

Apple Human Interface Guidelines (HIG) - Design System Reference

Prepared 2026-10-22. Sources: public HIG pages, read via Apple's public documentation JSON that backs each page (developer.apple.com/tutorials/data/design/human-interface-guidelines/<page>.json). **OFFICIAL** = stated in HIG; **ESTIMATED** = our conversion; **NOT VERIFIED** = not confirmed. HIG change log notes "June 9, 2025: Updated system color values, and added guidance for Liquid Glass" and "December 16, 2025: Updated guidance for Liquid Glass".

1. License

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2. Color - system colors (iOS/iPadOS)

OFFICIAL RGB values from <https://developer.apple.com/design/human-interface-guidelines/color> (table "Name | SwiftUI API | Default (light) | Default (dark) | Increased contrast (light/dark)"). HEX: exact conversion of official RGB. HSL: ESTIMATED. System colors are dynamic: they adapt to light/dark and Increased Contrast automatically - use the API (e.g. `Color.red` / `UIColor.systemRed`), not hard-coded values.

Name	API	Light		Dark		IC light	IC dark
Red	red	#FF383C rgb(255,56,60) hsl(359,100%,61%)		#FF4245 rgb(255,66,69) hsl(359,100%,63%)		#E9152D	#FF6165
Orange	orange	#FF8D28 rgb(255,141,40) hsl(28,100%,58%)		#FF9230 rgb(255,146,48) hsl(28,100%,59%)		#C55300	#FFA056
Yellow	yellow	#FFCC00 rgb(255,204,0) hsl(48,100%,50%)		#FFD600 rgb(255,214,0) hsl(50,100%,50%)		#A16A00	#FEDF43
Green	green	#34C759 rgb(52,199,89) hsl(135,59%,49%)		#30D158 rgb(48,209,88) hsl(135,64%,50%)		#008932	#4AD968
Mint	mint	#00C8B3 rgb(0,200,179) hsl(174,100%,39%)		#00DAC3 rgb(0,218,195) hsl(174,100%,43%)		#008575	#54DFCB
Teal	teal	#00C3D0 rgb(0,195,208) hsl(184,100%,41%)		#00D2E0 rgb(0,210,224) hsl(184,100%,44%)		#008198	#3BDDEC
Cyan	cyan	#00C0E8 rgb(0,192,232) hsl(190,100%,45%)		#3CD3FE rgb(60,211,254) hsl(193,99%,62%)		#007EAE	#6DD9FF
Blue	blue	#0088FF rgb(0,136,255) hsl(208,100%,50%)		#0091FF rgb(0,145,255) hsl(206,100%,50%)		#1E6EF4	#5CB8FF
Indigo	indigo	#6155F5 rgb(97,85,245) hsl(244,89%,65%)		#6D7CFF rgb(109,124,255) hsl(234,100%,71%)		#564ADE	#A7AAFF
Purple	purple	#CB30E0 rgb(203,48,224) hsl(293,74%,53%)		#DB34F2 rgb(219,52,242) hsl(293,88%,58%)		#B02FC2	#EA8DFF
Pink	pink	#FF2D55 rgb(255,45,85) hsl(349,100%,59%)		#FF375F rgb(255,55,95) hsl(348,100%,61%)		#E7124D	#FF8AC4
Brown	brown	#AC7F5E rgb(172,127,94) hsl(25,32%,52%)		#B78A66 rgb(183,138,102) hsl(27,36%,56%)		#956D51	#DBA679

Name	API	Light		Dark		IC light	IC dark
Gray	systemGray	#8E8E93 rgb(142,142,147) hsl(240,2%,57%)		#8E8E93 rgb(142,142,147) hsl(240,2%,57%)		#6C6C70	#AEAEB2
Gray (2)	systemGray2	#AEAEB2 rgb(174,174,178) hsl(240,3%,69%)		#636366 rgb(99,99,102) hsl(240,1%,39%)		#8E8E93	#7C7C80
Gray (3)	systemGray3	#C7C7CC rgb(199,199,204) hsl(240,5%,79%)		#48484A rgb(72,72,74) hsl(240,1%,29%)		#AEAEB2	#545456
Gray (4)	systemGray4	#D1D1D6 rgb(209,209,214) hsl(240,6%,83%)		#3A3A3C rgb(58,58,60) hsl(240,2%,23%)		#BCBCC0	#444446
Gray (5)	systemGray5	#E5E5EA rgb(229,229,234) hsl(240,11%,91%)		#2C2C2E rgb(44,44,46) hsl(240,2%,18%)		#D8D8DC	#363638
Gray (6)	systemGray6	#F2F2F7 rgb(242,242,247) hsl(240,24%,96%)		#1C1C1E rgb(28,28,30) hsl(240,3%,11%)		#EBEBF0	#242426

Semantic (dynamic) label & separator colors - OFFICIAL names/roles; HIG gives no fixed values (they are dynamic):

Color	Use for...
Label	A text label that contains primary content.
Secondary label	A text label that contains secondary content.
Tertiary label	A text label that contains tertiary content.
Quaternary label	A text label that contains quaternary content.
Placeholder text	Placeholder text in controls or text views.
Separator	A separator that allows some underlying content to be visible.
Opaque separator	A separator that doesn't allow any underlying content to be visible.
Link	Text that functions as a link.

Background hierarchy (systemBackground / secondary / tertiary, grouped variants) also dynamic; values NOT published in HIG.

