

UI Design System and Style Guide



Table of Contents

Purpose.....	6
Design Principles.....	6
Clarity.....	6
Consistency.....	6
Efficiency.....	6
Accessibility.....	6
Scalability.....	6
Brand Guidelines (Design Systems).....	6
Color System.....	9
Neutral Palette.....	9
Semantic Colors.....	10
Chart Colors.....	10
Typography.....	10
Font Families.....	11
Type Scale.....	11
Typography Rules.....	12
Layout System.....	12
Grid System.....	12
Spacing Scale.....	13
Layout Regions.....	13
Header.....	13
Sidebar.....	14
Main Content.....	14

Footer.....	14
Iconography.....	14
Icon Standards.....	14
Icon Sizes.....	15
Elevation and Shadows.....	15
Border Radius.....	15
Navigation Design.....	16
Primary Navigation.....	16
Breadcrumbs.....	16
Navigation States.....	16
Component Library.....	16
Buttons.....	16
Variants.....	17
Button Sizes.....	17
States.....	17
Form Controls.....	18
Input Fields.....	18
Dropdowns.....	18
Checkboxes and Radios.....	18
Date Pickers.....	18
Tables.....	18
Table Standards.....	18
Row States.....	19
Recommended Row Height.....	19
Cards.....	19
Card Structure.....	19
Card Usage.....	19

Modals and Dialogues.....	20
Modal Behavior.....	20
Modal Sizes.....	20
Types.....	20
Placement.....	20
Duration.....	21
File Upload Components.....	21
Features.....	21
Supported States.....	21
Data Visualization Standards.....	21
Data Entry Patterns.....	22
Form Layout.....	22
Validation.....	22
Responsive Design.....	22
Breakpoints.....	22
Responsive Behavior.....	23
Accessibility Guidelines.....	23
WCAG Standards.....	23
Keyboard Support.....	23
Accessibility Checklist.....	23
Motion and Animation.....	24
Motion Principles.....	24
Recommended Durations.....	24
Empty, Loading and Error States.....	24
Empty States.....	24
Loading States.....	24
Error Handling.....	25

Naming Conventions.....	25
Component Naming.....	25
CSS Naming.....	25
Design Tokens.....	26
Token Categories.....	26
Example Token Structure.....	26
Deliverable.....	27
Design Assets.....	27
Development Assets.....	27
Documentation.....	27

Purpose

This design system establishes consistent standards for designing and developing enterprise-grade web applications. It provides reusable User Interface (UI) principles, components, interaction patterns, accessibility guidelines, and visual standards to ensure a cohesive user experience across modules such as dashboards, project management, forms, file uploads, analytics, and administrative interfaces.

Design Principles

- Clarity
- Consistency
- Efficiency
- Accessibility
- Scalability

Brand Guidelines (Design Systems)

These are set of standards and rules that ensure a digital product consistently reflects brand identity of an organization across all screens, pages, and user interactions. They serve as a reference for designers, developers, content writers, and product teams to maintain a unified user experience. For a web application project, brand guidelines are typically created before detailed UI design and become the foundation for the design system, wireframes, mock-ups, and front-end development.

Key Components of Brand Guidelines: Logo Usage, Color Palette, Typography, Iconography, Imagery and Illustrations, Layout and Spacing, Accessibility Standards

Artifact	Owner	Consumers
Design Tokens	UX Team	Developers
Component Library	Developers	All Applications
Style Guide	UX Team	Business & Developers
Storybook Site	Developers	Developers & QA
Accessibility Standards	UX/QA	All Teams
Design Documentation	UX Team	Entire Organization

UI Design System

|

└─ **Design Assets**

| └─ Color System

| └─ Typography

| └─ Icons

| └─ Layout Grid

| └─ Design Tokens

|

└─ **Component Library**

| └─ Buttons

| └─ Forms

| └─ Tables

| └─ Navigation

| └─ Dialogs

|

└─ **Documentation**

| └─ Usage Guidelines

| └─ Accessibility Standards

| └─ UX Patterns

| └─ Coding Standards

|

└─ **Code Libraries**

| └─ React Components

| └─ Angular Components

| └─ Vue Components

| └─ CSS Framework

Color System

Primary Palette: It is used for the most prominent UI elements. In standard numerical naming systems, colors range from 50 (very light, almost white) to 900 (very dark, almost black). It is frequently used for readable body text or bold headings when placed over extremely light backgrounds.

