

# UI design

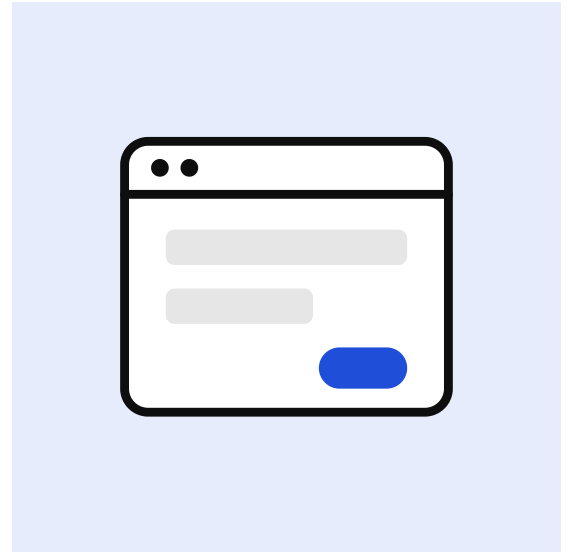
Designs the part of a digital product that the person sees and operates: screens, controls, text and states. UX covers the whole experience; UI, the surface where it happens.

In Spanish

*Diseño de interfaces (UI)*

Origin

The graphical interfaces of Xerox (Star, 1981) and Apple (Macintosh, 1984); Smith et al. (1982), Shneiderman (1987), and Apple (1987) set out highly influential principles



## What it deals with

The interface is the only part of the system the person sees and handles. If they can't tell what each element is, what they can do with it or what just happened, the product fails even if it works inside.

## Principles

### Visual hierarchy

Size, contrast, position and grouping say what to look at first and what belongs together; for example, a single primary button per screen.

### Consistency

Things that look alike work the same across the product. A design system gathers the components and rules that make this happen.

### Visible signals

Each element shows what can be done with it and where: a button looks pressable and a field, editable.

### Feedback and states

Every action shows what happened, and every screen has its states planned: empty, loading, error and complete.

### Depending on the device

Each screen is used differently: a watch up close and in seconds, a car at a glance, a TV from across the room with the remote's arrow keys.

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## Applications in design

### Use it like this

Design every state of each screen: empty, loading, error and complete.

### Avoid

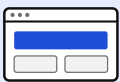
Inventing a new control for something people already know how to use, or giving two things that work the same a different look.

### Don't fall for it

What looks good on your large screen may fail on a phone, with enlarged text or using only the keyboard.

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## Especialidades



Specialty

### Web design

Designs websites that are understood at first glance and work on any screen.



Specialty

### Mobile app design

Designs apps for the phone: small screens, fingers, and use in a hurry and on the move.

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## Models and concepts



Concept

### Responsive design

One website that adapts to any screen size, from phone to computer.



Model

### Microinteractions

Small single-task moments, such as flipping a switch, designed piece by piece.

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## Methods and tools



Artifact

### Mockup

How a screen will look, with real colors, type, images and text, but without interaction.



Artifact

### Design system

The set of shared components, rules, and criteria a team uses to build its interfaces.

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Artifact

## Wireframe

The outline of a screen in boxes and lines, without final colors or images.

## Connections

### Builds on

|                                    |                                                 |                              |
|------------------------------------|-------------------------------------------------|------------------------------|
| ■ Human-computer interaction (HCI) | ■ Affordance                                    | ■ Aesthetic-usability effect |
| ■ Nielsen's usability heuristics   | ■ Calm technology                               | ■ Usability                  |
| ■ Cognitive psychology             | ■ Von Restorff effect                           | ■ Fitts's law                |
| ■ Hick's law                       | ■ Gestalt principles of perceptual organization | ■ Progressive disclosure     |
| ■ WCAG guidelines                  |                                                 |                              |

### Related to

|                         |                  |                                |
|-------------------------|------------------|--------------------------------|
| ■ Accessible design     | ■ Search design  | ■ Interaction design           |
| ■ Automotive HMI design | ■ Product design | ■ Graphic design               |
| ■ Inclusive design      | ■ UX design      | ■ XR design (extended reality) |
| ■ Typography            | ■ UX writing     |                                |

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## Authors and works

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|------|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1987 | <b>Ben Shneiderman</b>               | Proposed eight golden rules for interface design, such as consistency, informative feedback and the ability to undo actions.                              |
| 1987 | <b>Apple</b>                         | Published the interface guidelines for the Macintosh desktop, with principles such as consistency, immediate feedback and recognition rather than recall. |
| 1989 | <b>Jeff Johnson and others</b>       | Explained how the Xerox Star brought together the desktop with icons, direct manipulation and the same commands for every kind of document.               |
| 1995 | <b>Kevin Mullet and Darrell Sano</b> | Brought graphic design techniques to the screen: grouping, aligning, contrasting and ordering elements by importance.                                     |
| 2013 | <b>Don Norman</b>                    | Explained how signifiers and feedback make an object understandable.                                                                                      |
| 2016 | <b>Brad Frost</b>                    | Proposed building interfaces as a system of parts, from the smallest elements up to complete pages.                                                       |

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## Sources

### Original sources

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