

AS91893

Use advanced techniques to develop a digital media outcome (website)

4 credits

Evidence document 12COM 2025 Pakuranga College

You are creating a website to educate students about relevant implications.

(See separate instruction document.)

Initial design

What is the purpose of the website and who are the users?

What are the requirements of the end users?

The purpose of this website is to guide students through understanding and implementing the 'relevant implications' topic in their projects. The website would need to explain the importance of implementing relevant implications into a project. The users of this website would be predominantly students in high school, particularly year 12s and 13s taking computer studies. This website will also be assuming that this topic is new to the user, and will break it down in order to help them achieve their desired grade.

What relevant **implications** will you need to consider as you develop your website?

What are you likely to have to do?

Intellectual property

- I will need to check whether the materials I am using are available for use without any copyright issues. This mostly involves images, so I will have to check whether they are copyrighted or not.
- The website's content will be AI generated, which cannot be copyrighted and therefore can be used.

Accessibility

- I will need to make sure my website works on devices with different screen size. This means making the website responsive.
- I also need to make the website accessible to people with sight impairments, which means I need to accommodate color blindness with good contrast, and page readers with alt tags and good hierarchy with the header tags.

Usability

- like every website, this one needs to be usable by actually helping students with their work.
- Website requires a clear visual hierarchy
- Usability heuristics need to be implemented
- Navigation and over content should be easily understandable/

Aesthetics

- the website needs to be somewhat attractive, as well as consistent. I will do this by maintaining a constant color palette.

Functionality

- Links need to redirect to proper pages
- Styles and animations should work
- Image paths should be valid in order to display the images properly

What pages are you going to have?

What content will you have on each page?

Home page

- Relevant implication definition + examples
- Cards that display different relevant implications and redirect to respective page.

One page for each relevant implication

- Something to guide the user through writing about the respective relevant implication.
- An exemplar

Describe how your use of appropriate tools and techniques will make your solution fit for the purpose and end users (think about the benefits of using Bootstrap, or whatever other technologies you will use).

I used Live preview extension in Visual Studio Code since it allowed for more efficiency when creating and styling the website, it updates live.

I used GitHub in order to take advantage of version control and because I wanted more commits. ([Repository](#))

I used ChatGPT to generate content for the individual relevant implication pages since content generated by AI cannot be copyrighted AND to save time.

I did not use Bootstrap because I wanted some more customizability with animations and interactivity, and I didn't want to overwrite any bootstrap code just in case it got messy. Without having to rely on an external stylesheet, my website would be able to load faster and better accommodate the user's requirements.

I was considering using Flask in order to implement templates so I wouldn't have to rewrite the same code over and over again, however due to the way this assessment is submitted I refrained from doing so. This also saved me some time since Flask makes things hard to test especially since you have to re run the website every time a change is made.

Wireframes and design ideas

You need to include wireframes of your design ideas. Describe the main features of your designs and how they will help meet the needs of end users. Describe features such as navigation, and how the website could also be used on mobile devices.

(e.g. wireframe.cc, annotated sketches)

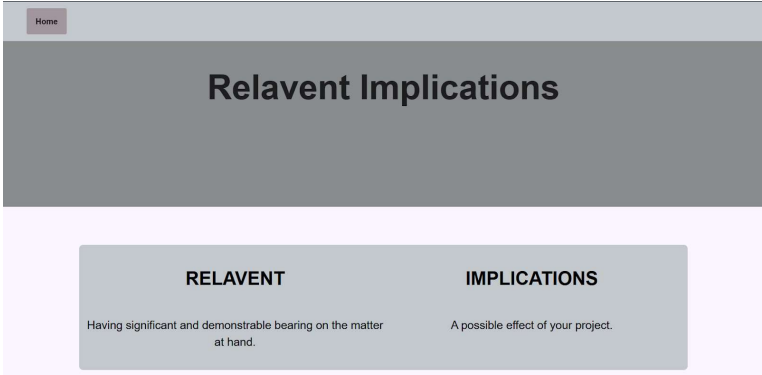
I wanted to implement a minimalistic design for the website since I have to prioritize usability over aesthetics.

