

SOFTWARE ENGINEERING



AGILE



GIT



UX/UI

- ✓ Design thinking process
- ✓ Information architecture
- ✓ **Basic design principles**
- ✓ **Usability principles**
- ✓ UX interviews

UX

UI

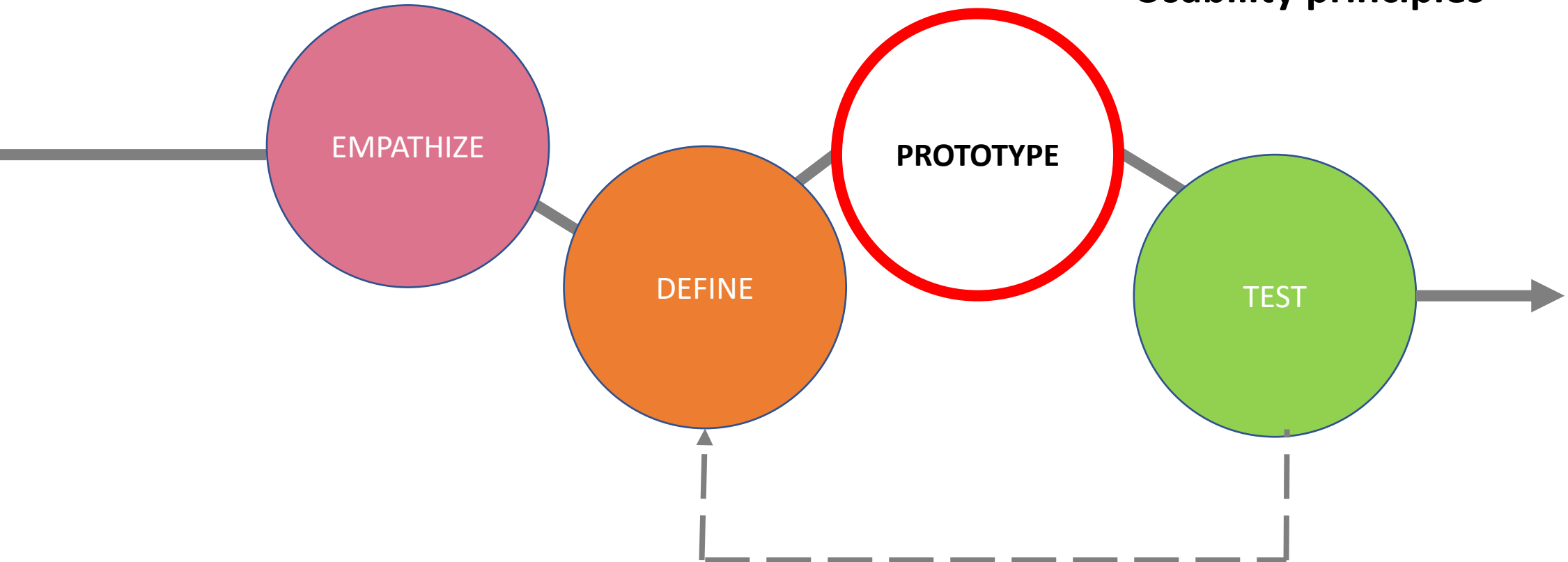
- ✓ Basic design principles
- ✓ Usability principles

EMPATHIZE

DEFINE

PROTOTYPE

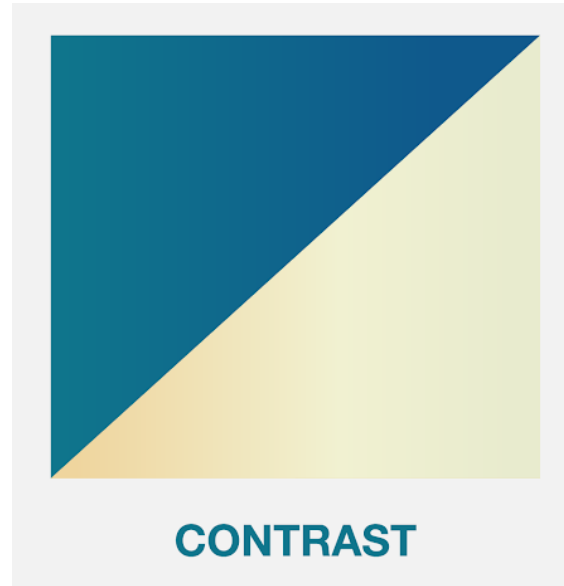
TEST



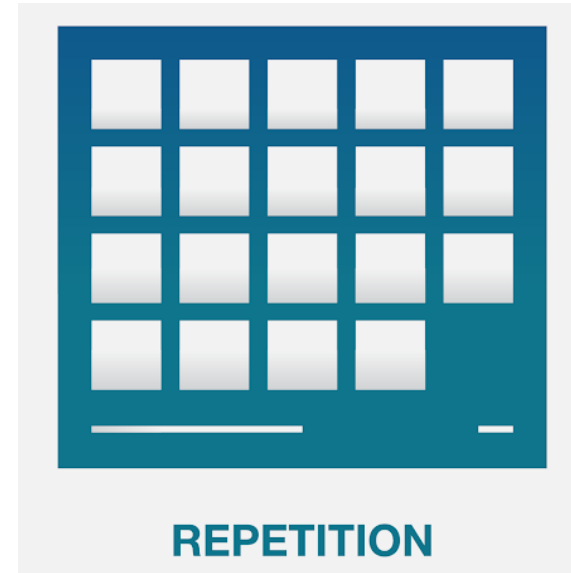
Create wireframe Basic design principles



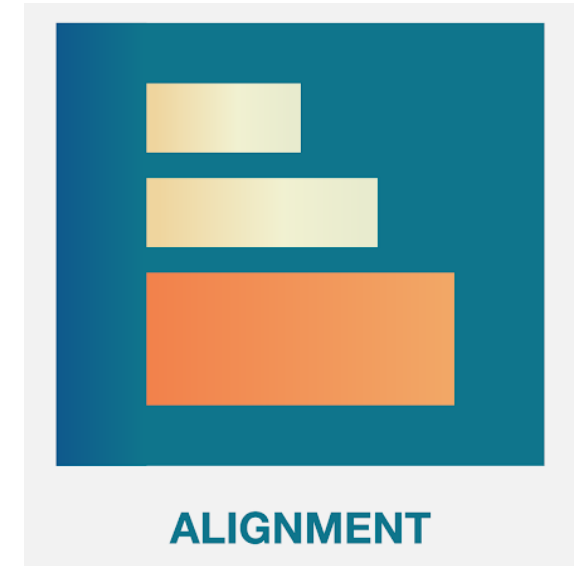
Things that are related should be **close to each other**



Not related elements are **graphically different**



Repeat style to reinforce the structure and the unity of your design

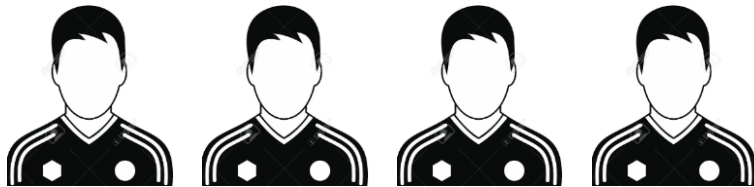


Align elements together to reinforce their connection

On which team is HIM ?

And why ?

TEAM A



RONAN

HIM

JEANNE

PISETH

TEAM B



RADY

NOEMIE

RATHA

Proximity

Things that are related should be close to each other



Together

Things that are NOT related should be far away from each other



Not together

Look at this picture

Phnom Penh, Cambodia

+855 – 89-456-8

Him Hey

PNC street 78

The best of the best

Where did you eyes go first ?

Example : 2, 1, 3, 4, 5



Now look at this picture

Where did your eyes go first ?

Him Hey

The best of the best

+855 – 89-456-8

PNC street 78

Phnom Penh, Cambodia

it' s clear !!

Our eyes know exactly where to start and end

1

First we look here



2

Then we look here

Him Hey

The best of the best

+855 – 89-456-8

PNC street 78

Phnom Penh, Cambodia

By **grouping** similar elements



Page is more **organized** You know **where to start** You know **where to stop**



Where are the groups on this slide ?



05 MIN



CLASS

Look at buttons : next, add, save, cancel

CA.GOV **EDD** Employment Development Department
State of California [Skip to main content](#) [Help](#) | [Benefit Programs Online](#) | [Log Out](#)

MAIN MENU
Home
Inbox
File a New Claim
Continue a Saved Draft
Manage My Profile
My Claim History

Employment Summary

1 → 2 → 3 → 4 → 5
Personal Information Initial Questions Employment Information Additional Information Certification

You are currently on Step 3 Employment Information

Section 4A - List of Employers

Please click the "Add" button to add information about your last or current employer. You must add at least one employer.

No Results Found

[Previous](#) [Next](#) [Add](#) [Save as Draft](#) [Cancel](#)

- Is Add button **related** to other buttons ?
- How can we improve this with our **proximity** principle?

  Employment Development Department
State of California [Skip to main content](#) [Help](#) | [Benefit Programs Online](#) | [Log Out](#)

MAIN MENU

- Home
- Inbox
- File a New Claim
- Continue a Saved Draft
- Manage My Profile
- My Claim History

Employment Summary

1 → 2 → 3 → 4 → 5
Personal Initial Questions Employment Information Additional Information Certification

You are currently on Step 3 Employment Information

List of employees

[Cancel](#) [Add](#)



The **Add** button is not the **main button** of the page

Which design you prefer and why ?

