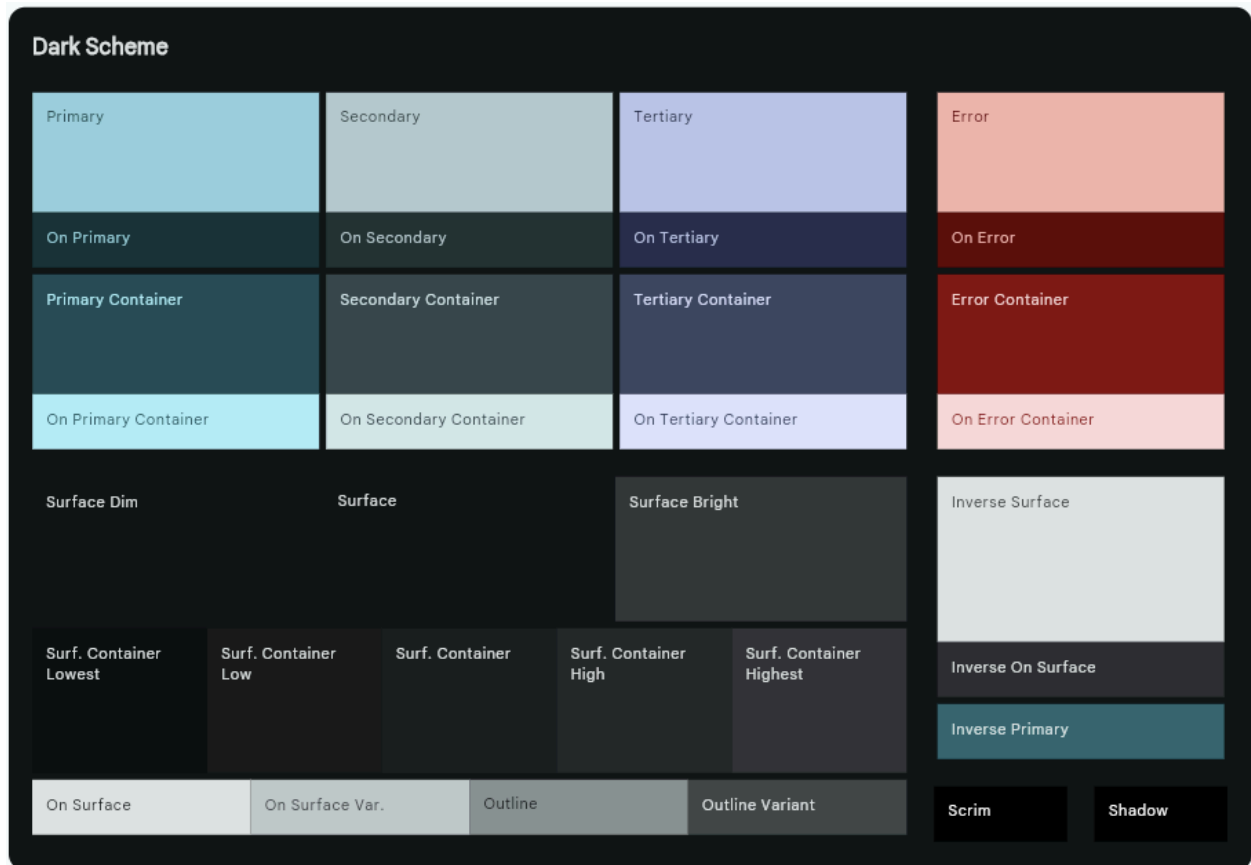


Code Swap: UI/UX Design and Style Guidelines

Color Schemes

Use the following color scheme which was created with Google's Material Theme Builder. The builder creates tonal palettes for each color to find and pair contrasting tones, ensuring accessible color combinations



Typography

Fonts styles should be consistent throughout the application based on their functionalities. Texts for challenge problems should be easily distinguished from the rest of the application. Use rem for font size units for readability across devices. There should be enough contrast between the text color and background color for them to be easily visible.

Spacing

Each UI element should have: (1) vertical and horizontal margins to separate it from other elements, and (2) vertical and horizontal padding to create space within the element, making its content more visible.

Spacers should be placed between panes on the Challenge page for increased distinguishability. Each spacer should contain a drag handle that allows the user to resize the pane.

Layout

App bars go inside panes and change based on width, showing more or fewer actions. In single vs. two-pane layouts, stuff stays in its pane. Columns help organize, and drag handles resize panes to set widths. Handles should be easy to use with hover, keyboard, and screen readers.

Component Behavior

Every action the user takes should have some visible response (an effect, transition, or animation). Buttons should change colors on "hover" and "active," API calls should trigger a loading indicator, opening/closing dialogs should be animated such that the (dis)appearance doesn't seem abrupt, etc. Use the shadcn/ui component library whenever possible, which provides these standard behaviors out of the box.

Accessibility Standards

POUR

- **Perceivability**
 - Have contrast between background and text
 - Can use dark background with light text for challenge view
 - Have content adapt to different screen sizes without breaking
- **Operability**
 - All functionality should be possible via keyboard
 - Avoid flashing imagery or content that can cause seizures
- **Understandability**
 - Text should be readable and understandable
 - Allow users to correct mistakes (e.g. go back to previous page or reset page)

- Add icons to show actions that user can perform
- **Robustness**
 - Buttons and text should be properly labeled and use semantic HTML
 - Allows for screen readers to work properly

Responsive Design Considerations

Use Tailwind's default breakpoints, which are inspired by common device resolutions: "sm" (40rem), "md" (48rem), "lg" (64rem), "xl" (80rem), and "2xl" (96rem). Tailwind uses a mobile-first breakpoint system, so unprefixed utilities should target mobile screens and prefixed utilities should target the specified breakpoint and above.

Use breakpoints when necessary to ensure that all components are visible and usable at any screen sizes. For testing, take advantage of Device Mode in DevTools.