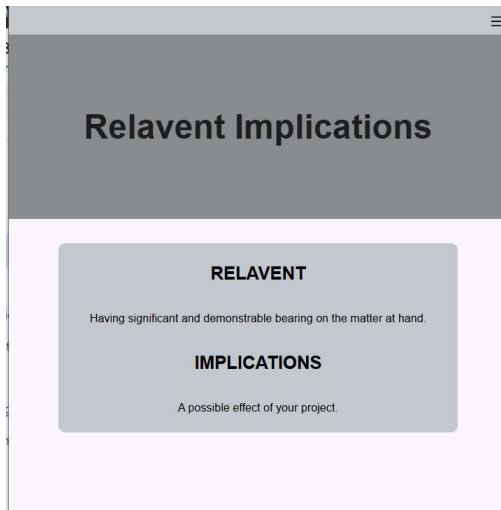
Home Page: [Wireframe](#)

Individual relevant implication pages: [Wireframe](#)

Evidence of development and testing

Evidence of testing should include W3C validator screenshots, plus description(s) of how you ensured the outcome is problem-free. Include screenshots in different browsers, on different size screens etc.

Version 1	Date: 12/3/25
Snapshots of progress.	
<p>(Screenshot or GitHub link, any Chat-GPT history)</p> 	
When minimized:	



Describe **testing** completed. Include screenshots.

(e.g. W3C Validator, Lighthouse, screen sizes, etc.)

In this version, my code was too short to validate without getting any issues so I waited until further versions to use the validator. However, I began testing the basic website with different screen sizes by minimizing my window. At first, the columns looked really ugly even when the screen was at its largest width (because I used float instead of flexbox) but I fixed this with 'justify-content: space-evenly'.

When I minimized the window, I wanted the 'Home' button to disappear and only reappear in the center once the hamburger is clicked. This worked without any issues.

The website currently feels very monotonous (addressed in later version).

I have not tested the website with any real students as of now.

Describe how relevant **implications** have been addressed.

(Explain why and how)

Intellectual Property

- In order to protect creative and innovative works, I had to make sure that the content I was using is free to use.
- I wrote the current content myself so I don't think it would be copyrightable.
- I haven't used any images yet, so I can't be copyrighted for that.

Accessibility

- My website has to be accessible by various different users, which includes those with disabilities that could affect their sight.
- I used a color palette generator to get a color palette with good contrast and one that accommodates color blindness
- My header hierarchy so far also accommodates screen readers

Usability

- My end users need to have a better user experience, result and understanding in my topic.
- You only need to scroll through the site which makes it extremely easy to use.

Aesthetics

- My end users need to be satisfied by the readability of the website, which increases perception and understanding ability.
- My website has to have good aesthetics
- Content isn't smushed up together, there's sufficient negative space (margin, padding) that makes the website so far look good.
- The website is currently symmetrical which looks pretty
- My color palette is minimalist and not overwhelming

Describe how you have used relevant **conventions** for the media type.

(e.g. Any [usability heuristics](#) followed)

Aesthetics and minimalist design

- I used a consistent colour palette for the site
- I also surrounded text in boxes with nice borders (creating a clean and modern effect) so that they're easier to read
- Minimalist design (simple color palette, lots of negative space) makes for a website that isn't overwhelming and is easy to navigate.

Recognition rather than recall

- Navbar is sticky and remains at the top of the page.
- Nav-hamburger which indicates that it is expandable.

Version 2

Date: 17/3/25

Snapshots of progress.

[Home](#)

Relevant Implications

RELAVENT


Having significant and demonstrable bearing on the matter at hand.

IMPLICATIONS

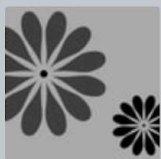
A possible effect of your project.

A relevant implication is a possible effect that your project takes into


[Home](#)




Accessibility




Aesthetics




Usability



Functionality



Health & Safety



Int. Property

When minimized:

Relavent Implications

RELAVENT

Having significant and demonstrable bearing on the matter at hand.

IMPLICATIONS

A possible effect of your project.

A relavent implication is a possible effect that your project takes into account.



Accessibility

Describe **testing** completed. Include screenshots.


In this version, my code did not pass the validator due to my image paths having spaces in them but this was easily fixable. I continued testing the site with different screen sizes, which was difficult to get right as I have not worked with a grid system in html/css before without bootstrap. At first I used static rows and columns to display the cards, which didn't allow for much flexibility the way I coded them. I also had an issue where every card would vary in size but I fixed this by making every image a constant width and height and making sure the text inside the card wrapped.

