Unified UI: A Modular Design System for Valley Golf Center

https://tliulamaga.github.io/Git-480-Senior-Project/

Executive Summary

Project Objective:

To improve the usability, visual consistency, and navigation of the Valley Golf Center website through a modular design system grounded in heuristic evaluation and user-centered design.

Goals of this Study:

-Evaluate the existing Valley Golf Center website using heuristic principles.

-Identify usability issues and propose a scalable, modular design system.

-Improve navigation, visual hierarchy, and accessibility.

Recommendations:

- Adopt a unified UI system with consistent styling across all subpages.

- Prioritize usability improvements over complete architectural overhaul.

- Use feedback loops (peer, professor, and user) to guide design decisions.

Executive Summary

Major Results:

- Developed a minimalist design system using

- Atomic Design principles. Implemented sticky navigation and responsive layouts.

- Enhanced readability and accessibility through layout refinements.

Why It Matters:

- The original site created friction for users trying to access its services

- A cohesive design improves user satisfaction supports business goals, and prepares the site for future scalability
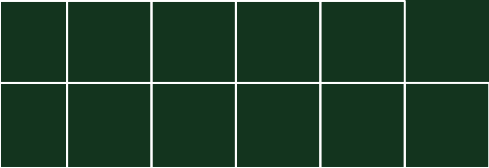
Introduction

About Valley Golf Center:
A local golf facility offering a wide range of services including a driving range, lessons, events, and tee time bookings.

Why the Evaluation Was Needed:
- The site had fragmented navigation and inconsistent visual language.
- Users struggled to find services and understand the site's structure.
- The booking interface and subpages lacked cohesion with the main site.

Problem Statement:
The website did not support intuitive user interaction. The website initially had no unified design system, which made user interaction difficult across all media platforms. This caused cognitive fatigue and primary services difficult for accessibility.

Valley Golf Center

Methodology

Evaluation Techniques:
- Heuristic analysis using Jakob Nielsen's 10 usability heuristics.
- Peer reviews from classmates.
- Feedback from Professor Cynthia Storm.
- Direct input from Valley Golf Center visitors.

Design Criteria:
Usability: Reduce cognitive load and improve recognition.
Scalability: Ensure design works across devices and platforms.
Visual Hierarchy: Prioritize key services and information.
Brand Alignment: Use colors and imagery that reflect VGC's identity.

Frameworks Used:
Atomic Design (Brad Frost): Modular components for consistency.
Material Design (Google): Guidelines for layout, spacing, and accessibility.

Project Planning:
- Weekly milestones for rebuilding each subpage
- Agile-inspired workflow with iterative feedback loops

Results and Recommendations

Navigation Confusion

Users have difficulty locating services due to scattered links and lack of a clear navigation structure. Navigation links has different styles across multiple pages. Different styles of navigation and inconsistent placing of links across multiple pages causes cognitive fatigue among users. Website services labeled "hard to manage" by Valley Golf Center customers.

The priority of this problem is **high**. Confusing navigation of company website discourages visits for customers to the facility.
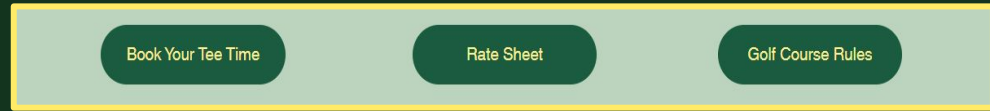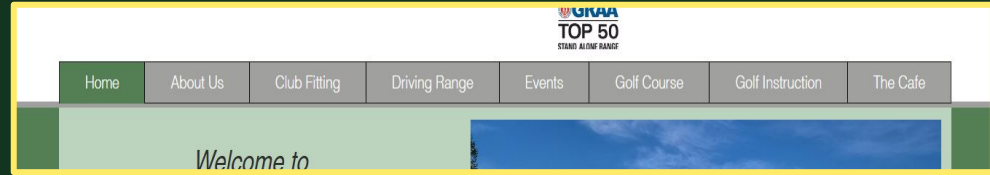
Navigation Confusion

The solution is to create a sticky navigation bar that remains visible as users scroll:

- Reduces cognitive load by keeping key links accessible

- Improves recognition over recall, aligning with Nielsen's heuristics

- Enhances user flow, especially for mobile users who previously had to scroll excessively

The supporting evidence for this added feature comes from:

- Peer and user feedback highlighted frustration with finding services

- Sticky navigation directly addressed this pain point

Valley Golf Center

Main Page

Driving Range

Golf Course

Golf Lessons

Events

Visual Inconsistencies

The original site lacked a unified visual language, with different styles across main and subpages. Different background colors, no unified color palette, and inconsistent typography.

