

Design Toolkit

LECTURE 1 NOTES

Fundamentals of Design Principles



- **Introduction to Design Principles**

- **Design Principles**

- Principles of design give designers a set of guidelines on how to design visually appealing compositions that create wonderful user experiences.
- The 11 principles of design every graphic designer should be familiar with are:

- **Hierarchy**

- Visual hierarchy is a vital part of good design. It is used to enhance your design focus.
- If everything on your page looks as if it's all important, then nothing will stand out.
- Create visual hierarchy through things such as scale (the relative size of elements) and color.
- Typographic hierarchy can be created using different typefaces, sizes, and font weights.

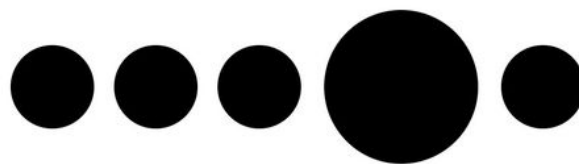


Fig: Hierarchy - Design Principle

- **Balance**

- Balance gives a design its form and stability.
- Balance within a composition can be achieved in a couple of different ways such as symmetrical balance and asymmetrical balance.
- **Symmetrical balance**
 - Symmetrical balance weighs the elements evenly on either side of the design.

- **Asymmetrical balance**

- Asymmetrical balance uses contrast to even out the design flow (e.g., dark elements are balanced out by light ones).

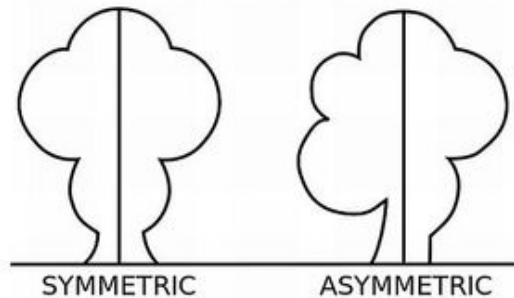


Fig: Symmetric And Asymmetric Balance in Design

- **Alignment**

- Alignment refers to how text or graphic elements are lined on a page.
- It helps ensure a sharp, ordered appearance for ultimately better designs by ensuring your various elements of design have a pleasing connection with each other.
- Center, right, or left-aligned text is the most common.

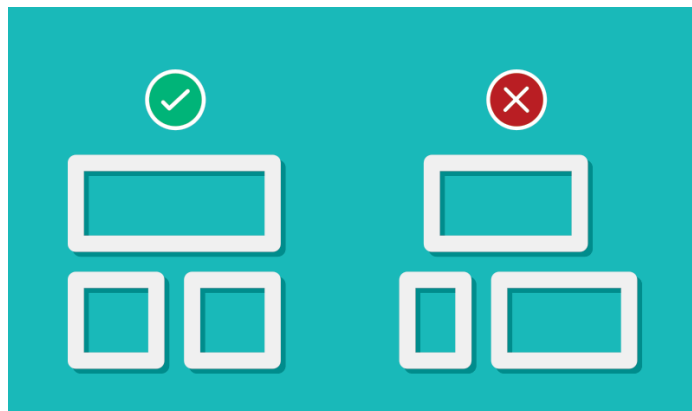


Fig: Alignment - Design Principle

■ Emphasis

- Emphasis is a part of design that catches the eye of the user — a focal point, in other words.
- It is used to emphasize the parts you want your users to look at first.



Fig: Emphasis - Design Principle

■ Proportion

- Proportion, also referred to as scale, is the relative size of objects within a design.
- Elements that are larger to others will stand out more and appear to have more importance to users. Smaller elements appear less important.
- Use proportion to create visual interest by drawing the viewer's eye to particular visual elements within your designs.

