

UI/UX DESIGN SPECIFICATION

StockFlow: Enterprise Inventory Management System

1 1. Design Philosophy

The visual architecture of "StockFlow" is grounded in the **Function-First** design philosophy, prioritizing data legibility and operational speed over decorative elements. The interface adopts a **Flat 2.0** aesthetic (Material Design Lite), utilizing clean lines, ample whitespace, and subtle depth cues (drop shadows) solely to indicate interactivity or hierarchy.

1.1 1.1. Core Principles

- **Clarity:** Information density is managed to prevent cognitive overload. Data tables use generous padding, and key metrics are isolated in high-contrast cards.
- **Consistency:** Interactive elements (buttons, inputs) share uniform corner radii (6px), padding, and hover behaviors across the application.
- **Feedback:** Every user action triggers an immediate visual response (e.g., hover states, focus rings, toast notifications).

2 2. Visual Identity System

2.1 2.1. Color Palette & Psychology

The color system is designed to convey trust and urgency where appropriate.

- **Primary Color (Royal Blue):** Used for primary actions (Submit, Save) and active navigation states. Blue is chosen for its association with stability and professionalism in enterprise software.
- **Semantic Colors:**
 - **Success (Emerald Green):** Indicates positive states (Stock Healthy, Operation Successful).
 - **Destructive/Alert (Crimson Red):** Reserved for critical actions (Delete) or warnings (Low Stock).

- **Neutrals:** A scale of Slate Grays is used for text, borders, and backgrounds to reduce eye strain during prolonged usage.

Role	Sample	Hex Code / Usage
Primary Action	Action	#2563EB (Buttons, Links)
Background	Canvas	#FFFFFF (Cards, Modals)
Surface	Base	#F3F4F6 (App Background)
Critical Alert	Alert	#EF4444 (Errors, Low Stock)
Success State	Safe	#10B981 (Confirmations)

2.2 2.2. Typography

Typeface: Inter (fallback to System Sans-Serif).

Rationale: Inter provides a tall x-height, making it highly legible for numerical data and small labels, which is crucial for inventory tables.

- **H1 (Page Titles):** 24px / Bold / Slate-900
- **H2 (Section Headers):** 18px / Semibold / Slate-800
- **Body (Table Data):** 14px / Regular / Slate-600
- **Labels (Forms):** 12px / Medium / Slate-500

3 3. Layout and Grid Structure

The application layout mimics standard SaaS dashboards to ensure familiarity.

3.1 3.1. The App Shell

The layout is divided into two primary zones:

1. **Navigation Sidebar (Fixed Width: 260px):** Contains global navigation links. It persists across all views to ensure users never lose context.
2. **Main Content Area (Fluid):** Occupies the remaining width. It utilizes a standardized padding of 32px (2rem) to frame the content.

3.2 3.2. Dashboard Grid

The dashboard utilizes a CSS Grid layout:

- **KPI Cards:** A 4-column grid row at the top displaying high-level metrics.
- **Data Panels:** A dynamic layout that stacks vertically on mobile devices (< 768px) and expands to side-by-side panels on desktop.

4 4. Component Specifications

4.1 4.1. Buttons

- **Primary:** Solid Blue fill, White text. Used for the main action on a page (e.g., "Add Item").
- **Secondary:** White fill, Gray border, Gray text. Used for cancel or alternative actions.
- **Destructive:** Light Red background, Red text. Used for "Delete" operations.

4.2 4.2. Input Forms

Inputs feature a distinct visual state for validation:

- **Default:** Gray-300 border.
- **Focus:** Blue-500 ring (2px) to aid keyboard navigation.
- **Error:** Red-500 border with a descriptive helper text below the field.

5 5. Accessibility (A11y) Standards

The design adheres to **WCAG 2.1 AA** guidelines to ensure inclusivity.

- **Contrast Ratios:** All text elements maintain a contrast ratio of at least 4.5:1 against their background.
- **Keyboard Navigation:** All interactive elements are focusable via the Tab key, with visible focus indicators.
- **Semantic HTML:** Implementation uses proper tags (`<nav>`, `<main>`, `<button>`) to support screen readers.