

User Interface Design Guideline

IF3151 Human Computer Interaction

K1 Dessi Puji Lestari / Lenny Putri Yulianti

K2 Fitra Arifiansyah

K3 Adi Mulyanto / Maya Nabila

Overview

01

What is User
Interface
Design

02

Designing User
Interface for
Users

03

UI vs UX Design

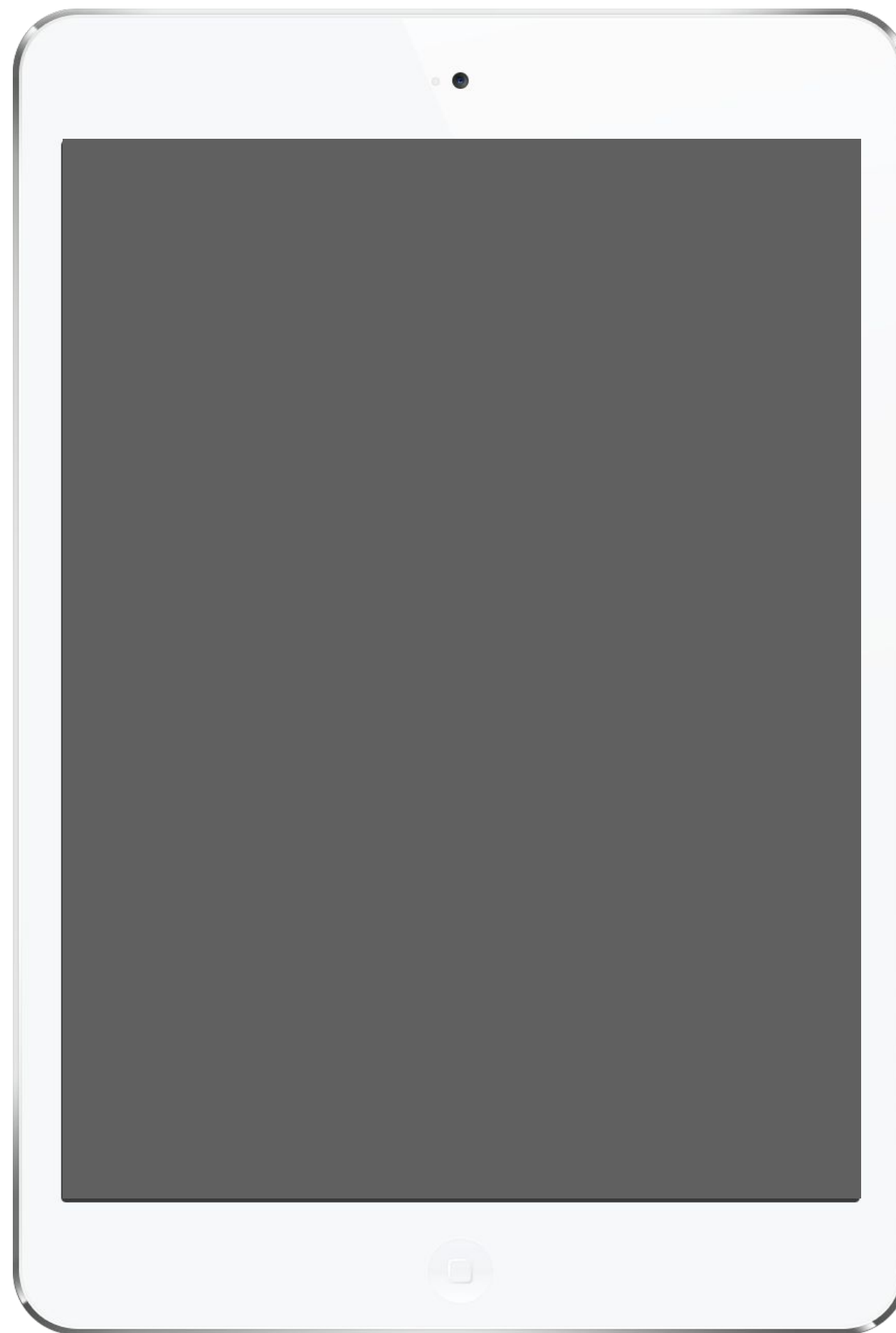
04

Know Your
Users

05

Basic Principles

User Interfaces



User Interfaces are the access points where users interact with designs.



+ Graphical user interfaces (GUIs)

Users interact with visual representations on digital control panels. A computer's desktop is a GUI.



+ Voice-controlled Interfaces (VUIs)

Users interact with these through their voices. Most smart assistants—e.g., Siri on iPhone and Alexa on Amazon devices—are VUIs.



+ Gesture-based interfaces

Users engage with 3D design spaces through bodily motions: e.g., in virtual reality (VR) games.

etc.

What is User Interface (UI) Design

The process designers use to build interfaces in software or computerized devices, **focusing on looks or style**.

UI design refers to graphical user interfaces and other forms—e.g., voice-controlled interfaces.

Designers aim to create interfaces which users find **easy to use and pleasurable**.

<https://www.interaction-design.org/literature/topics/ui-design>

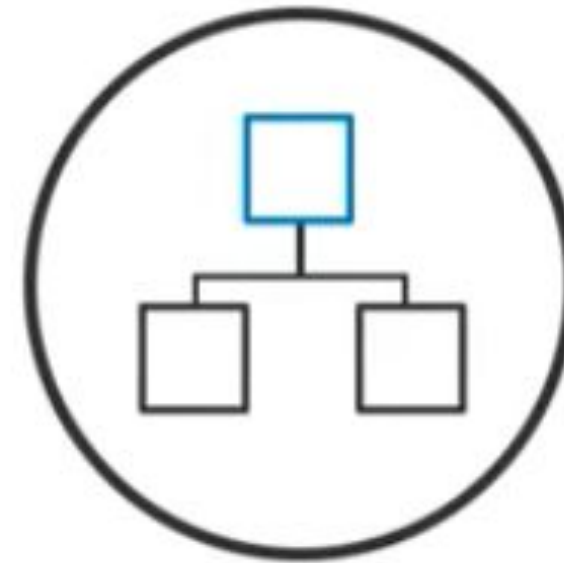
Good UI is



Grid



Typography



Hierarchy



Readability



Aesthetics

Michał Malewicz, co-founder and CEO of UX consultancy Hype4

Designing UI for Users

6

to design UIs best, you should consider:



User judge designs quickly and care about usability

- They don't care about your design, but about getting their tasks done easily and with minimum effort.
- Your design should therefore be “invisible”: Users shouldn't focus on it but on completing tasks:
 - e.g., ordering pizza on Domino's Zero Click app.

Designing UI for Users

7

to design UIs best, you should consider:



UIs should also be enjoyable

- When your design predicts users' needs, they can enjoy more personalized and immersive experiences. Delight them, and they'll keep returning.
- Where appropriate, elements of gamification can make your design more fun.



UIs should communicate brand values

- Good design is emotional design.
- Users associate good feelings with brands that speak to them at all levels and keep the magic of pleasurable, seamless experiences alive.

Know your Users



A good user interface design for your software is one of the critical aspects that make your software or website attractive and usable for your customers.

Great looking user interface that doesn't have a clear purpose isn't going to be very useful.

Have a clear understanding of your users, their goals, and how and when they will likely use the product.

Contoh Pengaruh Budaya User: E-Commerce

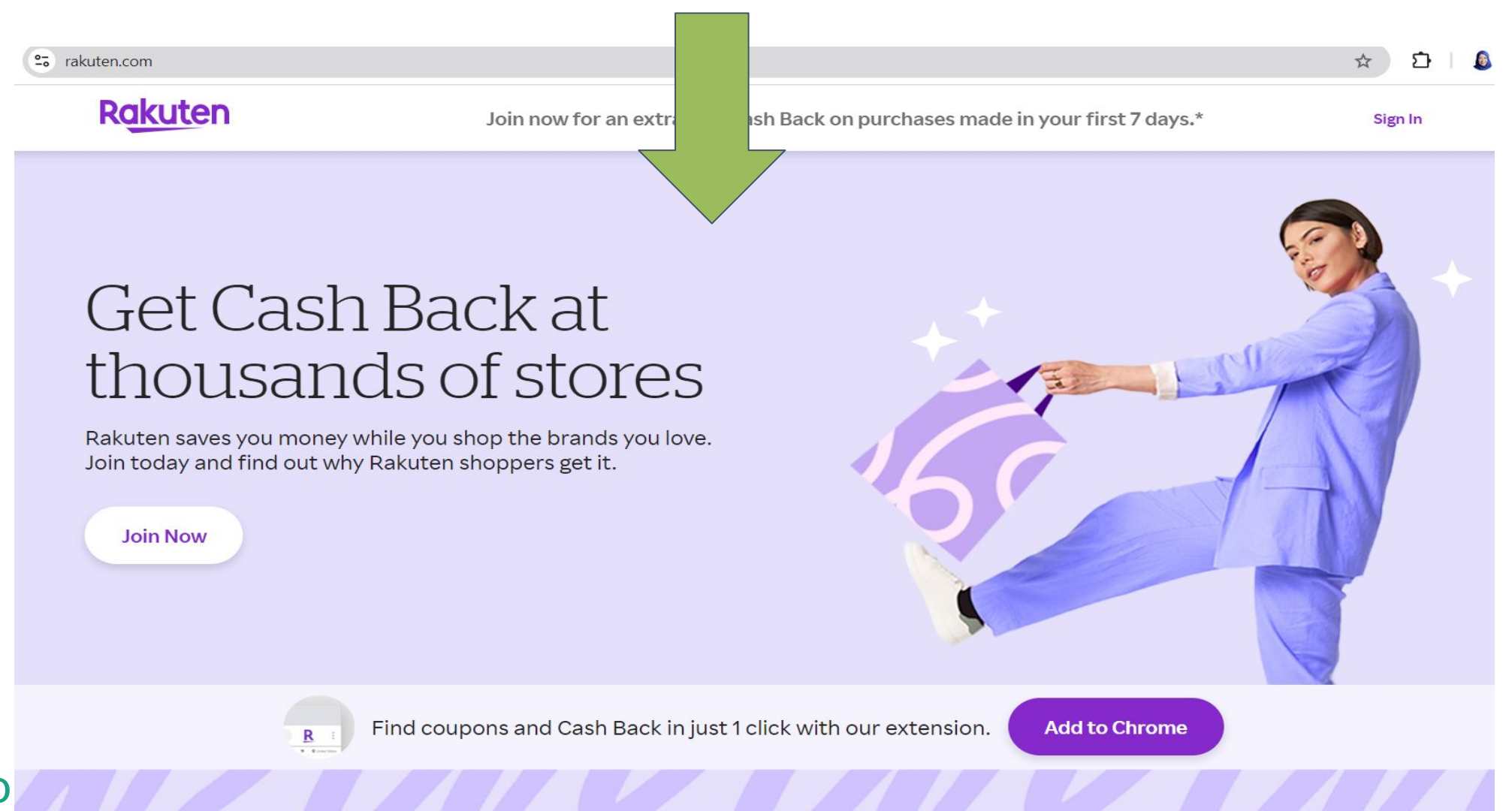
9

Perusahaan yang ingin memperluas pasar ke wilayah baru sering kali harus menyesuaikan desain aplikasinya (warna, layout, tulisan, dll) untuk budaya lokal.