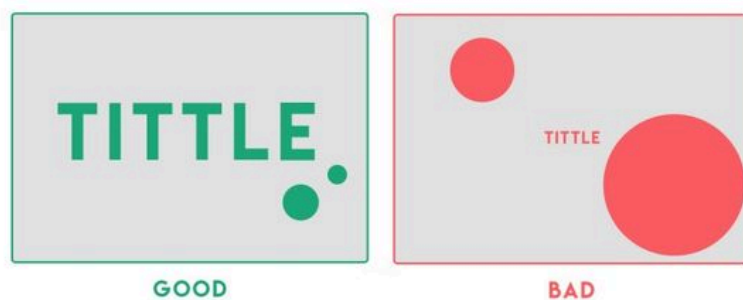


Fig: Proportion - Design Principle

■ Movement

- Movement refers to how a user's eyes move across your composition.
- The best designers can, to an extent, control which elements users focus on by placing them along the path of the most natural eye movement patterns.
- It's important to familiarize yourself with the most common eye movement patterns, F- and Z-patterns, and the layer cake pattern.
- F- and Z-patterns are more common on image-heavy pages, while the layer cake pattern is facilitated by lots of text with headings and subheadings.
- Note: F-pattern and Z-pattern are design principles that guide the eye movement on a page, with the F-pattern emphasizing horizontal scanning and the Z-pattern encouraging a diagonal reading path, both crucial for effective visual communication.

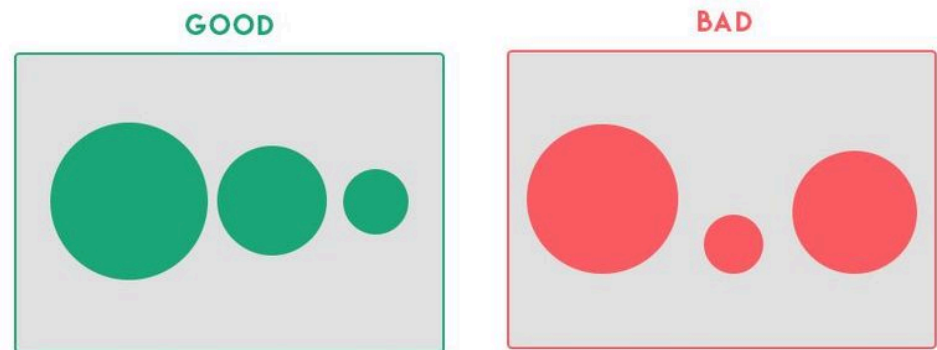


Fig: Movement - Design Principle

■ Negative Space

- Negative space in a design, also called white space, is space that has no design elements.
- Negative space is essential because it gives the elements in your composition room to breathe. Without it, pages look cluttered and are hard to navigate.



Fig: Use of Negative Space- Design Principle

■ Contrast

- Contrast can be achieved through color, shape, size, or similar properties of elements, and refers to the differences between them.
- Differences in the sizes of elements, their shape, or some other property also create contrast.
- It helps elements stand out from one another.

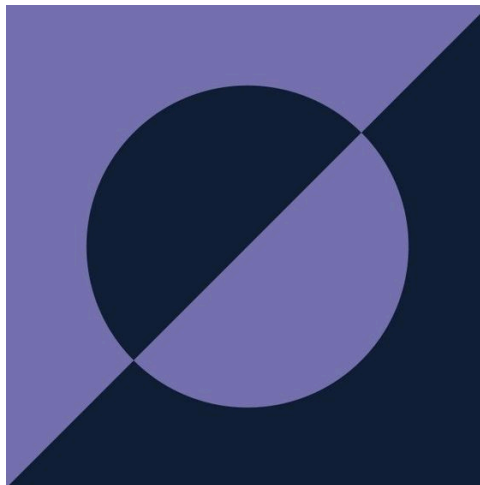


Fig: Color Contrast -Design Principle

■ Repetition

- Repeating colors, fonts, words, or shapes can help tie your design and overall look together.
- Employ repetition in simple ways—such as using the same icons throughout, in background patterns, or through things such as styling all of your photos in the same way.
- It also helps people remember your brand or other important information.

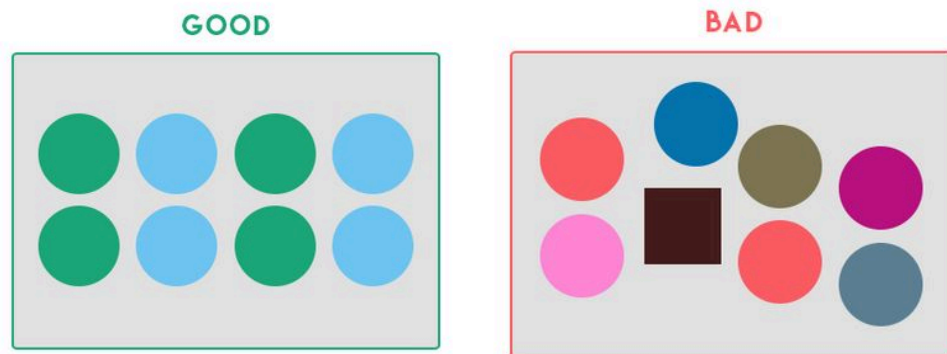


Fig: Repetition - Design Principle

■ Variety

- Variety can be used to draw the user's attention to specific elements or areas of the design and make them stand out.
- Create variety by adding unique or unexpected elements to your designs.



