# CA2 Journal

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## 1. Project Overview and Content

### My Target Audience:

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| Defined Audience: Teenagers |
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| Audience Considerations: |
| I tailored my website specifically for teenagers experiencing mental health challenges:  Since teenagers primarily use smartphones, I implemented Bootstrap's responsive grid system.    The results are  Since I know that my target audience is the teenagers I also needed to make the website interactive for them so I created a breathing exercise for them as well so that they can be more engaged with the website, |

### My Chosen Theme and Purpose:

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| Theme/Cause/Concept: |
| Mental Wellness |

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| Overall Message/Objective: |
| My main message from the website is to make mental health less scary and accessible for teenagers since I know that most of them can be guarded about their mental health it can show them that they it is okay and they can receive support and also provide them practical tools when they are stressed or struggling.      There is also easy access to Singapore crisis hotlines (SOS 1767, IMH 6389 2222) when someone needs immediate help.  The website makes mental health support feel more like using a helpful app rather than visiting a doctor, encouraging teenagers to actually seek help when they need it. |

### My Pages:

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| List and briefly describe the content, objective of each of your three required pages and the steps you took to ensure your content is well-written, accurate, informative, and worth reading.: |
| **Home Page:** Introduces mental wellness with a hero section featuring balanced stones background and "Your Mental Wellness Matters" headline. Auto-rotating carousel shows quotes from President Tharman and Barack Obama to normalize mental health. Includes real statistics (1 in 7 students affected) and clear buttons leading to support or resources.  **Informational Page (Resources):** Provides practical tools through interactive flip cards for morning routines, sleep, and stress management with color-coded progress tracking. Features accordion sections with Singapore university research and a customizable breathing exercise. Content organized in clean multi-column layouts.  **Interactive Form Page (Get Support):** Starts with crisis banner for emergency hotlines, then offers three support types: crisis (red), counselling (blue), and peer support (green). Includes emoji-based mood check-in and main form with 5+ input types (text, email, dropdown, radio, checkboxes) plus real-time validation.  **Quality Steps:**   * Used Singapore-specific statistics and helplines for local relevance * Wrote in simple, teenager-friendly language instead of clinical terms * Added interactive features to keep users engaged * Tested all functionality to ensure everything works properly |
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## 2. Layout and Aesthetic Design

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| Describe and explain your layout and aesthetic design: |
| When I started designing this website, I knew I had to make mental health feel less scary and more approachable for teenagers. So I went with a modern card-based layout that feels like using Instagram or TikTok - familiar and comfortable.  **Color Psychology in Action:** My colour scheme wasn't random at all. I chose calming blues (#4a90e2) as my primary colour because blue psychologically represents trust and stability - exactly what someone in crisis needs to feel. The secondary purple (#7b68ee) adds just enough personality without being overwhelming.  **Typography That Actually Works:** I used Bootstrap's display classes like display-4 for big impact headlines, but kept the body text simple with system fonts that teenagers are already used to seeing on their phones. No fancy fonts that might distract from the message.    **Breathing Room That Actually Helps:** I deliberately used lots of whitespace and subtle shadows because cluttered designs can increase anxiety. Every section has room to breathe, just like the people using it need. |