PNC CANTEEN

Breakfast

Eggs and pork– 5\$
Just eggs and pork fried with rice !
Fish amok– 5\$
A traditional steamed fish curry

Lunch

Lock lack – 5\$
Sautéed beef in a rich sauce, served with rice
Fish soup –10\$
Fish or seafood with vegetables
Khmer ginger chicken stir-fry– (price can change)
Garlic and ginger fired with chicken

1

PNC CANTEEN

Breakfast

Eggs and pork– 5\$
Just eggs and pork fried with rice !

Fish amok– 5\$
A traditional steamed fish curry

Lunch

Lock lack – 5\$
Sautéed beef in a rich sauce, served with rice

Fish soup – 10\$
Fish or seafood with vegetables

Khmer ginger chicken stir-fry – (price can change)
Garlic and ginger fired with chicken

2

PNC CANTEEN

Breakfast

Eggs and pork 5 \$
Just eggs and pork fried with rice !

Fish amok 5 \$
A traditional steamed fish curry

Lunch

Lock lack 5 \$
Sautéed beef in a rich sauce, served with rice

Fish soup 10 \$
Fish or seafood with vegetables

Khmer ginger chicken stir *Price can change*
Garlic and ginger fired with chicken

3



Summary of proximity

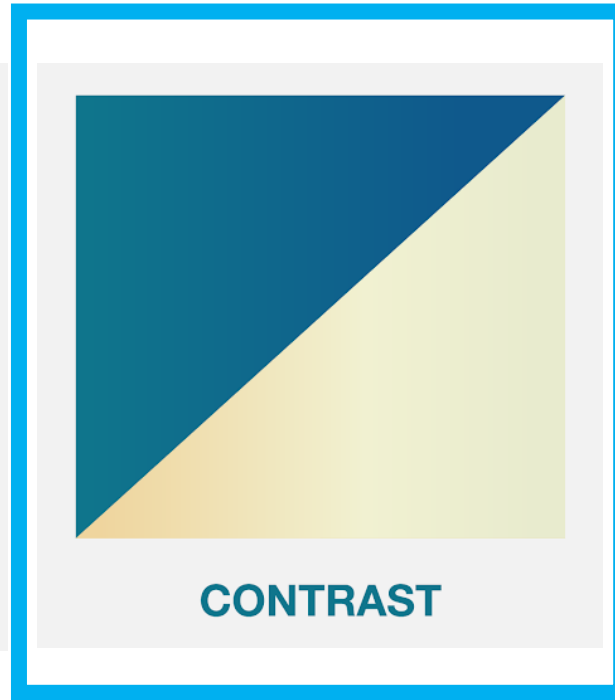


- ✓ Group element to **create organization**
- ✓ We should know **where to start, end**
- ✓
- ✓ Use **whitespace** to create meaningful groups
- ✓ Avoid **too many separated** elements
- ✓ Don't create relationship with **not related elements**

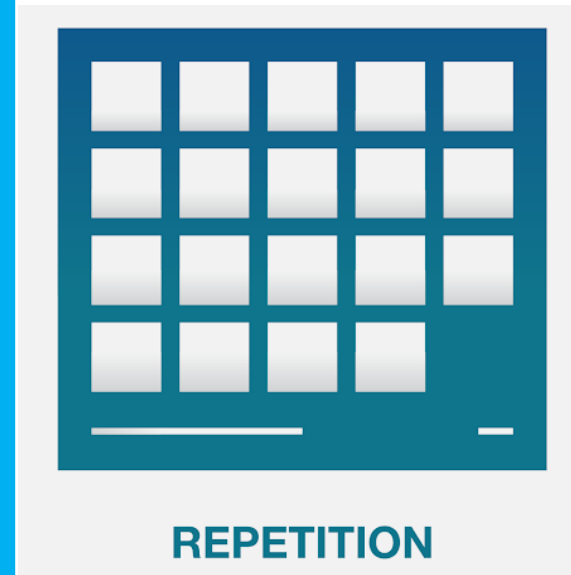
Basic design principles



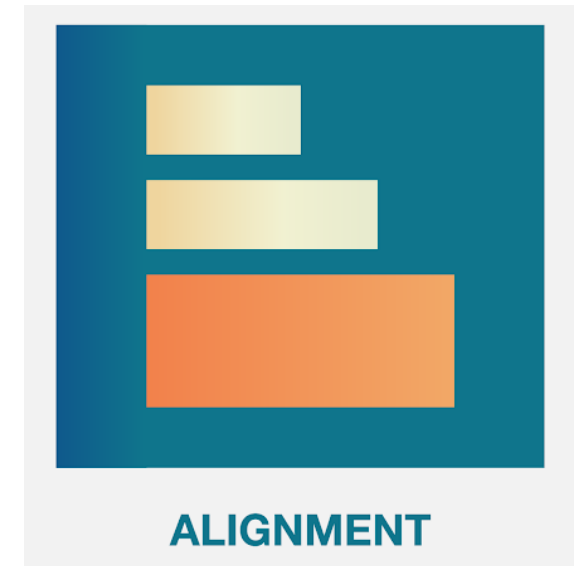
Things that are related should be **close to each other**



Not related elements are **graphically different**



Repeat style to reinforce the structure and the unity of your design



Align elements together to reinforce their connection



05 MIN



CLASS

Same or different ?



Same or different ?





5 MIN



CLASS

Contrast

A visual must contain 1 or many **elements in contrast**, to guide the reader eyes into the page



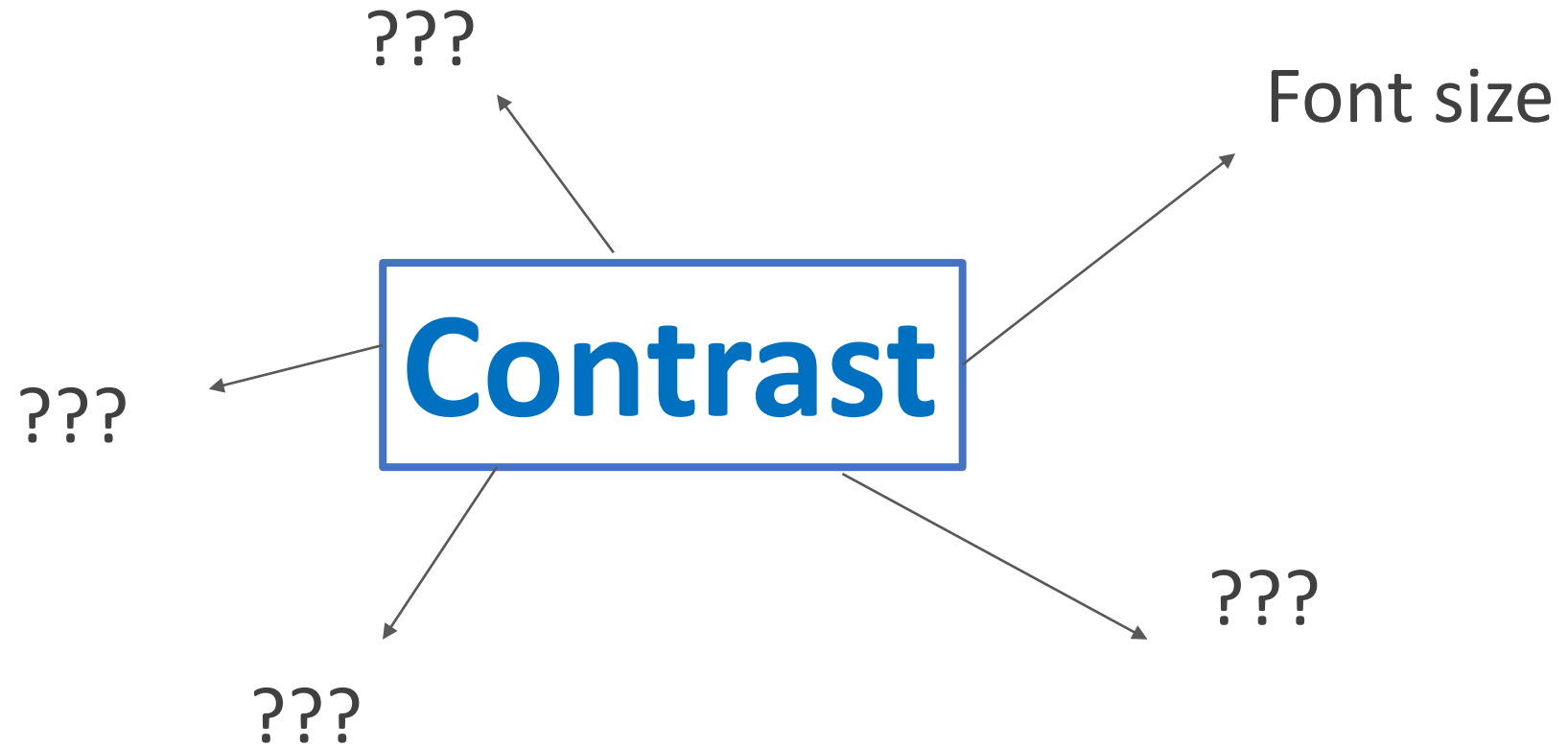
What is contrasted in this slide, and why ?



5 MIN

CLASS

How to create contrast in a design ?





5 MIN

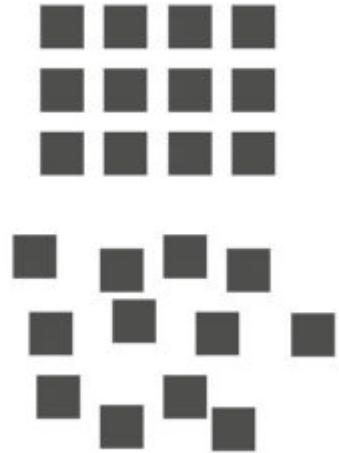


CLASS

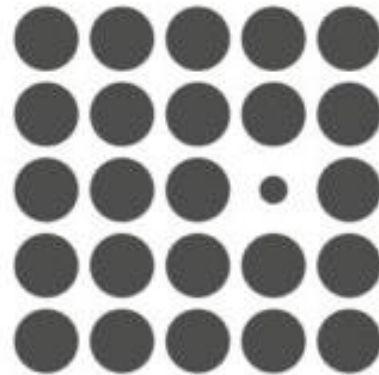
Contrast in...