The priority of this problem is **medium**. Inconsistency across these pages with visual elements creates confusion among users. Although it does not interfere with with usability, it does not aid in user interaction either.

Visual Inconsistencies

The solution is to develop a modular design using consistent components, typography, and color palette:

- Based on Atomic Design principles, which promote reusable UI elements

- Ensures brand consistency and scalability across future updates

- Reduces development time for future pages or features

The supporting evidence for this added feature comes from:

- Heuristic evaluation revealed inconsistent styling

- Modular components improved cohesion and maintainability

```
:root {
  --dark-green: ☐#13341E;
  --white:      ■#FFFFFF;
  --black:      ■#000000;
  --beige:      ▨#B9B482;
  --font-family: 'Montserrat', sans-serif;
}
```

At Valley Golf Center, we provide the Fresno community with access to golf instruction, practice facilities, and event hosting. Our services include private lessons, a 9-hole golf course, and a spacious driving range — all designed to support golfers of every skill level. Whether you're a recreational player or a competitive golfer, we offer online booking and transparent pricing to make your experience seamless and enjoyable

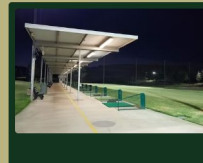| Day	Facility	Driving Range	Course
Monday	8:00am – 9:00pm	8:00am – 7:00pm	8:00am – 7:30pm
Tuesday	8:00am – 9:00pm	10:00am – 7:00pm	8:00am – 7:30pm
Wednesday – Saturday	8:00am – 9:00pm	8:00am – 9:00pm	8:00am – 7:30pm
Sunday	8:00am – 7:00pm	8:00am – 7:00pm	8:00am – 5:30pm

Driving Range

Valley Golf Center's driving range offers a spacious and well-maintained practice area for golfers of all skill levels. It features multiple hitting bays, targets at varying distances, and options for both casual practice and structured training.

Book Your Reservation Here

Day	Driving Range Hours
Monday	8:00am – 7:00pm
Tuesday	10:00am – 7:00pm
Wednesday – Saturday	8:00am – 9:00pm
Sunday	8:00am – 7:00pm

*Range ball sales end one hour prior to closing

Driving Range Prices

Small Bucket (25 balls)	$10.00
Medium Bucket (50 balls)	$16.00
Large Bucket (100 balls)	$19.00

Poor Readability

The original website has dense text blocks, inconsistent padding, and misaligned pricing made content hard to scan. This aligns with inconsistencies with user usability. Price formatting for services on the website is inconsistent and difficult to differentiate.

The priority of this problem is **high.** The current formatting does not align with accessibility best practices. It also undermines the professionalism in trust and in service presentation.

Poor Readability

The solution is to increase accessibility through:

- styling CSS to have accurate spacing between elements

- adding spacing between text elements

- aligning prices and hours of operation through use of tables

The supporting evidence for this added features comes from:

- Peer reviews and professor feedback emphasized readability issues

- Users responded positively to cleaner layouts

```css
main {
  margin-left: 240px;
  padding: 2rem;
  flex: 1;
  max-width: 1180px;
}
```

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Lack of Mobile Responsiveness

The original website was not optimized for mobile devices, despite many users accessing it via mobile devices. There are currently no media queries within the website to optimize accessibility among mobile users. Users are left to scroll through the website via mobile device horizontally to navigate services provided.

The priority of this problem is **high.** Via feedback from customers of Valley Golf Center, most site interactions are from mobile devices. Responsiveness for the website is essential for user interaction with the website.

Lack of Mobile Responsiveness

The solution is to add media queries to support mobile users by adding:

- media queries for mobile devices

- adding flex containers to format content for mobile use

The supporting evidence for this added features comes from:

- Direct feedback from VGC users indicated mobile access was common

- Responsive design became essential despite being initially out of scope
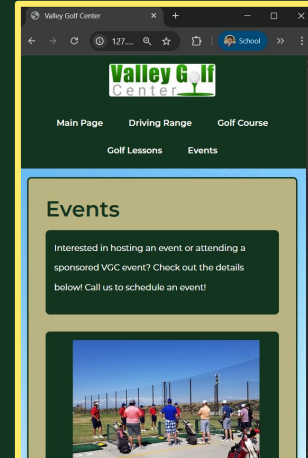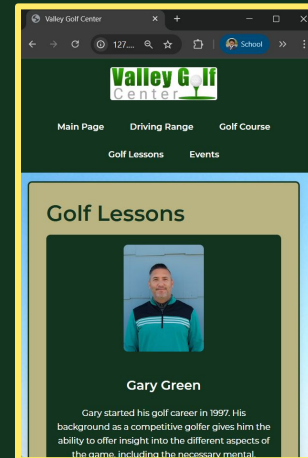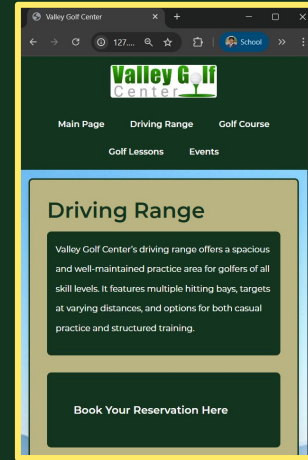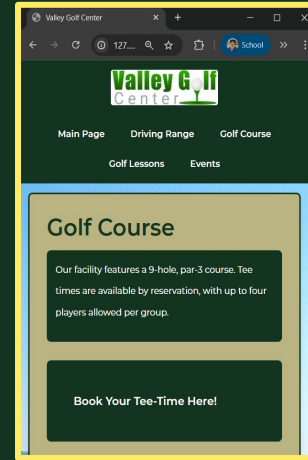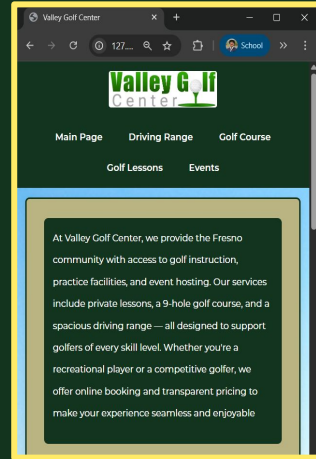
Lack Visual Design Lacking Depth

The website has visual elements, however they are sterile and disconnected from the company image, which is deeply rooted in the natural beauty and recreational atmosphere of the golf course itself. This causes the website to lack a sense of depth and emotional engagement.

The priority of this problem is **low.** While this does not hinder the accessibility of the website, it attaches the company's brand image to the emotional aspect of their website, which is an extension of their business.

Lack of Mobile Responsiveness

The solution is to integrate imagery from Valley Golf Center, this helps by:

- adding richness and personality to the website

- Strengthens brand identity and emotional appeal

- Balances minimalist layout with visual storytelling

The supporting evidence for this added features comes from:

- Visual enhancements were well-received by users

- Imagery helped differentiate Valley Golf Center from competitors
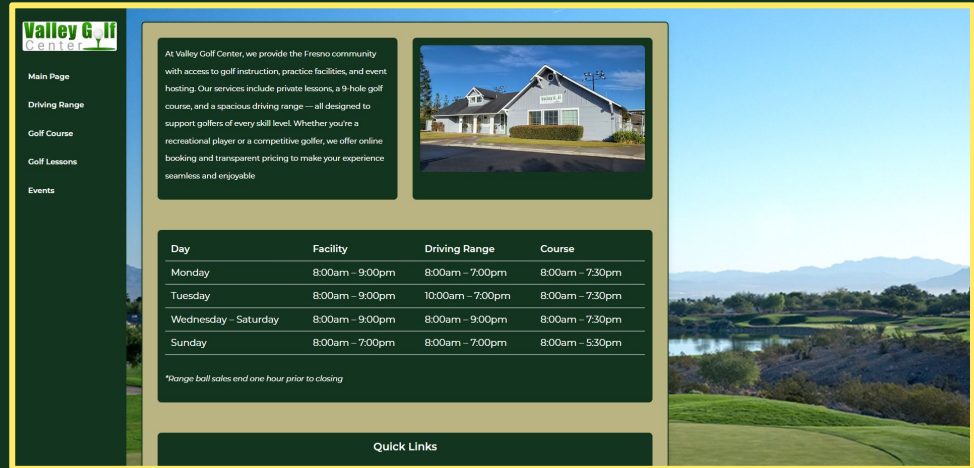
Conclusion

Summary of Findings:

- The project successfully addressed usability and consistency issues.
- A minimalist, modular design improved navigation and readability.
- Responsive design ensured accessibility across devices.

Why the Study Was Needed

- The original site failed to meet basic usability standards.
- Improvements aligned with user-centered design and business goals.

Future Opportunities

- Expand the design system to include booking interfaces and media platforms.
- Develop internal guidelines for cross-team usage.
- Conduct further usability testing with broader user demographics.

Reflection

- Agile workflow helped manage scope and adapt to challenges.
- Strong documentation supported design decisions and communication.
- Future projects will benefit from this structured, iterative approach.