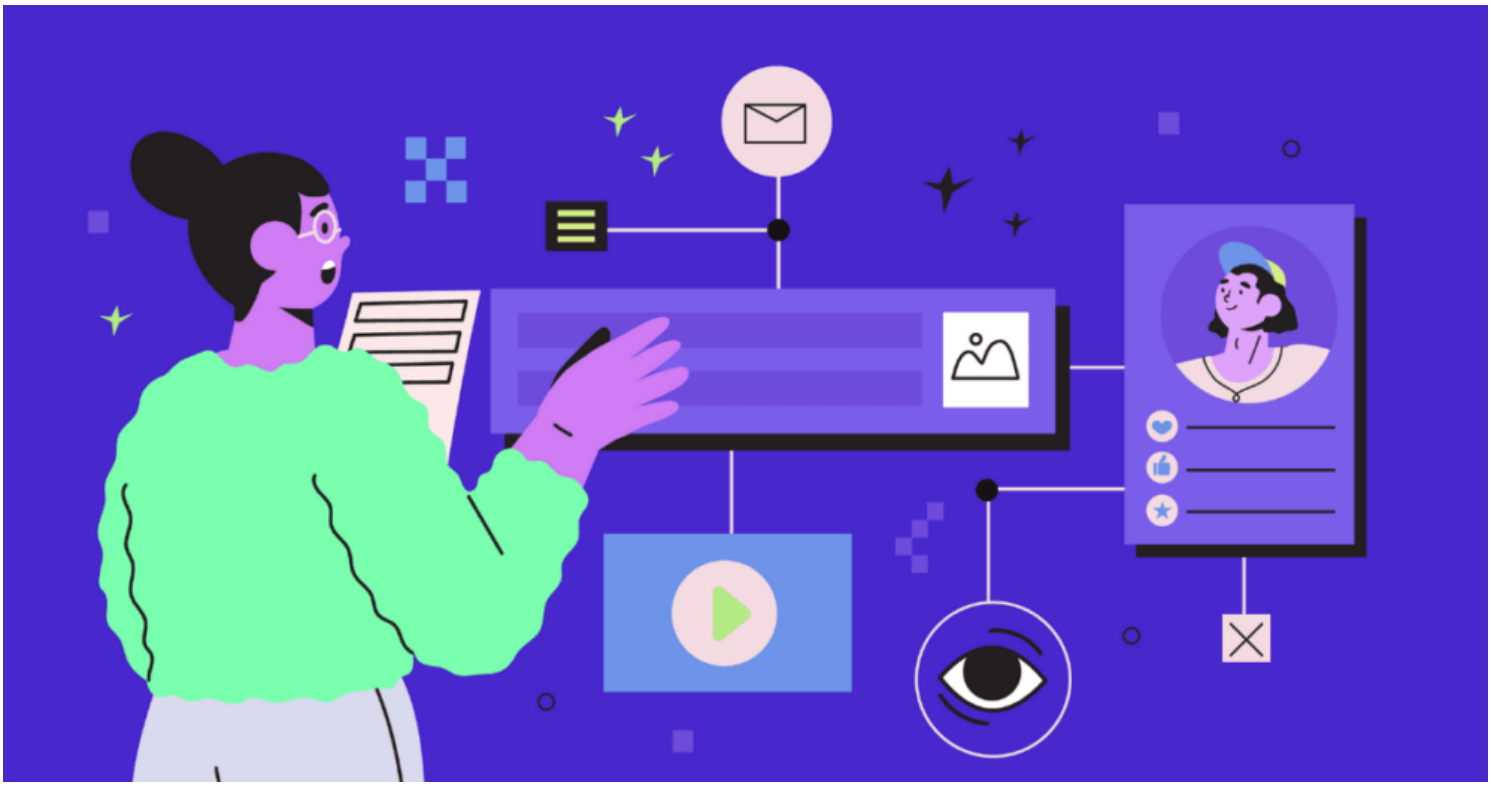
Nielsen's Heuristics: 10 Usability Principles To Improve UI Design

⋮ 6/30/2022



To work with UI means finding ways to develop interactions that allow the user to have a better experience.

The UI can not be confusing, demanding, or cause stress to the visitors. Instead, user journeys should be so fluid that their navigation becomes intuitive and effortless.

Therefore, one of the roles of designers is to prevent the user from needing external assistance to interact with a product.

How can you ensure that interactions are fluid and guarantee a good experience?