## 3. Use of Bootstrap classes

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| Describe and explain how Bootstrap is used for layout implementation: |
| [Some points to consider: Grid system, breakpoint strategy, mobile first approach, flexbox (if any)]  Bootstraps 12 collum grid system was very important for my website to work across all the different devices  **Hero sections:** col-lg-8 mx-auto keeps content readable on big screens while centering it perfectly  **Flip cards:** col-12 col-md-6 col-lg-4 creates the perfect responsive behavior - stacked on phones, 2 columns on tablets, 3 columns on desktop  **Support form:** col-6 col-md-3 for urgency buttons creates a smart 2x2 grid on mobile that becomes 1x4 on desktop  [Describe if there are any challenges in using Bootstrap for your layout and how you overcome it]      Mobile (default): Full width (col-12) - everything stacks  Tablet (768px+): Half width (col-md-6) - 2 columns side by side  Desktop (992px+): Third width (col-lg-4) - 3 columns for optimal viewing  **Flexbox Integration:** I combined Bootstrap's grid with flexbox utilities like d-flex justify-content-center to perfectly center my flip cards and align-items-center for vertical centering in hero sections.  \*\*Challenges I Overcame:\*\*  The biggest challenge was making my hero sections full-width while using Bootstrap's container system. Bootstrap containers have max-widths that prevented the immersive effect I wanted for mental health content. I solved this using CSS calc() functions: `width: 100vw; margin-left: calc(-50vw + 50%)` to break out of containers while keeping content properly centered. |
| Describe and explain how Bootstrap is used for typography: |
| Typography was crucial for my mental health website since I needed to create a welcoming, non-intimidating atmosphere for teenagers. I combined Bootstrap's typography utilities with Google Fonts to achieve this:  The main challenge was that Bootstrap's default typography system wasn't sufficient for my mental health website. Bootstrap's built-in fonts felt too sterile and corporate for teenagers seeking mental health support. Instead of relying on Bootstrap's typography utilities, I implemented a custom font system:    The biggest challenge was making mental health content feel approachable rather than clinical. Bootstrap's default fonts felt too sterile, so I integrated Google Fonts (Nunito) with Bootstrap's typography system. I used Bootstrap's responsive font utilities but overrode the font-family to maintain Bootstrap's scaling while getting the warm, rounded letterforms that work better for mental health content. |
| Describe and explain how Bootstrap is used for table implementation: |
| I actually didn't implement traditional data tables in my website since my mental health theme focused more on interactive cards and forms rather than tabular data. However, I used Bootstrap's table-like layout concepts through my flip cards arrangement.    **Why I Chose Cards Over Tables:** For mental health content, interactive cards felt more engaging than static tables. Users can explore wellness tips through flip interactions rather than scanning rows of data. This approach better suits my target audience of teenagers who prefer interactive, visual content. |
| Describe and explain how Bootstrap is used for form elements: |
| [Some points to consider: 5 different form controls / widgets, styling, layout]  I implemented a comprehensive support request form using Bootstrap's form components:  Text Input (form-control    Email Input (form-control):    Drop Down formselect    Radio butons:    CheckBoxes:    **Challenges and Solutions:** The biggest challenge was making form controls consistent in size across different devices. Bootstrap's default radio buttons and checkboxes were too small for mobile users with anxiety who might have difficulty with fine motor control. I solved this by combining Bootstrap classes with custom CSS to create larger, more accessible click targets while maintaining Bootstrap's responsive behavior. |
| Describe and explain how Bootstrap is used for navigation: |
| **My Navigation Approach:**  I used Bootstrap's navbar component with custom styling to create a mental health-appropriate navigation:    navbar-expand-lg for responsive hamburger menu on mobile  fixed-top to keep navigation accessible while scrolling  navbar-toggler for mobile menu functionality  ms-auto to right-align navigation items  nav-link active for current page indication  The challenge was ensuring the navigation felt welcoming. I customized Bootstrap's navbar with mental health-themed colors (calming blues) and added heart-pulse icon for the brand. The fixed navigation was essential for mental health resources. |
| Describe and explain how you use additional Bootstrap features: |
| [Some points to consider: Responsive Images, Cards, Carousels, Modals, etc. For each, explain what it is and why you chose to include it.]  **Bootstrap Components I Implemented:**  Cards (card, card-body, card-header):    *Purpose:* Cards organize mental health content into digestible, non-overwhelming sections.  Modals (modal, modal-dialog):    *Purpose:* Quick access to emergency mental health contacts without leaving the page.  Carousel (Custom Implementation):    *Purpose:* Showcase inspiring quotes from mental health advocates to reduce stigma.  Badges (badge, bg-danger):    *Purpose:* Visual indicators for urgency levels in support requests.  The carousel was the most challenging. Bootstrap’s carousel felt too heavy for my needs, so I built a custom carousel using Bootstrap's grid system but with custom JavaScript. This gave me complete control over the animation timing and mobile behavior while still using Bootstrap's responsive utilities. |

## 4. Use of Javascript

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| Interactive Features & User Relevance : |
| **JavaScript Features I Implemented:**  My website includes several interactive features specifically designed for mental health support:   1. **Flip Card Wellness Assessment:** Users can interact with daily wellness tip cards, select their current habits, and see real-time progress feedback 2. **Carousel Quote System:** Automatic rotation of inspiring quotes with manual navigation 3. **Form Validation System:** Real-time feedback as users fill out support requests 4. **Mood Check-in Component:** Interactive mood selection with personalized responses 5. **Breathing Exercise Tool:** Customizable breathing exercise with adjustable timing   **Relevance to Mental Health Theme:** These features are crucial for my target audience because:   * **Immediate Feedback:** Teenagers with anxiety need instant validation that their actions are recorded * **Non-judgmental Interaction:** Automated responses provide support without human judgment * **Engagement:** Interactive elements keep users engaged with mental health content longer * **Practical Tools:** The breathing exercise provides immediate stress relief techniques |
| JavaScript properties and methods |