Rakuten, salah satu e-commerce terbesar di Jepang, menawarkan desain yang padat dengan banyak informasi pada satu halaman, sesuai dengan preferensi pengguna Jepang yang lebih menyukai detail. Tetapi terasa berlebihan bagi pengguna di negara lain.

Gagal dan harus tutup



Basic Principles of UI Design

- Make buttons and other elements perform predictably
- Maintain high discoverability
- Keep interfaces simple
- Respect the user's eye and attention
- Minimize the number of actions for performing tasks
- Put controls near objects that user want to control
- Keep users informed
- Use appropriate UI design patterns
- Maintain consistency
- Intuitive

1. Make buttons and other elements perform predictably

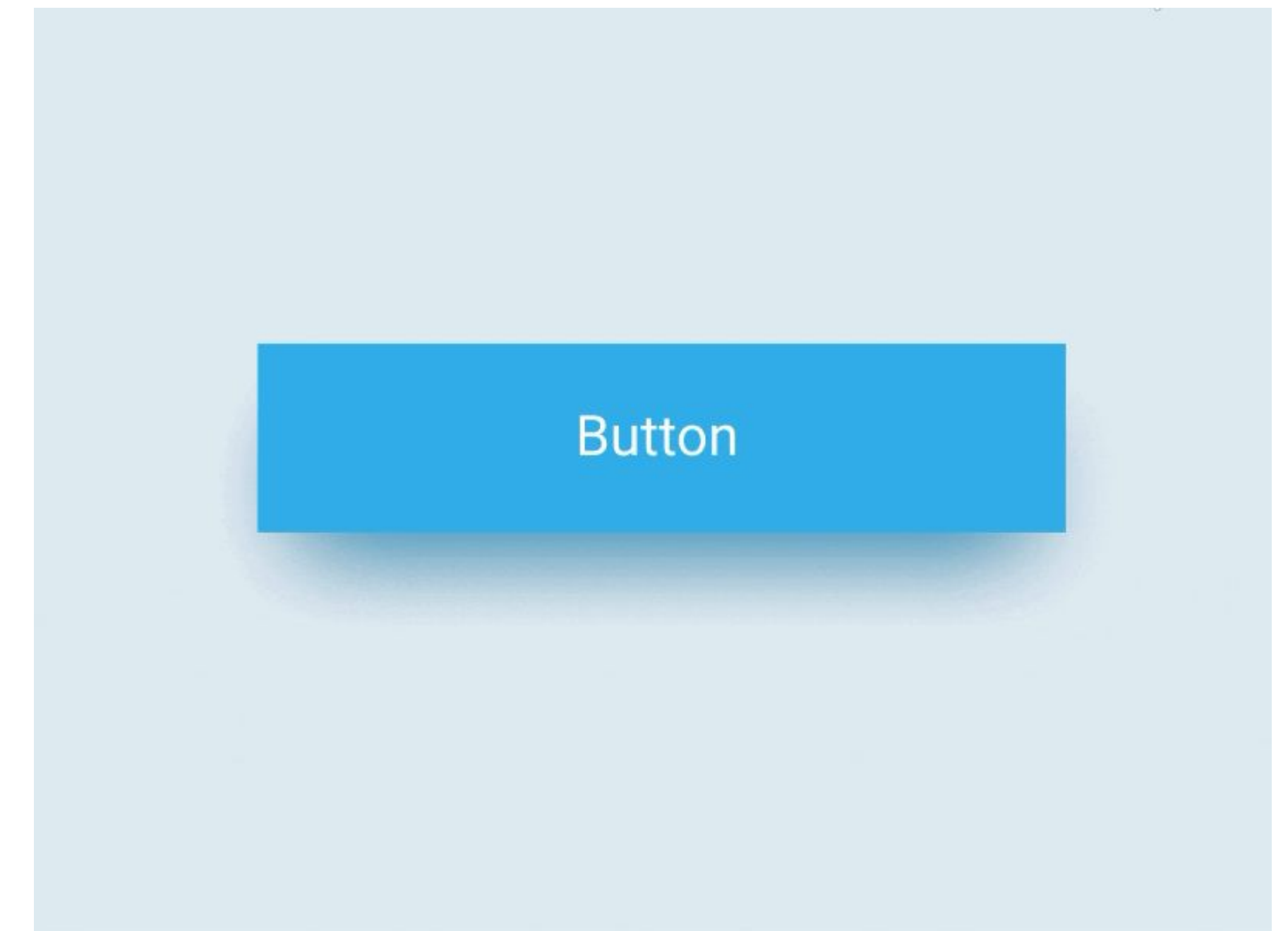
Make sure that all the buttons and other common elements perform predictably (including responses such as pinch-to-zoom) so users can unconsciously use them everywhere.

Form should follow function.



2. Maintain High Discoverability

- Discoverability can be defined as the ability for a user to find content or functionality present in a given experience such as a website, mobile app or in-car technology.
- Clearly label icons and include well-indicated affordances: e.g., shadows for buttons.
- There are several way to maintain discoverability, such as logical grouping and avoid complex hidden interactions.

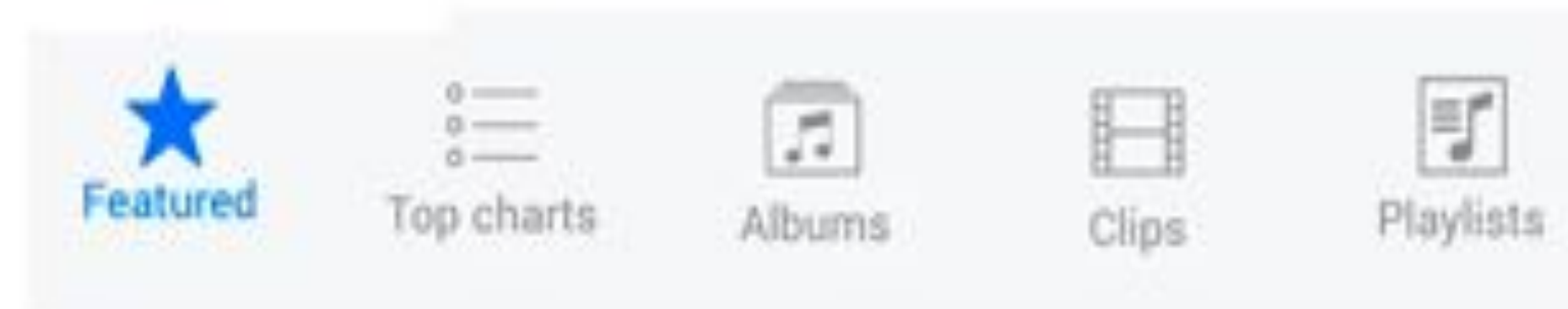


Logical Grouping

Items that have strong relationships, i.e. action buttons, should be located together into logical groups.

By structuring screen content into logically, the user will make sense of it much faster and is more likely to find what they need.

One example is to use an action or navigation bar. These all do similar functions in one component.

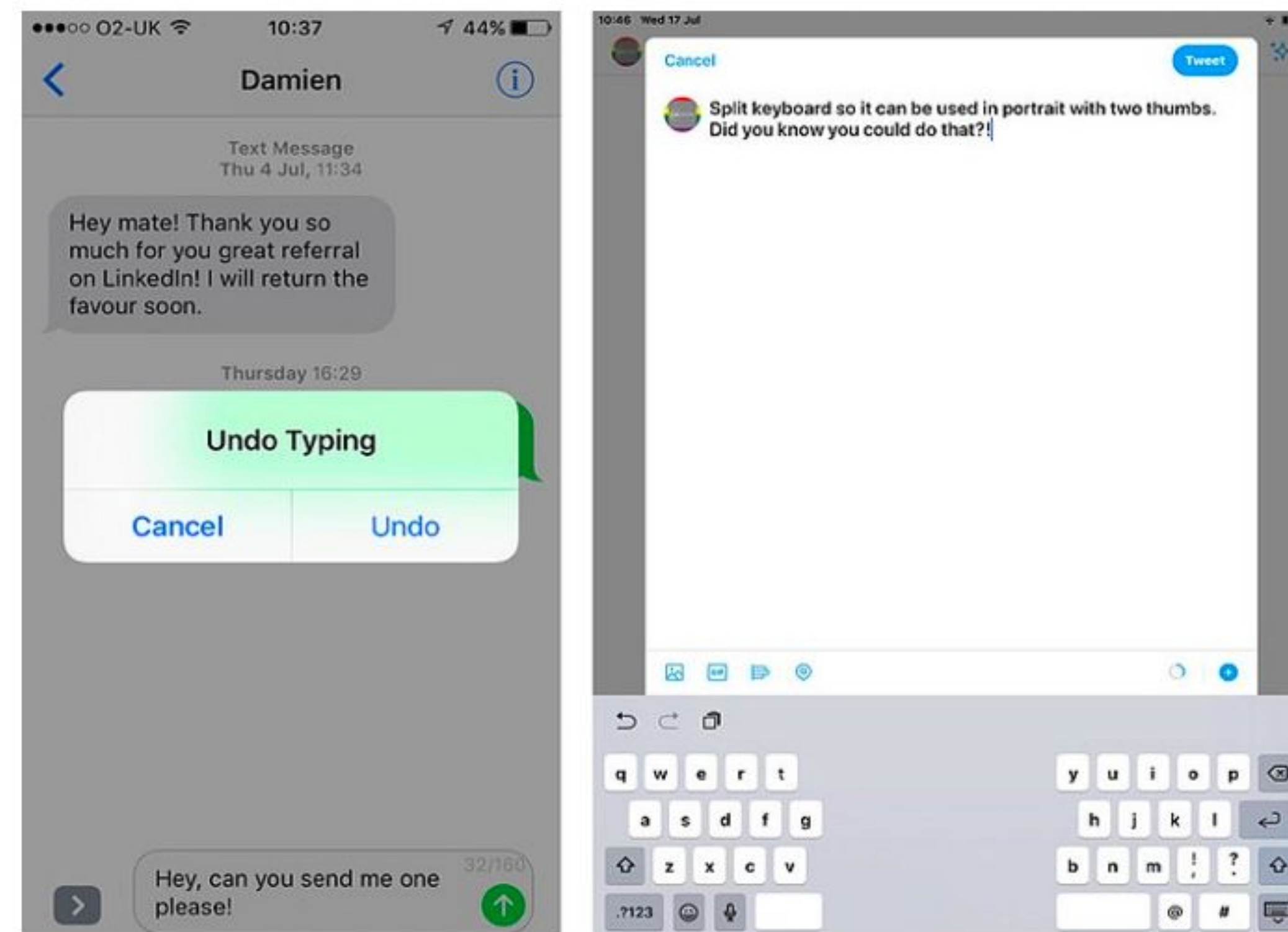


Avoid Complex Hidden Interactions

Complex interactions involving multiple digits should only be used where there is a need to avoid an inadvertent operation or is for extremely rare functions.