Let's go through the famous Jakob Nielsen's heuristics to find out how. These principles are indispensable for designers, so keep them on your mind, put them on your walls, memorize them! They will help you verify the usability of your interface.

What are the Jakob Nielsen's heuristics for interaction design?

In 1990, Jakob Nielsen and Rolf Molich proposed ten guidelines to help develop UIs.

Nielsen's heuristics are general principles, meaning that they do not determine specific usability rules. Instead, the heuristics are general rules of thumb you can follow to help create more accessible, user-friendly, and intuitive digital products.

They created these heuristics through observations and the expertise acquired during their years of work experience.

Here are the 10 Nielsen heuristics:

1. Visibility of system status;
2. Match between system and the real world;
3. User control and freedom;
4. Consistency and standards;
5. Error prevention;
6. Recognition rather than recall;
7. Flexibility and efficiency of use;
8. Aesthetic and minimalist design;
9. Help users recognize, diagnose, and recover from errors;

10. Help and documentation.

Reading tip: *Creating Responsive Design With Grids*

1) Visibility of system status

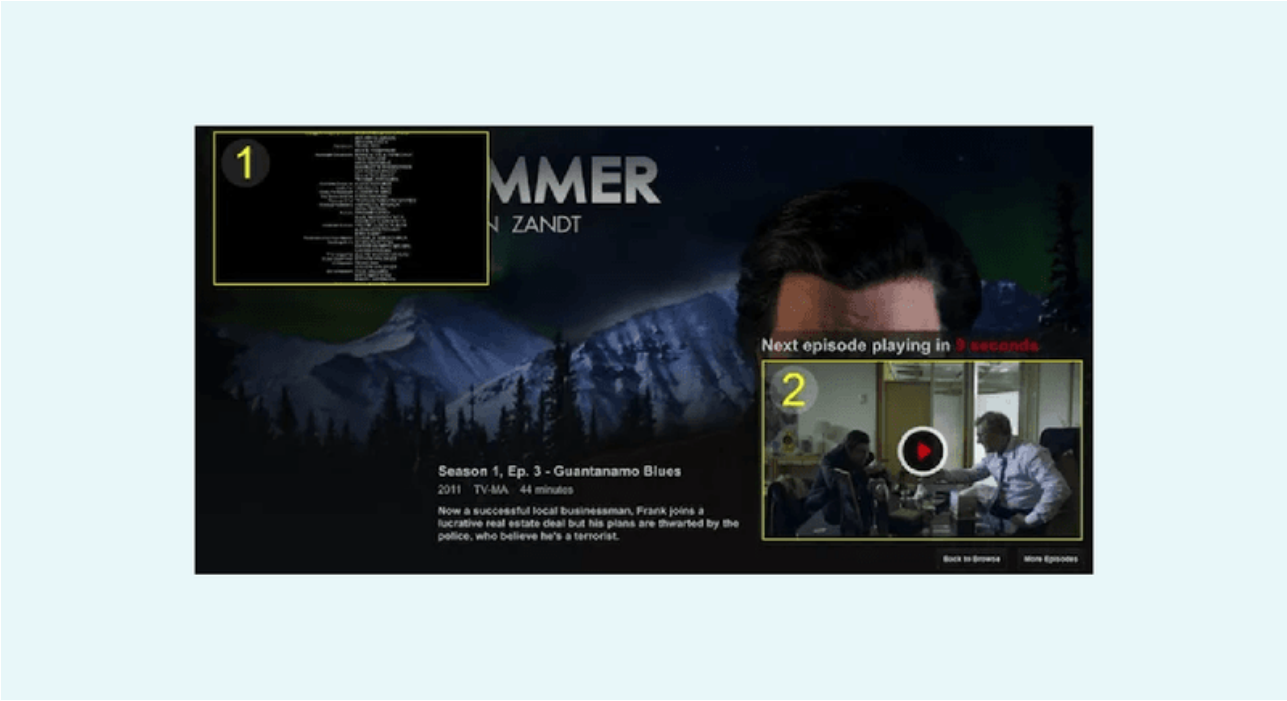
The first principle is about keeping users informed about their actions and what's happening at a given interaction.

When users are informed of the current system status, they learn the results of their past interactions, so they can better determine what their next steps will be.

Remember: When a design is predictable, it builds trust in the product.

This way, it's important to provide instant feedback that serves to inform the status of the interaction, in addition to guiding and leading the user to the next steps.

For example: when you finish watching an episode of a series on Netflix, the system provides a small screen telling you how long it will take to load the next episode.



