Training Day 27 Report

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Topic: CSS Layout Challenge – Homepage Design

Today's session was a hands-on layout challenge designed to reinforce Flexbox and Grid concepts. The goal was to build a fully responsive homepage using semantic HTML and advanced CSS layout techniques.

Challenge Brief

- Create a homepage for a fictional design agency.

- Use Grid for overall page structure and Flexbox for internal alignment.

- Ensure responsiveness across desktop, tablet, and mobile views.

Layout Sections

- **Header**: Logo, navigation menu (Flexbox horizontal alignment).

- **Hero Section**: Grid-based layout with image and welcome text.

- **Services**: Flexbox cards with icons and descriptions.

- **Testimonials**: Grid layout with alternating text/image blocks.

- **Footer**: Contact info and social links using Flexbox.

Techniques Applied

- Nested Flexbox inside Grid areas for modular control.

- Used `grid-template-areas` for semantic layout mapping.

- Applied media queries to adjust column count and font sizes.

- Used `gap`, `margin`, and `padding` for spacing.

Debugging Refinement

- Fixed overlapping content using `z-index` and container isolation.

- Adjusted Flexbox wrapping behavior for smaller screens.

- Validated layout using browser DevTools and W3C validator.

Key Takeaways

- Combining Flexbox and Grid unlocks powerful layout possibilities.

- Responsive design requires thoughtful structure and scalable units.

- Semantic HTML and modular CSS improve maintainability.

- Layout challenges help solidify real-world design thinking.