Some example are long presses, press two buttons at the same time.

There are complex operations that require multiple digits and yet are stereotypical, i.e. CTRL-ALT-DEL



Apple shortcuts to undo typing on iPhone and split the keyboard on the iPad.

3. Keep Interfaces Simple

Apply “less is more” approach.

One of the most important lessons to learn early on with UI design is to not over-design or give users too many options or information at once.

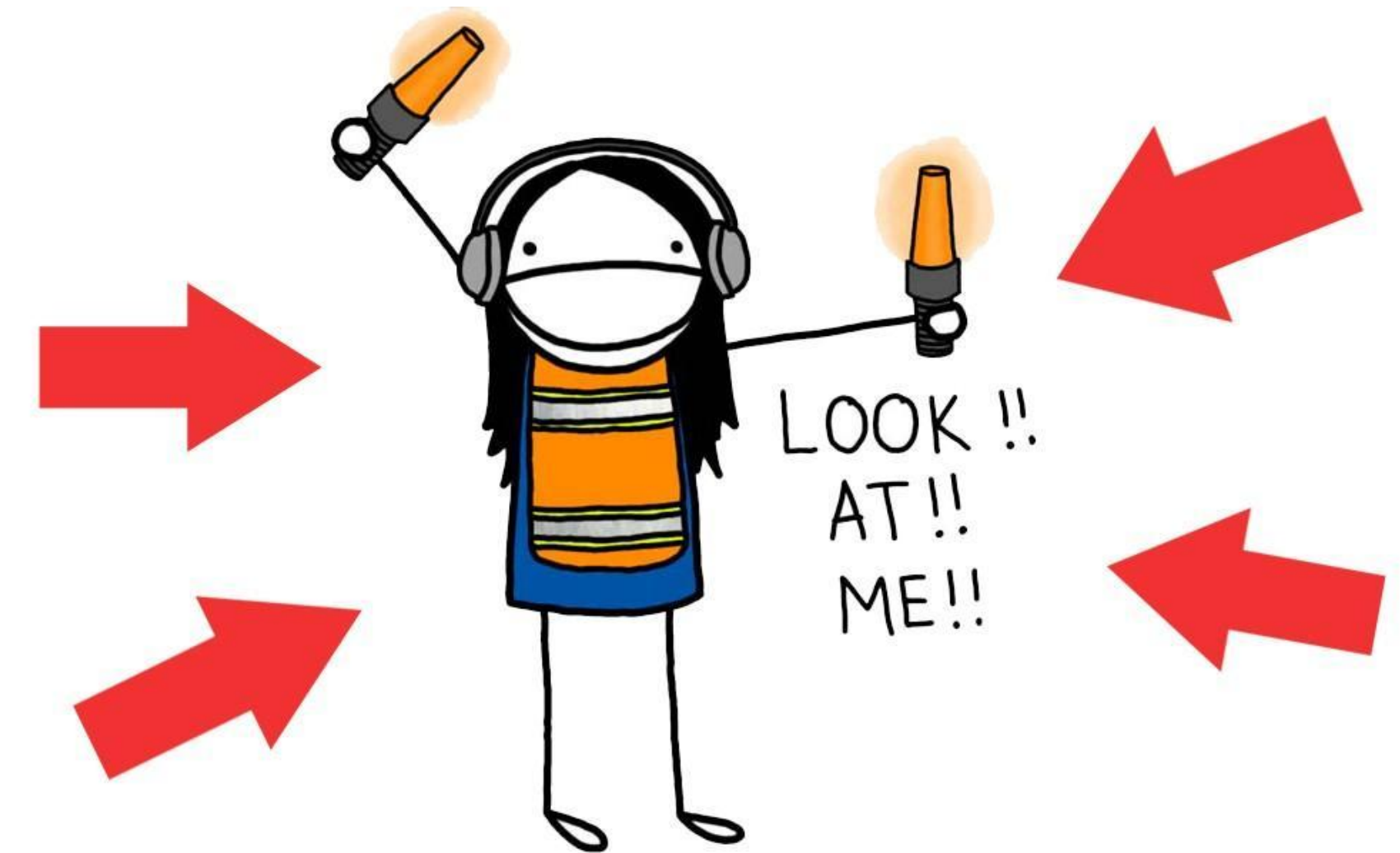
Focus on simplicity is what fuels the successful design of Apple products to this day and that same principle is essential to the UI design of digital products.



4. Respect the user's eye and attention

Focus on hierarchy and readability:

- **Use proper alignment.** Typically choose edge (over center) alignment.
- Draw attention to key features using: **Color, brightness and contrast.**
- Avoid including colors or buttons excessively.
- Text usage.

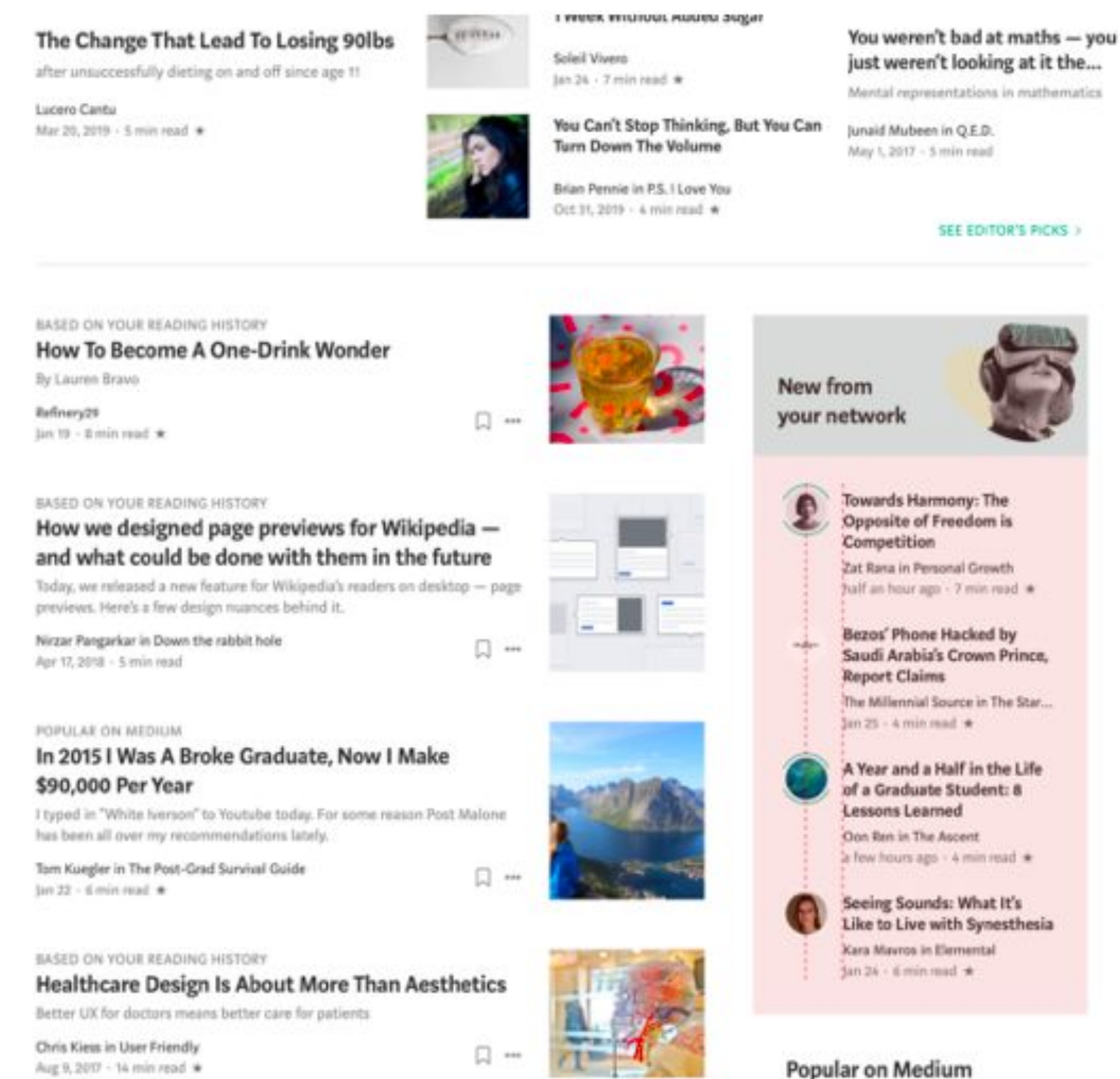


Use Proper Alignment

Alignment is the design theory which builds order, organization, and as a by-product from successful implementation, improves readability.

