

UI-USABILITY & DESIGN PRINCIPLES

This booklet presents fundamental principles that serve as guiding principles to consider when creating intuitive and effective user interfaces. The booklet is divided into three sections.

The first focuses on usability heuristics. These research-based principles guides your designs to be more user-friendly and efficient, covering essential aspects such as visibility, feedback, and consistency. By applying these heuristics, you can identify and resolve usability issues and streamline interactions.

The second section explores a subset of Gestalt principles, offering insights into how users perceive and group visual information. Understanding these principles allows you to craft interfaces that resonate with natural human cognition, making designs appear more coherent.

Lastly, the curated UI-design tips section provides practical advice to refine your UI-design. From layout considerations to color usage and typography choices, these tips help translate theoretical principles into actionable design practices.

01

Usability Heuristics

Jakob Nielsen's 10 heuristics for interaction design, are general principles that can guide you in your process. They are called "heuristics" because they are broad rules of thumb and not specific usability rules.

Apply these heuristics to identify usability issues, improve user experiences, and optimize digital products, when striving for user-friendly interfaces.

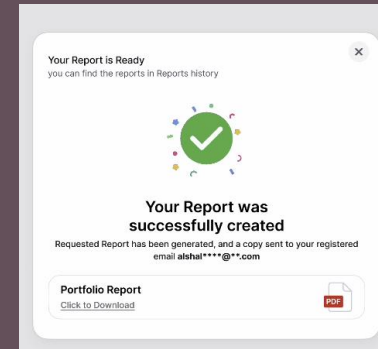
1. Visibility of System Status

The design should constantly **keep users informed about what is happening** through feedback mechanisms.



EXAMPLE

Utilize progress indicators to visually demonstrate ongoing processes

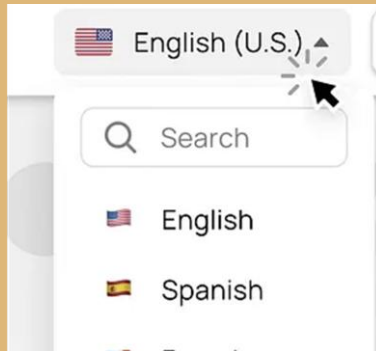


EXAMPLE

Implement notifications as direct feedback upon task completion to confirm successful actions.

2. Match between System & the Real World

Employ **language and symbols that users are familiar with** and reflect their experiences from the real world.



EXAMPLE

Optimize interface elements to reflect real-world conventions and analogies related to the context.

7.1 Introduction

A skill that a Games User Researcher should have is the ability to design quality methods and measures to answer questions about human behavior and attitudes with games. Games User Researchers should have a understanding of the limits of different methods and measures as well skill should be guiding teams to focus on the most appropriate question because while all questions are interesting, not all are equally useful to a game better.

Picking or devising a method to answer questions is just like a sports skill-based endeavour. You get better at it the more you do it. So the try, the better you get (just like playing games). Engaging in method s

Games User Research, Anders Drachen, Pejman Mirza-Babaei, Lennart E. Nacke (Eds).
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EXAMPLE

Highlighting text in an e-reading app is similar to highlighting text in a book.

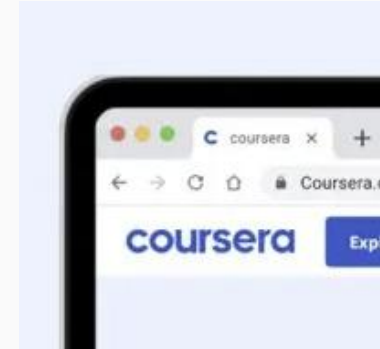
3. User Control & Freedom

Users often perform actions by mistake. They need a **clearly marked "emergency exit"** to leave the unwanted action.



EXAMPLE

Implement undo and redo functionalities to allow users to correct actions.

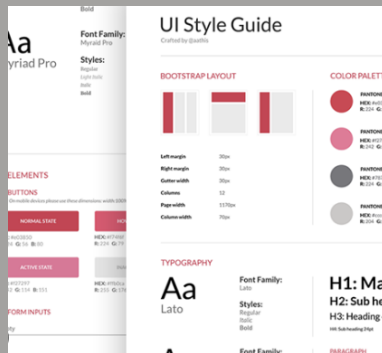


EXAMPLE

Make sure the exit is clearly labeled and discoverable.