2) Match between system and the real world

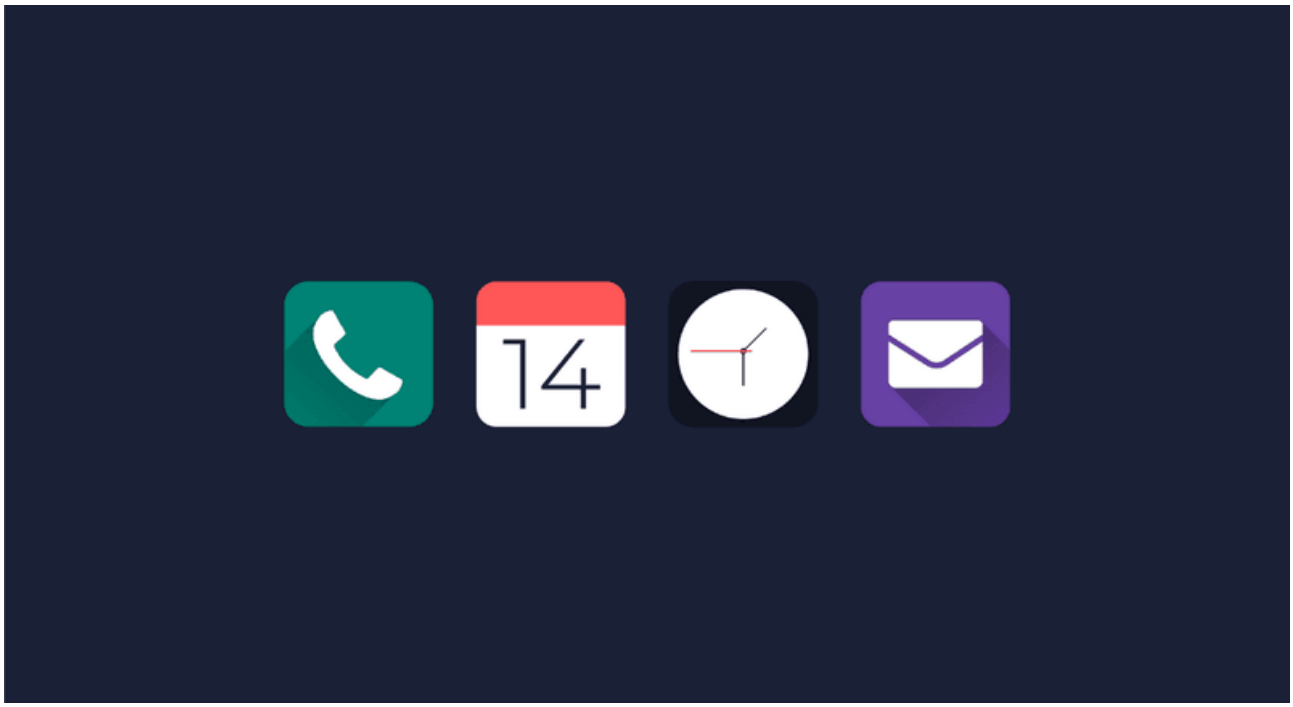
This principle claims that a system should always speak the user's language and follow real-world conventions.

This means avoiding marketing jargon or other expressions that might be familiar to who is building the product but not to their audience. So use words, phrases, and concepts that are familiar to your target audience.

Also, to establish a connection with the real world, components should appear in a logical order that will make sense to the users according to their life experiences.

Remember: people's mental model of technology is based on their offline experiences combined with their prior digital interactions.

With that in mind, always use icons and other illustrations that resonate with the real world, so users instantly recognize and understand what you're trying to say.



Skeuomorphism is a famous term used in graphical user interface design to describe objects that **mimic the physical world in their appearance and behavior.**

When you read on kindle, for example, the pages turn with a swipe, which imitates the experience of reading a physical book.

