User Interface Design

- Visual design(look&feel)
- Interaction design(functional&logical organization of elements)

Main UI design types

- Graphical user interface (GUI)
  - Web
  - Mobile
- (Touchscreen)
- Voice user interface (VUI)
- Menu-driven
- Gesture-based

Visual design

○ How the interface looks, considering things like color, typography, imagery and graphics, logos, icon design and spacing.

The Color Wheel

Visual design: Color

- Grouping colors:
  - Chromatic
  - Warm
  - Cool
  - Neutral
  - Active&Passive

- Are assosiated to different things

- Color wheel
  - Primary colors
  - Secondary colora
  - Tertiary colors

◦ Color has:
  ◦ Tint
  ◦ Tone
  ◦ Shade

◦ Defining a color:
  ◦ Hue
  ◦ Saturation/chroma
  ◦ Lightness/value

  ◦ Contrast

White → Tint

White → Gray

Gray → Tone

Black → Gray

Black → Shade

Tone ← Pure Color

Pure Color → Tint

Pure Color → Shade

Shade → Tone

Tint → Tone

Painters' Color Mixing Terminology
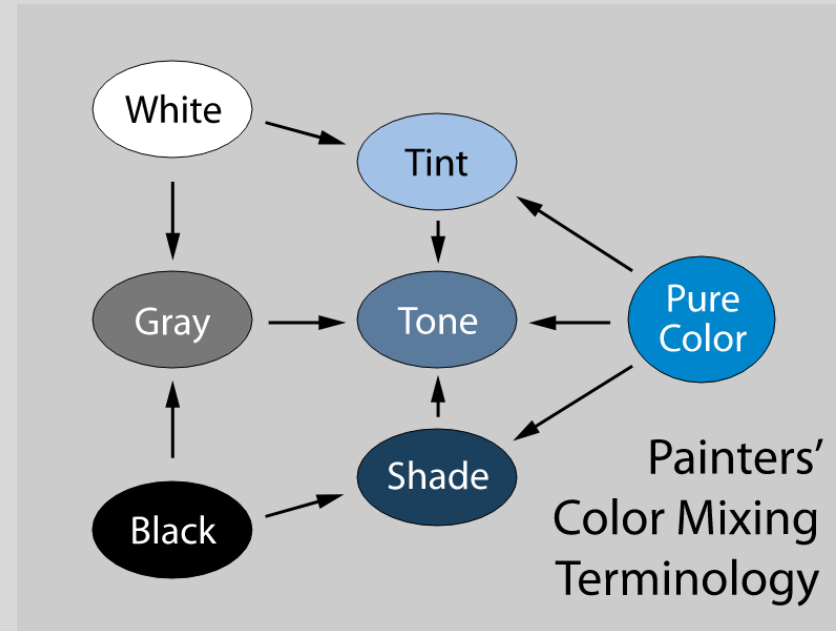
Color Schemes

MONOCHROMATIC   ANALOGOUS   COMPLEMENTARY
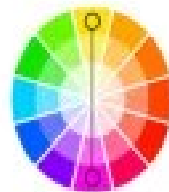
SPLIT COMPLEMENTARY   TRIAD   TETRAD   SQUARE
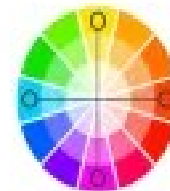
◦ Color schemes
  - ◦ Monochromatic (usually mobiles)
  - ◦ Analogous
  - ◦ Complementary
  - ◦ Split-complementary
  - ◦ Triadic
  - ◦ Tetradic

PANTONE 3581 C

COLOR VALUES:

RGB   34 50 110
HEX/HTML   22326E
CMYK   100 87 0 31
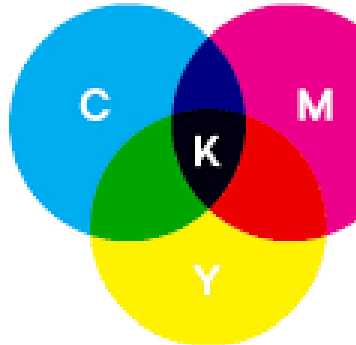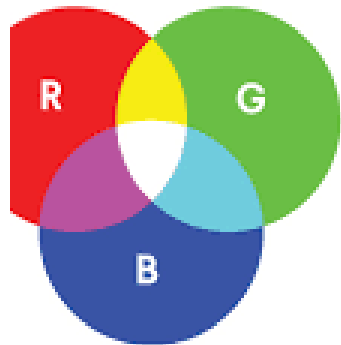
- Colors in design:
  - Primary color
  - Secondary
  - Accent
  - Backdrop/background

- Colors can be noted down in different ways, and the most common ones you will probably come across are Pantone, CMYK, HEX, and RGB.

- Guidelines
  - 2-5 colors, depending what you are designing
  - Match colors with the brand
  - 60-30-10 rule when creating color palette
  - Think accessibility
  - Use of colors should be consistent
  - Most systems reserve a certain red for errors, green for success, yellow for warning, and (possibly a lighter sky) blue for informational messages
  - Design systems such as Material design and Human interface guidelines has their own guidelines for using colors (https://developer.apple.com/design/human-interface-guidelines/foundations/color and https://m3.material.io/styles/color/overview)
  - There are differences when designing for different screens and devices
  - Light vs dark mode color designing

Figma color options:

- Solid, linear, radial, angular, diamond, image, video

- Hex, RGB, CSS, HSL, HSB

- Color styles

- Stroke: Color, inside/outside/center, strokes per side. Advanced: Style, join, miter angle

- Effects: Drop/inner shadow or layer/background blur

Visual design: Typography
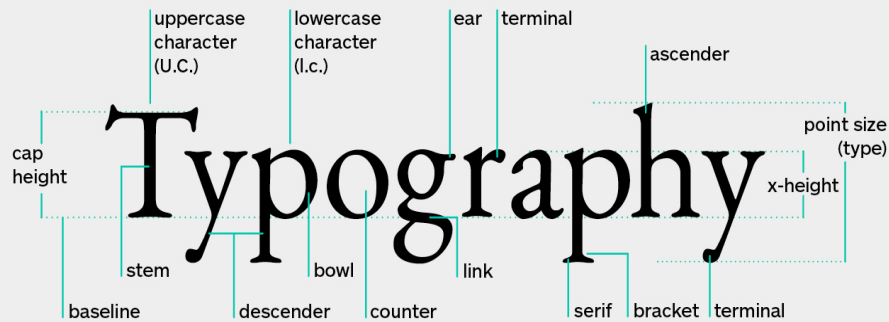
- Typeface

- Font

- Elements of typography:
    - Baseline
    - Cap height
    - X-height
    - Ascender/Descender
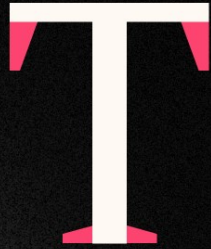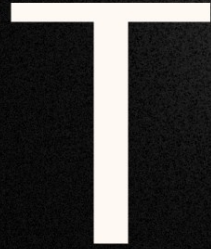
- Main generic fonts:
  - Serif fonts
    - Old-style
    - Transitional
    - Didone
    - Slab
  - Sans serif fonts
    - Grotesque
    - Neo-grotesque
    - Geometric
    - Humanist
  - Monospace fonts
  - Cursive (handwriting) fonts
  - Display fonts

  - Sans serif are usually used in mobile and web design
  - Neo-grotesque are typically for mobile design. Roboto is for Android and SF Pro(San Fransisco) sor iOS

They held him twenty-four hours out of pure curiosity while the doctors had a field day. But the press championed his cause, and he was set free.

They held him twenty-four hours out of pure curiosity while the doctors had a field day. But the press championed his cause, and he was set free.

They held him twenty-four hours out of pure curiosity while the doctors had a field day. But the press championed his cause, and he was set free.