Token	Color Code	Usage
Primary 900	#0B1F3A	Header background
Primary 700	#1D4E89	Primary actions
Primary 500	#2563EB	Active controls
Primary 300	#93C5FD	Hover states
Primary 100	#DBEAFE	Background highlights

Neutral Palette

Low-saturation colors like whites, blacks, and various shades of gray (or beige / tans). These colors form the foundational backdrop of an interface.

Token	Color Code	Usage
Gray 900	#111827	Primary text
Gray 700	#374151	Secondary text
Gray 500	#6B7280	Placeholder text
Gray 300	#D1D5DB	Borders
Gray 100	#F3F4F6	Backgrounds
White	#FFFFFF	Cards and surfaces

Semantic Colors

There are functional colors in UI design that convey specific meanings, states, or feedback, rather than being a decorative choice.

Semantic	Color Code	Usage
Success	#16A34A	Success alerts
Warning	#F59E0B	Warning alerts
Error	#DC2626	Validation errors
Info	#0EA5E9	Informational notices

Chart Colors

Define line, marker, marker fill and gridlines consistently.

Color	Hex Code
Blue	#2563EB
Green	#10B981
Orange	#F59E0B
Purple	#8B5CF6
Red	#EF4444
Cyan	#06B6D4

Typography

Scaling rules in UI design govern how layouts, typography, and spacing adapt across different screen sizes and device types. For example, baseline grid with dimensions, margins, and padding as multiples of 4. Increment font sizes and line heights harmoniously (such as using a scale multiplier like 1.25).

Font Families

Usage	Font
Primary UI Font	Inter
Alternate Font	Roboto
Monospace	DejaVu Sans Mono
Fallbacks	"Helvetica Neue", Arial, sans-serif

Type Scale

This refers to curated system of proportional font sizes used across a web app where sizes are defined by roles like Display, Headline, Title, Body, and Label. Do not scale just the font size. Line-height (leading) should grow proportionally as text size changes.

Element	Size	Weight	Line Height
Page Title	32px	700	40px
Section Heading	24px	600	32px
Card Heading	20px	600	28px
Body Large	16px	400	24px
Body Standard	14px	400	22px
Caption	12px	400	18px
Button Text	14px	600	20px

Design tokens are the building blocks of a UI design system when hard-coded static values (like hex codes or raw pixel numbers) are replaced with reusable, purpose-driven names. They are platform- and brand-agnostic key-value pairs that store visual design decisions such as colors, typography, spacing, and animation.

```
/* Global Tokens */
:root {
  --color-blue-500: #0066ff;
  --space-16: 16px;
```

```

}

/* Semantic Tokens (Light Mode vs Dark Mode) */
[data-theme="light"] {
  --color-brand-primary: var(--color-blue-500);
}

[data-theme="dark"] {
  --color-brand-primary: #3399ff;
}

/* Component Token Implementation */
.button-primary {
  background-color: var(--color-brand-primary);
  padding: var(--space-16);
}

```

Element	Font	Size	Weight
H1	Inter	32px	Bold
H2	Inter	24px	Semi-Bold
H3	Inter	20px	Semi-Bold
Body	Inter	14px	Regular
Caption	Inter	12px	Regular

Typography Rules

- Avoid more than 3 font sizes within a component
- Use sentence case for labels
- Use bold only for emphasis
- Maintain minimum 14px body text.

Layout System

User should not be required to scroll horizontally either on the base screen or pop-up windows.

Grid System

- 12-columns responsive grid
- Min content width: 1200px
- Gutter spacing - the empty gap between columns in a grid layout: 24px
- Minimum margin: 32px.