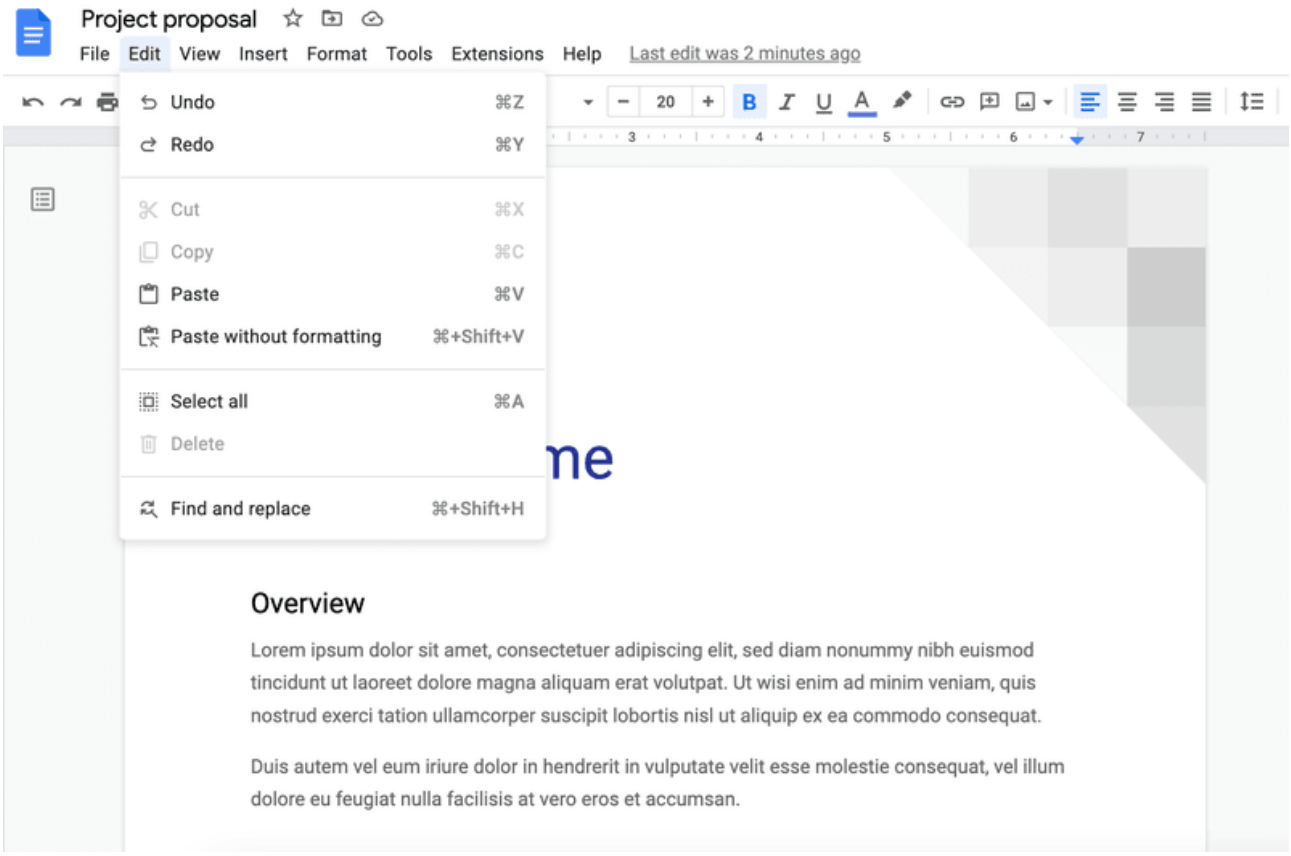
> ***Reading tip:*** *Usability: How To Develop A User-Friendly Website*

3) User control and freedom

A good UI design should never impose an action on the user or make decisions for them. Instead, the system should only suggest which paths the users can take.

The interactions you build must give users the freedom to decide and take the actions they see fit — except for rules that go against the system or interfere with some functionality.

However, don't forget to consider that users may regret their decision or make an error. Therefore, it is necessary to think of how the system can allow users to *undo* and *redo* their actions according to their needs.



Example of Google Docs showing *undo* and *redo* options.