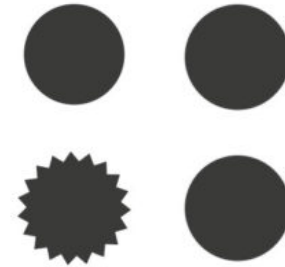
Text
Font / size



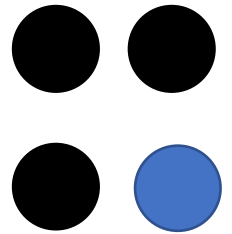
Order
disorder



Size



Shape



Color

Initial design

LIBRARY PNC CLUB

WHY READING IS SO IMPORTANT ?

Reading and writing work in similar ways. Reading improves your writing style and flow. Writers learn to perfect their craft by taking inspiration from other writers. It's impossible to be a good writer if you don't read. Acclaimed author Stephen King is said to carry a book with him wherever he goes. He even reads while eating.

Final design

We keep the alignments in left and right sides to **link the 3 part together**

LIBRARY PNC CLUB

WHY READING IS SO IMPORTANT ?

Reading and writing work in similar ways. Reading improves your writing style and flow. Writers learn to perfect their craft by taking inspiration from other writers. It's impossible to be a good writer if you don't read. Acclaimed author Stephen King is said to carry a book with him wherever he goes. He even reads while eating.

We switch to black background
To **increase attention**

We increase the question font size + bold
To **catch the reader attention**

Contrast the most important And hide the least important

TOW-AWAY

TEMPORARY

NO PARKING

ANYTIME

SUNDAY ONLY

8 AM - 6 PM

VIOLATORS WILL BE TOWED

NO PARKING

ANYTIME

VIOLATORS WILL BE TOWED

SUNDAY ONLY - 8 AM - 6 PM - VIOLATORS WILL BE TOWED

T O W - A W A Y

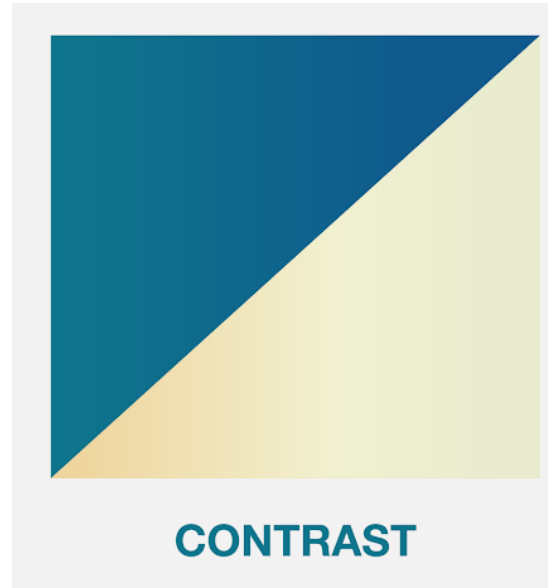
Contrast tips

- ✓ Change fonts, size, colors to **contrast** some elements
- ✓ Make a **clear difference** in your colors, font, size, to apply the contrast efficiently
- ✓ Limit the differences on other elements : to **maximize the contrast**

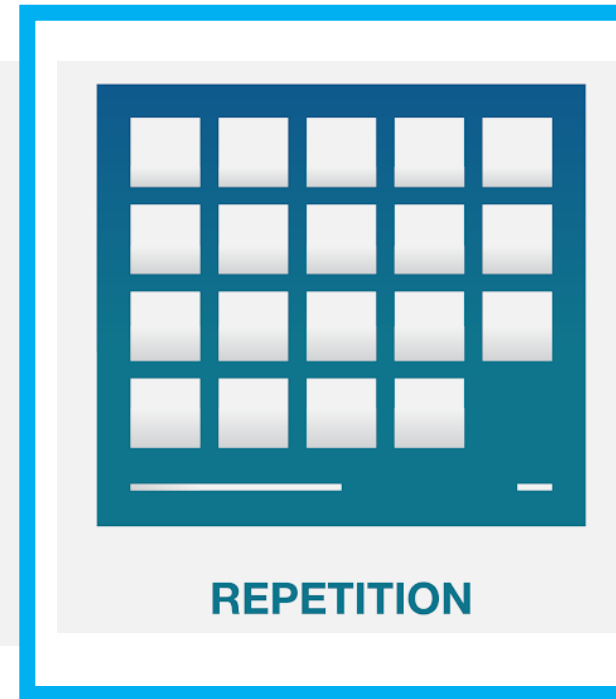
Basic design principles



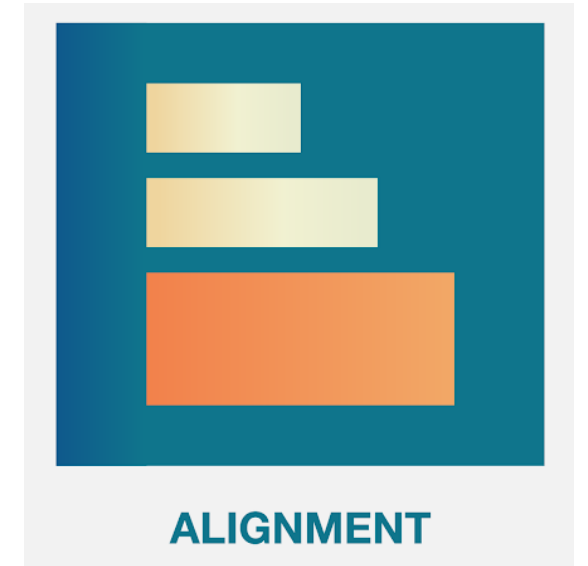
Things that are related should be **close to each other**



Not related elements are **graphically different**



Repeat style to reinforce the structure and the unity of your design



Align elements together to reinforce their connection



05 MIN



CLASS

Who are on the **same team** ?





5 MIN



CLASS

Repetition

Repeat the style of some elements to **unify** and **link** them together

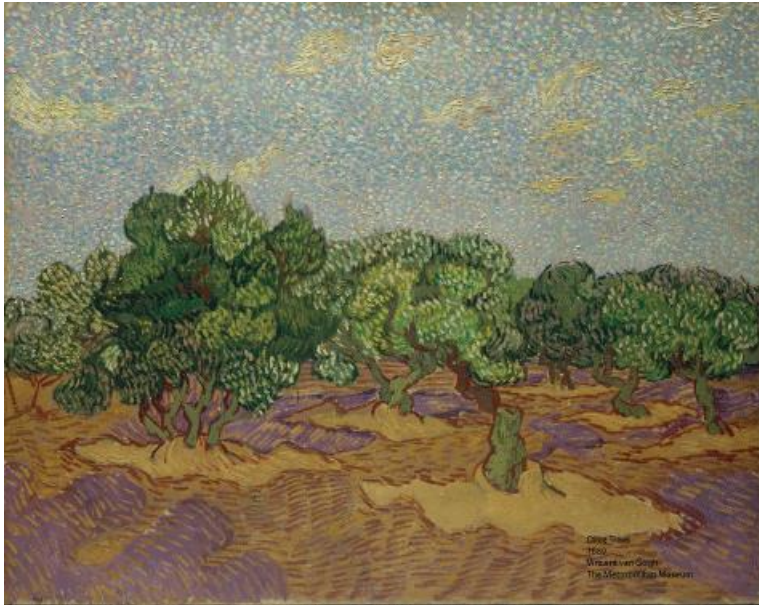
What is repeated in this slide, and why ?



5 MIN

CLASS

What is repeated here ?