Three alignments type:

- Vertical
- Horizontal
- Object



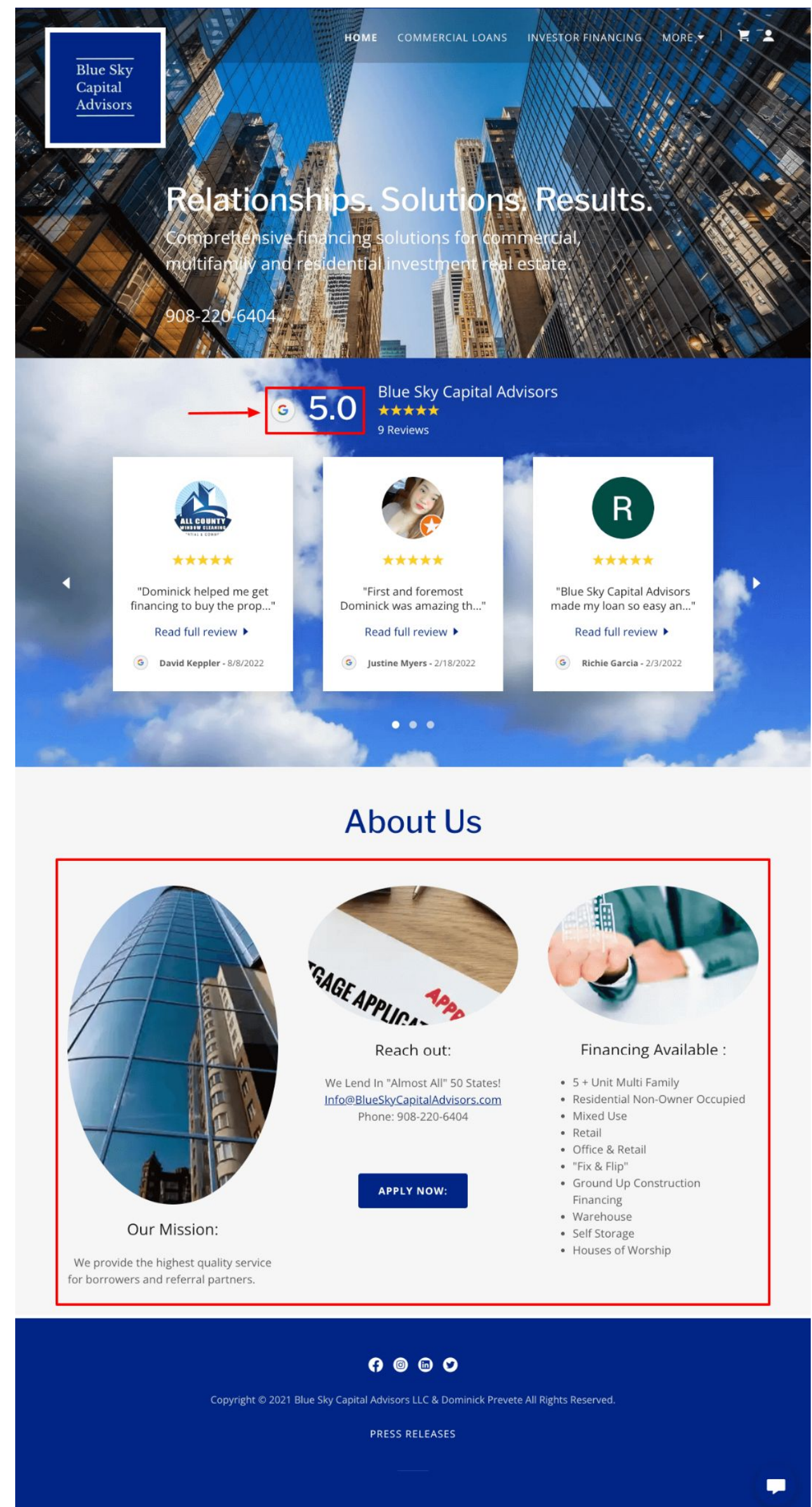
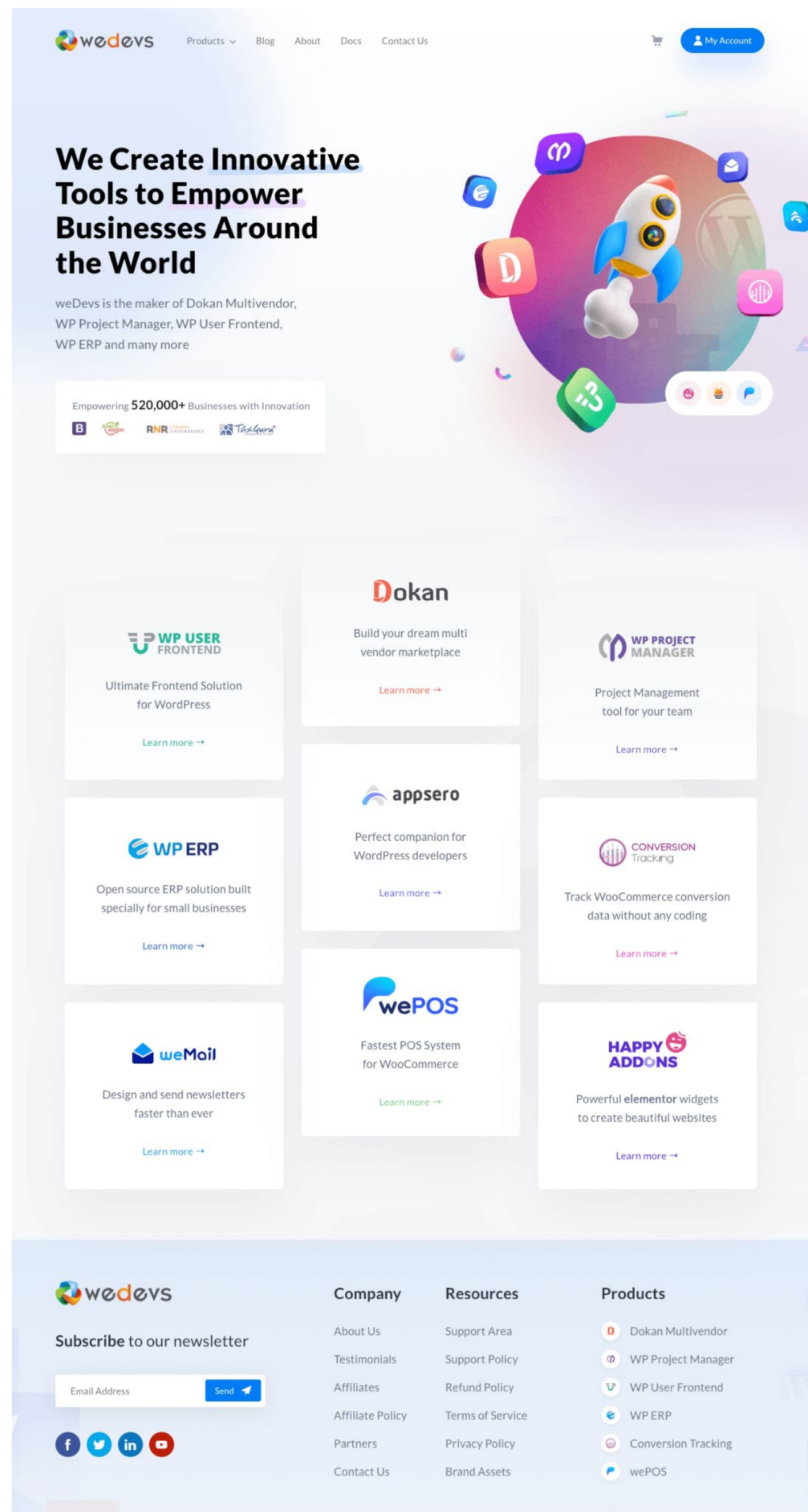
<https://uxdesign.cc/principles-of-ui-design-alignment-dd707e983f29>

A good tip when combining objects with content is to align objects centrally and to align content left.

Masalah dan Tantangan

Ketersebaran Informasi Perlunya platform akademik yang menyatukan banyak aplikasi redundan di ITB.	Kurangnya Notifikasi Informasi Notifikasi terkait informasi penting tidak ditampilkan ke pengguna secara langsung.	Fitur yang Kurang Bermanfaat Banyaknya fitur-fitur aplikasi yang tidak terpakai digunakan	Kinerja Aplikasi Buruk Aplikasi terasa lamban dan berat ketika digunakan.
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Use Proper Alignment



<https://happyaddons.com/alignment-in-web-design/>

Color, Brightness, and Contrast

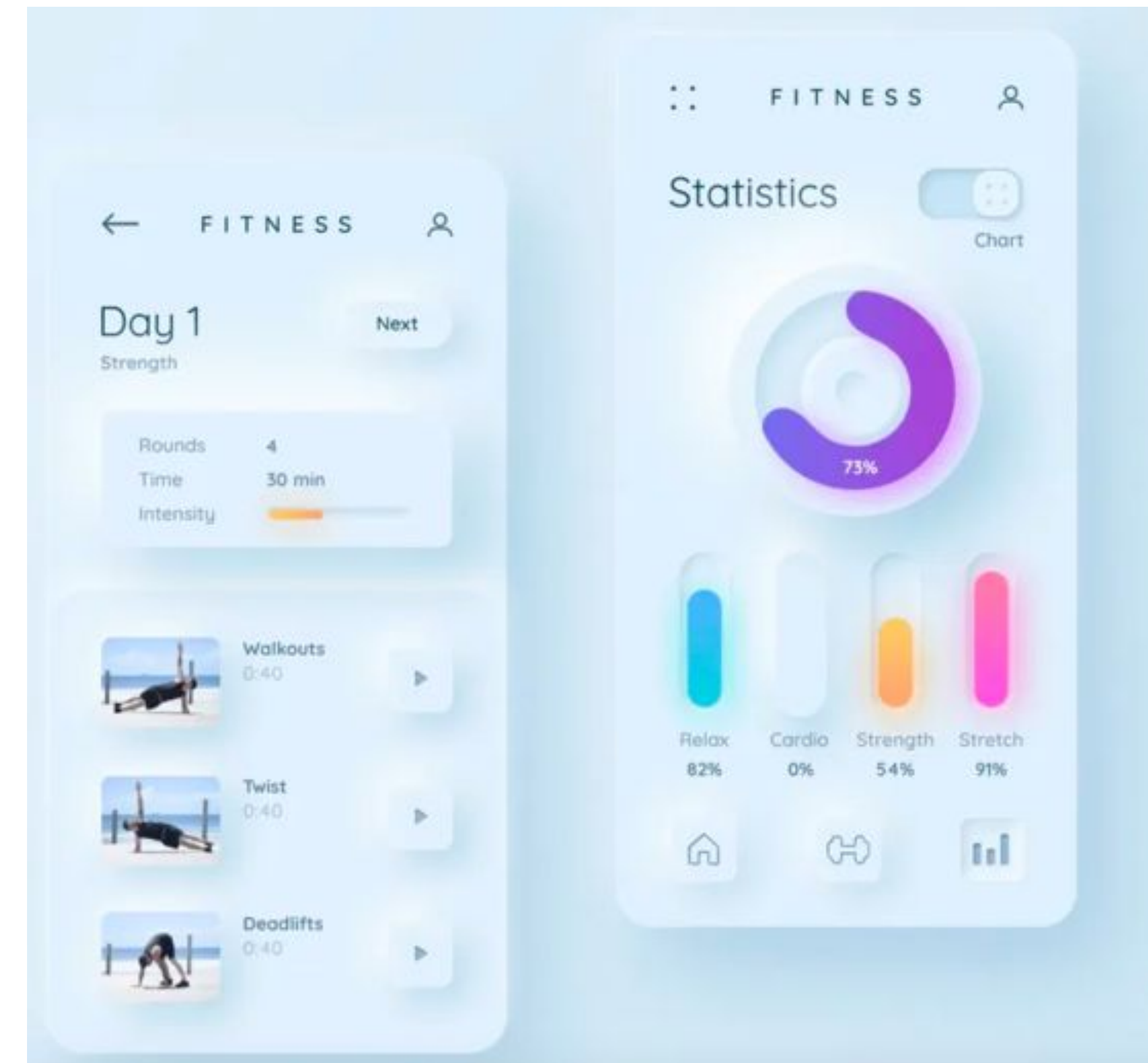
Use contrasting colours.