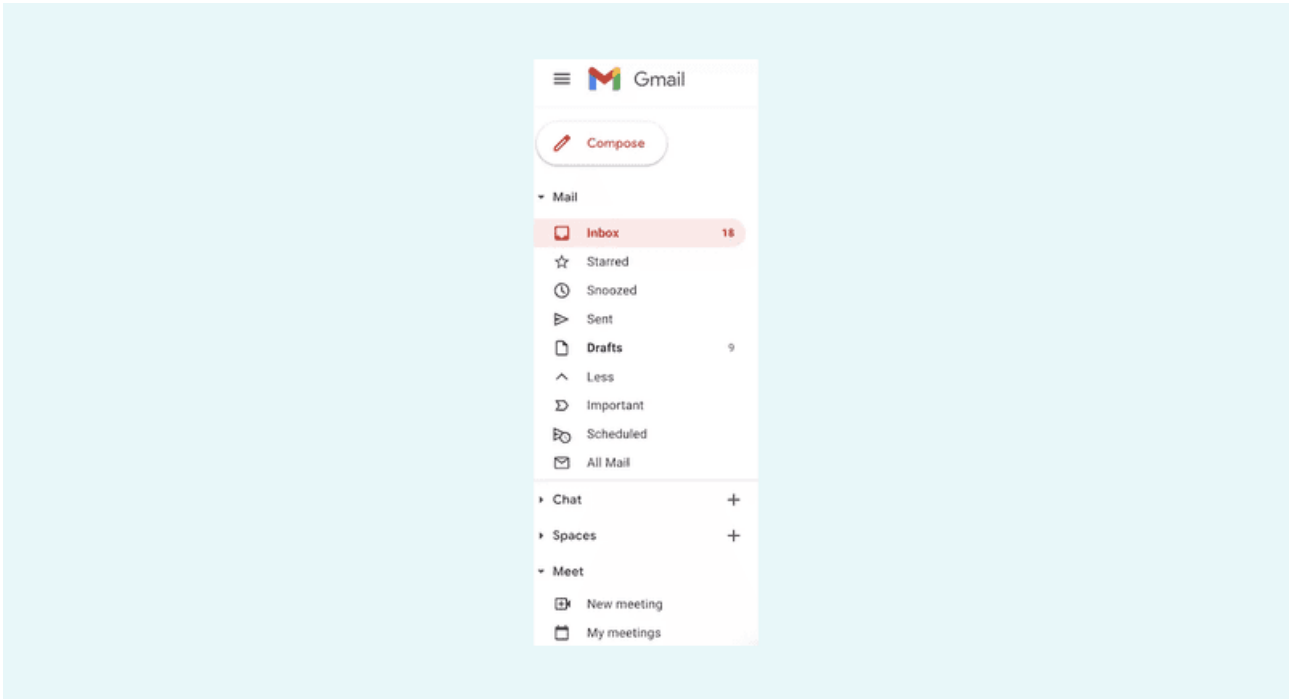
4) Consistency and standards

This heuristic is about keeping the same language throughout the system to avoid confusing the user.

So when users interact with a product, they should have no doubts about the meaning of words, icons, or symbols used.

Therefore, an interface must follow the system's conventions, maintaining interaction patterns across different contexts.

Designers should create a consistent design that speaks the same language and treats similar things in the same way.



5) Error prevention

This Nielsen heuristic proposes that a good design should always **prevent problems from occurring.**

Think of a delete files button, for example. We must assume that users might accidentally click this button or that they can imagine a different result from it.

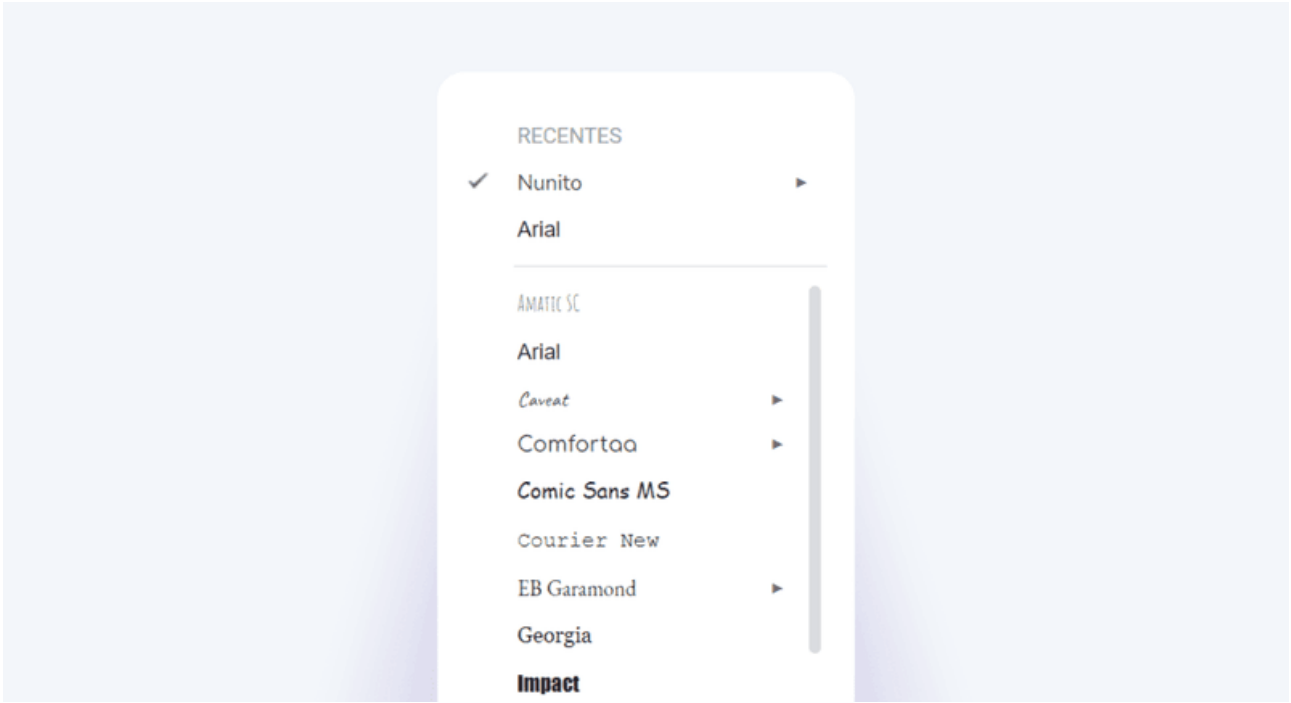
This way, to prevent the user from getting frustrated if they delete files by mistake, it is essential to create a warning message to confirm the decision before going through.