3. Typography

OFFICIAL: system font San Francisco (SF Pro, SF Compact, SF Mono, SF Arabic, etc.) and serif New York (NY). Default / minimum text sizes:

Platform	Default size	Minimum size
iOS, iPadOS	17 pt	11 pt
macOS	13 pt	10 pt
tvOS	29 pt	23 pt
visionOS	17 pt	12 pt
watchOS	16 pt	12 pt

iOS/iPadOS Dynamic Type sizes at the default "Large" setting - OFFICIAL

(<https://developer.apple.com/design/human-interface-guidelines/typography>; table selected as the one where Body = 17pt, matching the stated 17pt iOS default):

Style	Weight	Size (points)	Leading (points)	Emphasized weight
Large Title	Regular	34	41	Bold
Title 1	Regular	28	34	Bold
Title 2	Regular	22	28	Bold
Title 3	Regular	20	25	Semibold
Headline	Semibold	17	22	Semibold

Style	Weight	Size (points)	Leading (points)	Emphasized weight
Body	Regular	17	22	Semibold
Callout	Regular	16	21	Semibold
Subhead	Regular	15	20	Semibold
Footnote	Regular	13	18	Semibold
Caption 1	Regular	12	16	Semibold
Caption 2	Regular	11	13	Semibold

Dynamic Type: HIG provides tables for every size category (xSmall-xxxLarge and accessibility AX1-AX5); support Dynamic Type so text scales with user settings.

4. Layout, spacing & grids

OFFICIAL (layout page): respect the safe area; use system layout guides/margins and readable-width guides. HIG does not publish a fixed column grid or spacing scale for iOS - NOT VERIFIED/none official. tvOS grid tables (OFFICIAL, <https://developer.apple.com/design/human-interface-guidelines/layout>): e.g. 2-column unfocused content width 860pt, 3-col 560pt, 4-col 410pt, 5-col 320pt, 6-col 260pt, 7-col 217pt, 8-col 184pt, 9-col 160pt; horizontal spacing 40pt, minimum vertical spacing 100pt.

5. Hit targets & accessibility

Platform	Default control size	Minimum control size
iOS, iPadOS	44x44 pt	28x28 pt
macOS	28x28 pt	20x20 pt
tvOS	66x66 pt	56x56 pt
visionOS	60x60 pt	28x28 pt
watchOS	44x44 pt	28x28 pt

OFFICIAL, <https://developer.apple.com/design/human-interface-guidelines/accessibility>. Contrast (OFFICIAL): text up to 17pt needs at least 4.5:1; 18pt+ or bold text 3:1. visionOS: "Aim to place buttons so their centers are always at least 60 pts apart."

6. Radii, shadows & materials

HIG does not publish fixed corner-radius or shadow tokens; controls use system shapes (incl. concentric corners with Liquid Glass) - specific values NOT VERIFIED. Materials (OFFICIAL, <https://developer.apple.com/design/human-interface-guidelines/materials>): translucent materials and Liquid Glass provide depth and hierarchy instead of drop shadows.

7. Components & states

HIG documents components such as buttons, toggles, pickers, segmented controls, sliders, steppers, text fields, menus, alerts, action sheets, sheets, popovers, lists/tables, collections, tab bars, toolbars, navigation bars, sidebars, search fields, progress indicators. Buttons (<https://developer.apple.com/design/human-interface-guidelines/buttons>): system styles and roles (e.g. normal, primary, cancel, destructive); states enabled, highlighted/pressed, disabled, focused (keyboard/tvOS/visionOS hover effect). Exact styling values NOT VERIFIED.

8. Icons - SF Symbols

OFFICIAL (<https://developer.apple.com/design/human-interface-guidelines/sf-symbols>): symbols integrate with San Francisco and align with text in all weights and sizes; available in three scales (small, medium default, large); four rendering modes - monochrome, hierarchical, palette, multicolor; symbol animations work across rendering modes, weights and scales. Total symbol count: NOT VERIFIED this run. License: SF Symbols license agreement (Apple platforms only).

9. UX analysis & lessons

- Semantic, dynamic colors (label, secondaryLabel, systemBackground) make dark mode and Increased Contrast nearly free. Lesson: never hard-code system colors.
 - Dynamic Type tables show a disciplined scale where leading scales with size; build layouts that reflow at AX sizes.
 - 44x44pt minimum touch target is a widely adopted benchmark (cf. WCAG target-size).
 - Depth via materials/Liquid Glass rather than shadows keeps content primary; risk: legibility over busy backgrounds - test contrast.
 - Platform-specific values (tvOS focus grids, visionOS 60pt spacing) remind teams to design per input modality.
- Analysis is our interpretation.

Gaps

Not published/verified: hex values for semantic background/label colors, spacing scale, corner radii, shadow specs, SF Symbols count, macOS/watchOS color tables (only iOS/iPadOS tables extracted).

Sources

<https://developer.apple.com/design/human-interface-guidelines/color>
<https://developer.apple.com/design/human-interface-guidelines/typography>
<https://developer.apple.com/design/human-interface-guidelines/layout>
<https://developer.apple.com/design/human-interface-guidelines/accessibility>
<https://developer.apple.com/design/human-interface-guidelines/materials>
<https://developer.apple.com/design/human-interface-guidelines/buttons>
<https://developer.apple.com/design/human-interface-guidelines/sf-symbols>
<https://developer.apple.com/design/human-interface-guidelines/dark-mode>

Figures (screenshots & renders)