Fig: variety - Design Principle

■ Unity

- Unity is important because it makes users feel at ease while navigating your design.
- Everything appears to be in its proper place and there are no jarring elements that stand out negatively.

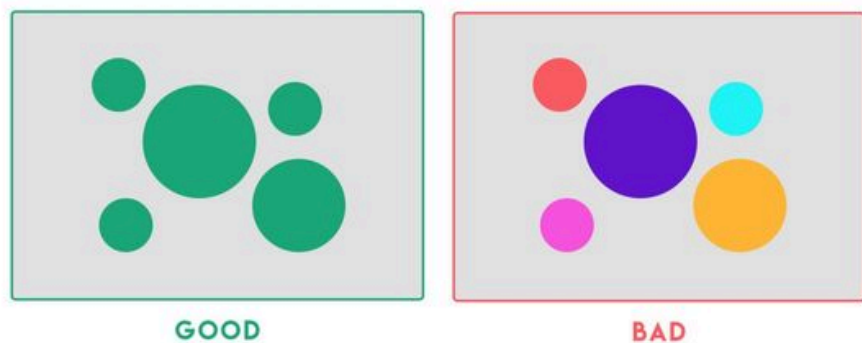


Fig: Unity- Design Principle

● Understanding Color Theory

- Color theory is both the science and art of using color.
- Color theory also involves the messages colors communicate, and the methods used to replicate color.
- Colors are organized on a color wheel and grouped into three categories: primary, secondary, and tertiary.

■ RGB and CMYK

- **RGB:** RGB stands for Red Green Blue. It is the color scheme for digital images. RGB color mode is used if the project is to be displayed on any screen. RGB color scheme is used in electronic displays such as LCD, CRT, cameras, scanners, etc.
- **CMYK:** CMYK stands for Cyan Magenta Yellow Key (Black). It is the color scheme used for projects including printed materials. This color mode uses the colors cyan, magenta, yellow and black as primary colors which are

combined to different extents to get different colors.

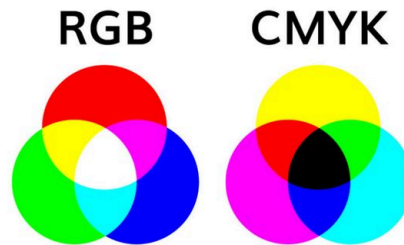


Fig: Difference between RGB and CMYK

■ The Color Wheel

- The color wheel consists of three primary colors: red, yellow, blue.
- Three secondary colors (colors created when primary colors are mixed: green, orange, purple).
- Six tertiary colors (colors made from primary and secondary colors, such as blue-green, blue-violet, red-violet, yellow-green, yellow-orange, red-orange).