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| [Provide concrete examples of how you used them and explain it works. Use diagrams to illustrate as much as possible]  *Accessing DOM elements using querySelector methods*      *Manipulating styles directly*    querySelectorAll() returns a NodeList of all matching elements  querySelector() returns the first matching element  style property allows direct CSS manipulation |
| JavaScript functions |
| [Describe any custom JavaScript functions you created. What is the purpose of each function, how it works and how do they contribute to your interactive features? Use diagrams to illustrate as much as possible]  **JavaScript Functions**  **Custom Functions I Created:**   1. **updateProgress() Function**     **Purpose:** Updates wellness assessment progress bars based on user choices with appropriate color coding for mental health feedback.  **How It Works:** Takes wellness data, finds corresponding DOM elements, animates progress bar, and applies color psychology (red = concerning, green = excellent).  showSlide() Function:    **Purpose:** Controls quote carousel navigation with smooth transitions and prevents animation conflicts.  **How It Works:** Uses CSS class manipulation and timing controls to create smooth slide transitions while preventing user spam-clicking.  validateAllFields():  **Purpose:** form validation ensuring all required mental health support information is collected. |
| Arrays |
| [If you utilized JavaScript arrays, explain how you worked with their properties and methods. Provide an example of data stored and manipulated in an array. Use diagrams to illustrate as much as possible]          Used.length to loop through the whole array      I used JavaScript arrays extensively for DOM element collections, data storage, and state management. NodeLists from querySelectorAll() allowed efficient iteration through multiple form elements and interactive components |
| Control Structures |
| [Describe instances where you used program loops or conditional statements in your JavaScript code. Explain the logic behind their use. Use diagrams to illustrate as much as possible]    Direct index access is faster than iterator methods  Ensures ALL wellness assessment cards get consistent interaction behavior      **Reset State:** Ensure only one slide is active at a time  **Visual Consistency:** All navigation dots reflect current state  **Mental Health Content:** Smooth transitions reduce anxiety for users reading inspirational quotes |

## 5. General Website Management

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| File Organization & Naming Conventions: |
| [Describe the folder structure you used to organize your project files]  [Describe how you applied proper file naming conventions throughout your project.]    I created a folder for each of the files so one for css,html ,images and javacsript.the reason I did this was so it was easier to manage all the files, if I wanted to trouble shoot a issue I could just go to the file that contained the specific css or js for that html5 page alone.  File names clearly indicate their purpose and scope. support.css contains only support page styles, while styles.css contains shared elements like navigation and button styling. This separation prevents CSS conflicts and makes maintenance straightforward. |
| Image Optimization & Attribution |
| [Describe the tools or techniques you used to optimize your image]    I kept all images under the 800KB CA2 requirement  for mental health content, I chose images that represent wellness and balance rather than clinical or distressing imagery. The balanced stones background symbolizes mental equilibrium, appropriate for the website's therapeutic purpose. |
| Code Quality & Validation |
| [Describe how you tested your website for browser compatibility]  **Desktop Browser Testing:** I systematically tested across multiple browsers to ensure consistent functionality:   * **Chrome 120+:** Primary development browser, used for debugging and performance optimization * **Firefox 119+:** Tested alternative rendering engine, verified CSS Grid and Flexbox behavior * **Safari 17+:** Ensured WebKit compatibility, particularly for CSS animations and font rendering * **Edge 119+:** Verified Microsoft ecosystem compatibility   [Describe how your scripting and styling are organised and explain why you have done so in that manner]  **Why This Organization Approach:**   * **Maintainability:** Related code stays together, making updates easier * **Debugging:** Problems can be isolated to specific sections quickly * **Collaboration:** Other developers can understand structure immediately * **Scalability:** New features fit naturally into existing organization   [Describe how you validate your web pages and solve the errors]  **Validation tool:** Used W3C Markup Validator for each HTML page  **Common errors found:** Missing alt attributes on images, improper nesting of elements  **Resolution approach:** Added semantic alt text for accessibility, corrected HTML structure  **Final result:** All three pages pass HTML validation without errors  [Describe how you add comments to your files and why you have done so in that manner]  **Future maintenance:** I can understand my code months later without confusion  **Interview preparation:** Demonstrates systematic thinking and professional practices  **Debugging assistance:** Comments help isolate issues during troubleshooting  **Knowledge transfer:** Other developers can understand decision-making process  **Learning documentation:** Comments capture why certain approaches were chosen over alternatives |
| Other Frameworks used (if any) |
| [Describe any other framework or libraries used in the website (if any) and explain why and how it was used]  **Google Fonts Implementation:**  **Framework:** Google Fonts Web API  html  <link href="https://fonts.googleapis.com/css2?family=Nunito:wght@300;400;500;600;700&display=swap" rel="stylesheet">  **Purpose and Rationale:** Mental health websites require typography that feels approachable rather than clinical. System fonts (Arial, Times New Roman) can feel sterile and intimidating for teenagers seeking help. Nunito's rounded letterforms create a warmer, more welcoming atmosphere essential for mental health content. |