Apple system colors (iOS/iPadOS) - rendered by us from official HIG RGB values

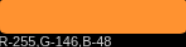
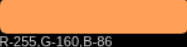
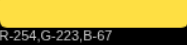
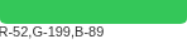
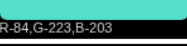
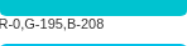
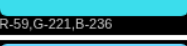
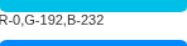
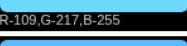
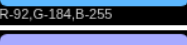
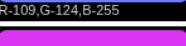
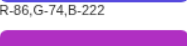
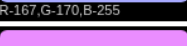
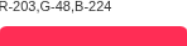
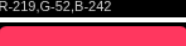
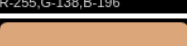
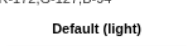
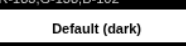
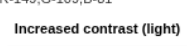
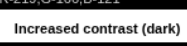
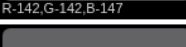
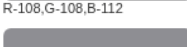
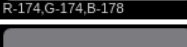
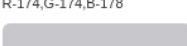
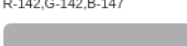
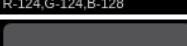
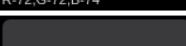
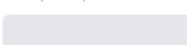
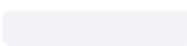
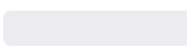
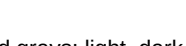
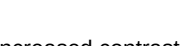
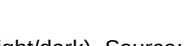
	Default (light)	Default (dark)	Increased contrast (light)	Increased contrast (dark)
Red	 R-255,G-56,B-60	 R-255,G-66,B-69	 R-233,G-21,B-45	 R-255,G-97,B-101
Orange	 R-255,G-141,B-40	 R-255,G-146,B-48	 R-197,G-83,B-0	 R-255,G-160,B-86
Yellow	 R-255,G-204,B-0	 R-255,G-214,B-0	 R-161,G-106,B-0	 R-254,G-223,B-67
Green	 R-52,G-199,B-89	 R-48,G-209,B-88	 R-0,G-137,B-50	 R-74,G-217,B-104
Mint	 R-0,G-200,B-179	 R-0,G-218,B-195	 R-0,G-133,B-117	 R-84,G-223,B-203
Teal	 R-0,G-195,B-208	 R-0,G-210,B-224	 R-0,G-129,B-152	 R-59,G-221,B-236
Cyan	 R-0,G-192,B-232	 R-60,G-211,B-254	 R-0,G-126,B-174	 R-109,G-217,B-255
Blue	 R-0,G-136,B-255	 R-0,G-145,B-255	 R-30,G-110,B-244	 R-92,G-184,B-255
Indigo	 R-97,G-85,B-245	 R-109,G-124,B-255	 R-86,G-74,B-222	 R-167,G-170,B-255
Purple	 R-203,G-48,B-224	 R-219,G-52,B-242	 R-176,G-47,B-194	 R-234,G-141,B-255
Pink	 R-255,G-45,B-85	 R-255,G-55,B-95	 R-231,G-18,B-77	 R-255,G-138,B-196
Brown	 R-172,G-127,B-94	 R-183,G-138,B-102	 R-149,G-109,B-81	 R-219,G-166,B-121
	Default (light)	Default (dark)	Increased contrast (light)	Increased contrast (dark)
Gray	 R-142,G-142,B-147	 R-142,G-142,B-147	 R-108,G-108,B-112	 R-174,G-174,B-178
Gray (2)	 R-174,G-174,B-178	 R-99,G-99,B-102	 R-142,G-142,B-147	 R-124,G-124,B-128
Gray (3)	 R-199,G-199,B-204	 R-72,G-72,B-74	 R-174,G-174,B-178	 R-84,G-84,B-86
Gray (4)	 R-209,G-209,B-214	 R-58,G-58,B-60	 R-188,G-188,B-192	 R-68,G-68,B-70
Gray (5)	 R-229,G-229,B-234	 R-44,G-44,B-46	 R-216,G-216,B-220	 R-54,G-54,B-56
Gray (6)	 R-242,G-242,B-247	 R-28,G-28,B-30	 R-235,G-235,B-240	 R-36,G-36,B-38

Figure 1. System colors and grays: light, dark, increased contrast (light/dark). Source: RENDERED BY US from official RGB values on <https://developer.apple.com/design/human-interface-guidelines/color>

iOS Dynamic Type - Large (default) - rendered by us from HIG values. SF Pro is not installed on the box; Inter used as stand-in.

Large Title - Regular 34pt / 41pt	The quick brown fox
Title 1 - Regular 28pt / 34pt	The quick brown fox
Title 2 - Regular 22pt / 28pt	The quick brown fox
Title 3 - Regular 20pt / 25pt	The quick brown fox
Headline - Semibold 17pt / 22pt	The quick brown fox
Body - Regular 17pt / 22pt	The quick brown fox
Callout - Regular 16pt / 21pt	The quick brown fox
Subhead - Regular 15pt / 20pt	The quick brown fox
Footnote - Regular 13pt / 18pt	The quick brown fox
Caption 1 - Regular 12pt / 16pt	The quick brown fox
Caption 2 - Regular 11pt / 13pt	The quick brown fox

Figure 2. iOS Dynamic Type at Large (default) size - Inter used as stand-in for SF Pro (not installed). *Source: RENDERED BY US from official values on <https://developer.apple.com/design/human-interface-guidelines/typography>*