I added an extra box in a different color to improve contrast and make the website look less monotonous. (Addressing the monotony problem in version 1)

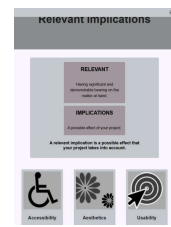
Made a person test out the website:

1. Jaden, age 16, computer science student without prior knowledge on what relevant implications are.
 - a. Had no functionality issues except for the one listed below, even tested on his ipad. However he said it was inconvenient to have to scroll so much to view all the relevant implications when the screen is minimized (addressed in later version).
 - b. When screen was minimized we found that the navbar hamburger completely

disappeared, this was fixed easily because I simply forgot that I removed an entire media query.
Describe how relevant implications have been addressed.
<p>Intellectual Property</p> <ul style="list-style-type: none"> - In order to protect creative and innovative works, I had to make sure that the images and content I was using is free to use. - I wrote the current content so far myself so I don't think it would be copyrightable. - The images I've used are free to use <p>Accessibility</p> <ul style="list-style-type: none"> - My website has to be accessible by various different users, which includes those with disabilities that could affect their sight. - This version has images, so I've implemented alt tags in order to accommodate screen readers. <p>Aesthetics</p> <ul style="list-style-type: none"> - My end users need to be satisfied by the readability of the website, which increases perception and understanding ability. - My website has to have good aesthetics - Content isn't smushed up together, there's sufficient negative space (margin, padding) that makes the website so far look good. - The website is currently symmetrical which looks pretty - My color palette is minimalist and not overwhelming
Describe how you have used relevant conventions for the media type.
<p>Aesthetics and minimalist design</p> <ul style="list-style-type: none"> - I added an extra box in a different color to improve contrast and make the website look less monotonous. (Addressing the monotony problem in version 1) <p>Consistency and standards</p> <ul style="list-style-type: none"> - all buttons turns cursor into a pointer, as well as getting bigger/brighter to indicate that it is clickable. Users will be able to recognize that it is a button.

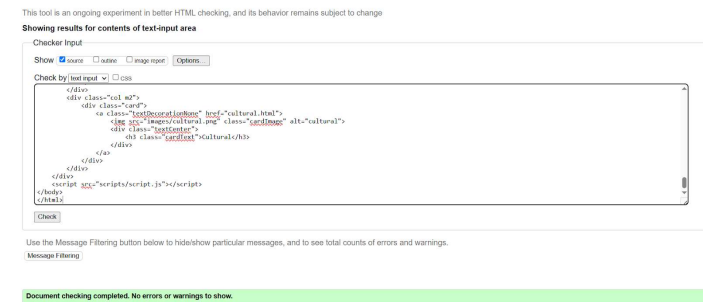
Version 3	Date: 24/3/25
Snapshots of progress.	
	

When minimized:



Describe **testing** completed. Include screenshots.

Index page:



Individual relevant implication sites (all follow the same template):



As seen in the screenshots above, my websites passed the w3validator without any issues.

This version had minimal issues except for errors with the new animation. There was an error where the navbar collapsing animation would play whenever the screen minimized, but this was fixable by making the navItems 'overflow: hidden' to make sure the content is hidden before the animation plays.

Taking into account Jaden's suggestion on how inconvenient it is to scroll through the grid, I put more of the relevant implications into each row in order to make it more compact. I tested this grid by minimizing my window and making sure the grid resized itself accordingly.

I tested the final version of the website with the same previous people, to which no issues were encountered and all individuals were able to explain what a relevant implication is. I mainly got good feedback such as compliments on the animation and website design.

Describe how relevant **implications** have been addressed.

Intellectual Property

- In order to protect creative and innovative works, I had to make sure that the images and content I was using is free to use.
- All of the content of my pages have been written by me or generated by ChatGPT, which means none of it is copyrightable.
- The images I've used are free to use

Accessibility

- My website has to be accessible by various different users, which includes those with disabilities that could affect their sight.
- This version has images, so I've implemented alt tags in order to accommodate screen readers.
- I have implemented a good heading hierarchy in order to accommodate screen readers and to make easier to work with overall.
- My entire website is responsive including the text and images, which allows different screens to use the website. My divs resize accordingly.

Functionality

- My website needs to be efficient and understandable for end users.
- This version loads images very quickly and has images and a navbar that redirect the user to the home site.

Usability

- My website needs to be easy to use by my end users.
- Taking into account Jaden's suggestion on how inconvenient it is to scroll through the grid, I put more of the relevant implications into each row in order to make it more compact.

Aesthetics

- My end users need to be satisfied by the readability of the website, which increases perception and understanding ability.
- My website has to have good aesthetics
- Content isn't smushed up together, there's sufficient negative space (margin, padding) that makes the website so far look good.
- The website is symmetrical which looks pretty and follows the heuristic of consistency and standards
- My color palette is minimalist and not overwhelming

Describe how you have used relevant **conventions** for the media type.