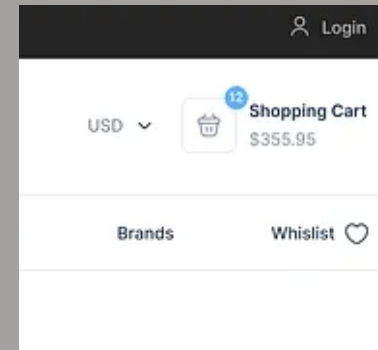
4. Consistency & Standards

The design should adhere to **consistent patterns and established conventions**.



EXAMPLE

Having a design system that ensures uniformity across products.



EXAMPLE

Aligning designs with industry standards to leverage existing user familiarity and expectations.

5. Error Prevention

Systems should **proactively prevent errors**, helping users avoid **mistakes** rather than just providing solutions afterward.



Create Password

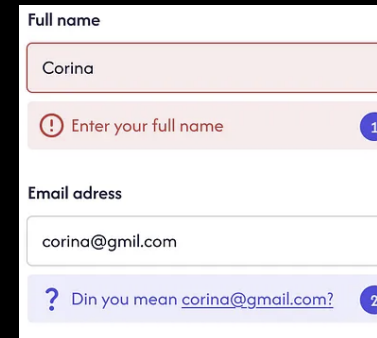
Password:

Password must contain:

- ✓ At least 8 characters in length
- ✓ Lower case letters (a-z)
- ✓ Upper case letters (A-Z)
- ✗ Numbers (0-9)
- ✗ Special characters (!@#%&*')

EXAMPLE

Establish constraints and defaults that guide users seamlessly through tasks.



Full name

! Enter your full name 1

Email adress

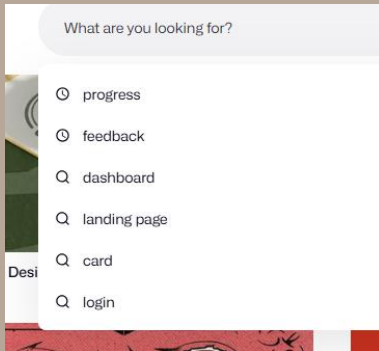
? Din you mean [corina@gmail.com?](mailto:corina@gmail.com) 2

EXAMPLE

Prevent mistakes by removing memory burdens, supporting undo, and warning your users.

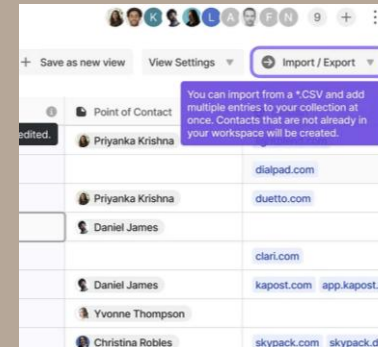
6. Recognition Rather Than Recall

The **system should rely on recognition of visible elements** rather than requiring users to recall information from memory.



EXAMPLE

Keeping frequently used options visible and easily accessible to users.

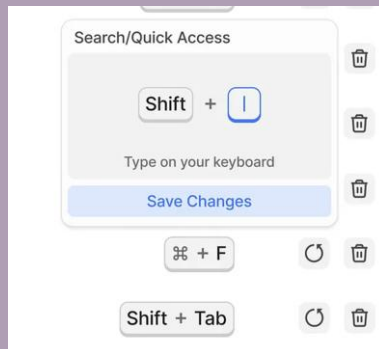


EXAMPLE

Offering contextual help through tooltips and hints, instead of giving users a long tutorial to memorize

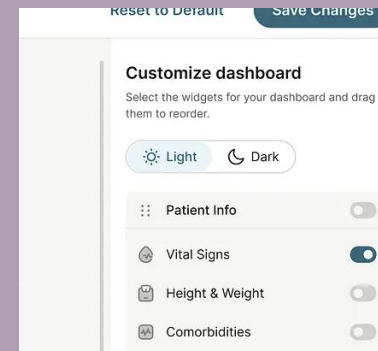
7. Flexibility & Efficiency of Use

Offer flexibility to accommodate both novice users and experts, providing shortcuts for efficiency.