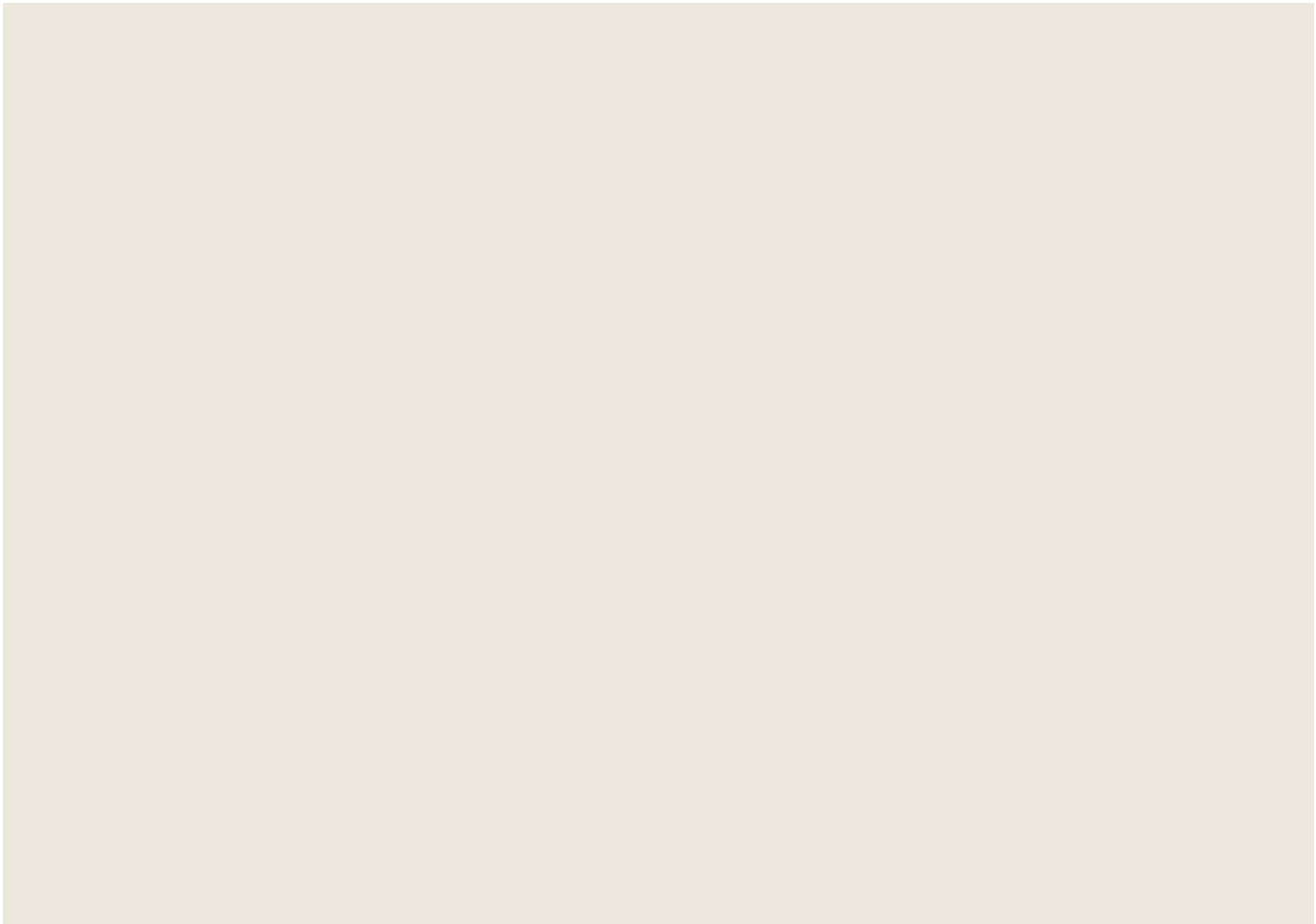


Figure 3. Color page. *Source: OFFICIAL PAGE SCREENSHOT (headless Chromium capture of the public page), <https://developer.apple.com/design/human-interface-guidelines/color>*

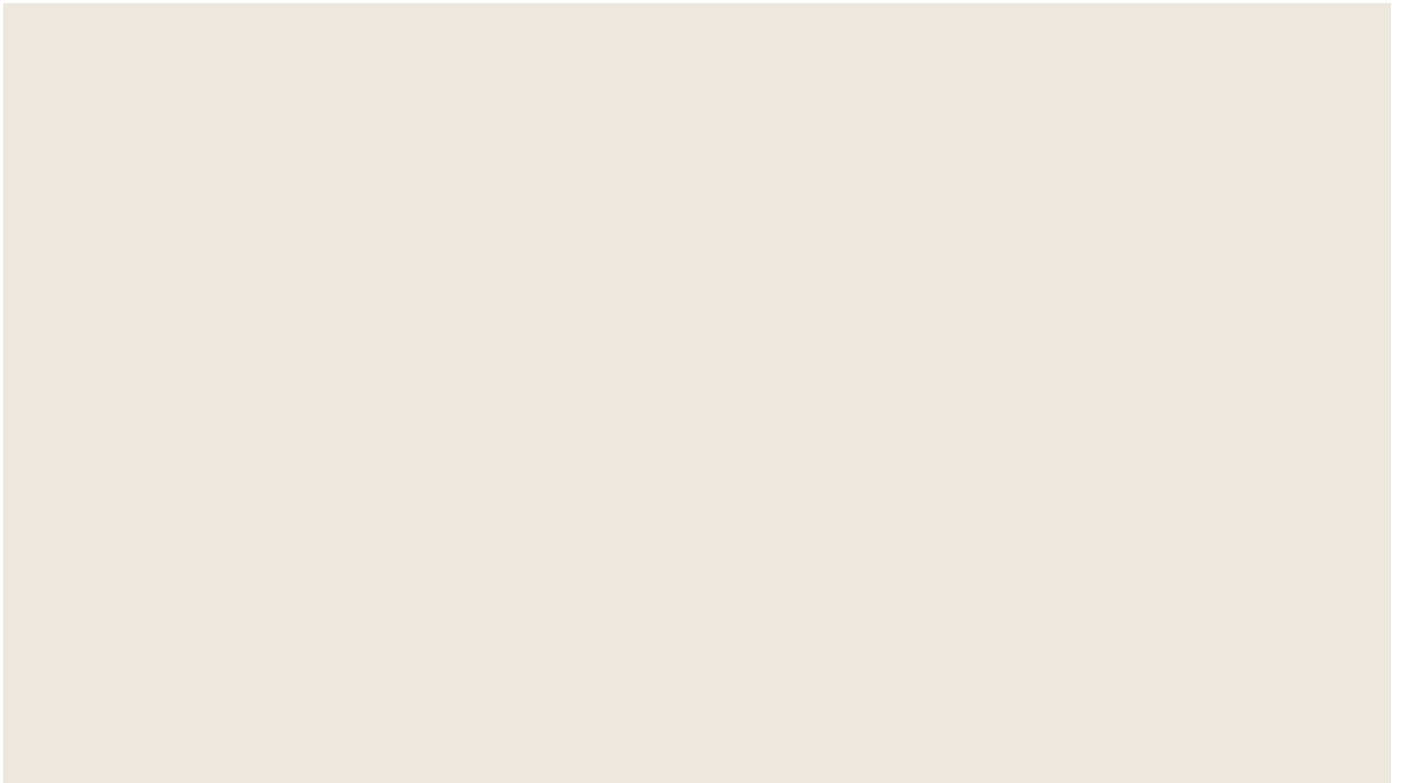


Figure 4. Color hero artwork. Source: OFFICIAL IMAGE (Apple, embedded on the public HIG page; captured by headless Chromium element screenshot), <https://developer.apple.com/design/human-interface-guidelines/color>