Spacing Scale

This is a standardized system of baseline grids, keylines, margins, padding, and gaps used across an interface. Padding is the space between elements within a component. Dimensions describe the width and height of component elements. A container is a shape used to represent an enclosed area. Containers can hold UI elements such as images, icons, or surfaces.

Token	Value
XS	4px
SM	8px
MD	16px
LG	24px
XL	32px
XXL	48px

Layout Regions

Header

- Company Logo
- Application Name
- Fixed top navigation
- Global search
- Notifications
- User profile menu.

Sidebar

- Collapsible navigation
- Module grouping
- Active state highlighting
- Icon + label format.

Main Content

- Breadcrumb navigation
- Section headers
- Action toolbar
- Responsive content cards.

Footer

- Environment info
- Version number
- Support links
- Copyright.

Iconography

Icon Standards

- Use outline icons for standard actions
- Use filled icons for selected states
- Maintain consistent stroke width
- Recommended library: Lucide or Material Symbols.

Icon Sizes

Usage	Size
Small	16px
Standard	20px
Navigation	24px
Hero	32px

Elevation and Shadows

Level	Shadow
Card	0 1px 3px rgba(0, 0, 0, 0.10)
Modal	0 10px 25px rgba(0, 0, 0, 0.15)
Dropdown	0 4px 12px rgba(0, 0, 0, 0.12)

Border Radius

Element	Radius
Buttons	8px or 25% of height
Cards	12px or 10% of height
Inputs	8px or 25% of height
Modals	16px or 10% of height

Navigation Design

Primary Navigation

- Left-aligned logo
- Top-level navigation in sidebar
- Support nested expandable menu groups
- Persist selected module state.

Breadcrumbs

Format: Home / Projects / Project Details / Reports

Navigation States

- Default
- Hover
- Active
- Disabled
- Focused

Component Library

Buttons

Primary: most prominent, high-emphasis button (Submit, Save, Login) in a user interface which should use a bold, solid brand color to stand out from the background.

Secondary: buttons for alternative, less important actions such as Edit, Cancel, Go Back

Tertiary: low-emphasis user interface element used for secondary, optional, or miscellaneous actions such as Share, View details, Add to Favorite

Danger: Buttons such as Delete, Clear Data, Reset to Defaults, Close Workspace

Ghost: Usually a transparent, outline-style button called so because it lacks a solid background, making it blend into the interface.

Variants

Variant	Usage	Background Color	Text Color	Boarder Radius
Primary	Main actions	#2563EB	White	50%
Secondary	Alternate actions	#6B7280	Black	50%
Tertiary	Low emphasis actions	Light gray	Black	25%
Danger	Destructive actions	#FF5429	Black	50%
Ghost	Minimal UI areas	White	Black	25%

Button Sizes

Size	Height	Width Ratio
Small	32px	1.25
Medium	40px	1.50
Large	48px	2.00

States

- Default
- Hover
- Pressed
- Disabled
- Loading

Form Controls

Input Fields

- Label inline with input
- Helper text - mandatory
- Error state with inline message
- Clear focus indicator.

Dropdowns

- Searchable for large datasets
- Keyboard navigable
- Multi-select support.

Checkboxes and Radios

- Minimum click target: 40px
- Support keyboard interaction.

Date Pickers

- Calendar overlay
- Range selection support
- Timezone awareness.

Tables

Table Standards

- Sticky headers
- Sortable columns
- Resizable columns
- Pagination support
- Export functionality.

Row States

- Hover
- Selected
- Expanded
- Error
- Disabled

Recommended Row Height

- Standard: 48px
- Compact: 40px

Cards

Card Structure

- Header
- Content area
- Footer actions
- Optional status indicator

Card Usage

- Dashboard widgets
- Summary metrics
- Reports
- Project summaries

Modals and Dialogues

Modal Behavior

- Background overlay
- ESC key support
- Close button required

- Focus trapping enabled.

Modal Sizes

This refers to the predefined dimensions of a modal window—an overlay that temporarily blocks interaction with the main page until the user takes action or dismisses it.