EXAMPLE

Incorporating shortcuts and gesture controls to enhance task efficiency for advanced users.

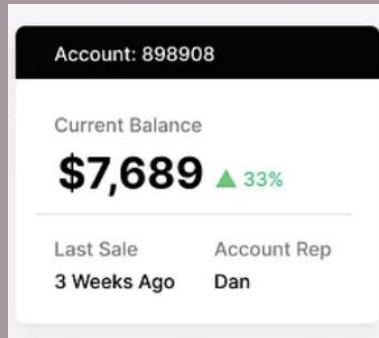


EXAMPLE

Allowing personalization options to tailor the interface to individual user workflows.

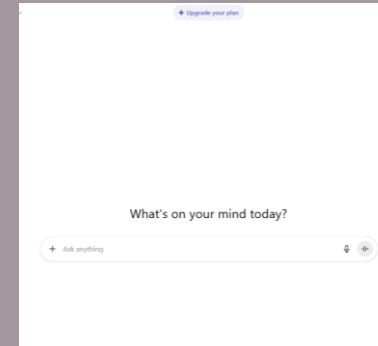
8. Aesthetic & Minimalistic Design

Interfaces should **not contain information that is irrelevant or rarely needed.**



EXAMPLE

Maintaining a clear visual hierarchy to direct user attention meaningfully

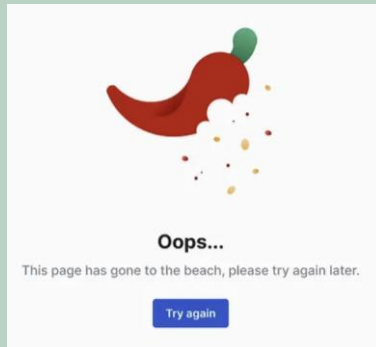


EXAMPLE

Prioritizing content and task-critical elements in the user-interface

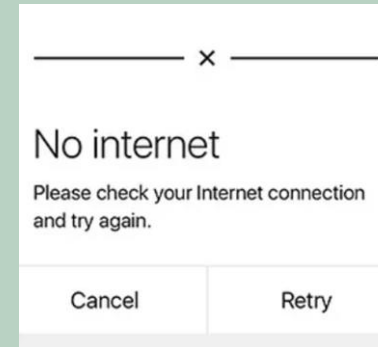
9. Help Recognize, Diagnose, & Recover from Errors

Error messages should **be expressed in plain language (no error codes)**, precisely indicate the problem.



EXAMPLE

Using simple language to describe errors clearly, avoiding technical jargon or error codes



EXAMPLE

Offering suggestions or shortcuts to enable immediate error recovery.

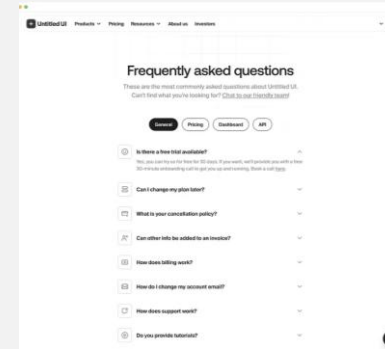
10. Help & Documentation

The design should **have accessible help documentation** for guiding **users** in understanding and completing tasks.



EXAMPLE

Having help documentation that is easily searchable and user-friendly.



EXAMPLE

Developing clear, concise FAQs and step-by-step guides to anticipate user questions and needs.