- Use different colours like red and green.
- It's easier to distinguish between two different colours than to recognise two colours similar to each other.

Keep a balance. Choose colours that are close to each other in saturation but still distinguishable.

Avoid using colours that are close to each other in lightness.

For example, dark blue and light blue may be too close in colour and look the same. However, they'll be easily distinguished if they're not near saturation.



Text

Font sizes, bold type/weighting, italics, capitals and distance between letters.

Users should pick up meanings just by scanning.

Display — **Best in Travel**

overline — First City to Visit
heading — **Copenhagen, Denmark**

body — Denmark's capital of cool is unstoppable. New-Nordic Noma has gourmands swooning with its new digs, urban farm and groundbreaking Scandinavian menus.

Secound City to Visit
Shēnzhèn, China

Welcome to China's most innovative city – Shēnzhèn – the 'Silicon Valley' of China. Drawn to its slew of new design

5. Minimize the number of actions for performing tasks

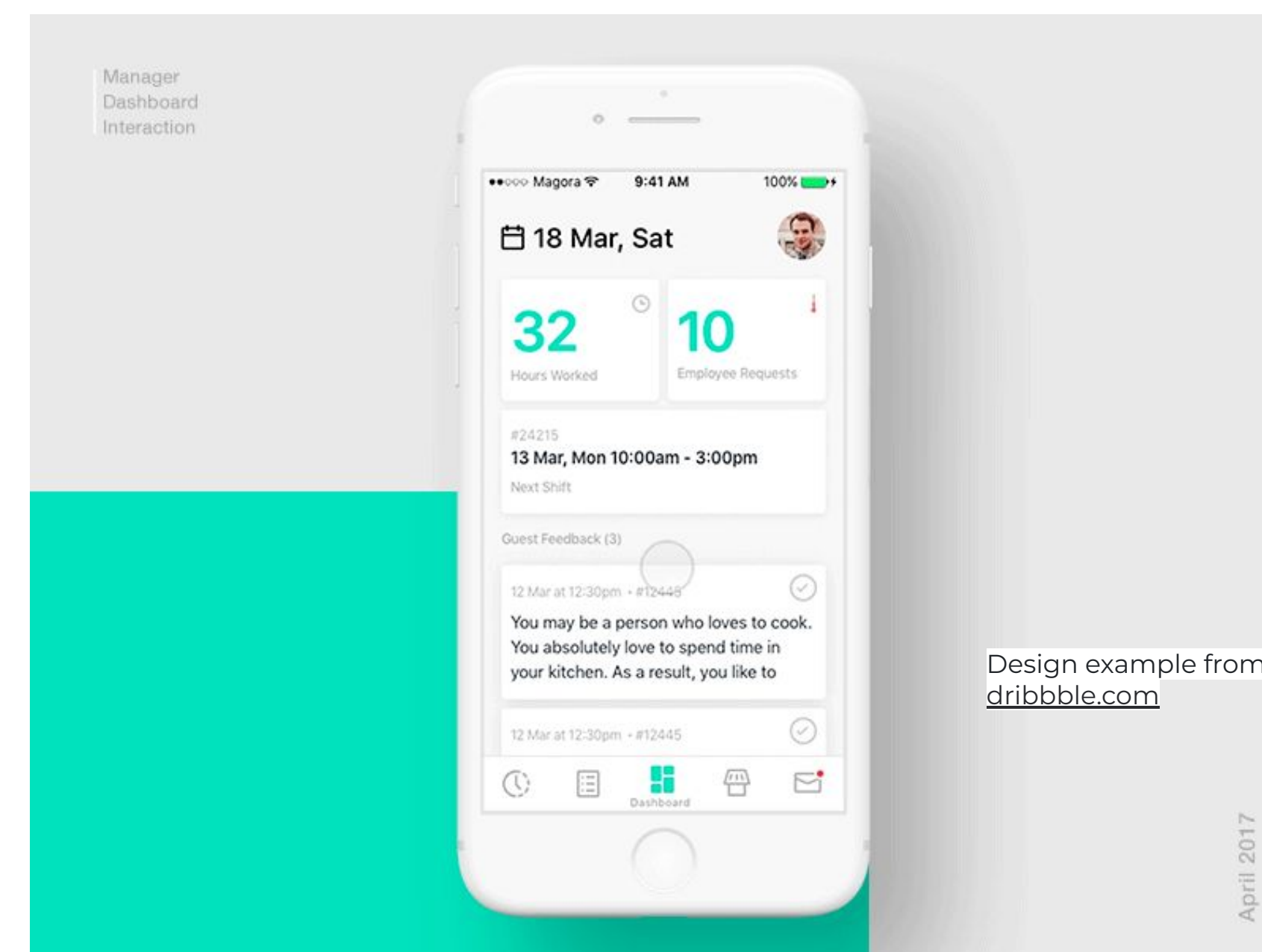
Ease complex tasks by using progressive disclosure.

Progressive disclosure is a strategy for managing information complexity.

- When you use progressive disclosure, you show only the information necessary at that point in the interaction.
- And you display more advanced functionalities of the app interface as the user interacts with it.



<https://uxplanet.org/design-patterns-progressive-disclosure-for-mobile-apps-f41001a293ba>



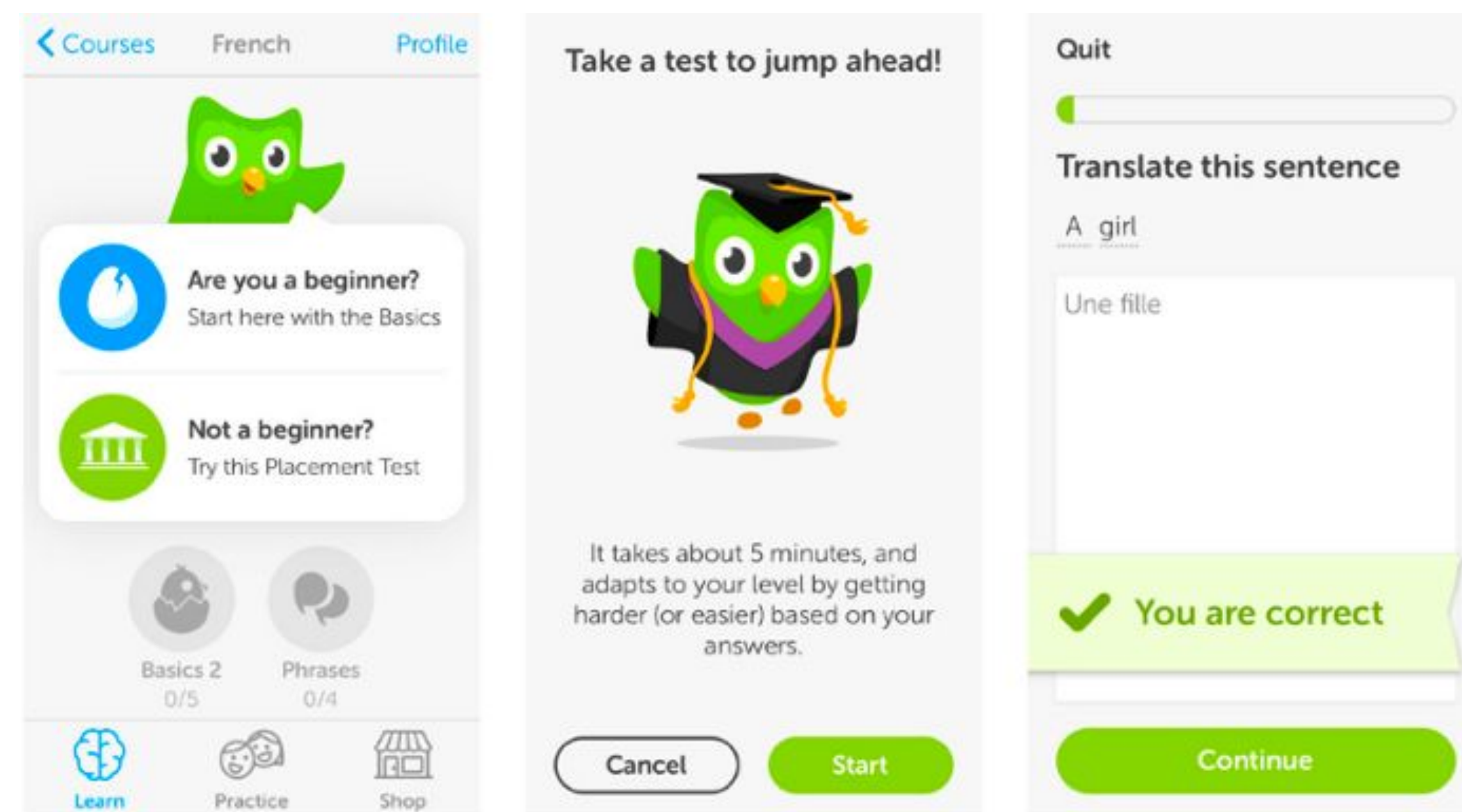
Design example from dribbble.com

Progressive Onboarding

Interactive progressive onboarding is a good example of progressive disclosure.

This is basically a user-guided tour where hints are only triggered when the user reaches the appropriate point in their experience.