- Can be aligned
  - Left
  - Center
  - Right

  - Emphasize
    - Bold
    - Italics
    - Underlining
    - Capitalize
    - Spacing
    - Color

- Size
  - Px
  - Em
  - Rem
  - Sp
  →For screens

  Web: em, rem, pixels

  Mobile: pixel independent; iOS→Points and Android→sp (https://developer.apple.com/design/human-interface-guidelines/foundations/typography and https://m3.material.io/styles/typography/overview)

	Web	iOS	Android	Native Screen Resolution
Units	**pixels** px	**points** pts	**density-independent pixels** (dps) Scalable pixels (sp)	**pixels** px
Scaling Technique	Logical Resolution	Logical Resolution	Density Independence	None
Similarity	web pixel is ≈ iOS point ≈ Android density-independent pixel roughly about the same size in practice Each is about the size of a 'standard screen resolution pixel' if high resolution displays did not exist			Screen resolution pixels are entirely different than the pixels, points, and density-independent pixels on the web, iOS, and Android. Screen Resolution pixels are the actual number of physical pixels on screen.

FontWeight	Weight value
FontWeight ExtraBlack	**950**
FontWeight Black	**900**
FontWeight ExtraBold	**800**
FontWeight Bold	**700**
FontWeight SemiBold	600
FontWeight Medium	500
FontWeight Normal	400
FontWeight SemiLight	350
FontWeight Light	300
FontWeight ExtraLight	200
FontWeight Thin	100

- Weight:
  - Light
  - Regular
  - Medium
  - Bold

- Formatting text:
  - Space between letters
  - Line lenght
  - Line height

SANS TYPE SUITE • ROBOTO

MAIN HEADING

SUBHEADER

This is my paragraph text or "body copy" where I'll start dialing into the details about this really cool service that I offer to ideal clients.

SCC
.

- Primary/Secondary/(third font)

- Hierarchy:
  - Title/Header
  - Subtitles
  - Body text

  - Scalability

- Guidelines:
  - Fonts can be defined by using CSS
  - If using a font which is not installed in operating system, it will be replaced by some other random font and that might destroy the design completely
  - Use fonts which are included with most of operating systems
  - Consider brand, number of fonts used, language and amount of written content when selecting fonts
  - Use enough whitespace
  - Don't squeeze or stretch fonts
  - Different font size recommendations for different devices and operating systems
  - Think about readability and reading patterns
  - Consider accessibility

Figma typography options

- Figma represents font size in density-independent pixels.

- Font, weight:light/regular/medium/bold, size

- Style

- Line height, letter spacing, paragraph spacing

- Auto width, auto height, fixed size

- Alignment: left/center/right. Top/middle/bottom.

- Type settings:
  - Basic: Resizing, alignment, decoration, paragraph spacing, paragraph indent, list style, case
  - Detail: Letter case, numbers, letterforms, horizontal spacing, more features.
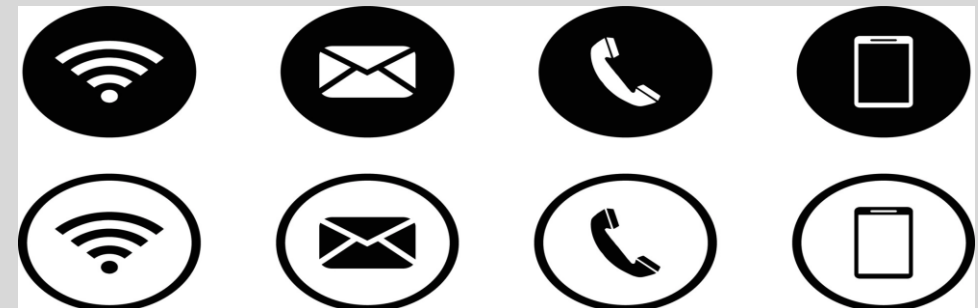
Visual design: Image

- Photos, illustrations, logos, icons
- Guality
- Licence
- Size
- Raster/Vector
- Brand
- Accessibility
- Is is suitable for different screen sizes

Figma image options

- Fill, fit,crop,tile

- Exposure, contrast, saturation,temperature, tint, highlights, shadows

Visual design: Iconography

◦ Icons are visual expressions of product, services and tools

◦ Represents features, functionality or content

◦ Are usually associated with real life examples (camera→taking photos)