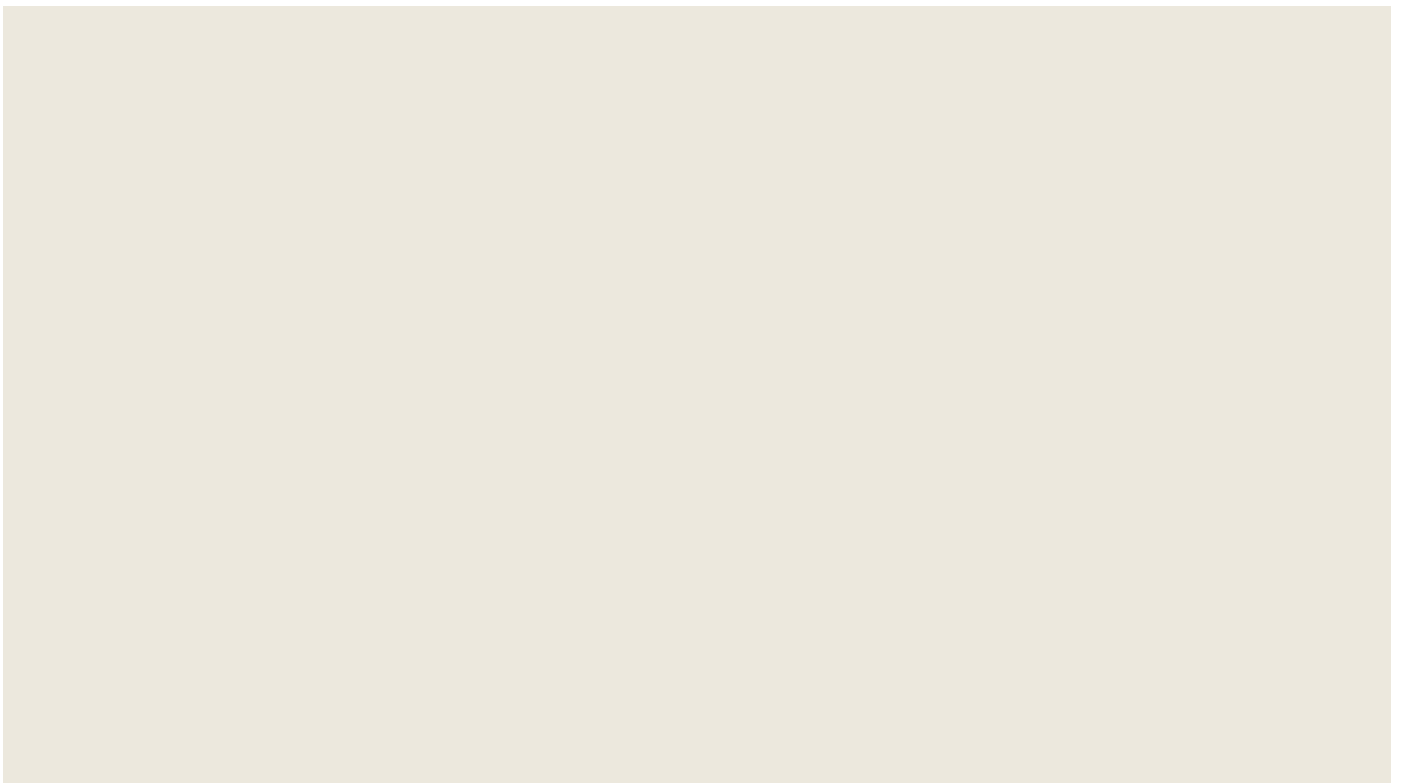


Figure 5. Typography hero artwork. Source: OFFICIAL IMAGE (Apple, embedded on the public HIG page; captured by headless Chromium element screenshot), <https://developer.apple.com/design/human-interface-guidelines/typography>