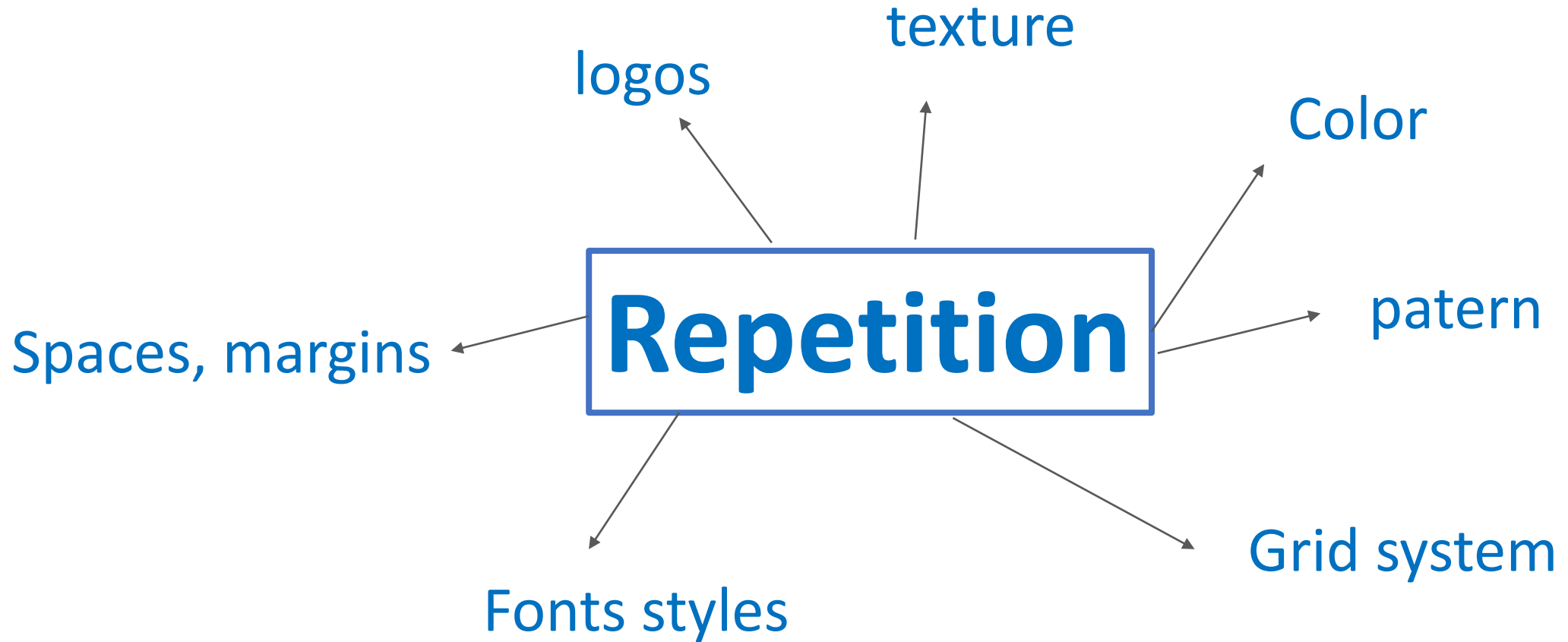


5 MIN



CLASS

Repetitions can be everywhere



Repetition =

spacing

Grid system

Title color , size, font

Separator style

alignment



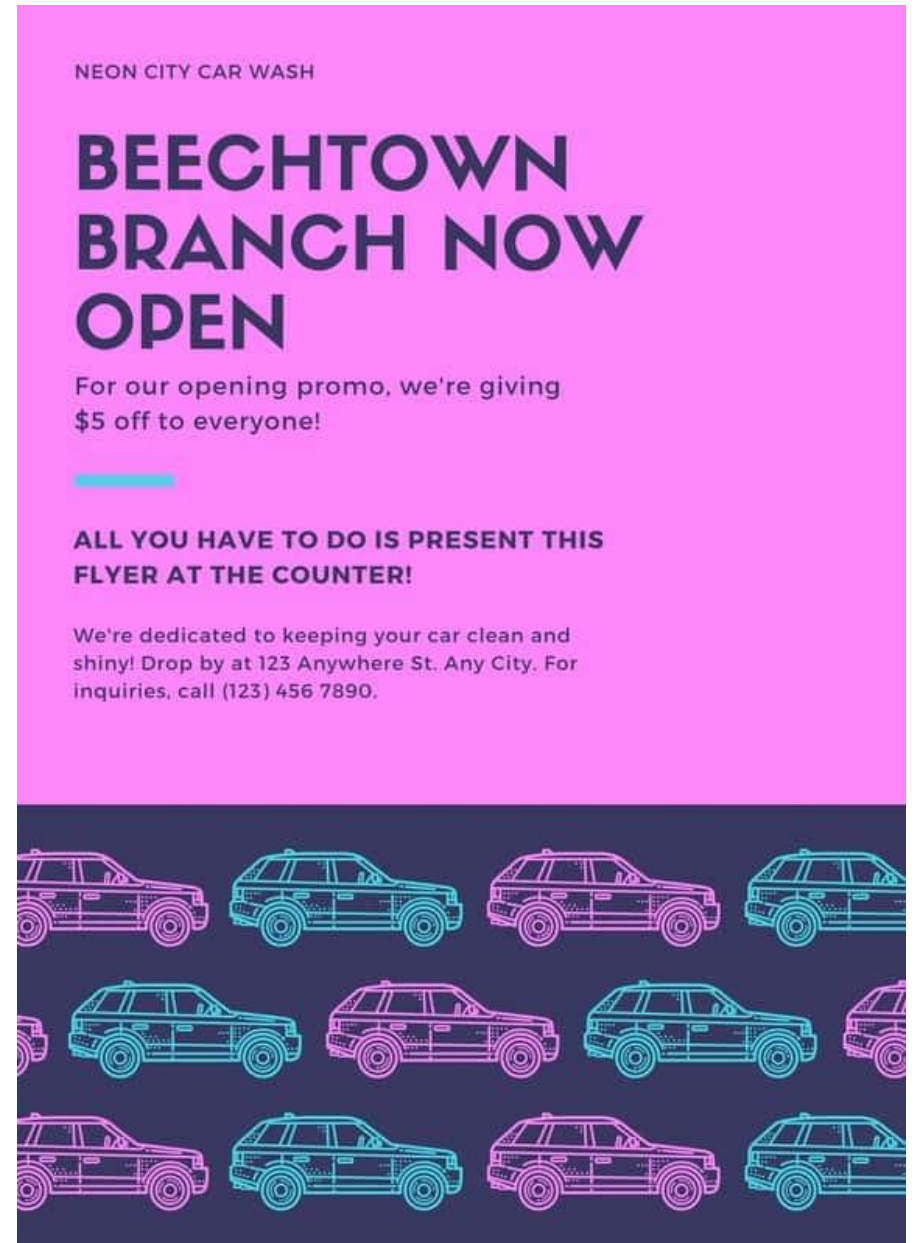


5 MIN

✓ Which **repeated styles** unify elements in this poster ?

✓ Which element is **contrasted** ?

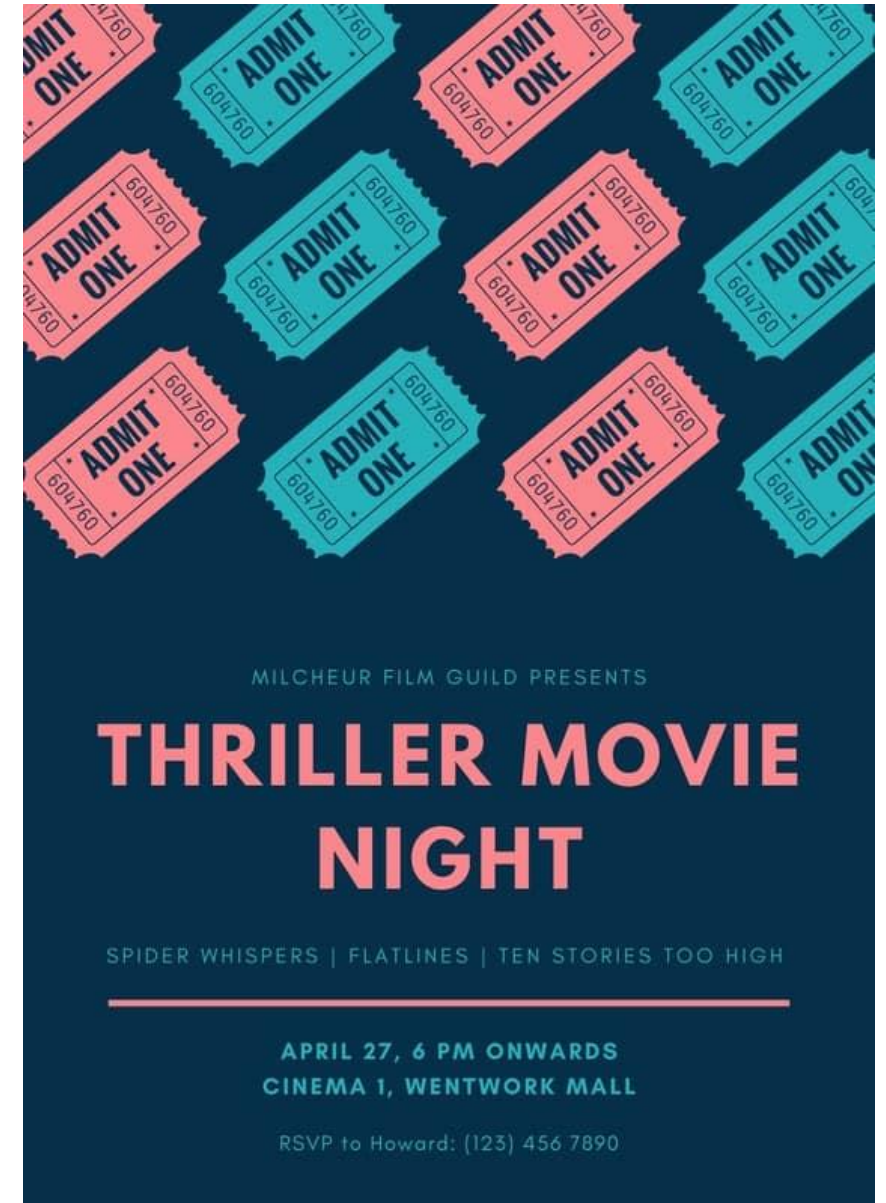
✓ Which elements are **grouped** together ?





5 MIN

- ✓ Which **repeated styles** unify elements in this poster ?
- ✓ Which element is **contrasted** ?
- ✓ Which elements are **grouped** together ?





5 MIN

List down the **problems** of this design in terms of :

- Repetition
- Contrast
- Proximity

The screenshot shows the LINGsCARS.com website with a cluttered and inconsistent design. Key elements include:

- Header:** A mix of text, a traffic light icon, and a 'WIN!' banner for a 'Play stupid game' promotion.
- Navigation:** A row of buttons for 'Home', 'Cars and Vans', 'How It Works', 'Price Lists', 'About Ling' (with handwritten 'CME!'), 'Customers' (with handwritten 'WAH! 1500+ Letters'), 'Fun Stuff', and 'Quote/Order'.
- Business Customer Pricing:** A section with a 'NEW SEXY' banner, a photo of a woman, and a 'Search Cars Here' button.
- Twitter Feed:** A section titled 'LING'S LIVE TWITTER FEED' showing tweets from @LINGsCARS.
- Footer:** A row of links including 'Intro Film', 'News', 'Blog', 'Office TV', 'Contact', 'Moan', 'Links', 'Play Quiz', 'Privacy Policy', and 'Google Visitors'.
- Sidebars:** Two sidebars on the left promote 'CAR LEASING' and 'ABARTH CAR LEASING'.
- Bottom Section:** A large banner with a 'You can't find a car?' message and an 'Apply for a CAR QUOTE' button, followed by a 'UK WARNING' about dodgy companies.

