Code Review 1 - Chapter1 Intro Page

Participants:

- **Moderator**: Man-Hua Chu (Kate)
- **Author**: Soyeon Park
- **Reader**: Soyeon Park
- **Recorder**: Sangmoon Han
- **Reviewers**: Sangmoon Han, Soyeon Park, Yu-Tse Ling (Zona), Po-Yun Hsiao (Harold)

When it Happened:

- **Date**: 27/4/2025
- **Time**: 11:05 AM

Issues Found:

1. **Artifact**: `src/frontend/src/app/chapters/chapter5/intro/page.tsx`
   - **Location**: Functionality
   - **Severity**: Medium
   - **Type**: Issue
   - **Defects Category**: Visual Representation Defects (Alternative)
   - **Description**: Consider Accessibility: If the component will include images or interactive elements in the future, consider adding accessibility features (like alt text for images).

Actions Taken:

- To address potential accessibility issues, Soyeon implemented alt text for all images, videos, and interactive elements. This ensures that if a media file fails to load, users will still receive contextual information about the missing content. (e.g., "Chapter 4 Introduction Image", "Quiz 2 Video", etc.), improving the usability and accessibility of the application.
- Kate confirmed that the issue was addressed, and checked the changes were properly implemented.

Before:

```
{/* Teeth Image */}
<div className='my-4 flex justify-center'>
    <img
        src="https://res.cloudinary.com/difs4tswt/image/upload/v1745114847/droppedImage-s
        className="my-4 w-1/2 mx-auto"
    />
</div>
```

After:

```
{/* Teeth Image */}
<div className='my-4 flex justify-center'>
    <img
        src="https://res.cloudinary.com/difs4tswt/image/upload/v1745114847/droppedImage-s
```

```
                alt="Teeth image"
                className="my-4 w-1/2 mx-auto"
            />
        </div>
```

Lessons Learned from Interactions with AI:

- **Accessibility**: From the ChatGPT review, we recognised that there are cases where users are unable to load components successfully. Alt text descriptions provide a fallback, describing what type of resource should appear at that location, enhancing accessibility.

Code Review 2 - Chapter 1 Main Page

Participants:

- **Moderator**: Man-Hua Chu (Kate)
- **Author**: Soyeon Park
- **Reader**: Soyeon Park
- **Recorder**: Sangmoon Han
- **Reviewers**: Sangmoon Han, Soyeon Park, Yu-Tse Ling (Zona), Po-Yun Hsiao (Harold)

When it Happened:

- **Date**: 25/4/2025
- **Time**: 11:05 AM

Issues Found:

1. **Artifact**: `src/frontend/src/app/chapters/chapter1/chapter1Main.tsx`
   - **Location**: Variable description
   - **Severity**: Trivial
   - **Type**: Improvement
   - **Defects Category**: Visual Representation Defects (Long Line)
   - **Description**: The variable description is written in a long single line. It was suggested to break the line into multiple lines for better readability.

Actions Taken:

- Soyeon updated the code to break the long line for better readability.
- Kate confirmed that the issue was addressed, and the change was properly implemented.

Code Snippet

- Before:

```
import ChapterMain from '@/components/chapterMain';

export default function Chapter1Page() {
  const title = 'Chapter 1: An Introduction to Orthodontics';
```

```
    const description = 'Orthodontics is a highly specialized field of Dentistry, aims towards aesthetic
    const sections = [
      { id: 0, title: '', href: '/chapters/chapter1/intro', icon: 'https://res.cloudinary.com/difs4tswt/
      ...
```

- After:

```
 import ChapterMain from '@/components/chapterMain';

 export default function Chapter1Page() {
   const title = 'Chapter 1: An Introduction to Orthodontics';
   const description =
     'Orthodontics is a highly specialized field of Dentistry, aims towards aesthetic and functional er
     'Considered first speciality of dentistry. However, rapid advancement have taken place in the last

   const sections = [
     {
       id: 0,
       title: '',
       href: '/chapters/chapter1/intro',
       icon: 'https://res.cloudinary.com/difs4tswt/image/upload/v1745402176/Intro_ChatGPT_Image_ziurdw
     }
     ...
```

Lessons Learned from Interactions with AI:

- **Readability**: Long lines, especially in variable descriptions, can make the code harder to read and maintain over time. AI helped highlight this issue early on, preventing potential issues in the future.