6) Recognition rather than recall

As seen, Nielsen's heuristics aim to reduce users' cognitive load, and this also includes their memory capacity.

So it's essential to think of ways to make options and actionable components visible; this is important because it's easier for us to recognize something rather than remember it.

The user should not have to remember all the actions or functions of the system. Therefore, always leave small reminders of information that can assist users in navigating your designs. For example, menu items should be visible or easy to access when needed.

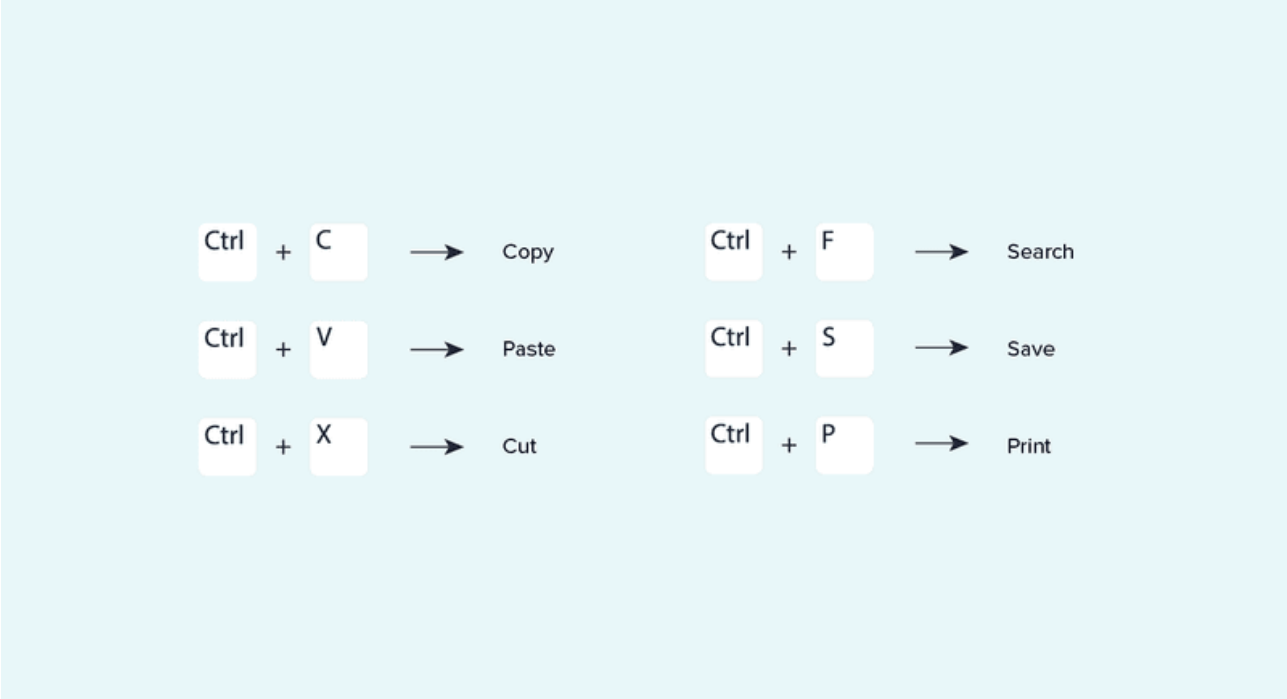


7) Flexibility and efficiency of use

Your designs should benefit both inexperienced and experienced users.