02

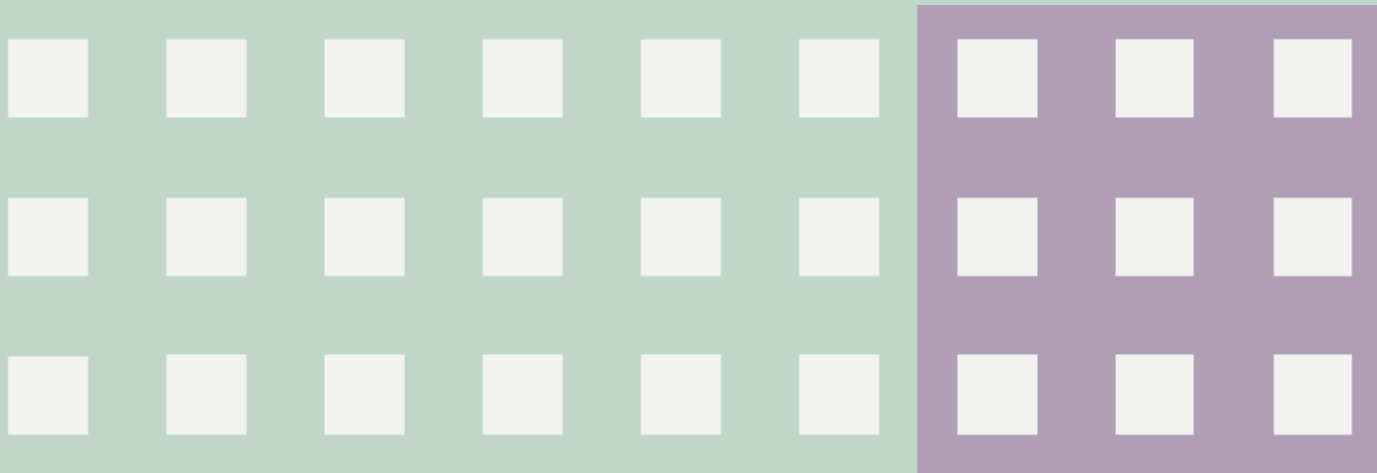
Gestalt Principles

Gestalt Principles are principles of human perception that describe how humans group similar elements, recognize patterns and simplify complex images when we perceive objects.

Designers use the principles to organize content on websites and other interfaces, so it is aesthetically pleasing and easy to understand.

Based on your needs at Everllence, we've chosen a relevant subset.

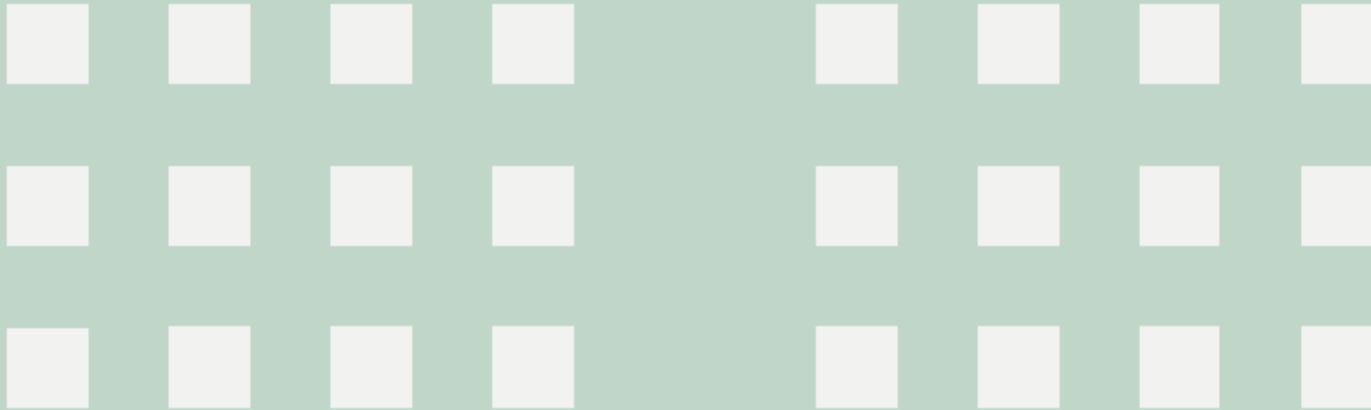
The principle of **Common region**



Humans perceive elements that are in the same closed region as one group.

To apply this principle to your interfaces, group related objects together in a closed area to show they are separate from other groups.