◦ Meant to be simple

◦ Custom or standard icons

◦ Use consistent icons in design

◦ Designing icons think size, color, grids, strokes&fill, style, end use, personality etc

◦ Can be animated

◦ Raster/<u>Vector</u>

Figma icons

- Using plugins / creating own

Visual design: Shapes
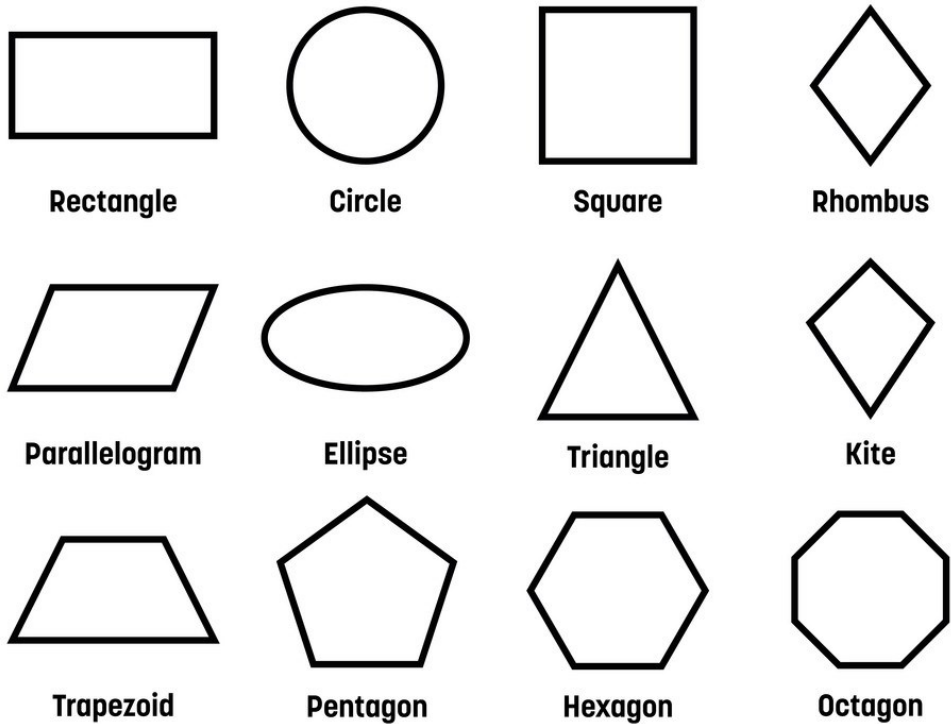
◦ Can communicate about emphasis, identity, state or brand.

◦ Material design has a defaul which means rectangular shapes having 4dp rounded corners.

Shapes in Figma

◦ Rectangle

◦ Line

◦ Arrow (different ones, customizable)

◦ Ellipse

◦ Polygon (rotation, count)

◦ Star (rotation, count, ratio)

Visual design: Layout

- ◦ "Layout design is the process of arranging visual and textual elements on-screen in order to grab a reader's attention and communicate information in a visually appealing way."

- ◦ Elements of layouts: text, image, line, shapes, white space

- ◦ Principles of layput design: Alignment, visual hierarchy, balance, proximity,