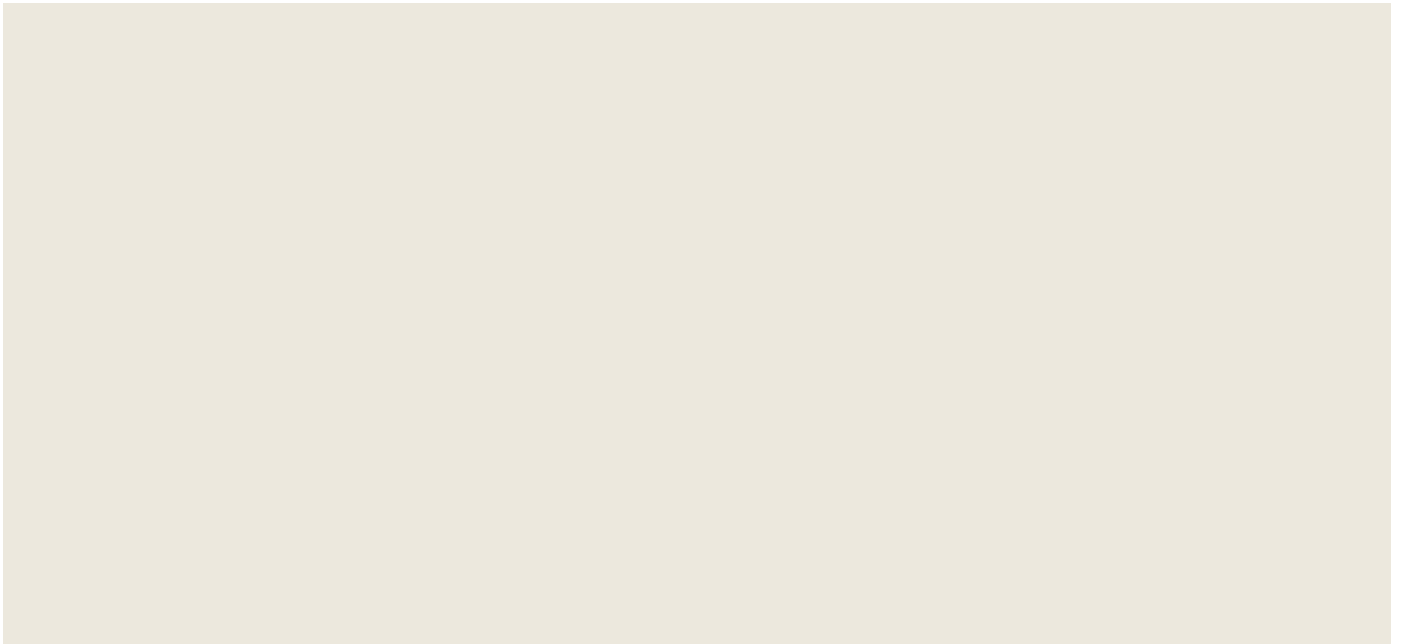


Figure 6. Typography example image. Source: OFFICIAL IMAGE (Apple, embedded on the public HIG page; captured by headless Chromium element screenshot), <https://developer.apple.com/design/human-interface-guidelines/typography>

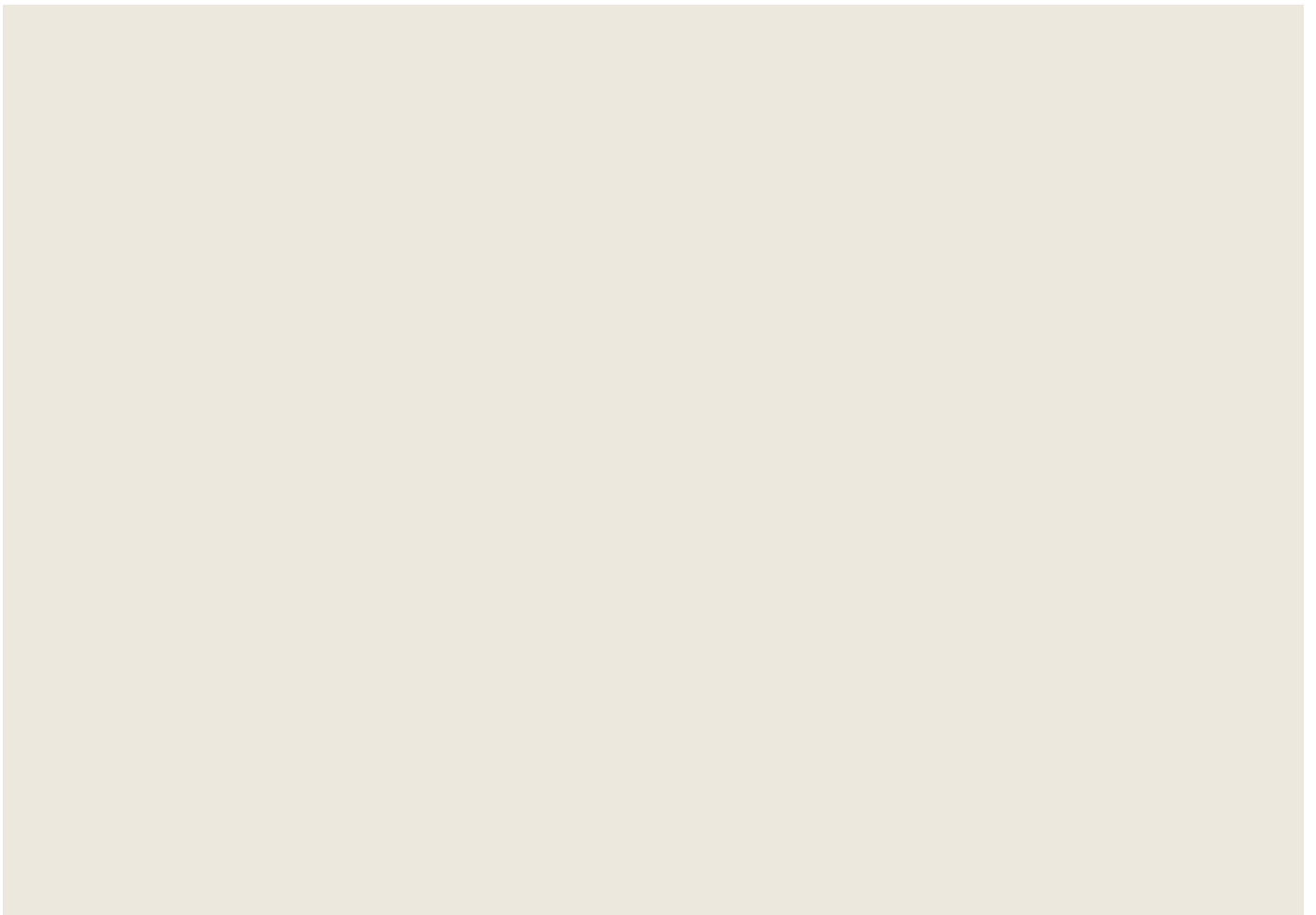


Figure 7. Buttons page. Source: OFFICIAL PAGE SCREENSHOT (headless Chromium capture of the public page), <https://developer.apple.com/design/human-interface-guidelines/buttons>