The design is criticized for its lack of consistency, excessive use of text and images, and poor use of color and layout, which are the focus of the activity.



5 MIN

Why option B is better ?

A

DELTA
TESTACCT/QA
GOLD/ELITEPLUS
DL2397768025
H2GB

BOARDING PASS
SKY PRIORITY
1 006 2144698802 0
GKAWEZ

BOARDING PASS
SKY PRIORITY
TESTACCT/QA
GOLD/ELITEPLUS
DL2397768025

FLIGHT DL10	DATE 02FEB	CLASS H	ORIGIN ATLANTA	DEPART 1035P	SEAT 20E	FLIGHT DL10	DATE 02FEB	CLASS H	ORIGIN ATLANTA	DEPART 1035P	SEAT 20E
OPERATED BY DELTA AIR LINES INC				COACH		OPERATED BY DELTA AIR LINES INC				COACH	
DESTINATION LONDON-HEATHROW				940P		DESTINATION LONDON-HEATHROW				940P	
DEPARTURE DATE - **SUBJECT TO CHANGE** SOUTH TERMINAL						DESTINATION LONDON-HEATHROW OPERATED BY DELTA AIR LINES INC DELTA SKY CLUB ONE-DAY PASS					

BCN ATL001
ATL18461/001

INTL - VERIFY PASSPORT
WHEELCHAIR REQUESTED /SPECIAL MEAL REQUESTED

B

Ivan Boyko June 5, 2016 **Lufthansa**

LH 907 to Frankfurt	Boarding 9:10 AM	Seat A22 Window
Terminal 2 Boarding area D	Gate D10	 Departing 9:40 AM ✈️
	Boarding priority 1 2 3 4	

In Frankfurt
take Sky Train to Terminal 1

Justify your choice in terms of

- ✓ Contrast
- ✓ Repetition
- ✓ Alignment
- ✓ Grouping



Summary of repetition

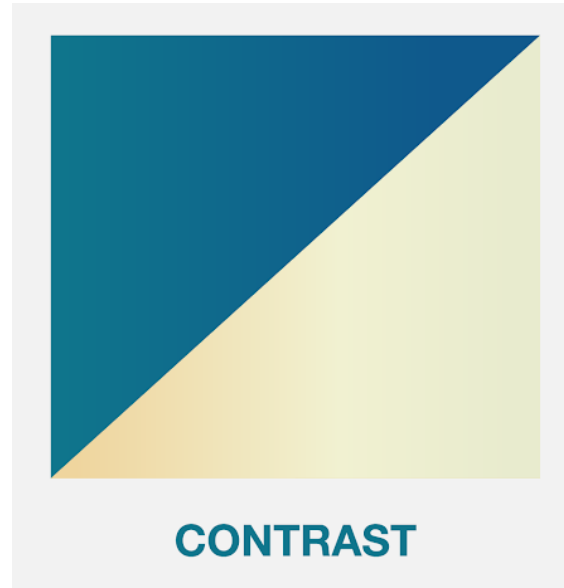


- **Repetition** makes elements look like they **belong together**
- The purpose is to **unify** and add **visual interest**
- You cannot have **contrast** without **repetition**

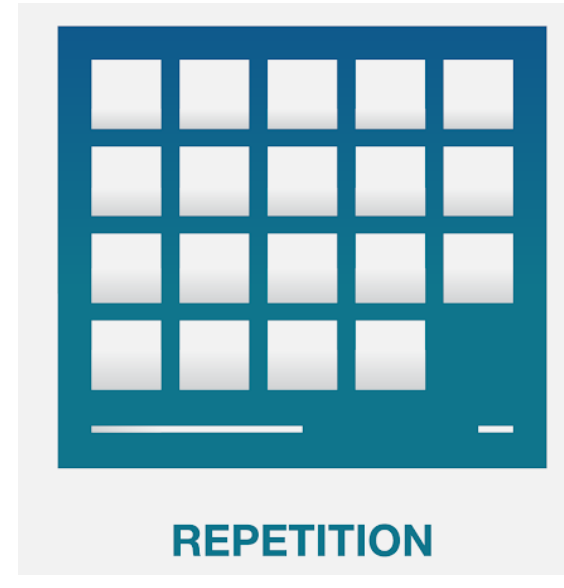
Basic design principles



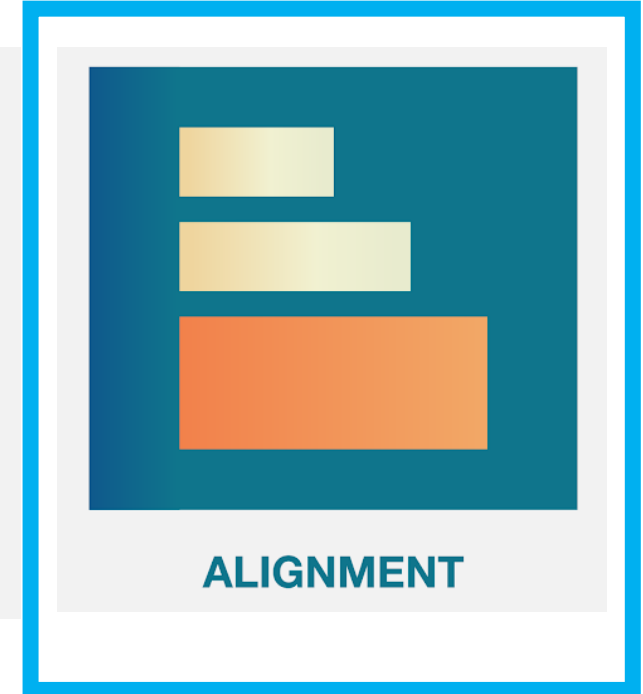
Things that are related should be **close to each other**



Not related elements are **graphically different**



Repeat style to reinforce the structure and the unity of your design



Align elements together to reinforce their connection



05 MIN

CLASS

In which kitchen are you the most comfortable ?