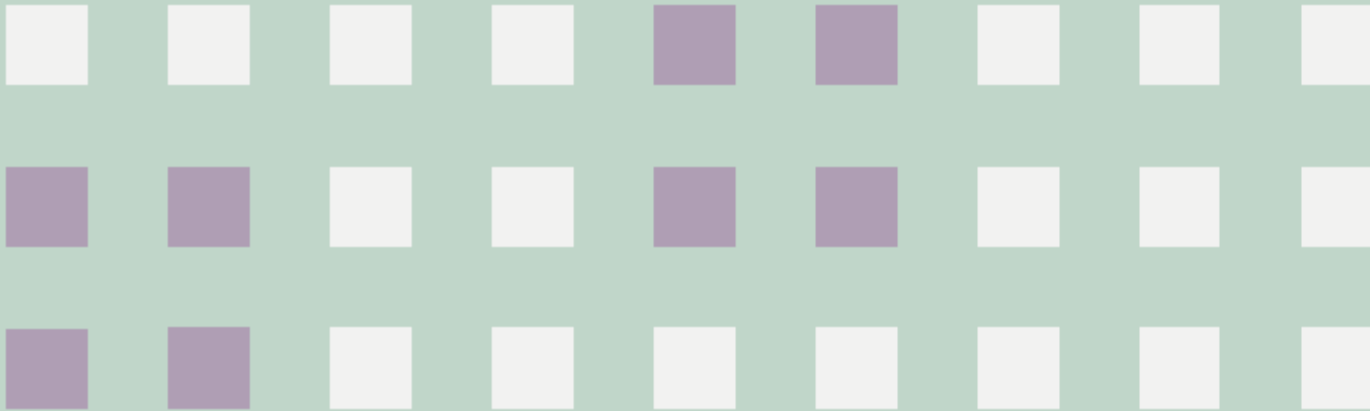
The principle of **Proximity**



**We group closer-together elements,
separating them from the rest**

When you group elements in your UI-design, the users
will see it as one distinct entity on the screen.

The principle of **Similarity**



When items, objects or elements share superficial characteristics, we perceive them as grouped.

We can see this principle in branding and design system guidelines.

An example is Google products. They share the same design system, to group these products. Here, all buttons share the same visual properties, to create a consistency and let the users know that clicking this button will lead to an action.

03

UI - Design Principles

When designing new interfaces or updating existing digital products, UI design principles serve as a compass for creating intuitive interactions. Good UI design helps users find their way effortlessly, supports clear decision-making, and reduces cognitive load. This booklet presents a curated set of principles to guide your work, they are not rigid rules, but practical guides toward digital products that are both functional and enjoyable to use.

Space elements based on how closely related they are

White space is the area **between** design elements, left empty.

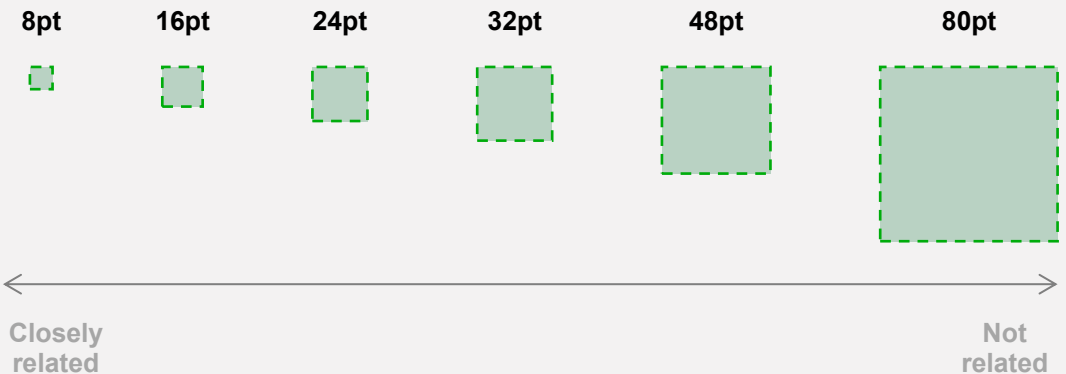
It is also the space **within** *individual* design elements, including the space between typography.

A model to use for spacing elements in a UI-design is **the 8-pixel principle**. The principle rely on **multipliers of 8**, for white space and dimensions, providing an easy to remember approach to creating scalable and consistent layouts.