Notice that inexperienced users need more detailed information. But as they keep using a product, they become experienced users. This way, allowing them to customize processes like creating keyboard shortcuts is a good practice.

Also, try enabling personalization by tailoring content and functionality for individual users.

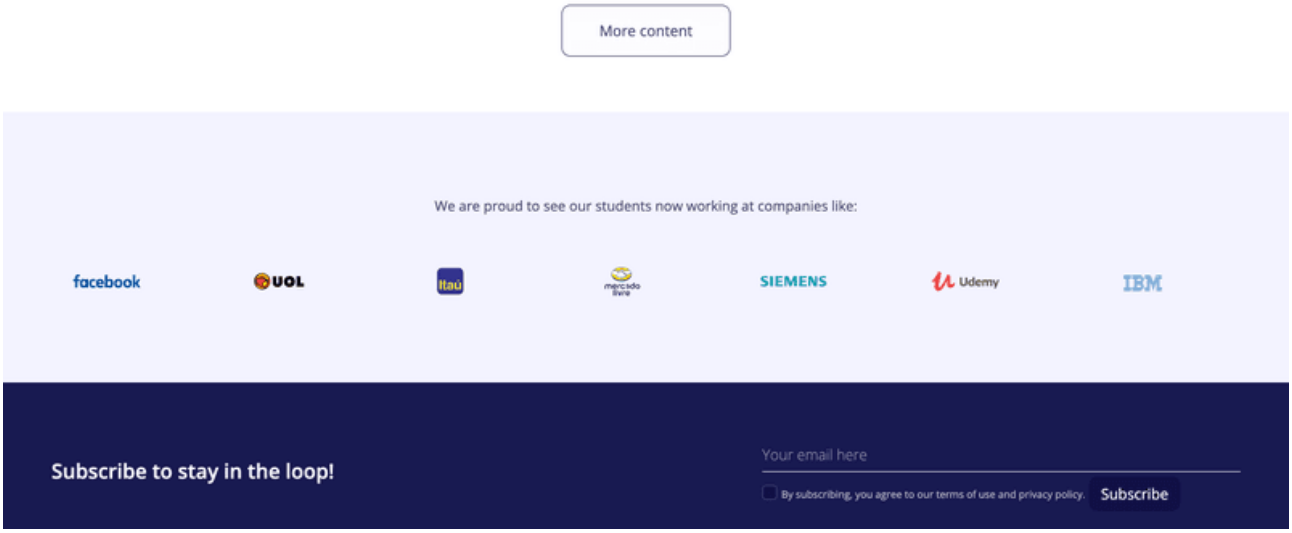


8) Aesthetic and minimalist design

As a designer, please don't consider aesthetics above functionalities.

Therefore, create interactions that contain only essential information. Avoid unnecessary visual elements that can overwhelm and distract users.

Remember: each extra piece of information will compete with relevant, indispensable data and deviate attention from the most essential.



Source: Aela School. Example of minimalistic design.

9) Help users recognize, diagnose, and recover from errors

Your designs should help the user identify and find solutions to eventual problems and errors.