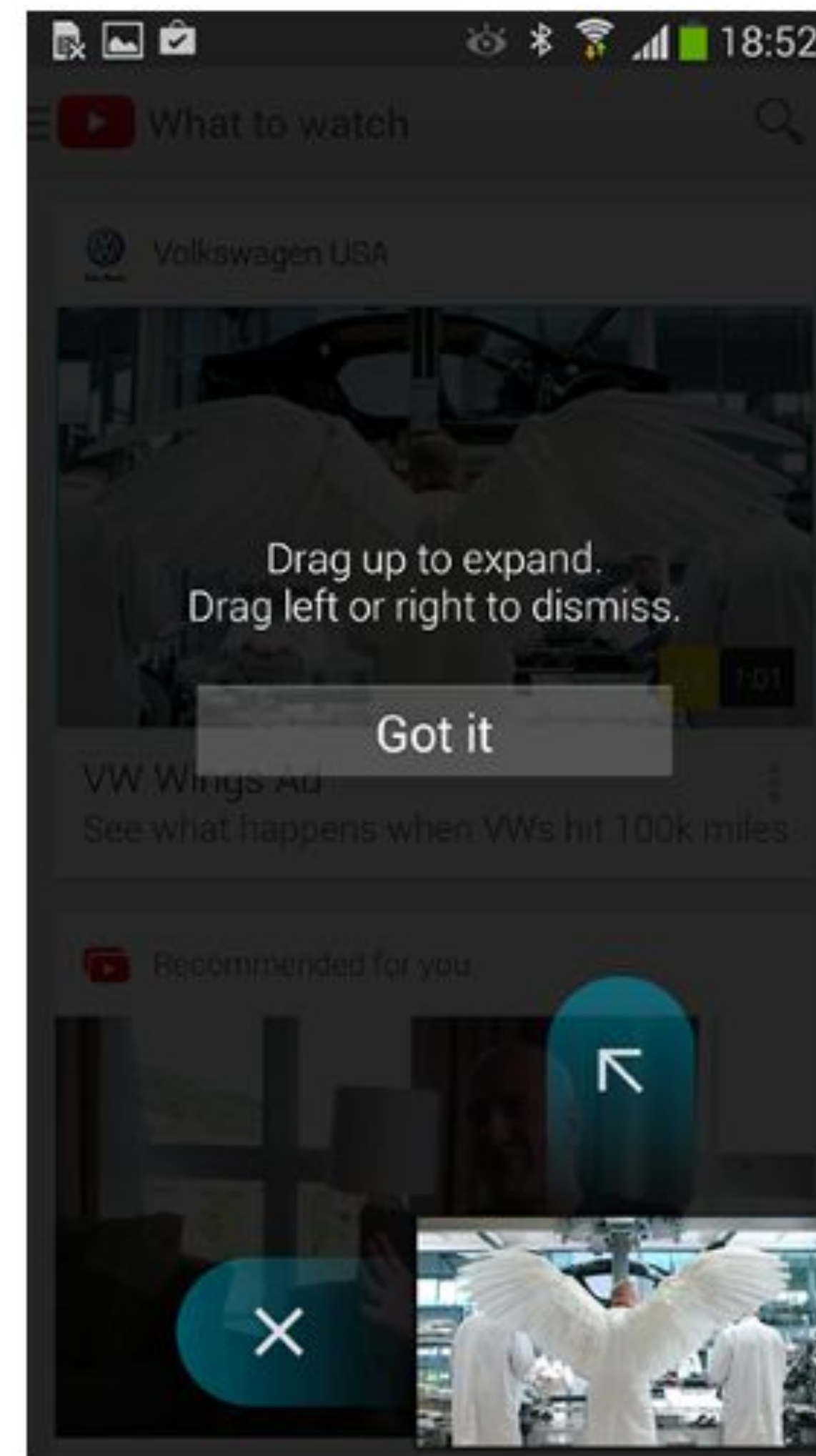
Hints may appear in different orders for different users.



Instructional Overlay

Progressive disclosure can be used to disclose the right information, exactly when the user needs it.

Any time you mask important functionality, it's very important to give your users a cue that they can still access that functionality.



Animated Hints

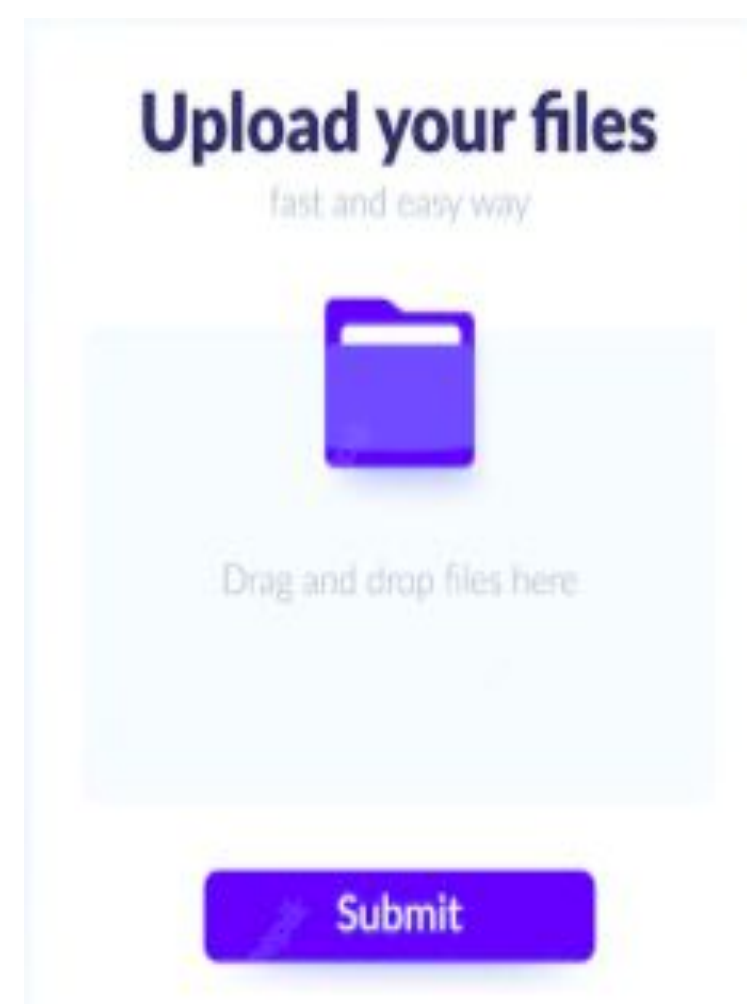
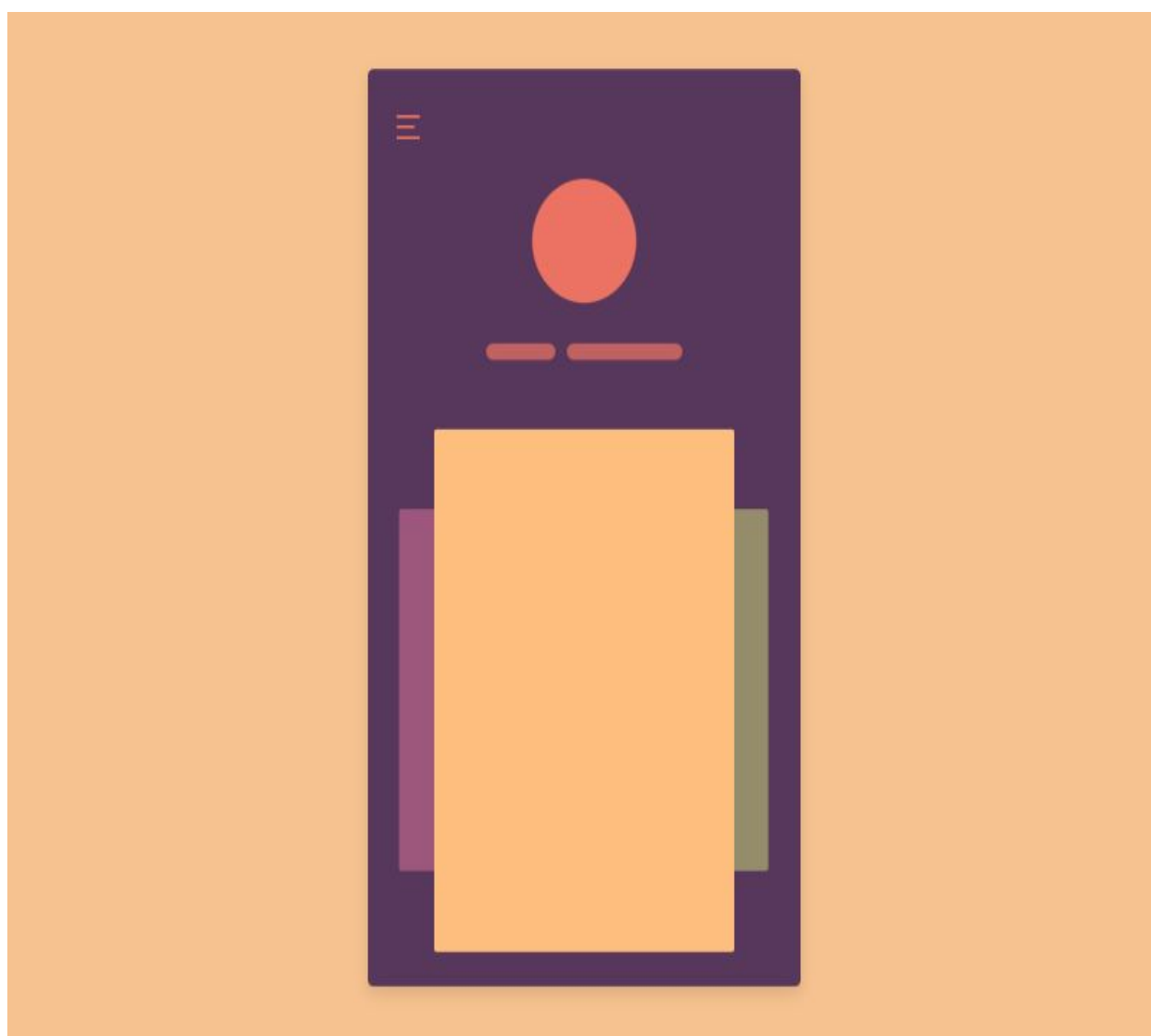
Games have a lot of examples of progressive disclosure.

Many games have to reveal game mechanics as users move further into a game.

So the hints are only triggered when the user reaches the appropriate point in their experience.



6. Put controls near objects that user want to control



Position buttons where users can easily find or expect to see them.

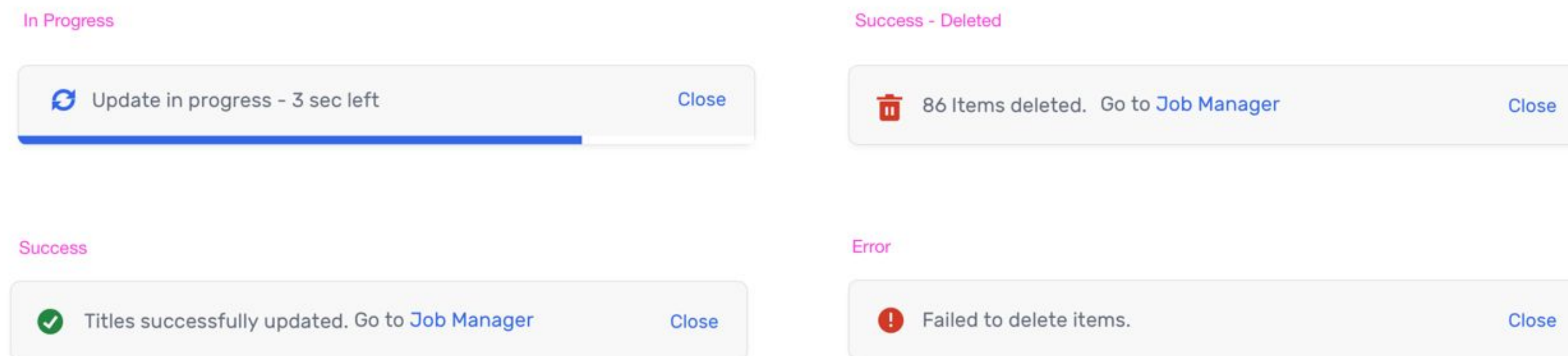
For example, a button to submit a form should be near the form.