This design principle is closely related to the Gestalt principle of Proximity.

White space does not need to be white. It can be any color, texture, pattern, or even a background image

Use 8pt spacing grid:

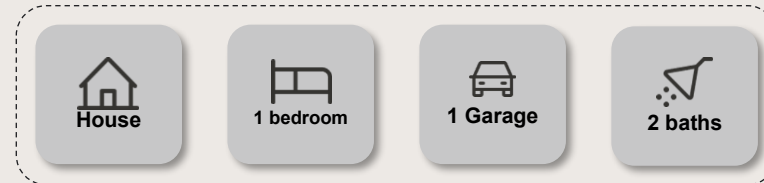


Similar looking elements function similarly

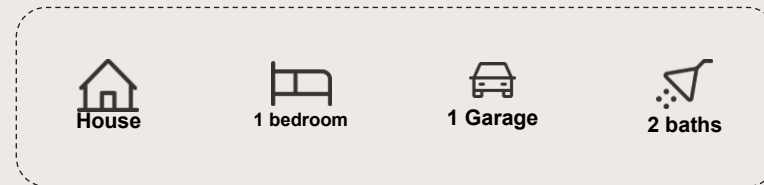
If elements look similar, people will expect them to work in a similar way. Elements with the **same functionality should look alike**, while elements **with different functionality should differ**.

In the example, the icon containers start out with a similar visual style to the “primary” button. This makes them seem interactive, even though they’re not.

Removing the color and button styling from the icons helps to avoid them being mistaken for interactive elements.



Primary



Primary

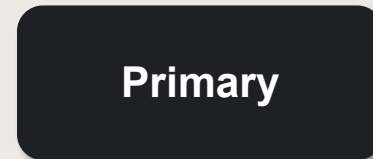
Use weighted buttons

For most website or app projects, you'll need 3 button weights to indicate the importance of actions: **primary**, **secondary**, and **tertiary**. You may also require smaller and/or larger button sizes depending on the complexity of the interface

Primary buttons are the most prominent button used to highlight the most important action. **Secondary buttons** are usually the alternative to the primary action. Use secondary buttons for less important actions or for multiple actions that have equal importance. **Tertiary buttons** are especially good for displaying multiple actions or destructive actions that you want to make less prominent.

If there isn't a single most important action on an interface, use secondary or tertiary buttons for those actions.

Avoid using multiple primary buttons on a screen. They can compete for attention and cause confusion around what to do next.



Tertiary

Use color sparingly and with purpose.

Avoid using color purely for decoration, as it can be confusing and distracting.
Start with black and white and introduce color where it conveys meaning.

To ensure an interface is accessible to those who are color blind (or just have a grey-scale setting on their phone), you can't rely on color alone to convey meaning or distinguish visual elements. You need to use additional visual cues to differentiate interface elements.

A simple and effective approach is to apply the brand color to interactive elements like text links and buttons. This helps teach people what's interactive and what's not.

But be mindful about your brand color, as colors like red, green and yellow has inherent meanings and references to e.g. destructive actions or warnings.



Articles

Activities

About us



Articles

Activities

About us

Tryg | 

Primary

Delete

Use contrasts

To help people with vision impairments and all in all just improve overall usability,
aim to at least meet Web Content Accessibility Guidelines (WCAG) 2.1 level AA color contrast requirements.

Contrast is a measure of the difference in perceived brightness between two colors. It's expressed as a ratio ranging from 1:1 to 21:1.

As a reference black text on a black background has the lowest 1:1 contrast ratio, black text on a white background has the highest 21:1 ratio.

- User interface elements, like form fields, icons, and buttons, need to have at least a 3:1 contrast ratio.
- Small text (18px and under) needs a minimum contrast of 4.5:1.
- Large text (above 18px with bold weight or above 24px with regular weight) needs a minimum contrast of 3:1.

Avoid pure black and opt for a dark grey instead. Pure black has a very high contrast against white and can cause eye strain and fatigue when reading text.



