



# WEB DESIGN 2

## Assessment 3

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# URL

3 mins walk through YouTube URL: <https://youtu.be/rjmhwjXjVhQ>

Website URL: <https://lswai.github.io/webdesign2/>

## Pseudocode

### Section 0:

section class transforms x to position with duration of 1 second;

### Section 1: About

Back to top button activates at header position at y:500px;

If body or document elements scroll above 20% of page

{Display back to top button}

If button clicked

{Position body back to 0;

Visibility: none;}

Else

{position sticky;}

GSAP ScrollTrigger activates – About section header shifts into position from x: -1000px;

If section enters view

{

    About photo shifts in from the left (-100%) with opacity transition;

    About text shifts in from the right (100%) with opacity transition;

    Animation completes within 1 second ease-in-out;

}

Else

{

    Reset animation when scrolling up;

}

Intersection Observer watches about-section with threshold 10%;

If section is at least 10% visible

```
{  
  Add class "visible" to trigger animation;  
}
```

Else

```
{  
  Remove class "visible" to reset effect when scrolling up;  
}
```

## Section 2: Gallery

GSAP ScrollTrigger activates – Gallery header shifts into position from x: -1000px;

Image Slider Functionality:

Initialize currentIndex = 0;

Set totalSlides = total number of images;

Start auto-slide every 3 seconds:

```
{  
  Increment currentIndex;  
  If currentIndex exceeds totalSlides  
  {  
    Reset currentIndex to 0;  
  }  
  Update gallery position;  
}
```

Update gallery position function:

```
{  
  Move image track to - (currentIndex * 50%) horizontally;  
  Remove "active" class from all dots;  
  Add "active" class to current dot;
```

```
}
```

If navigation dot clicked:

```
{  
    Set currentIndex to clicked dot index;  
    Update gallery position;  
    Reset auto-slide interval;  
}
```

If image-box hovered:

```
{  
    Display description text;  
}
```

Else

```
{  
    Hide description text;  
}
```

## Section 3: Gears

GSAP ScrollTrigger activates – Gears header shifts into position from x: -1000px;

Typing Effect for "Lists" header:

If "Lists" header enters viewport

```
{  
    Initialize i = 0;  
    Clear text content;  
    Loop through each character in "Lists" string  
    {  
        Append character to text content;  
        Wait for typing speed interval;  
    }  
}
```

Fly-in Effect for List Items:

If list item enters viewport

```
{  
  Add "visible" class with staggered delay;  
}
```

Else

```
{  
  Remove "visible" class;  
}
```

## Section 4: Safety Section

### 1. SETUP SAFETY SECTION

- a. Create a section with id "safety-section"
- b. Add a container div inside the section
- c. Add a title "Safety Concern" inside the container

### 2. CREATE FIRST GRID LAYOUT (GRID)

- a. Define a grid container with three columns
- b. Inside the grid, create flip-cards for:
  - i. Weather
  - ii. Wild Animals
  - iii. Avalanches

### 3. CREATE SECOND GRID LAYOUT (GRID-SECOND)

- a. Define a second grid container with two columns
- b. Inside the grid, create flip-cards for:
  - i. Dehydration
  - ii. Hypothermia

### 4. STYLE SAFETY SECTION (CSS)

- a. Set background color to light blue (#91C7F6)
- b. Center align text and elements
- c. Define grid layout with spacing between cards
- d. Adjust second grid margin for visual balance

## 5. CREATE FLIP-CARD FUNCTIONALITY

- a. Each flip-card contains:
  - i. A front side with the safety topic name
  - ii. A back side with a detailed description
- b. Apply a hover effect:
  - i. On hover, rotate the card 180 degrees to show the back
  - ii. Ensure smooth transition using transform and perspective

## Section 5: Preparation

On page load:

Set preparation-section visibility to hidden (opacity: 0).

Apply CSS transition for smooth fade-in effect.

On scroll detection (using Intersection Observer):

If preparation-section enters viewport by at least 50%

Then add class visible (fade-in effect).

Else remove class visible (fade-out effect).

## Section 5: Preparation

On page load:

Set preparation-section visibility to hidden (opacity: 0).

Apply CSS transition for smooth fade-in effect.

On scroll detection (using Intersection Observer):

If preparation-section enters viewport by at least 50%

Then add class visible (fade-in effect).

Else remove class visible (fade-out effect).

## Critical Reflection

### Design Evolution: Comparing Initial Concepts and Final Outcomes with Rationale

#### 1) Addition of Animation Effects in the About, Gears, and Preparation Sections (Aesthetic & Functional Change)

In the final version, I incorporated animation effects in key sections of the website to enhance the visual appeal and user experience.

This change improves user engagement by making the content feel more dynamic and interactive. Research indicates that animations help direct users' attention to important information and create a more seamless browsing experience.

The animations ensure a smooth transition between elements, reducing cognitive load and improving content readability, which aligns with best practices in modern web design.

#### 2) Integration of a Shoelace Dialog in the Contact Us Section (Functional Change)

To meet the Assignment 3 requirements while maintaining the original design proposal, I added a Shoelace dialog for the Contact Us section. Shoelace provides lightweight and accessible UI components, ensuring a cleaner and more structured way to handle user interactions. This change improves usability by creating a modal-style contact form that enhances accessibility and maintains a professional layout without altering the intended design structure.

These modifications were made to enhance user engagement, improve functionality, and ensure accessibility while staying true to the original proposal. The addition of animations aligns with usability principles that emphasize user experience and engagement, while the shoelace dialog integration adheres to best practices in modern web development. Both changes contribute to a more refined and interactive final website.

### Integrating Feedback: Refining My Website Based on Tutor and Peer Insights

Feedback played a crucial role in the development process. General suggestions focused on improving navigation clarity, visual hierarchy, and ensuring interactive elements didn't impact performance. Peer reviews pointed out that while the minimalist design reduced clutter, it also lacked user engagement. To address this, I added interactive features like hover effects and

subtle animations to enhance engagement without affecting load times or accessibility. Additionally, feedback recommended more thorough testing across devices, which led me to implement responsive design frameworks and cross-browser compatibility checks. This iterative process ensured continuous improvement.

## Evaluating Project Success: Assessing My Website's Alignment with Assignment Goals

The final website effectively addresses the project goal outlined in the Assignment 2 proposal. The original goal was to provide climbers with essential information on safety, gear, and techniques to help them climb confidently and safely. The website includes comprehensive sections on safety guidelines and quality gear, aligning with the proposal's objectives.

It provides clear and detailed safety guidelines to ensure climbers understand the precautions necessary for mountain climbing. These guidelines cover critical measures and practices to mitigate risks, directly reflecting the project's emphasis on a safe climbing experience.

The website also includes recommendations for reliable, high-quality gear, supporting the proposal's intent to equip climbers with the tools needed for a safe climb.

Although the original proposal included a section on climbing techniques, I chose to replace this with a more detailed preparation section. This change focuses on ensuring climbers are well-prepared before their climb, covering key areas such as planning, assessing physical readiness, and managing logistical challenges. These elements are crucial for a safe ascent and descent, maintaining the spirit of the original goal.

## Unfinished Elements: Wish List Features and Future Enhancements for My Website

I wanted to include interactive routes map and more advanced animation effects such as logo animation and page motion but these features were too advanced for my current skill level. In future web assignments, I aim to learn and apply animation libraries and mapping APIs to enhance functionality and user engagement.

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