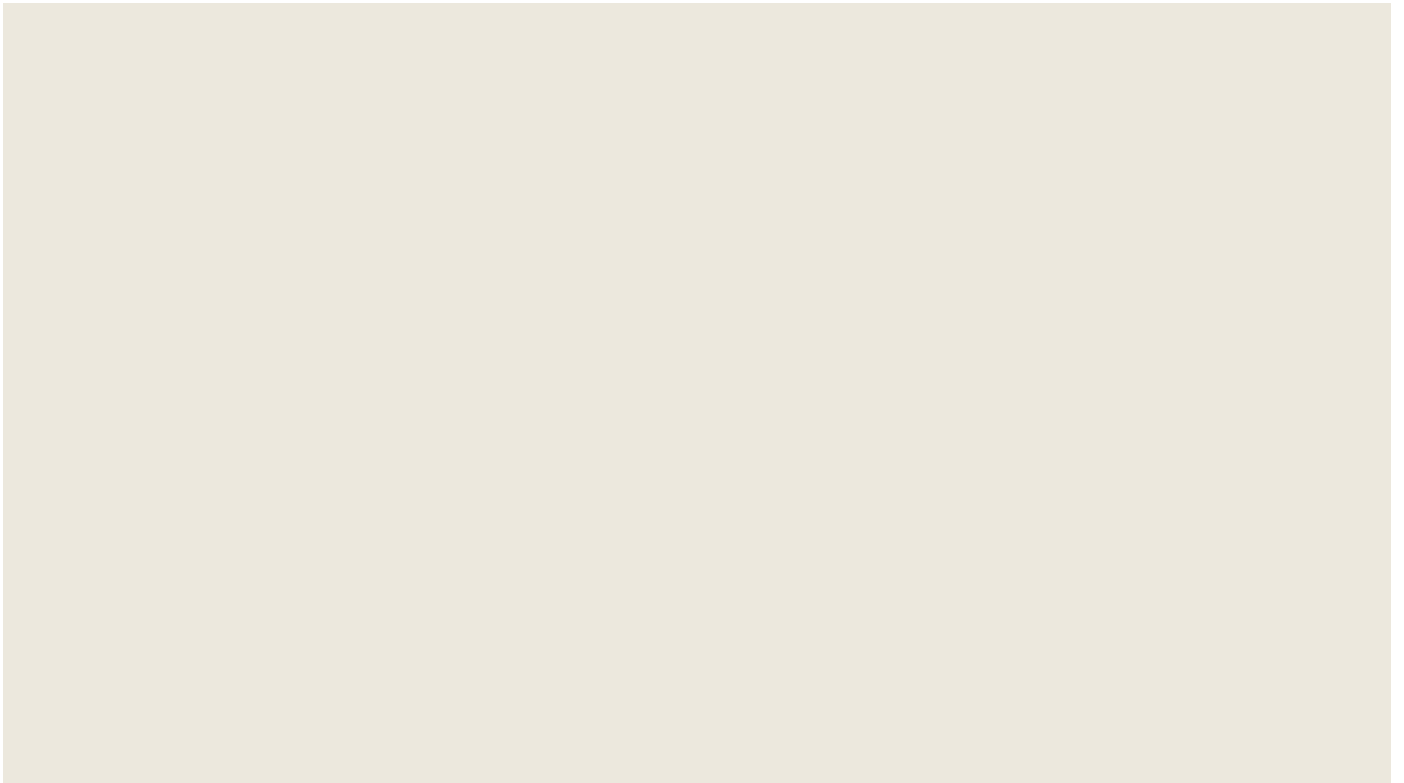


Figure 8. Buttons hero artwork. Source: *OFFICIAL IMAGE* (Apple, embedded on the public HIG page; captured by headless Chromium element screenshot), <https://developer.apple.com/design/human-interface-guidelines/buttons>



Figure 9. Alert with primary, destructive and secondary buttons (button roles). Source: OFFICIAL IMAGE (Apple, embedded on the public HIG page; captured by headless Chromium element screenshot), <https://developer.apple.com/design/human-interface-guidelines/buttons>