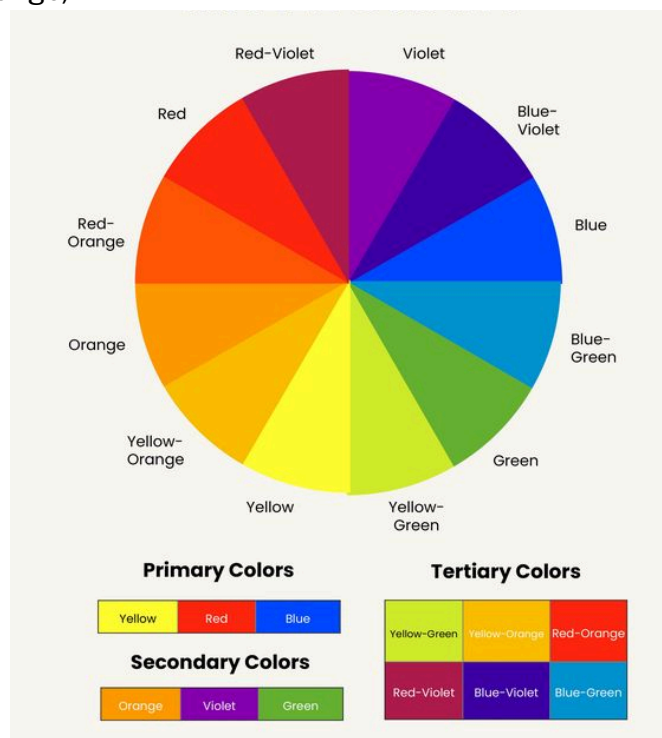


Fig: Color Wheel

■ Warm and Cool Colors

- **Warm Colors:** These colors are generally associated with energy, brightness, and action. Red, Orange, and Yellow are warm colors.
- Warm colors (reds, yellows, oranges) evoke energy, passion, and warmth.
- **Cool Colors:** These colors are often identified with calm, peace, and serenity. Blue, Green, and Purple are cool colors.
- Cool colors (blues, greens, purples) are associated with calmness, serenity, and tranquility.



Fig: Warm and Cool colors

■ Hue, Shade, Tint, and Tone

- **Hue:** This is the original color or pure colors.
- **Tint:** A tint is a hue to which white has been added. For example, red + white = pink.
- **Shade:** A shade is a hue to which black has been added. For example, red + black = burgundy.
- **Tone:** A tone is a color to which black and white (or grey) have been added.

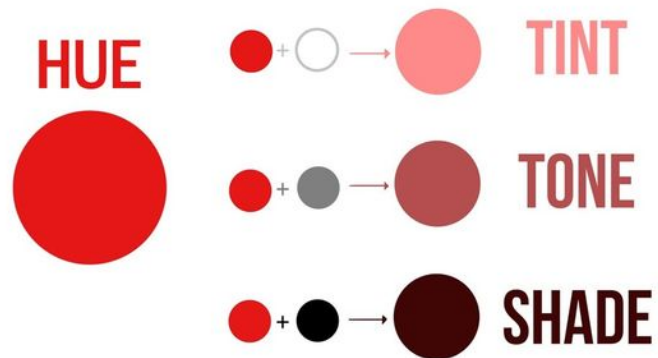


Fig: Hue, Tint, Tone, and Shade

■ Color Harmony

- Color harmony refers to the pleasing arrangement of colors and is essential in creating visually appealing designs.
- Common color harmonies include complementary, analogous, triadic, and tetradic schemes.
- Complementary colors are opposite each other on the color wheel and create high contrast.
- Analogous colors sit next to one another on the color wheel — red, orange, and yellow.
- Triadic colors are evenly spaced around the color wheel and tend to be very bright and dynamic.

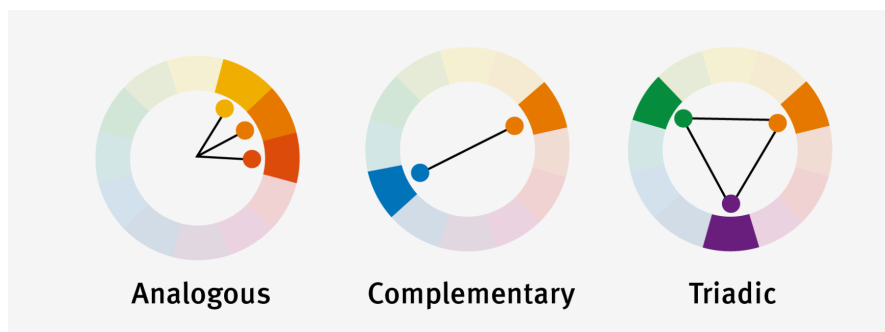


Fig: Common Color Harmonies

- **Typography Essentials**

- Textual information makes up to 90% of user interface design, and the better you 'design' text, the higher your chances of creating a positive user experience.
- These hooks are instrumental for setting up and tearing down the test environment, ensuring a clean and consistent state for each test.

- **Typeface**

- A typeface is a design or style of a set of letters that share common characteristics.
- A font refers to a specific instance within a typeface, often distinguished by factors such as weight (e.g., bold or regular) or style (e.g., italic).
- Typefaces can be classified into a few categories:
- **Serif**
 - A serif is a small shape that appears at the beginning or end of a stroke on a letter.
 - Serif typeface works well for the headings but it is not recommended to use it for body text.

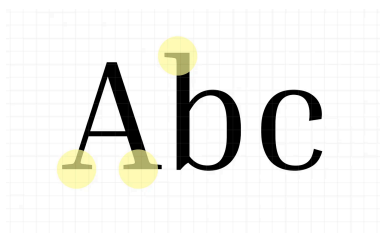


Fig: Serif (Highlighted)

- **Sans serif**
 - A typeface without serifs is called a sans serif typeface.
 - A sans serif typeface works well for body text.
 - In digital interfaces, sans-serif fonts can provide a crisp and clear

appearance, especially on high-resolution screens.