If the content is where users expect, the chance of them finding it is hugely increased.

7. Keep users informed

Regarding system responses/actions with feedback :

- Things like loading screens and messages of confirmation or error messages make the difference between good and great UI design.
- It is important to let users know what is going on behind the scenes of a product to reduce user pain points and frustration that will make them not want to use the product.

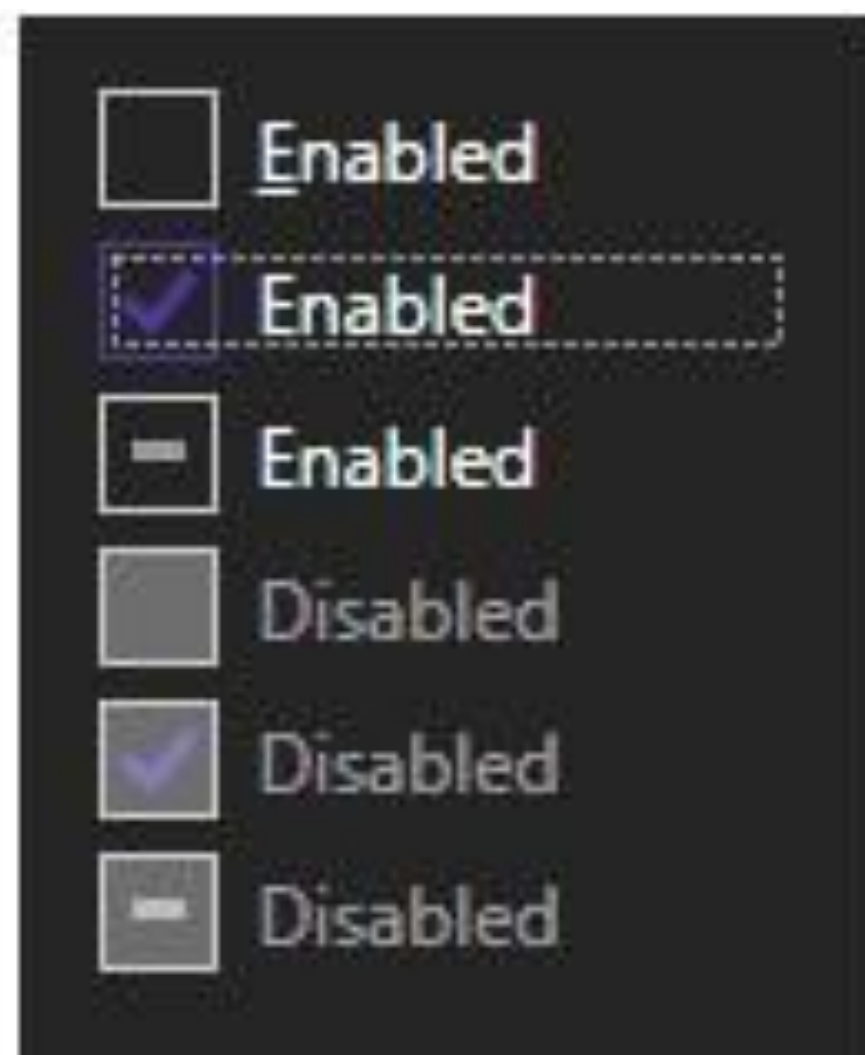


8. Use appropriate UI design patterns

User interface (UI) design patterns are reusable/recurring components which designers use to solve common problems in user interface design.

Use appropriate UI design patterns to help guide users and reduce burdens (e.g., pre-fill forms).

Beware of using dark patterns, which include hard-to-see prefilled opt-in/opt-out checkboxes and sneaking items into users' carts.



UI Design Patterns

Websites and apps have a conventional look and feel because of design patterns such as global navigation and tab bars.

In UI design, you can use design patterns as a quick way to build interfaces that solve a problem—for instance, a date picker design pattern to let users quickly pick a date in a form.

So, UI design patterns serve as design blueprints that allow designers to choose the best and commonly used interfaces for the specific context the user faces.

Some of the most common UI design patterns are:

- Breadcrumbs
- Lazy Registration
- Date Picker
- Social Media
- Leaderboard

Breadcrumbs

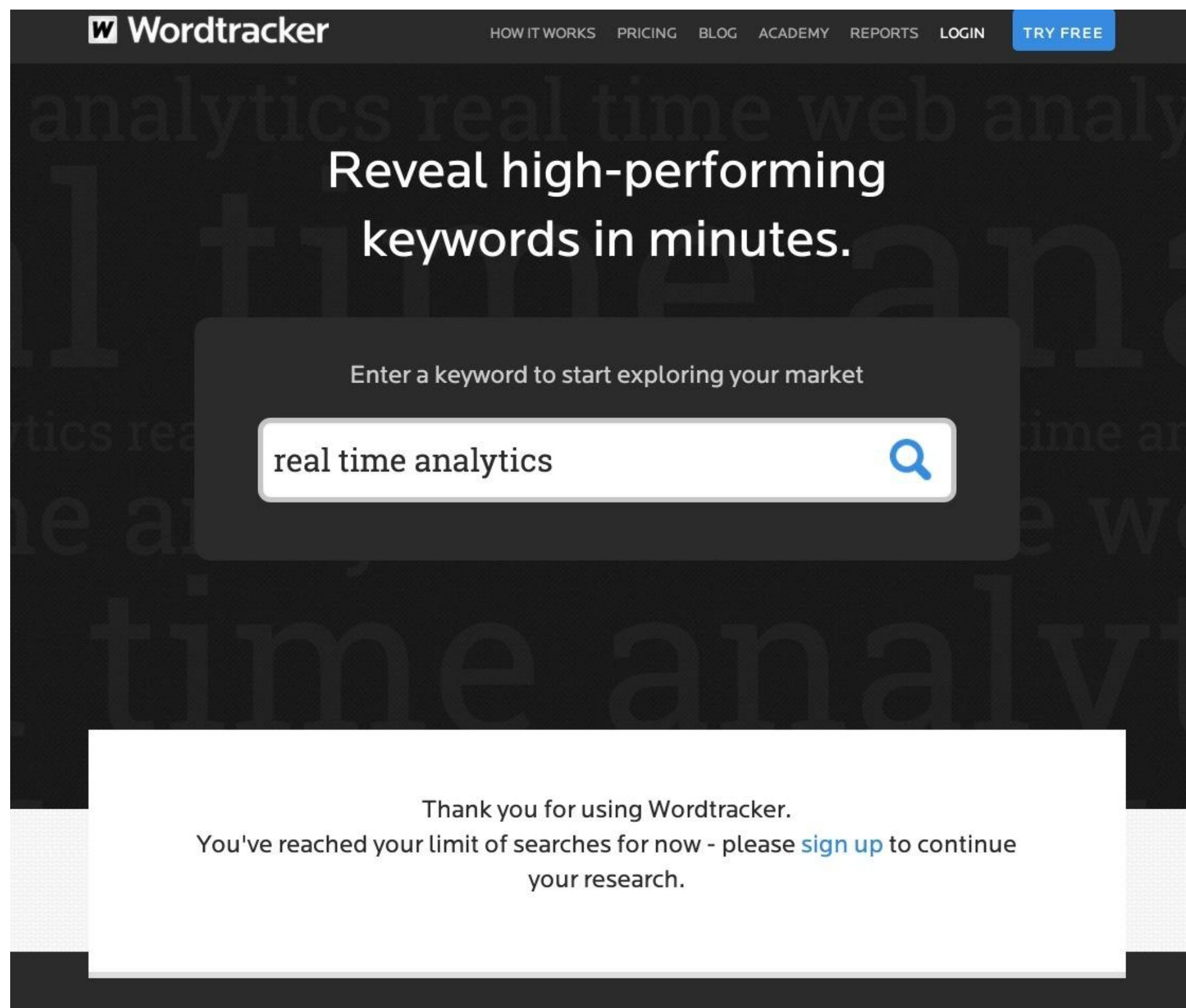
Use linked labels to provide secondary navigation that shows the path from the front to the current site page in the hierarchy.

This pattern shows the hierarchy of browsed content, so users are able to switch between pages rapidly.

Breadcrumbs is a popular pattern for ecommerce websites. Since most ecommerce websites have a branched structure with multiple product categories, it's important to provide users with the ability to effortlessly come back to a product category or the main page.



Lazy Registration



The Lazy Registration pattern allow users to use your system and take action before or without registering.

The idea is to let users interact enough with your system so that the actual registration is just another small step in the larger process.

Use this sign-up pattern to let user sample what your site/app offers for free or familiarize themselves with it.

The Shopping Cart pattern is a good example of Lazy Registration: users can browse and choose products and only have to register when they proceed to checkout.