A**B**



5 MIN

CLASS

Alignment

Nothing should be placed on the page arbitrarily

Lack of alignment creates **discomfort !**



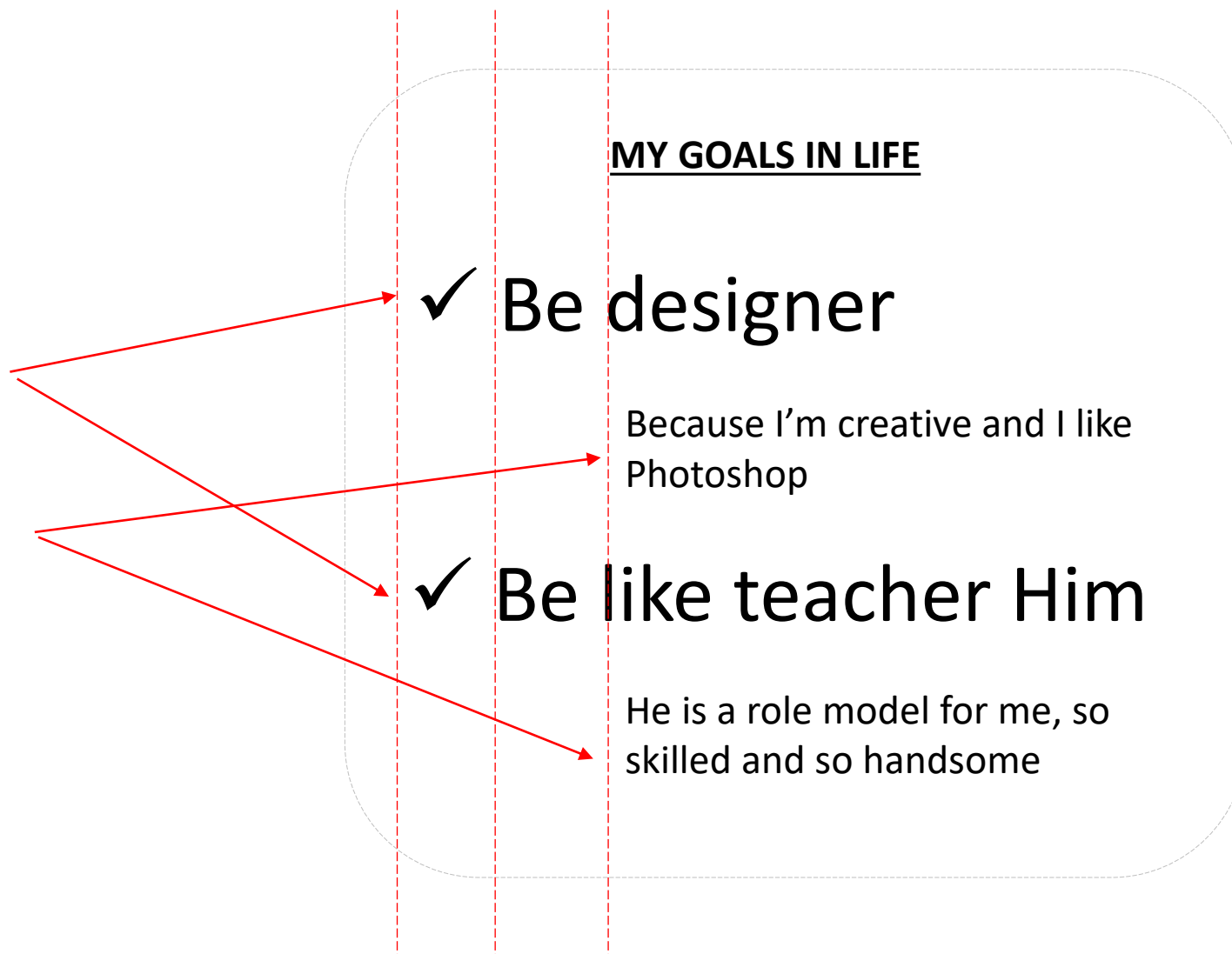
5 MIN



CLASS

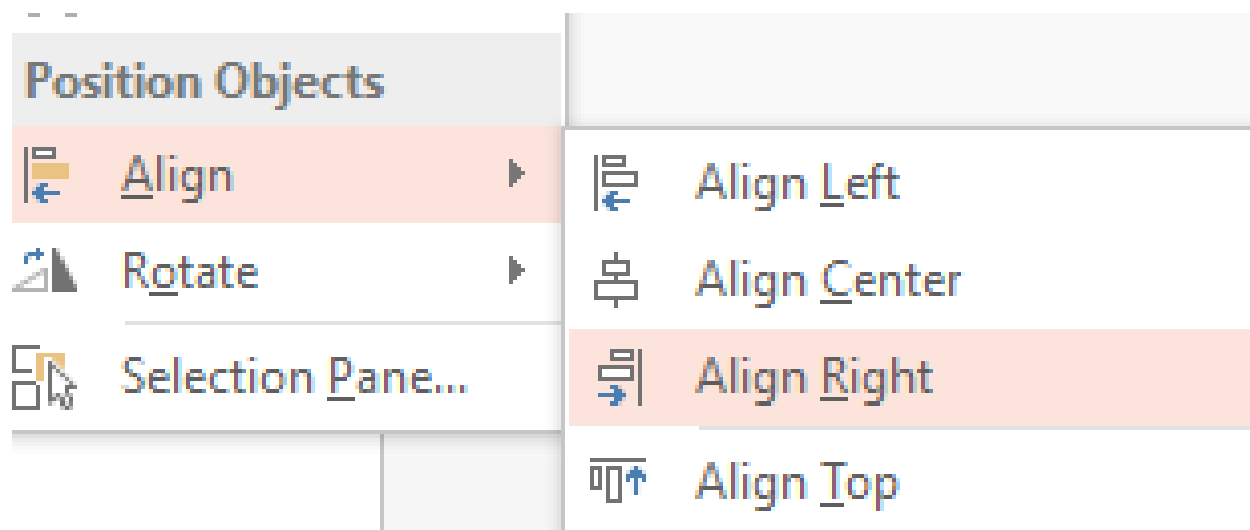
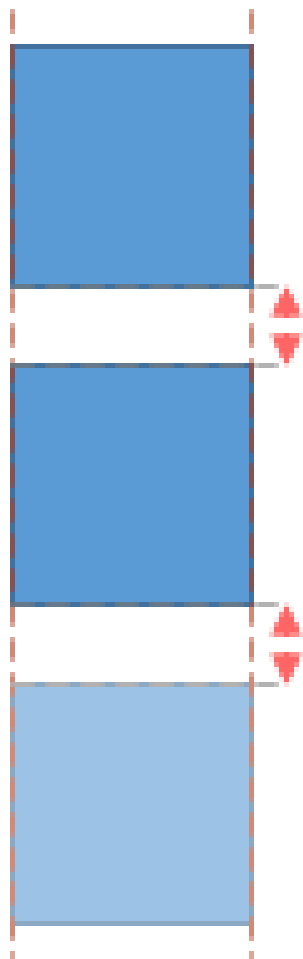
An **invisible line** connect aligned elements

Even if elements
are far away,
The alignment
makes them
strongly unified





Use FIGMA/POWERPOINT Tools to ALIGN !!





5 MIN



CLASS

An **center** alignment is
Safe, easy to use, comfortable, formal

Him Hey

The best of the best

+855 – 89-456-8

PNC street 78

Phnom Penh, Cambodia

An **right/left** alignment gives a
more sophisticated impression

Him Hey

The best of the best

Those 2 element
are linked
Together
With the
alignment

+855 – 89-456-8

PNC street 78

Phnom Penh, Cambodia

QUESTION



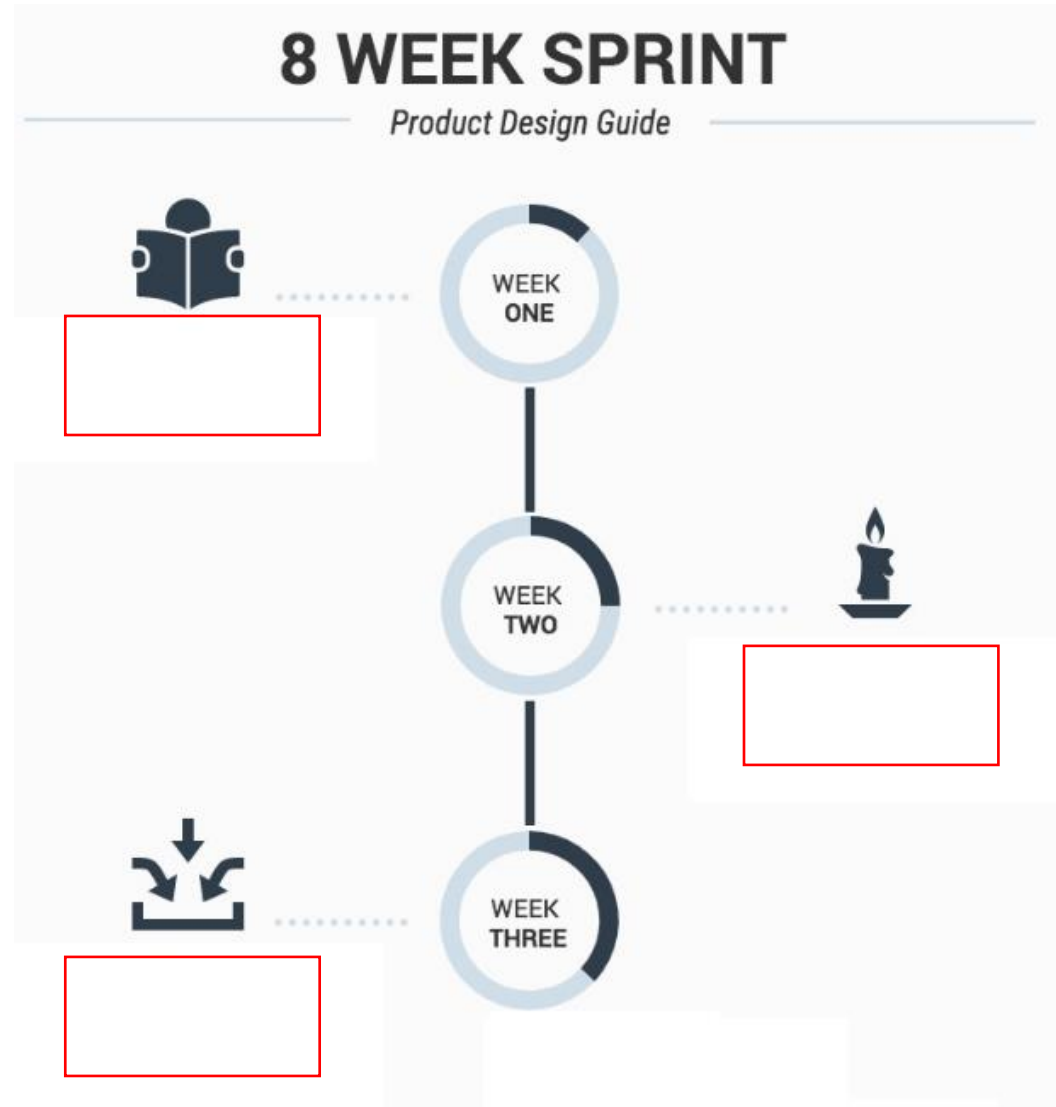
5 MIN



CLASS

Which **alignment** to choose to put text on rectangles ?

Left
Right
Center
Justified



QUESTION



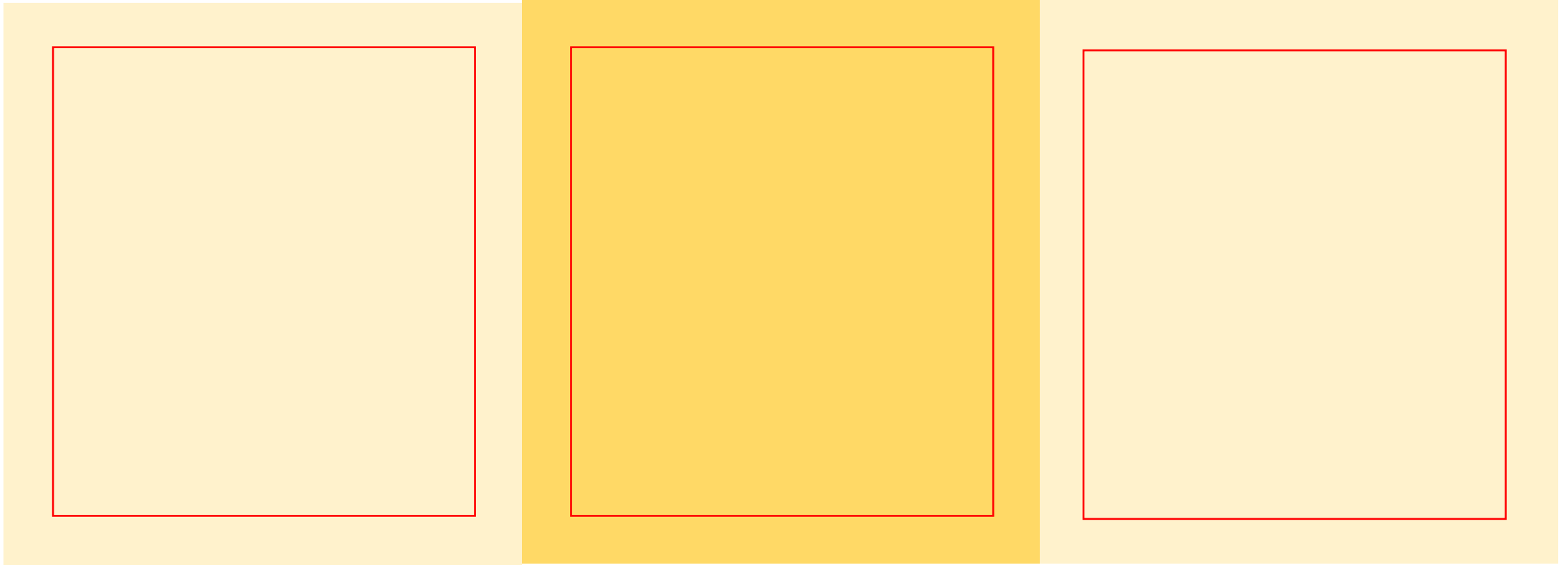
5 MIN



CLASS

Which **alignment** to choose to put text on rectangles ?