Aesthetics and minimalist design

- This final version polishes up the animations
- Color palette remains constant
- Overall containers have a sleek design with rounded edges

Consistency and standards

- all buttons turns cursor into a pointer, as well as getting bigger/brighter to indicate that

it is clickable. Users will be able to recognize that it is a button.

- All images are the same height and width which makes the cards the same height and width as each other.

Recognition rather than recall

- Navbar is sticky and remains at the top of the page.
- Nav-hamburger which indicates that it is expandable.

Final Summary

Summarise how your outcome meets user needs. This is a good place to justify your outcome and dump all evidence and discussion to get you up to Merit/Excellence.

Also, anything you want to add about how you addressed implications, tested thoroughly and made sure that your solution is an effective solution.

I believe my outcome meets the end user's needs since:

1. My website meets its purpose: it guides the user through the writeup of each relevant implication. Through testing I found that it does indeed help the user understand what these relevant implications are.
2. My website itself implements relevant implications:
 - a. It is aesthetic, functional, easy to use and accessible by various users
3. The website is compatible with different screen sizes.

In order to achieve this outcome, I made the following decisions:

1. I decided not to use Bootstrap since I wanted more customizability and less of the hassle with overwriting code. This also meant I could produce a website more catered towards the user. Instead of using Bootstrap I used media queries to achieve a responsive layout.
2. I used ChatGPT to generate the content on the pages in order to ensure that my pages are not copyrightable. AI only produces non copyrighted content.
3. I used a Visual Studio Code extension called 'Live Preview' to make my coding process much faster since the extension would enable me to see results without having to refresh the site every single time.
4. I was considering using Flask in order to implement templates so I wouldn't have to rewrite the same code over and over again, however due to the way this assessment is submitted I refrained from doing so. This also saved me some time since Flask makes things hard to test especially since you have to re run the website every time a change is made.
5. I chose to animate my website to make it more interactive and dynamic, which also addresses the aesthetics heuristic/relevant implication.
6. I chose a consistent color palette for the website to cater for the aesthetics implication. This makes the website appear more professional AND this particular palette is usable by users with color blindness.

7. I decided on a slick, symmetrical layout to improve aesthetics and address the heuristic of consistency.

RELEVANT IMPLICATIONS ADDRESSED (version 3)

Intellectual Property

- In order to protect creative and innovative works, I had to make sure that the images and content I was using is free to use.
- All of the content of my pages have been written by me or generated by ChatGPT, which means none of it is copyrightable.
- The images I've used are free to use

Accessibility

- My website has to be accessible by various different users, which includes those with disabilities that could affect their sight.
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Functionality

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Aesthetics

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- The website is symmetrical which looks pretty and follows the heuristic of consistency and standards
- My color palette is minimalist and not overwhelming

Throughout every version, I focused mainly on the front end rather than the content since I could generate the content with ChatGPT anytime. I would test the website's responsiveness on my own before getting other students to give feedback on the content; since I coded the website with its responsiveness in mind, I barely had to make any severe changes to the

website's layout throughout the project. I spent most of the time on error prevention and making sure my website wasn't buggy.

Of the four students, only one test had issues with the overall website – which was how inconvenient it was to scroll through the 1x9 grid of relevant implications. To address this usability issue, I changed the default grid size to 2x6 to make it a little easier to use.

Version one was mainly just the backbone of the entire project, meaning it was really monotonous. This was fixed in version two by adding extra boxes in different color and simple hover animations. Version three fixed the terrible grid sizing of version two and implemented more animations (like the navbar expanding) to improve interactivity. I also added all the content in this version.

Version changes are more visible and in depth as you can see in my GitHub repository: <https://github.com/quiluh/Relevant-Implications>

I think this website is effective considering the four people I had asked to test my website were able to concisely explain what a relevant implication is and how to write about it. However, I did not discuss the importance of implementing them because of time constraints. I also did not create a more intricate navigation bar due to the same reasons but my website still achieves the goal.

I was not able to polish up the site due to time constraints, although I think my website achieves its goal well despite this. Some improvements I have considered are:

1. Improve navbar, add more buttons that can redirect to each relevant implication instead of the single home button
2. Improve responsiveness, some elements such as the <p> tags in the individual pages were rushed and I think they could have been much better but it still conveys the content well.
3. Go into more depth as to why relevant implications need to be implemented, not just the 'what' and the 'how'.