## 6. Interactive Form

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| Form Validation: |
| [Describe how you used HTML5 to implement basic form validation. Provide specific examples]    I used the input type=text for the required field validation  Email Format Validation:    Radio button group validaotio n    **required attribute:** Prevents form submission without essential information  **minlength="2" and maxlength="50":** Ensures names are reasonable length  **type="email":** Automatic email format checking by browser  **Radio button groups:** Ensures exactly one urgency level is selected  **Semantic form structure:** Proper labels and fieldsets for accessibility  [Explain how you implemented validation to provide immediate visual feedback to the user as they fill out the form, if any]  [Explain how you tested the form to ensure the necessary form inputs are sent to the backend]  I filled In the form and submitted |
| JavaScript for Validation |
| [If you implemented any JavaScript for further validation logic or to handle the form submission process, describe its functionality]  Email input to check if there is a @ o      **Invalid email formats:** Tested test@, @gmail.com, invalid.email - all caught by validation  **Name boundary testing:** Tested single character (fails), 51 characters (fails), normal names (pass)  **Radio button validation:** Confirmed form won't submit without urgency selection  **Checkbox validation:** Verified at least one concern must be selected |

## 7. Personal Reflection

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| Key Takeways: |
| Some of the key taekaways I have from this project is that I really enjoyed it. It was really difficult at times and I stressed out a lot, however through doing this project I learned lots of new things,it allowed me to strengthen parts that I never knew I could do such as the javascript and bootstrap area, I learnt how to use them properly and adjust, however I also learned that my coding skills itself isn’t enough. Whie I had the idea I couldn’t fully implement my vision, therefore I had to use Generative AI to help me with this project as declared in the declaration form.  Working with mental health content forced me to think beyond technical requirements to human needs. Every design choice became a question of  How will this affect someone feeling vulnerable?  I had to think from different perspectives to ensure the best UX |
| Future plans: |
| [Describe how you will do this project differently if you have to do it again]  [Describe how you plan to use what you have learnt from this project in the future]   1. **Mobile-First Development Strategy:** If rebuilding this project, I would start with mobile constraints and scale up, rather than retrofitting responsiveness. The breathing circle overflow and flip card sizing issues demonstrated that responsive design is more natural when mobile limitations guide initial implementation. This approach would prevent technical debt and create better solutions. 2. **JavaScript Planning:** I would design the JavaScript structure before coding. Some functions became overly complex (handling multiple responsibilities), and I encountered naming conflicts between files. A proper module pattern with clear interfaces would improve maintainability: 3. **I** would also try to draw out the website and plan it the way I would like it to be earlier so I could have a clearer idea of what I want, through doing this project I had spouts of inspiration which led it to look like what it is but I believe if I had planned it may have been better, so it the future if I ever do this type of project again I will definitely start with the planning first and focus on purely the logic alone afterwards |

## Instructions for Students:

* Be Specific and Reflective: Avoid generic statements. For example, instead of "I used Bootstrap," explain how and why you used specific Bootstrap features.
* Show Your Thought Process: This journal is not just about what you did, but why you did it and how you approached problems. If you used external resources, including generative AI, explain how you evaluated, adapted, modified, or integrated the information into your unique solution, demonstrating your critical thinking and understanding. If you faced any challenges, describe it and how you overcome it. The goal is to show your learning journey, not just the end product.
* Cite Sources: Refer to concepts and guidelines from "the sources" (e.g., "As noted in Chapter 1, content strategy..." or "Following the principle of semantic markup discussed in Chapter 5...") to demonstrate your understanding and application of the material. Share the URL(s) of the Gen AI conversations containing the prompt and responses used. You can reuse the sources stated in the Academic Integrity Declaration document.
* Honesty is Key: Acknowledge challenges and areas for improvement. This demonstrates a mature understanding of the design and development process.