Primary



Primary

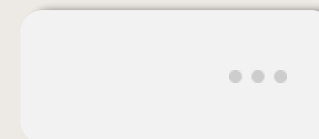
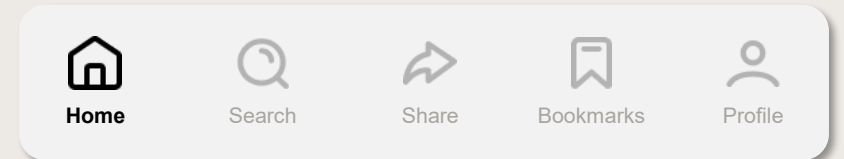
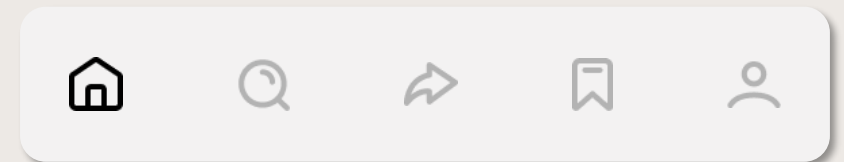
Don't confuse minimalism with simplicity

Minimal doesn't mean simple. Designers tend to favor minimal interfaces, as they can look beautiful and clean. A minimal interface has fewer elements and styles but isn't necessarily simple to understand and use.

Minimal interfaces can be vague or confusing as they lack crucial details needed for good usability. Simplification isn't just about reduction. Removing or hiding too much can harm usability. Ensure that you're not removing or hiding critical information or details.

Adding text labels to the icons helps ensure people can understand what they mean, especially those using screen readers.

People don't use what they can't see. Hiding things behind interactive menus is a convenient way to keep an interface clean and minimal, but it's risky, as some people might miss those things. If there's space, try to ensure important content and actions are visible when they're needed.



Create a clear visual hierarchy

Not all information in an interface has the same level of importance.

Aim to present information in order of importance by making more important elements look more prominent.

A clear visual hierarchy, helps people scan information quickly and focus on areas of interest and importance. It also improves aesthetics by creating a sense of order.

You can create a visual hierarchy and e.g. increase or decrease the importance of an element by manipulating its:

- **size**
- **color**
- **surrounding white space**
- **position**

And you will read this last

**You will read
this first**

And then you will read this

Then this one

Be consistent in the use of typefaces and fonts

As a **rule of thumb use a Sans-Serif**, they're easier to read on screens and bring a clean and simple design. Serif fonts can be useful in areas with a lot of text, as it helps guide the readers eyes.

Look for typefaces with taller lower-case letters and greater letter spacing, as they're generally more legible at small sizes.

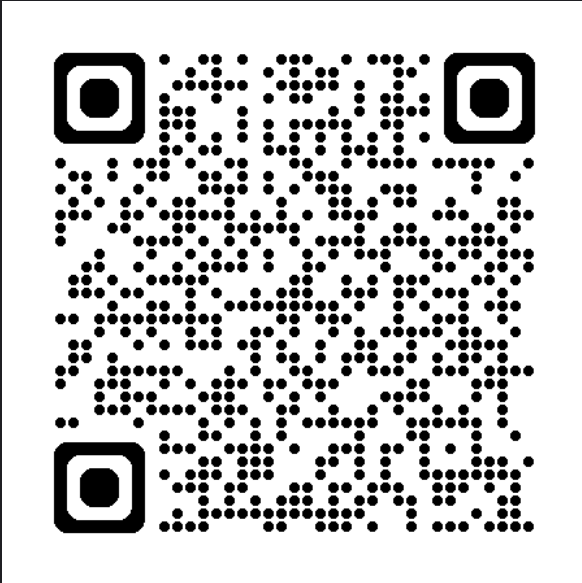
Using lots of different font weights can add noise and clutter to your interface. It also makes it more difficult to use each font weight consistently. Keep your design system simple and concise by using regular and bold font weights only.

Quick tips:

Use bold font weight for headings to emphasize them.

Use regular font weight for other smaller text.

~~Light~~
~~Semi light~~
Regular
~~Semi Bold~~
Bold



For easier use and reference after this course,
all resources and links have been aggregated in a
Github Repository

