

Lab 5 -WAD612S

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CSS- Design Decisions and Challenges faced along the way

Design

- For the design I went for a modern clean aesthetic, I used a contemporary design approach with subtle shadows, rounded corners and smooth transitions.
- I applied consistent 8px-12px border radius values and subtle box shadows throughout.
- I benefitted from the consistent theming components that was setup':root', this made the modifications easier.
- I took mobile users into consideration as well, by implementing CSS grid and Flexbox for flexible layouts.

Component-Specific Design Decisions

Cards:

- Shadow Strategy: Used layered shadows for depth perception
- Hover Effects: 8px translateY with enhanced shadow for interactive feedback
- Image Handling: Fixed height (200px) with object-fit: cover for consistent layouts

Buttons:

- Padding System: 12px vertical, 24px horizontal for optimal touch targets
- State Management: Clear visual hierarchy (default → hover → active → disabled)

Form Controls:

- Focus Strategy: Used box-shadow instead of outline for modern appearance
- Border System: 2px borders that change color on focus
- Input Sizing: Consistent 12px padding with 16px font-size for readability

Navigation:

Layout Decision: Horizontal flex layout with equal distribution

Active State: Background color change rather than underline for clarity

Mobile Adaptation: Vertical stacking on smaller screens

Challenges faced:

1. Theme Switching Complexity

Challenge: Creating a robust dark theme that worked across all components

Solutions:

- Created comprehensive CSS variable overrides
- Used semantic color naming (--text-color, --card-bg)
- Tested contrast ratios for accessibility

2. Interactive Widget Integration

Challenge: Maintaining consistency between custom widgets and form controls

Solutions:

- Established shared styling patterns
- Used consistent spacing units (multiples of 4px)
- Implemented unified transition timing (0.3s ease)

3. Responsive Layout Management

Challenge: Ensuring components work well at all screen sizes

Solutions:

- Used CSS Grid with auto-fit for flexible layouts
- Implemented container queries where appropriate
- Created mobile-specific component behaviors

4. Animation Performance

Challenge: Smooth animations without impacting performance

Solutions:

- Used transform and opacity for hardware acceleration
- Limited animations to essential interactions
- Implemented prefers-reduced-motion consideration