Code Review 3 - Chapter 1 Section 4 images

Who Participated:

- **Moderator**: Yu-Tse Ling (Zona)
- **Author**: Man-Hua Chu (Kate)
- **Reader**: Man-Hua Chu (Kate)
- **Recorder**: Sangmoon Han
- **Reviewers**: Sangmoon Han, Soyeon Park, Yu-Tse Ling (Zona), Po-Yun Hsiao (Harold)

When It Happened:

- **Date**: 25/4/2025
- **Time**: 11:10 AM

Issues Found:

1. **Artifact**: `src/frontend/src/app/chapters/chapter1/section4/page.tsx`
   - **Location**: Variable `gallery1Images, gallery2Images`
   - **Severity**: Trivial

- **Type**: Improvement
- **Defects Category**: Documentation Defects (Naming)
- **Description**: The variable names `gallery1Images` and `gallery2Images` are not descriptive enough to reflect the content of the images. It was suggested to use more descriptive names that clarify the nature or purpose of the images within the gallery.
- **Fixed by the Author?**: Yes
- **Verified by the Moderator?**: Yes

Actions Taken:

- Kate updated the variable names `gallery1Images` and `gallery2Images` to `extraOralIntraOralImages` and `interceptiveApplianceImages`.
- Zona confirmed that the hange was properly implemented.

Lessons Learned from Their Interactions with AI:

- **Importance of Naming Conventions**: Good names serve not only the developer but also anyone who might be working with the code in the future. A name should be intuitive enough to convey the purpose of the variable or asset.

Code Review 4 - Section 4 Page (Gallery Images)

Participants:

- **Moderator**: Yu-Tse Ling (Zona)
- **Author**: Man-Hua Chu (Kate)
- **Reader**: Man-Hua Chu (Kate)
- **Recorder**: Sangmoon Han
- **Reviewers**: Sangmoon Han, Soyeon Park, Yu-Tse Ling (Zona), Po-Yun Hsiao (Harold)

When it Happened:

- **Date**: 25/4/2025
- **Time**: 11:15 AM

Issues Found:

1. **Artifact**: `src/frontend/src/app/chapters/chapter1/section4/page.tsx`
   - **Location**: Variable `gallery1Images`
   - **Severity**: Trivial
   - **Type**: Improvement
   - **Defects Category**: New Functionality (Use Standard Method)
   - **Description**: The array `gallery1Images` could benefit from being dynamically generated, especially if images are stored in a more structured format or fetched from an API. The current static method for declaring the image array limits flexibility, especially when the number of images changes over time or when the data is fetched from a backend.
   - **Fixed by the Author?**: Yes
   - **Verified by the Moderator?**: Yes

Actions Taken:

- Kate updated the `gallery1Images` array to be generated dynamically. This was done by organizing the image data into a structured format and making the images easier to manage, especially as the project grows.
- The change was reviewed and verified by Zona. It was confirmed that the solution provided a more scalable approach to handling images.

Code Snippet:

- **Before**: All images are declared in `src/frontend/src/app/chapters/chapter1/section4/page.tsx`

```
export const extraOralIntraOralImages = [
  {
    src: 'https://res.cloudinary.com/difs4tswt/image/upload/v1745114790/IMG_5908-36_fbtbzy.jpg',
    caption: 'Extra Oral Frontal View Relaxed',
  },
  {
    src: 'https://res.cloudinary.com/difs4tswt/image/upload/v1745114796/IMG_5909-38_b6kls5.jpg',
    caption: 'Extra Oral Frontal View with Emotional Smile',
  },
  // more static images...
];
```

- **After**: A file called `section4Images.ts` is created to handle images.

```
export const extraOralIntraOralImages = [
    {
        src: 'https://res.cloudinary.com/difs4tswt/image/upload/v1745114790/IMG_5908-36_fbtbzy.jpg',
        caption: 'Extra Oral Frontal View Relaxed',
    },
    // more images
```

Lessons Learned from Interactions with AI:

- **Scalability and Flexibility**: This change makes it easier to modify image links and scale the content.