- ◦ Mobile vs web

- ◦ Responsive

- ◦ Intuitiveness, predictability and consistency
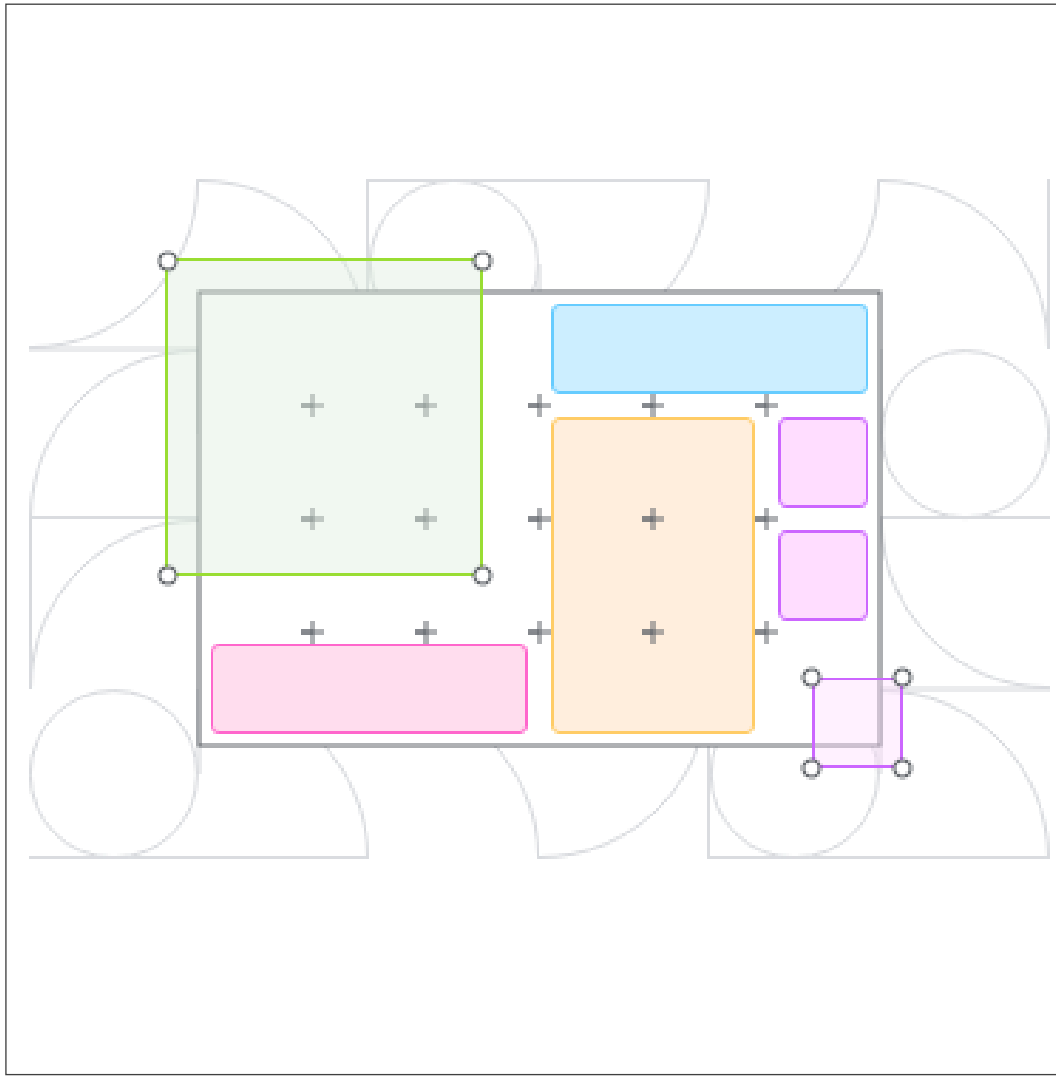
- Using grids will help positioning and making eye pleasing layouts.
  - Designing for a desktop a default is 12-column grid with 24 gutters and 24 margins.
  - Designing for tablet the default column amount is 8, gutter 23.
  - In mobile design there are usually 4 columns, 20-30 margins and 16 gutters.
  - There are different grid structures like colums, modular and hierarchical.

Figma layout

◦ Auto layout

◦ Layout grid

  ◦ Grid: Size,color

  ◦ Columns: Count, color, type, width, margin, gutter

  ◦ Rows: Count, color, type, height, margin, gutter

Interaction design:

◦ How the user interface and its various elements behave and function. For example, what happens when a user clicks on a particular button

◦ Refers to relationship between a user and a product/service

◦ Words, images/visual representations, objects/space, time and action/behavior

◦ Transitions: Motion

◦ Animations

◦ Interaction: Gestures such as navigational, action, transform

Sound

- Sound
- Music
- Voice

Mobile vs web design