<https://ui-patterns.com/patterns/LazyRegistration>

Date Picker

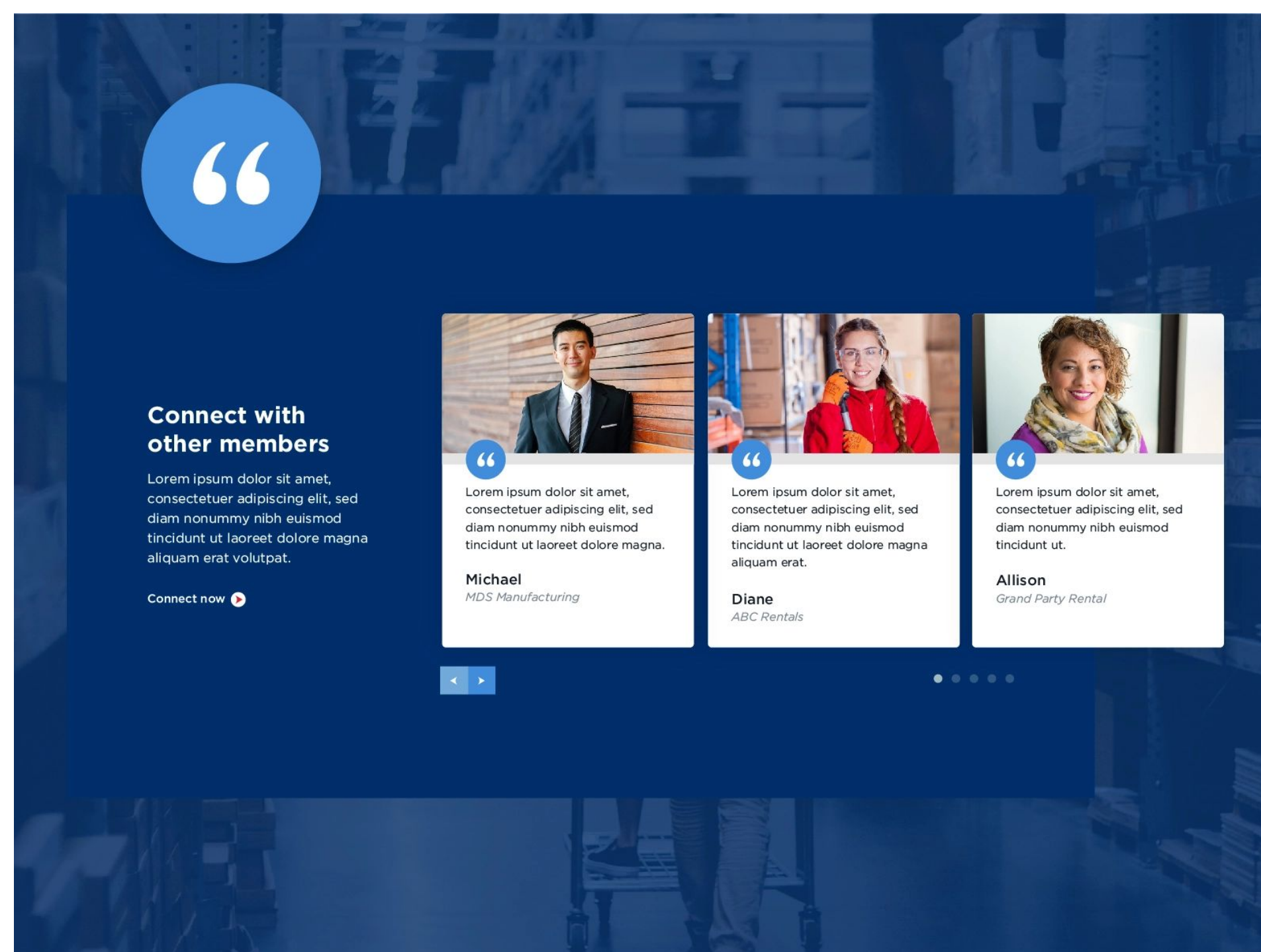


If you want to provide your users with an opportunity to select dates for a flight or a room, you're likely to use an element called a date picker (or a calendar picker).

A date picker displays a calendar and lets users pick a date or a range of dates in a few clicks without entering them manually.

Date pickers are convenient for selecting a date range: as a rule, such systems display two calendars side by side so a user can choose a date range in a few clicks (or taps).

Social Media



Social media patterns serve several functions at once. These patterns facilitate communication (chat), content sharing (auto-sharing), building social reputation (testimonials), and other social interactions (follow, invite a friend).

The social media category, despite its name, doesn't necessarily mean using patterns in social media websites or apps. Depending on the context, these patterns are also used for building a sense of trust, competition, and user engagement

Leaderboard

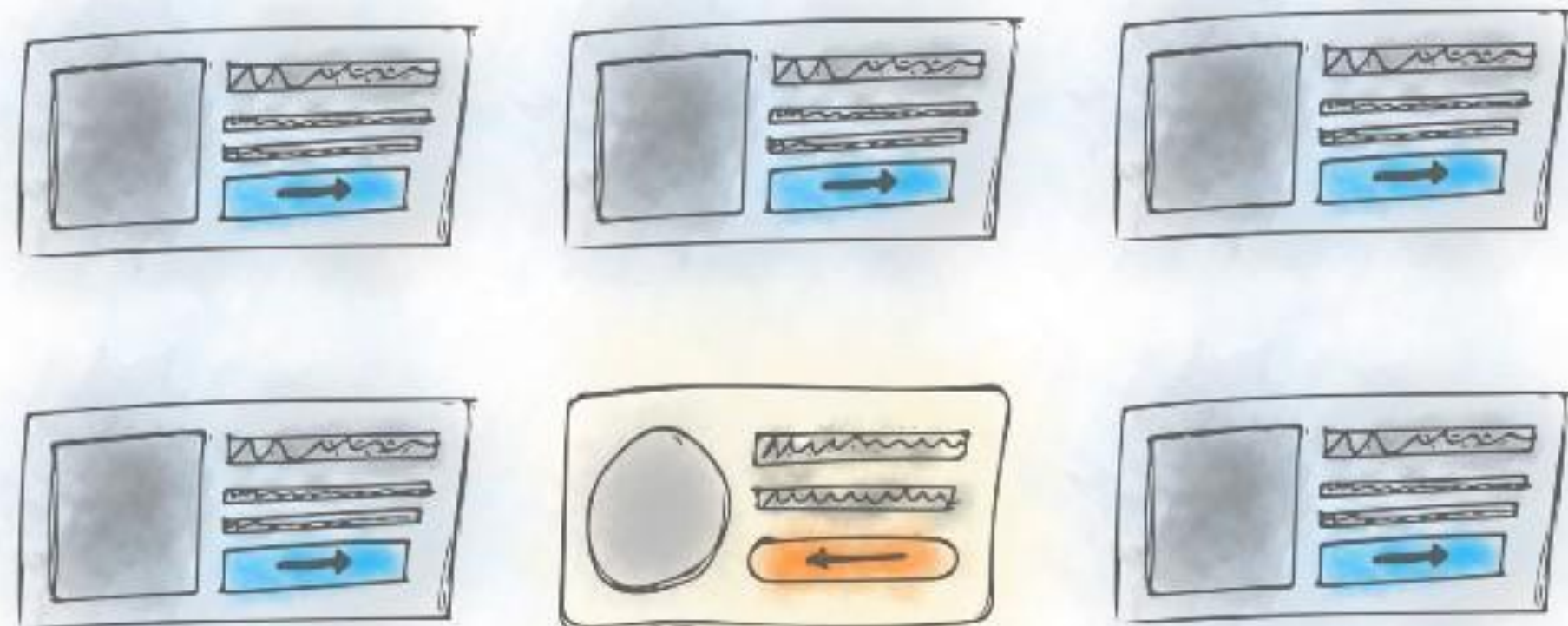


The leaderboard pattern is commonly used to indicate the best performers in a category.

It's efficient to use this pattern in a highly competitive environment to stimulate user involvement in a game or a competition and drive a sense of community.

A successfully implemented leaderboard pattern is contextual, which means that you should compare only users with similar levels, activity rates, and so on. Also, it's better to compare users with people from their friends lists or people who are in the same location. As a rule, people feel more involved when they compete with people they know or at least could potentially meet.

9. Maintain Consistency



<https://uxdesign.cc/design-principle-consistency-6b0cf7e7339f>

Be consistent across your ecosystem of different features, screens and applications.

Using consistency increases predictability of where to look and find what is required.

This reduces the need to learn and increases usability.

It also raises confidence in the user that you've provided a good experience.

10. Intuitive

Always provide next steps which users can deduce naturally, whatever their context.

An intuitive product allows the user to focus on the problem they're trying to solve, the question they're trying to answer, or the task they're trying to complete, rather than focusing on how to use the system.

This can be accomplished through following:

- established and understood design patterns
- making sure your use of color (particularly status/indicator colors)
- typography
- iconography is clear and consistent
- when there is an error, the system tells you what's wrong.

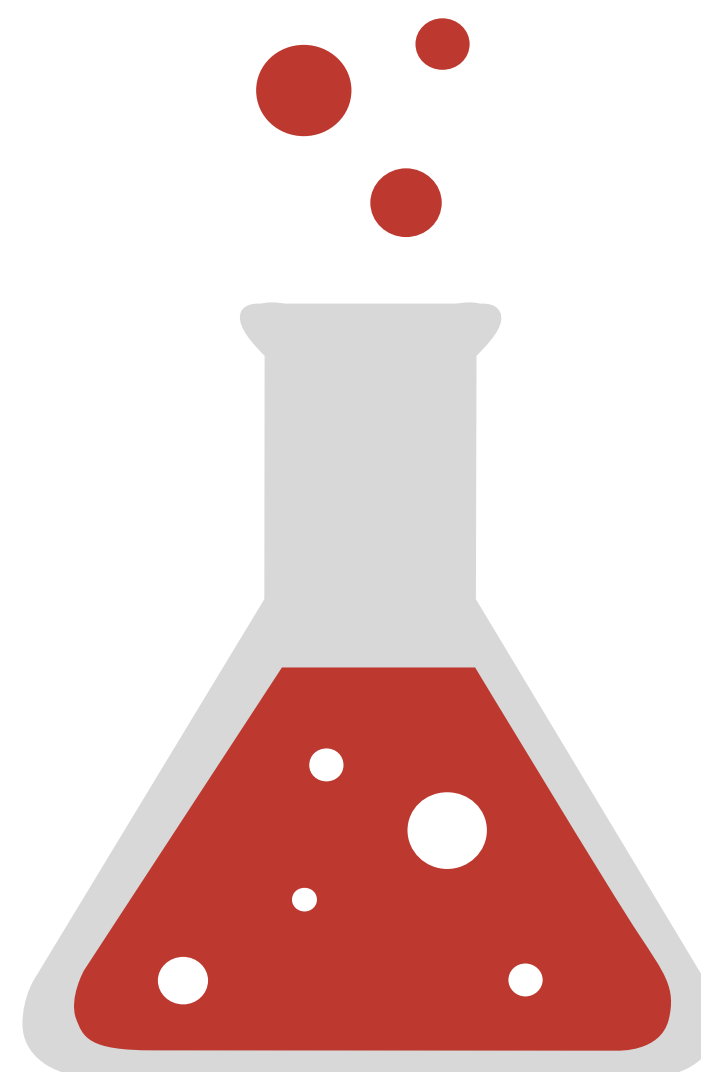


Conclusion



Because the best interface is no interface, you should offer users the most direct, accessible, comfortable control (and best experience) where they'll forget they're using your design.

Therefore, keep asking yourself
“Can I make things simpler?”



*Creativity is the key to success
in the great education*

Terima Kasih