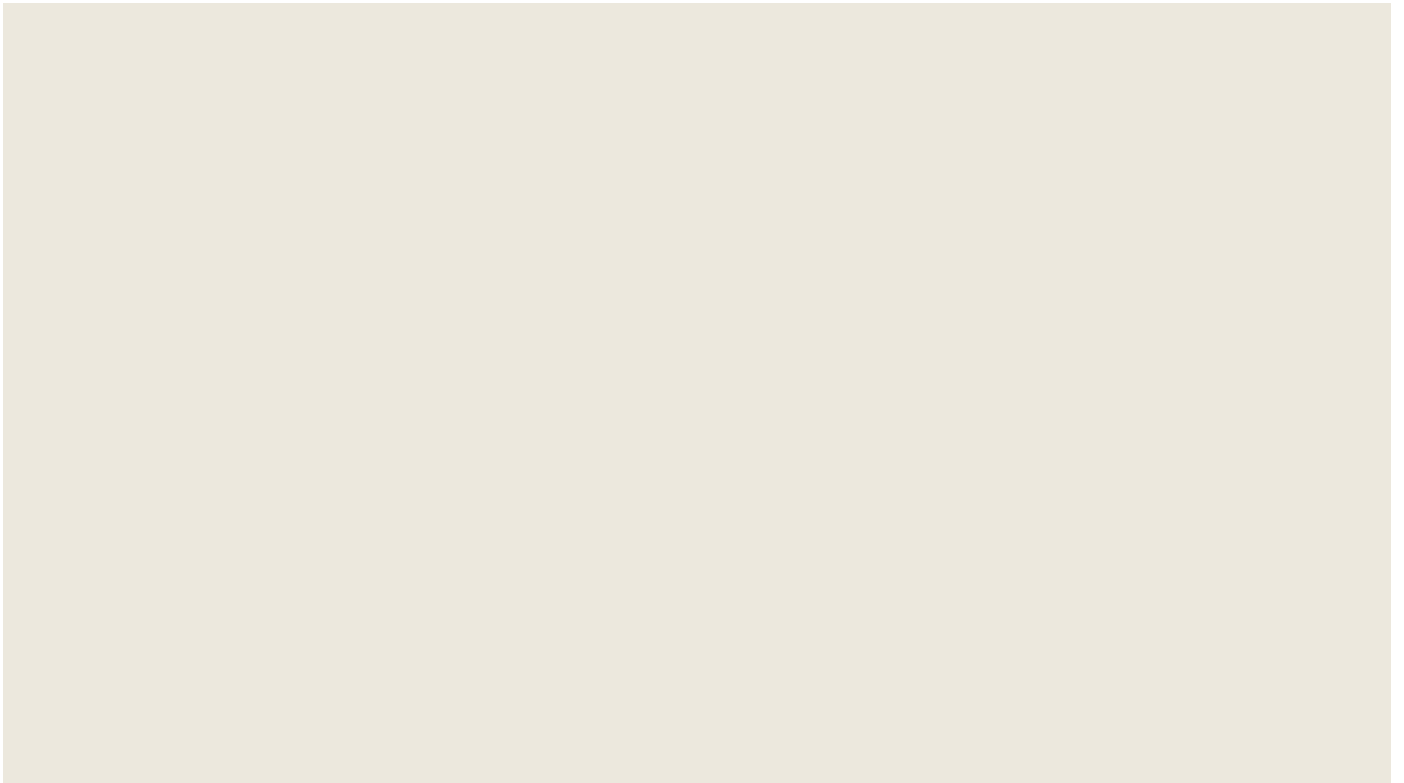


Figure 10. Layout hero artwork. Source: OFFICIAL IMAGE (Apple, embedded on the public HIG page; captured by headless Chromium element screenshot), <https://developer.apple.com/design/human-interface-guidelines/layout>

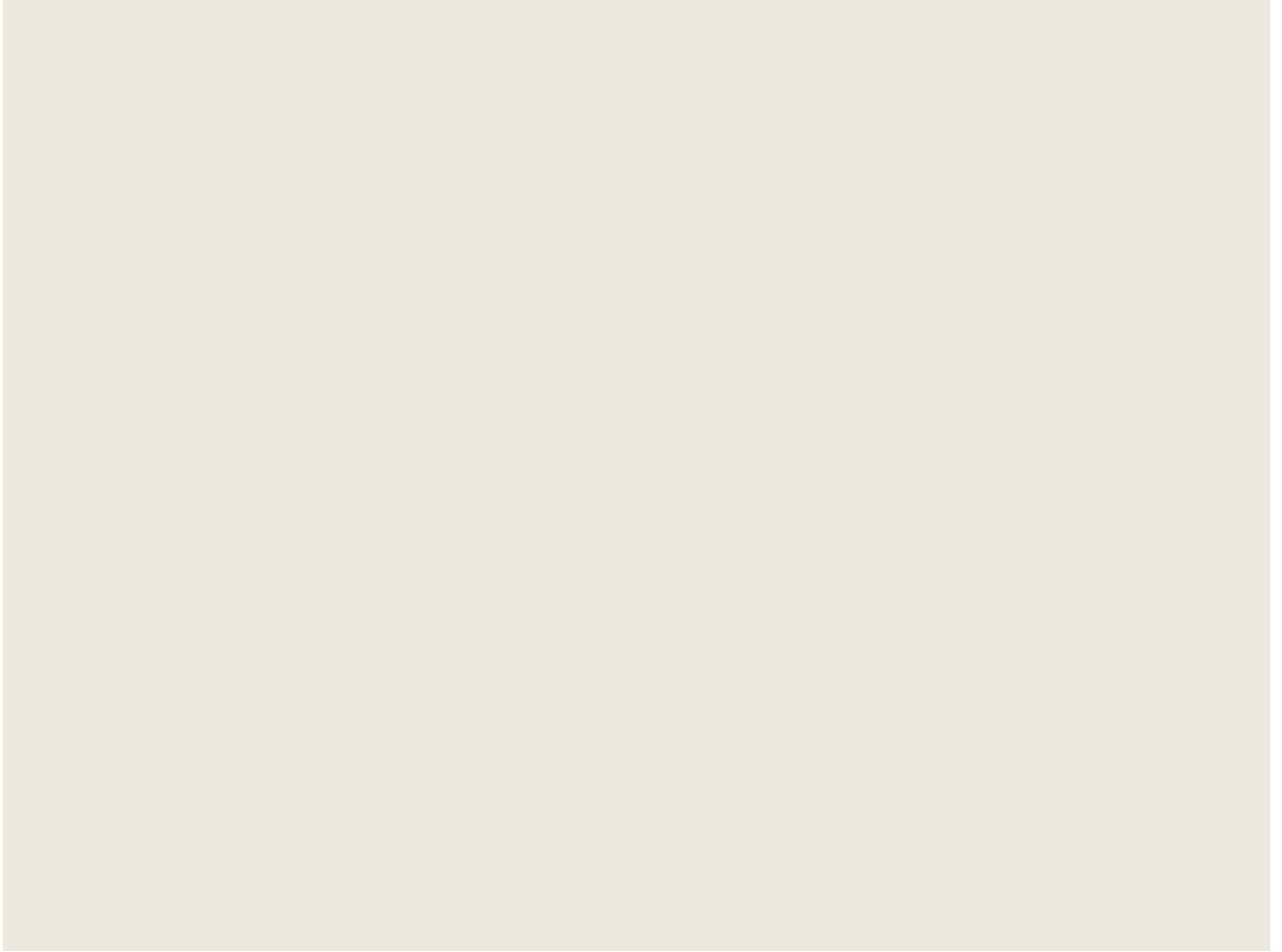


Figure 11. Layout example (sample layout). Source: OFFICIAL IMAGE (Apple, embedded on the public HIG page; captured by headless Chromium element screenshot), <https://developer.apple.com/design/human-interface-guidelines/layout>

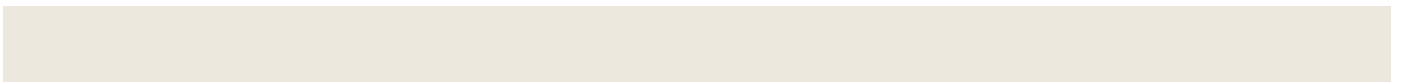


Figure 12. SF Symbols examples. Source: OFFICIAL IMAGE (Apple, embedded on the public HIG page; captured by headless Chromium element screenshot), <https://developer.apple.com/design/human-interface-guidelines/sf-symbols>