Size	Width	Height
Small	400px	
Medium	640px	
Large	960px	

Notifications

Types

- Success
- Error
- Warning
- Information.

Placement

- Top-right toast notifications
- Inline alerts within forms.

Duration

- Standard toast: 5 seconds
- Critical alerts remain until dismissed.

File Upload Components

Features

- Drag-and-drop upload

- Progress indicator
- File type validation
- Multi-file upload support
- Retry capability.

Supported States

- Empty
- Drag active
- Uploading
- Completed
- Failed

Data Visualization Standards

- Use consistent chart legends
- Limit charts to 5–7 series
- Prefer horizontal labels
- Ensure chart accessibility.

Data Entry Patterns

Form Layout

- Single-column preferred
- Group related fields
- Use progressive disclosure
- Minimize scrolling.

Validation

- Validate on blur
- Show inline errors
- Preserve entered values
- Use descriptive messages.

Example: "Project name is required."

Responsive Design

Breakpoints

Refers to specific screen widths at which a website or app's layout automatically shifts to remain usable and visually appealing. They act as triggers that dictate how content adapts to different devices, such as smartphones.

Device	Width
Mobiles	< 768px
Tablets	768px - 1024px
Laptops, Desktops	1024px - 1440px
Large Display	> 1440px

Responsive Behavior

- Collapse sidebar on tablet.
- Stack cards vertically on mobile.
- Use adaptive tables.
- Maintain touch-friendly targets.

Accessibility Guidelines

WCAG Standards

- Minimum contrast ratio: 4.5:1.
- Keyboard navigation support.
- Screen reader labels.
- Visible focus states.

Keyboard Support

Action	Shortcut
Navigate fields	TAB
Reverse navigation	SHIFT + TAB
Submit form	ENTER
Close modal	ESC

Accessibility Checklist

- Alt text for images
- ARIA labels
- Semantic HTML
- Error announcements.

Motion and Animation

Motion Principles

- Functional over decorative
- Fast and subtle
- Maintain context continuity

Recommended Durations

Interaction	Duration
Hover	100ms
Dropdown	150ms
Modal	250ms
Page transition	300ms

Empty, Loading and Error States

Empty States

Include:

- Simple illustration
- Description
- Recommended next action

Loading States

- Skeleton loaders preferred
- Avoid blocking full screen
- Show progress for long operations.

Error Handling

- Explain issue clearly
- Provide recovery action
- Avoid technical jargon.

Naming Conventions

Component Naming

Format: ComponentNameVariantState

Example: PrimaryButtonLoading

CSS Naming

Recommended:

- BEM

- Utility-first frameworks
- Design tokens

Use BEM (Block, Element, Modifier that is `.block__element--modifier`) naming convention.

```
.card {}  
.card__title {}  
.card__description {}  
.card--active {}
```

A child part of a Block that has no standalone meaning and is semantically tied to its parent is appended to the Block name using a double underscore (`__`). Modifier which is a flag on a Block or Element used to change its appearance, state, or behavior is appended to the Block or Element using a double hyphen (`--`).

Design Tokens

Token Categories

- Color
- Typography
- Spacing
- Border radius
- Elevation
- Motion

Example Token Structure

```
{  
  "color": {  
    "primary": "#2563EB", "success": "#16A34A"  
  },  
  "spacing": {  
    "md": "16px", "lg": "24px"  
  }  
}
```

Deliverable

Design Assets

- Component library
- Design tokens
- Icon library
- Typography system

Development Assets

- React component library
- CSS token package
- Documentation site
- Storybook examples

Documentation

- UX guidelines
- Accessibility standards
- Interaction patterns
- Usage examples.

For enterprise web applications, this document is usually paired with:

1. **Wireframes** (low-fidelity layouts)
2. **Annotated screen mockups** (Figma / Adobe XD)
3. **Design system/style guide**
4. **Front-end component specification**
5. **User journey and navigation flow document**
6. **Accessibility compliance checklist**
7. **Responsive design specification.**