Left
Right
Center
Justified





Summary of alignment



1. Every element **must have a connection** with other elements
2. Always **align a new element** with something else on the page
3. **Avoid centered** alignment

Nothing should be placed on the page arbitrarily !!



15 MIN



Team 2

ACTIVITY 3

Evaluate the **flyers** (2 pages) according to the **grid**

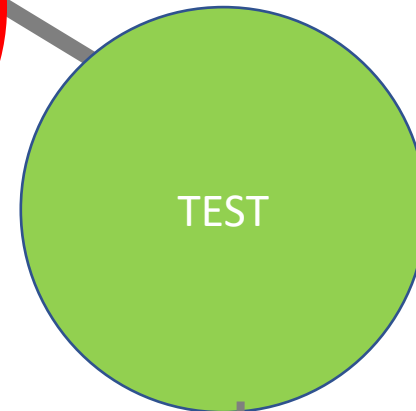
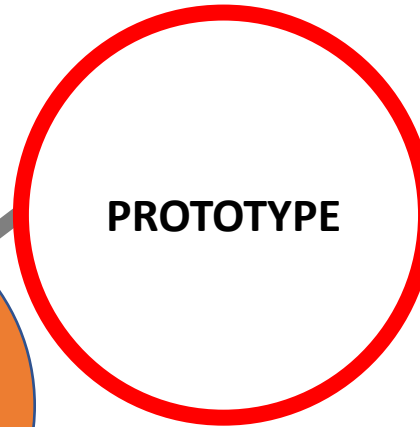
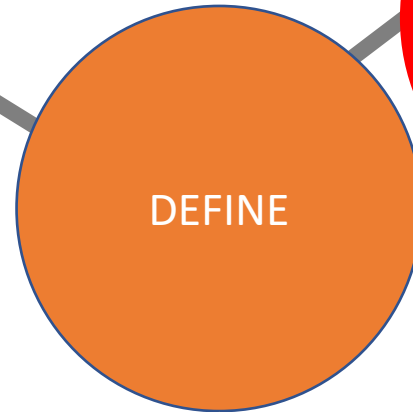
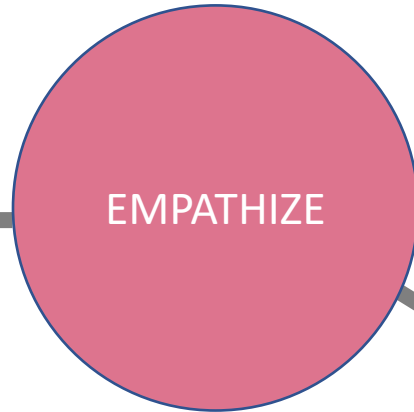
CATEGORY	CRITERIA
PROXIMITY	<ul style="list-style-type: none"> ✓ Elements are <u>grouped</u> to increase their cohesion ✓ Space is used to reinforce the grouping ✓ When elements are not related, they are not grouped
CONTRAST	<ul style="list-style-type: none"> ✓ Elements are <u>contrasted</u> to create interest ✓ Contrast is high enough
ALIGNMENT	<ul style="list-style-type: none"> ✓ Elements are <u>aligned</u> to structure the page
CONSISTENCY REPETITION	<ul style="list-style-type: none"> ✓ All pages respect the same styles (margins, colors, sizes...)
DESIGN SYSTEM	<ul style="list-style-type: none"> ✓ Unique choice of color set ✓ Unique choice of fonts ✓ Unique widgets styles in all pages



UX

UI

- ✓ Basic design principles
- ✓ Usability principles





Usability Principles **Criteria**

Why Criteria ?

We need **criteria** to define **what is good or bad** in the evaluation of a User Interface

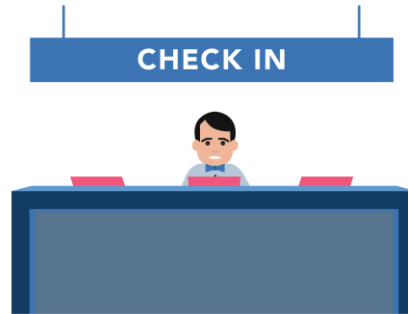
Usability Principles Criteria



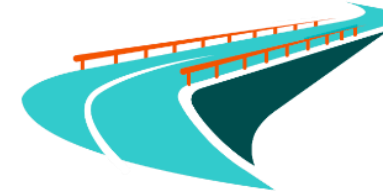
Visibility of
system status



User control
and freedom



Consistency
and standards



Error
prevention



Aesthetic and
minimalist
design



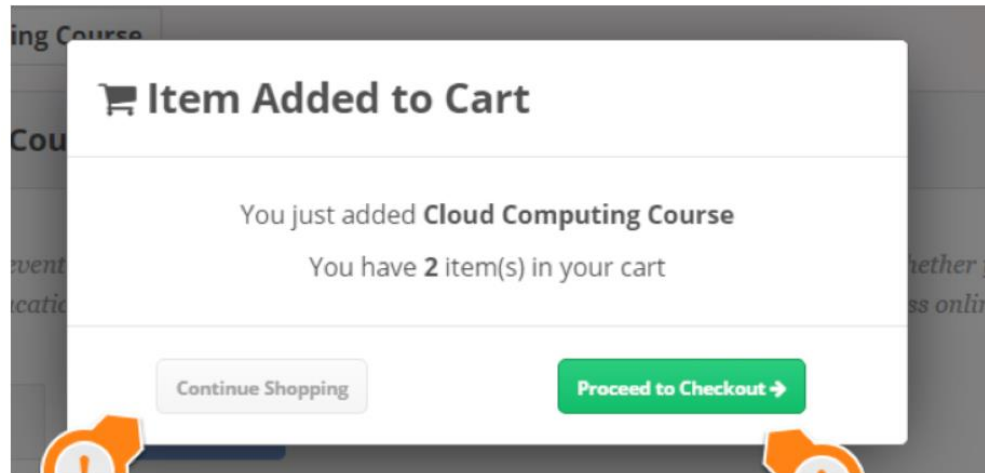
Visibility of system status

The system should always keep users informed about **what is going on**



Visibility of system status

Notifications



Feedbacks after each action

Information on evolution

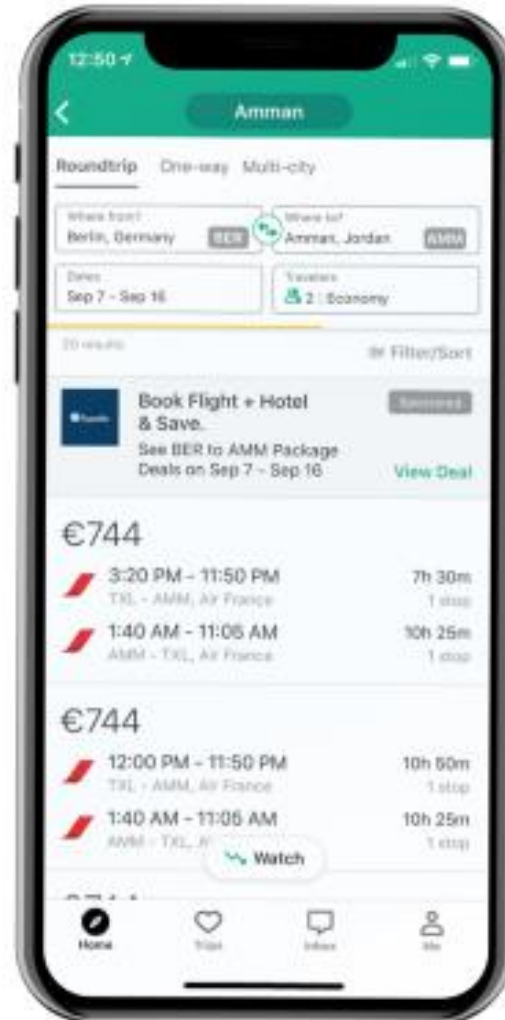


Uploading: 77%

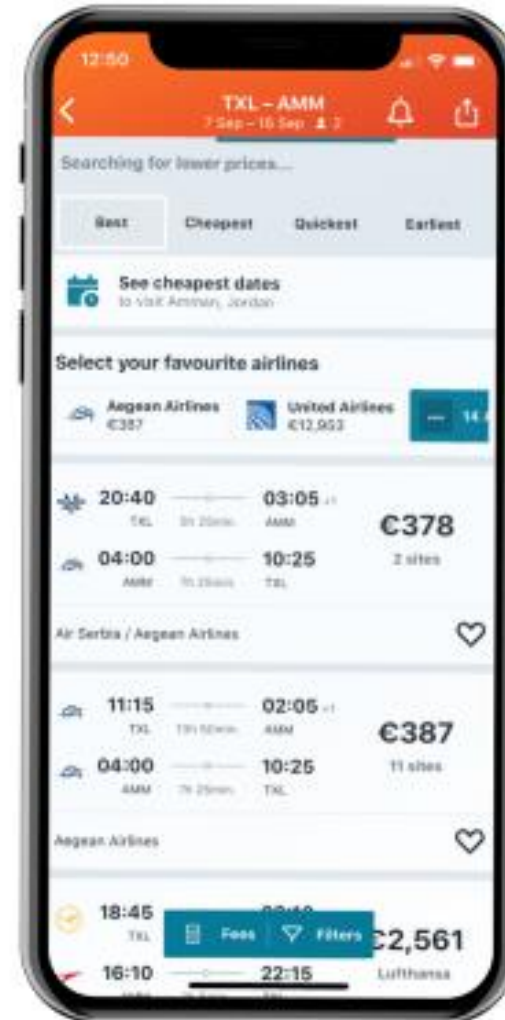
Example Data.csv



Which app is better to **inform about the loading**, and why ?