Code Review 5 - Image Gallery Component

Participants:

- **Moderator**: Yu-Tse Ling (Zona)
- **Author**: Man-Hua Chu (Kate)
- **Reader**: Man-Hua Chu (Kate)
- **Recorder**: Sangmoon Han
- **Reviewers**: Sangmoon Han, Soyeon Park, Yu-Tse Ling (Zona), Po-Yun Hsiao (Harold)

When it Happened:

- **Date**: 25/4/2025

- **Time**: 11:30 AM

Issues Found:

1. **Artifact**: `src/frontend/src/components/ImageGallery.tsx`
   - **Location**: `images` prop validation
   - **Severity**: Medium
   - **Type**: Issue
   - **Defects Category**: Check Defects (Check User Input)
   - **Description**: There was no check to ensure that the `images` prop is a valid array and contains at least one image. It was suggested to add a check to handle cases where the `images` prop might be empty or not an array, to prevent errors during rendering.
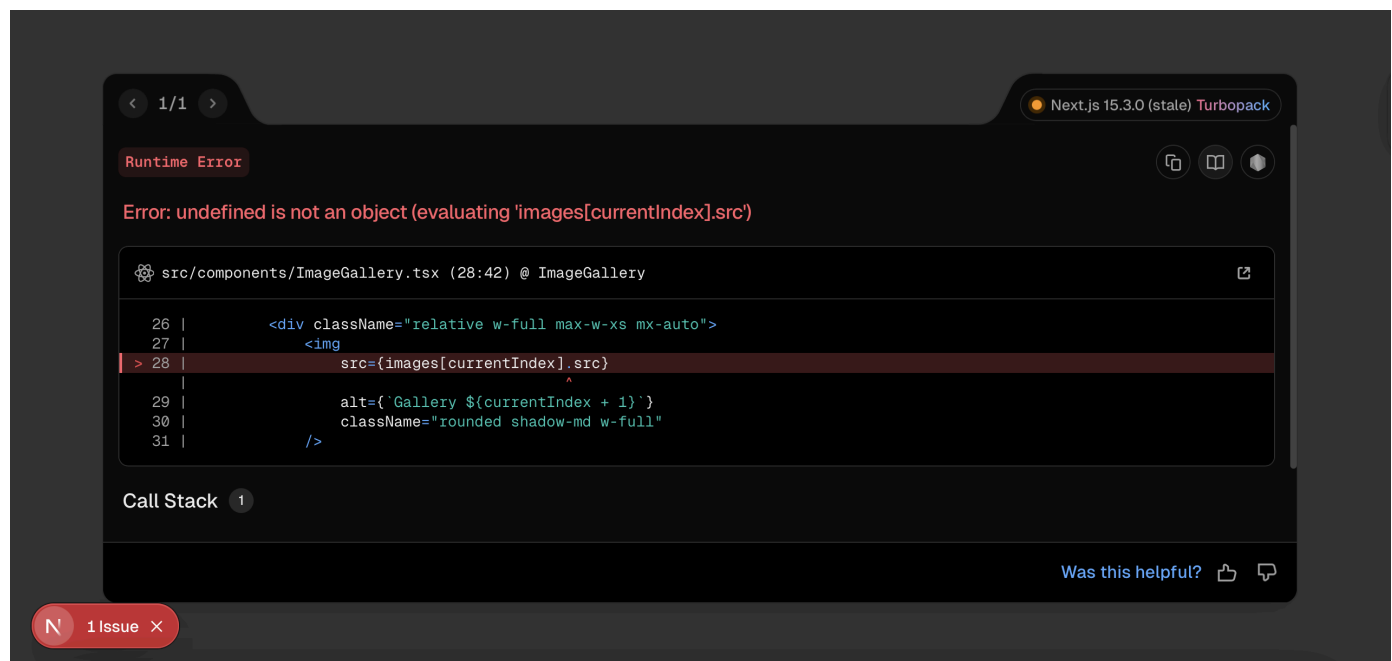
Actions Taken:

- Kate added a validation check at the beginning of the component to ensure that the `images` prop is a valid array and contains at least one image. If the check fails, the component renders a message saying "No images available".
- Zona verified that this prevents potential errors when the `images` array is empty or malformed, enhancing the component's robustness.

Code Snippet:

- **Before**:

```
export default function ImageGallery({ images }: Props) {
    const [currentIndex, setCurrentIndex] = useState(0);
...
}
```

```
< 1/1 >                                        ● Next.js 15.3.0 (stale) Turbopack

Runtime Error

Error: undefined is not an object (evaluating 'images[currentIndex].src')

  src/components/ImageGallery.tsx (28:42) @ ImageGallery

  26 |          <div className="relative w-full max-w-xs mx-auto">
  27 |              <img
> 28 |                  src={images[currentIndex].src}
     |                                         ^
  29 |                  alt={`Gallery ${currentIndex + 1}`}
  30 |                  className="rounded shadow-md w-full"
  31 |              />

Call Stack  1

                                    Was this helpful?  👍  👎

N  1 Issue  ✕
```
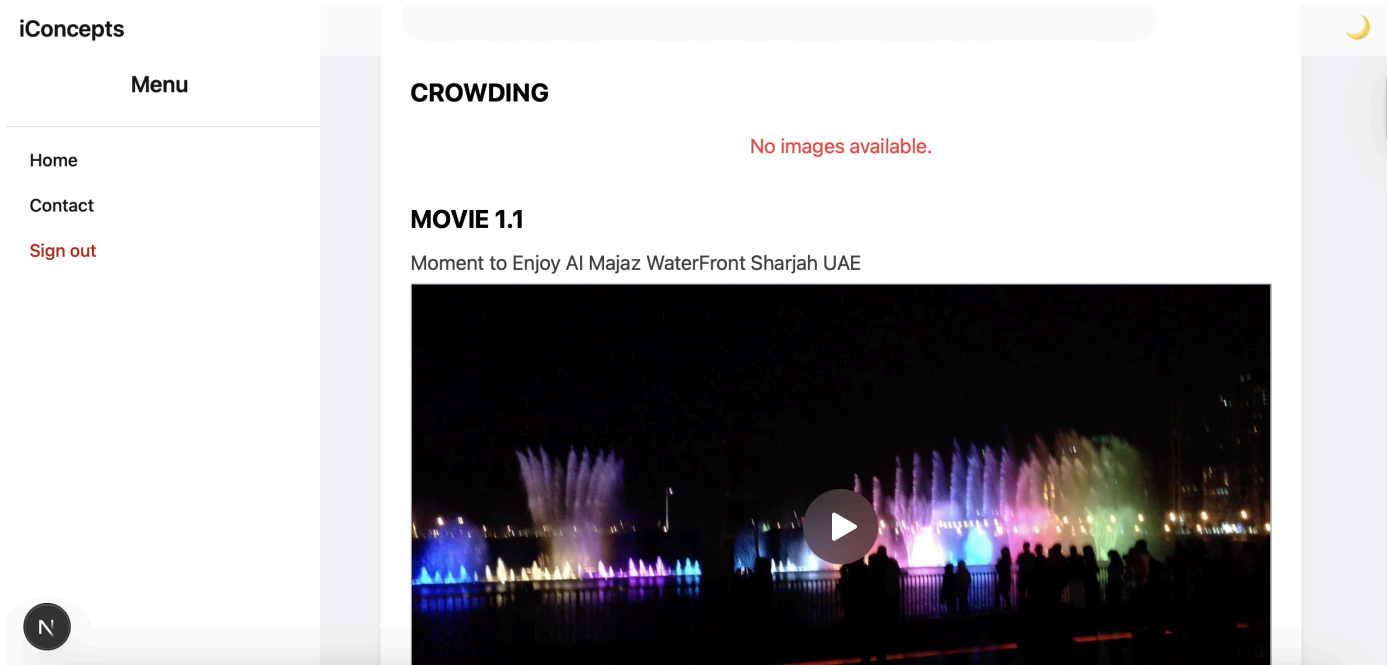
- **After**:

```
export default function ImageGallery({ images }: Props) {
    // Check if images is a valid array and contains at least one image
    if (!Array.isArray(images) || images.length === 0) {
        return (
            <div className="text-center text-red-500">
                No images available.
            </div>
        );
    }
    const [currentIndex, setCurrentIndex] = useState(0);
    ...
}
```