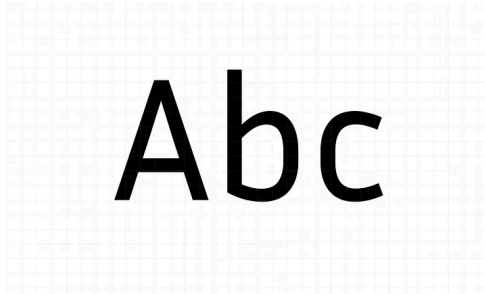


Fig: Sans serif

- **Monospace**

- Monospace typefaces display all characters with the same width.
- A monospaced typeface is commonly used in programming languages to distinguish programming code from natural-language text.

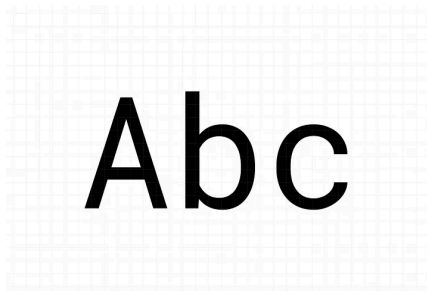


Fig: Monospace

- **Handwritten Typeface**

- Handwriting typefaces are unconventional with a natural, handwritten feel.
- Handwritten typeface is used as a decorative element in design.
- Sometimes, UI designers use the handwritten typeface for headings (H1-H6) to make the UI look more visually attractive.

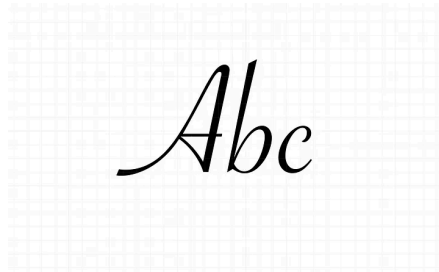


Fig: Handwritten

■ Font size

- Font size is a measurement of the height of characters in a typeface, typically, measured in points (pt) or pixels (px).
- Digital design usually uses pixels or ems, which are relative units of measurement. It is recommended to use 16 pixels for body text.
- Pixels and ems take into account the user's screen resolution and zoom level.
- Print design often uses points or millimeters, depending on the country and printing standard.

■ Type scale

- A type scale is a system that defines a set of harmonious and proportionally related font sizes for body text and headers.
- The system helps to create a visually appealing and consistent visual hierarchy in UI design.

3.852rem/73.24px	What is a Typographic Scale?	H1
2.441rem/58.59px	What is a Typographic Scale?	H2
1.953rem/46.88px	What is a Typographic Scale?	H3
1.563rem/37.50px	What is a Typographic Scale?	H4
1.25rem/30.80px	What is a Typographic Scale?	H5
1rem/24.80px	What is a Typographic Scale?	BASE (BODY)
0.8rem/19.20px	What is a Typographic Scale?	SMALL TEXT
0.64rem/15.36px	What is a Typographic Scale?	CAPTION TEXT
0.512rem/12.29px	What is a Typographic Scale?	SMALL PRINT

■ Font weight

- Weight refers to the relative thickness of a font's stroke. A typeface can come in many weights.
- A typical number of weights for a typeface is four or six.
- It is recommended to use Regular font weight for body text.
- Use bold text for headings, titles, Call-to-action button labels, Highlight individual words in body text, Highlight active elements.

■ Letter spacing

- Letter spacing, also called tracking, is a space between letters in a piece of text.
- Letter spacing should be selected proportionally to the font size:
 - Larger type sizes, such as headlines, use tighter letter spacing to improve readability.
 - By reducing space between individual letters, you improve readability since the reader's eye will travel a shorter distance.
 - For smaller type sizes, such as body text and, especially, text in vertical columns, looser letter spacing can improve readability as more space between letters in smaller type sizes increases the contrast between each letter shape.



■ Line height

- Line height, also known as leading, controls the amount of space between baselines in a block of text.
- Both too big and too little small line height can negatively impact text readability.
- It's recommended to choose a text's line height proportional to the type size.
- For most text, the optimal line spacing is between 120% and 145% of the point size.