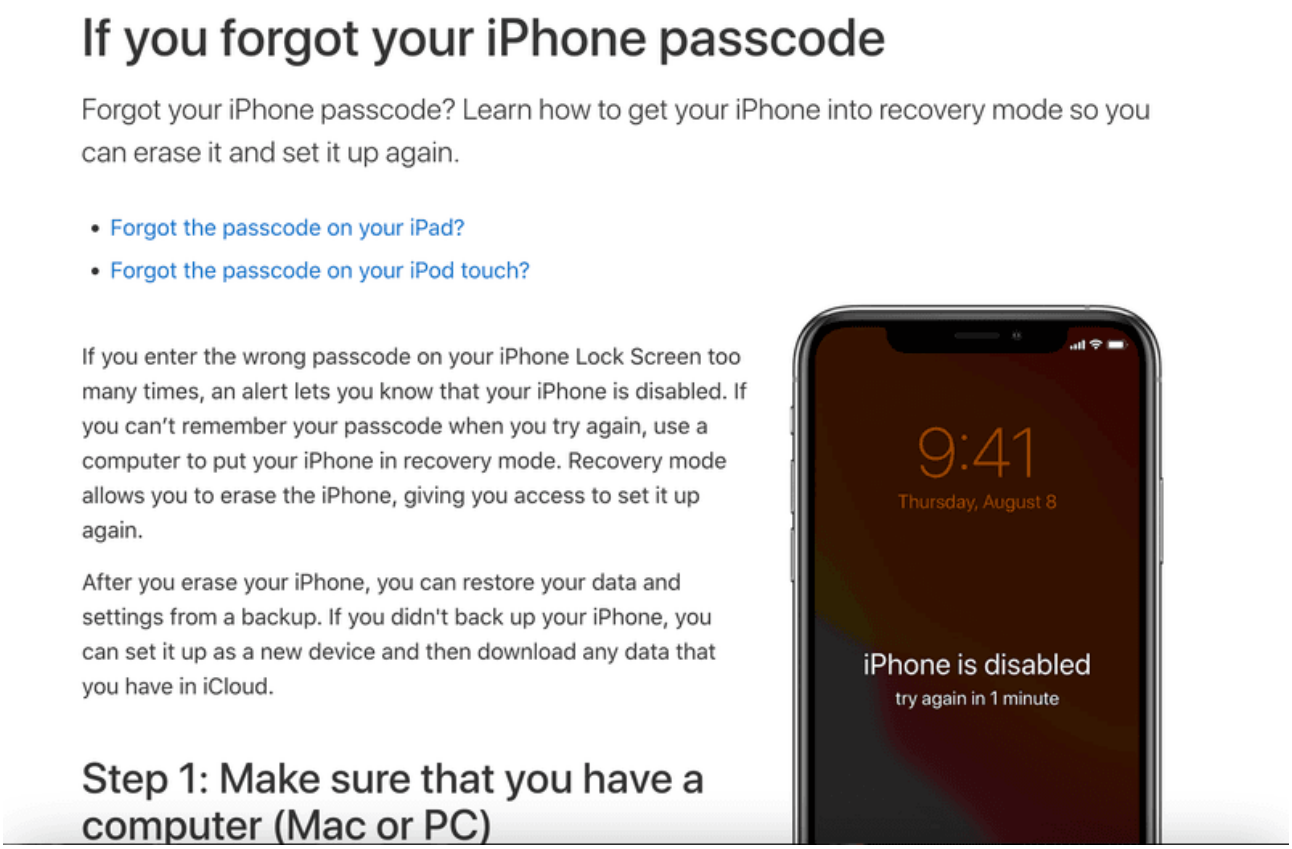
For that, express error messages in plain language: code-free and clear. Moreover, don't forget to tell them what the problem was and suggest a solution.

10) Help and documentation

The last of Nielsen's heuristics concerns documentation that will help users understand how to perform their tasks.

Although all the heuristics listed above are supposed to help users avoid errors and make it easy to navigate without assistance, it is still essential to provide further assistance at any given time.

This way, always deliver help documentation that is easy to search for and focused on users' tasks. A good practice is to list concrete steps users can follow to complete a task successfully.



Example of Apple's assistance for iPhone with actionable steps.

Conducting a Heuristic Evaluation

Although Nielsen's heuristics serves as a foundation for the development of UIs, it is also essential to carry out an evaluation of the final product.

Conducting heuristic evaluations in your designs is important to collect information regarding usability problems and improve interactions and user experience even further.

For the evaluations, a specialist should test the product, to then identify and list all the problems they have found. Of course, this evaluation is done based on Nielsen heuristics.

Usually, more than one professional performs the heuristic assessment, so the team can count on different perspectives to approach problems.

However, as the perception of positives and negatives varies from person to person, inviting other designers to evaluate the prototype can lead to even better results – in terms of a final product.

In cases where more than one professional performs the heuristic evaluation, each person must inspect the interface individually and without contact with the others. This way, it is possible to obtain independent and unbiased results.

A heuristic evaluation manages to find and explain usability problems. Moreover, UX designers should continuously question how things work, how to improve the lives of others and look for solutions to existing problems.

> ***Reading tip:*** *Desk Research: How To Conduct Secondary Research Efficiently*

Final thoughts on UI heuristics

Nielsen's heuristics are indispensable for UX and will help you design better. The ideal scenario is working with the heuristics in mind **from the beginning of a project** in order to avoid future adjustments.

An intuitive design that has a minimalist approach and is easy to understand engages users both online and in the physical world. By following the ten heuristics of Nielsen and Molich, designers can create user-friendly, accessible, and intuitive products.