsive websites?

A:

Although we encourage it, this assignment will not mark you based on website responsiveness, so there are no marks for website responsiveness.

Q9: Can I use multiple HTML files?

A:

No, please only use one HTML file named 'index.html'.

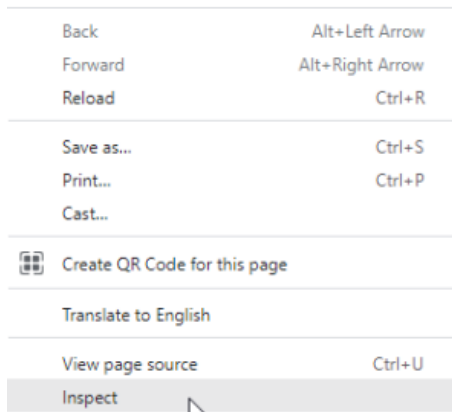
Q10: How do I make sure my website is suitable for a 1920x1080 desktop?

A:


The examples shown will be for Microsoft Edge and Google Chrome, though most web browsers should support this function. Before submission, you should review your design with Google Chrome.

You may follow these steps:

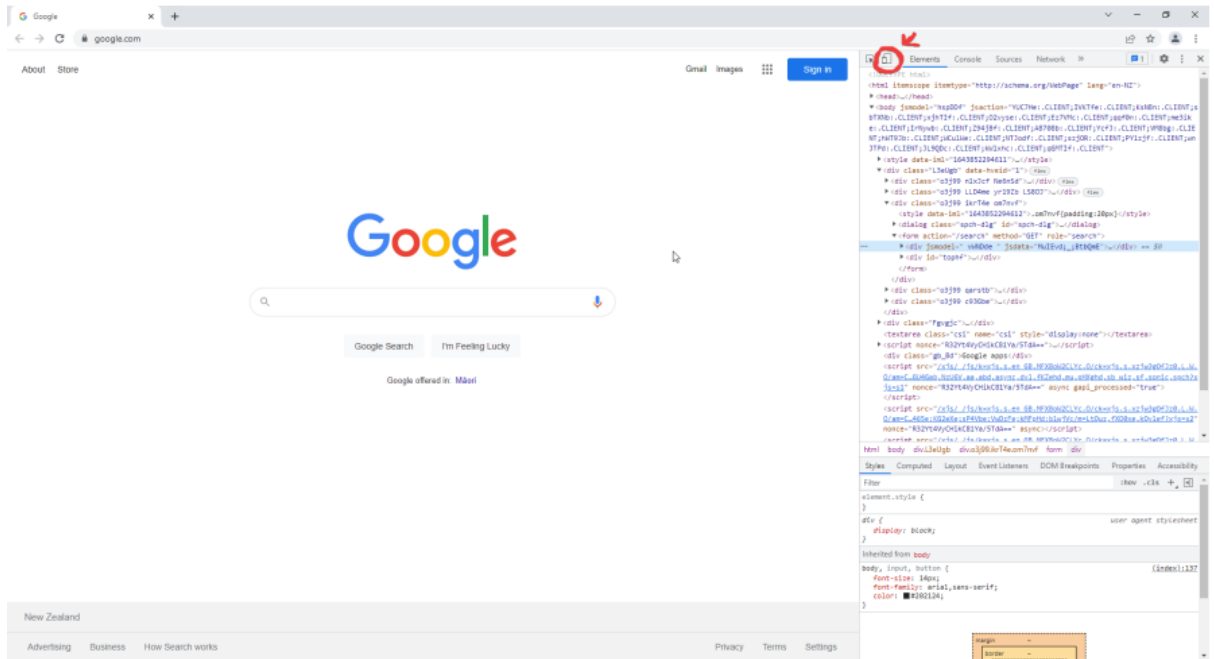
1. Right click anywhere on the browser.
2. Click 'inspect element'.



3. You should now see the 'developer tools' section. (By default it is on the right)
4. Click the 'toggle device toolbar' icon.

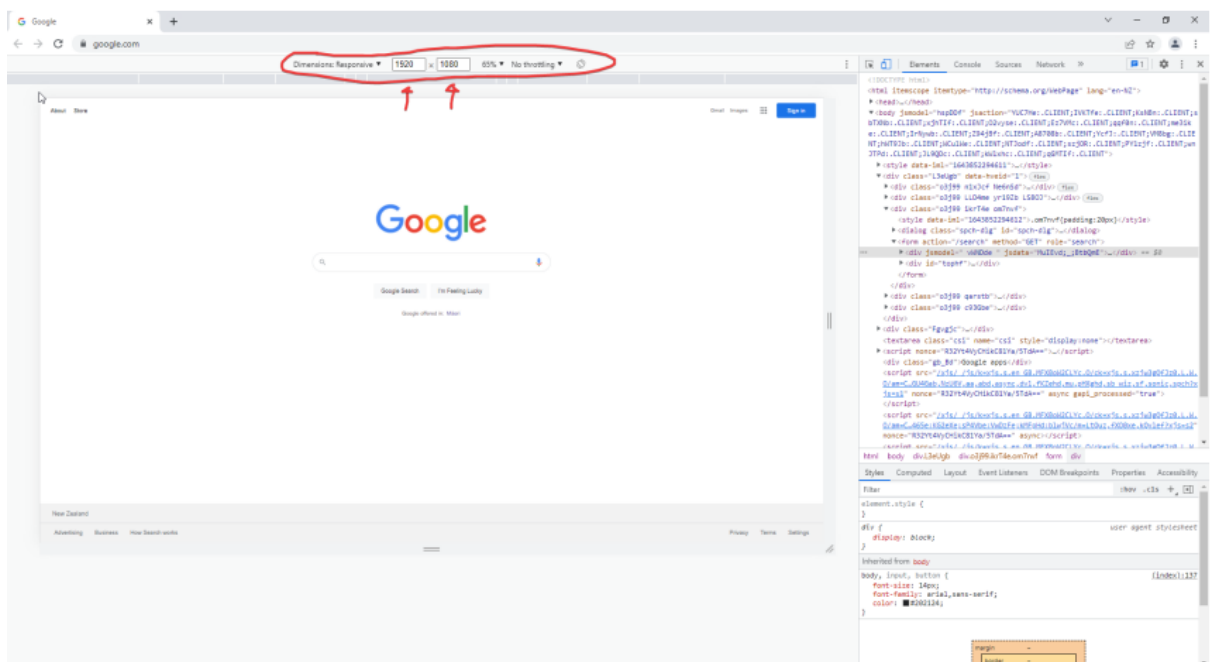
It should look similar to the image: 

It is also highlighted in red in the following screenshot.



5. Now you should notice some changes to the browser.

Near the top of your browser (just under the address bar), you should see two input fields. Set the dimensions to 1920 x 1080.



6. Now you can see your browser in 1920x1080 resolution. These are the dimensions that your marker will see your website in.

Q11: Can I add more sections to my registration form?

A:

No, please only add the sections mentioned in the specifications.

Q12: Can I have multiple input fields per question?

A:

No, each question can only have one input field.

Incorrect (showing two input fields side by side):

Address

Correct:

Address

Q13: Can I separate the sections into multiple columns?

A:

No, all the sections and their corresponding questions must be within one column.

Q14: Could I submit my github repo?

A:

No -- you must follow every single submission instruction precisely as they've been laid out. Each instruction is there for a reason. Please ask us in lecture if you are curious!

Q15: How should I check the colour contrast of web elements?

A:

There are many online tools. We recommend: <https://webaim.org/resources/contrastchecker/>

Sources

Recycling website example - <https://zerowaste.co.nz>