iConcepts

Menu

Home

Contact

Sign out

N

CROWDING

No images available.

MOVIE 1.1

Moment to Enjoy Al Majaz WaterFront Sharjah UAE

Lessons Learned from Interactions with AI:

- **Improved Code Robustness**: By implementing input validation, the component is now more robust and can handle edge cases more gracefully. It also provides better feedback to the user, making the application more reliable and user-friendly.

Code Review 6 - Chapter4 Intro Page

Participants:

- **Moderator**: Man-Hua Chu (Kate)
- **Author**: Soyeon Park
- **Reader**: Soyeon Park
- **Recorder**: Sangmoon Han
- **Reviewers**: Sangmoon Han, Soyeon Park, Yu-Tse Ling (Zona), Po-Yun Hsiao (Harold)

When it Happened:

- **Date**: 27/4/2025
- **Time**: 11:15 AM

Issues Found:

1. **Artifact**: `src/frontend/src/app/chapters/chapter4/intro/page.tsx`
   - **Location**: Interface Defect
   - **Severity**: Medium
   - **Type**: Issue
   - **Defects Category**: Logic Defects (Compute)
   - **Description**: Parameter: The parameters for the SectionPage component are correctly passed. However, prevHref is set to undefined, which may not be necessary unless it is explicitly required by the SectionPage component.

Actions Taken:

- To address page navigation issues, Soyeon added interactive buttons for every intro pages. This ensures the usability of navigating chapters through "previous" and "next" toggle.
- Kate confirmed that the issue was addressed, and checked the changes were properly implemented.

Before:

```
<SectionPage
    title="Chapter 4: Functional Orthopaedic Appliances"
    subtitle="Published in 2024 · Views: 19723 · Average Reading Time: 17min"
    prevHref=""
    nextHref="/chapters/chapter4/section1"
    chapterHref="/chapters/chapter1"
>
```

After:

```
<SectionPage
    title="Chapter 4: Functional Orthopaedic Appliances"
    subtitle="Published in 2024 · Views: 19723 · Average Reading Time: 17min"
    prevHref="/chapters/chapter3/section5"
    nextHref="/chapters/chapter4/section1"
    chapterHref="/chapters/chapter4"
>
```

Lessons Learned from Interactions with AI:

- **Parameter**: We organised the content by dividing it into chapters, and further splitting each chapter into multiple sections, including an introductory section for every chapter. During the initial implementation, we overlooked the navigational flow between chapters. Although the "Next" button allowed users to move forward to the introduction of the next chapter (e.g., from Chapter 3 to Chapter 4 Introduction), there was no mechanism to navigate back to the last section of the previous chapter from the introduction page.(e.g., from Chapter 4 introduction to Chapter 3)
- Through the GPT review, we identified and corrected this issue. We updated the `prevHref` parameter in the `SectionPage` component to properly link the introduction section of a chapter back to the last section of the previous chapter, ensuring seamless navigation in both directions across chapters.