1

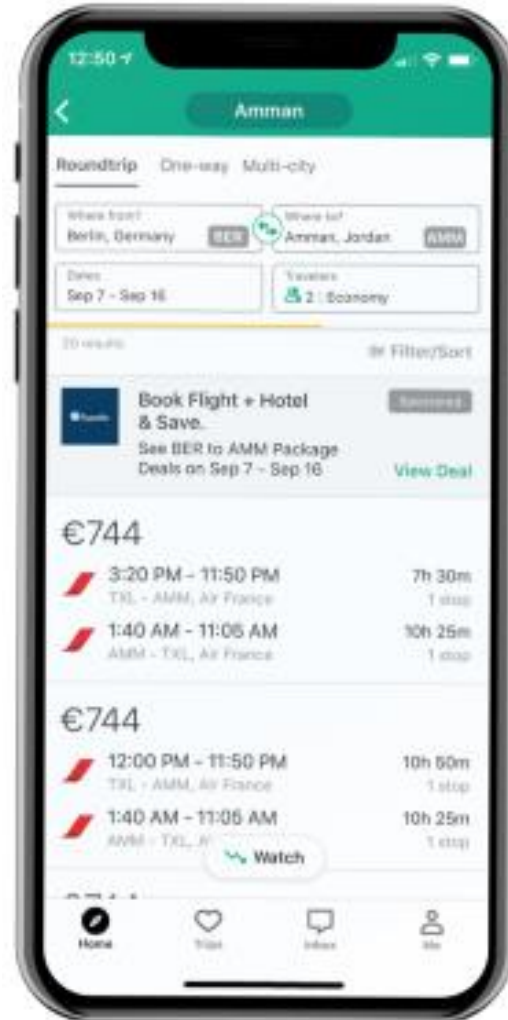


2

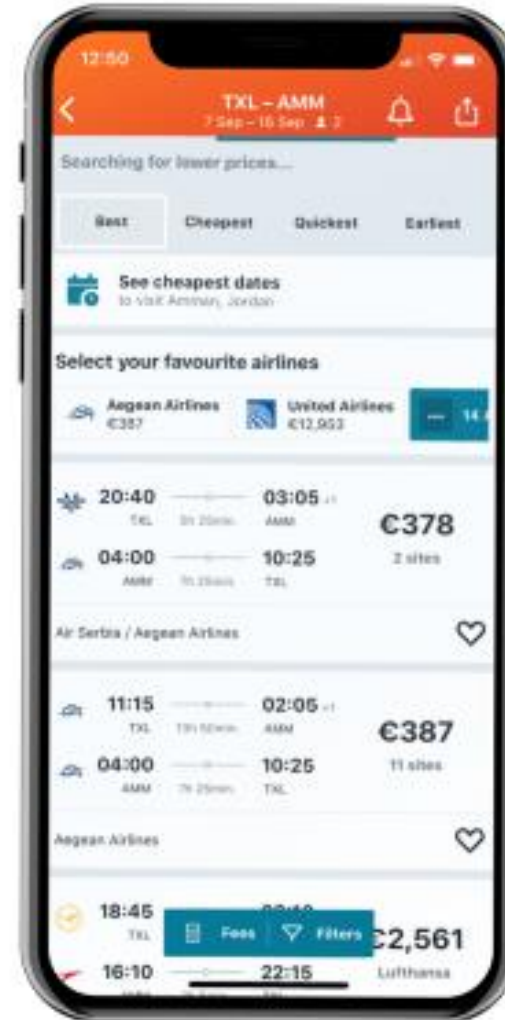


Which app is better to **inform about the loading**, and why ?

The loading progression can be estimated



1



2

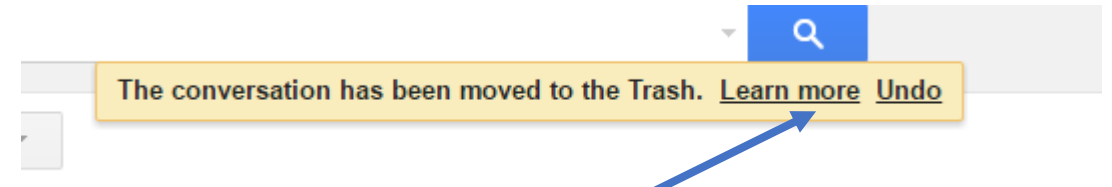
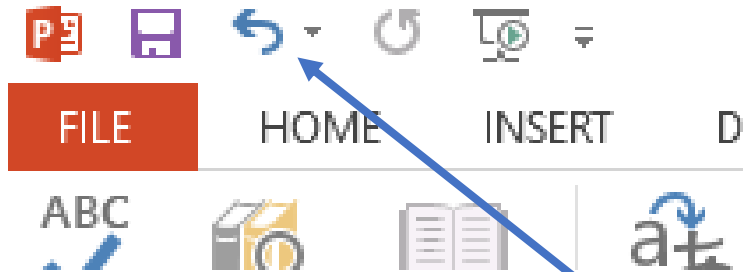


User control and freedom

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



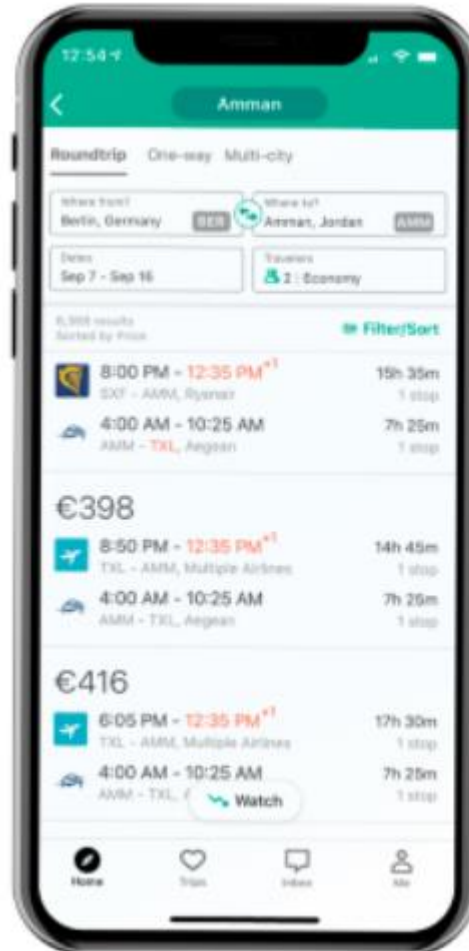
User control and freedom



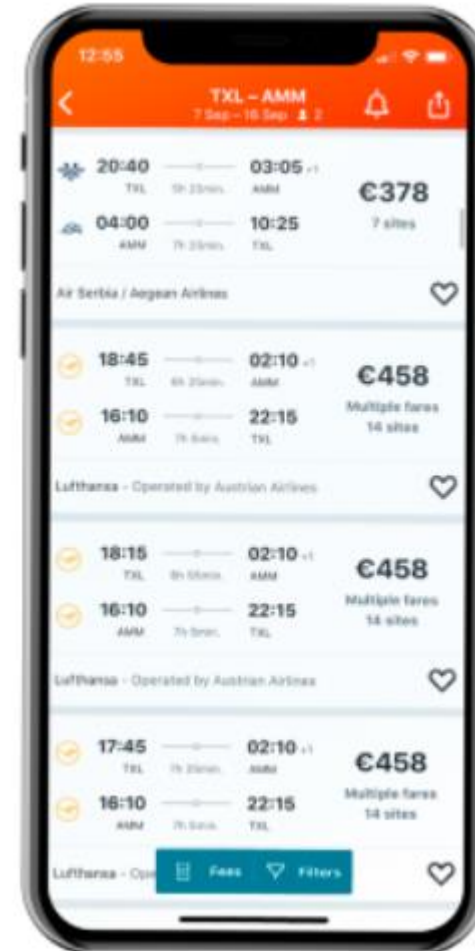
Backward steps are possible



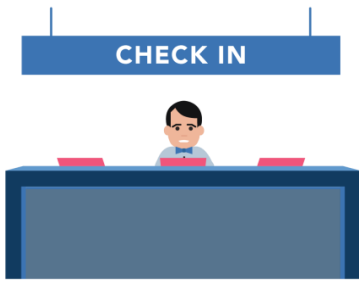
Which app is allow me to easily change my start date if I made a mistake ?



1

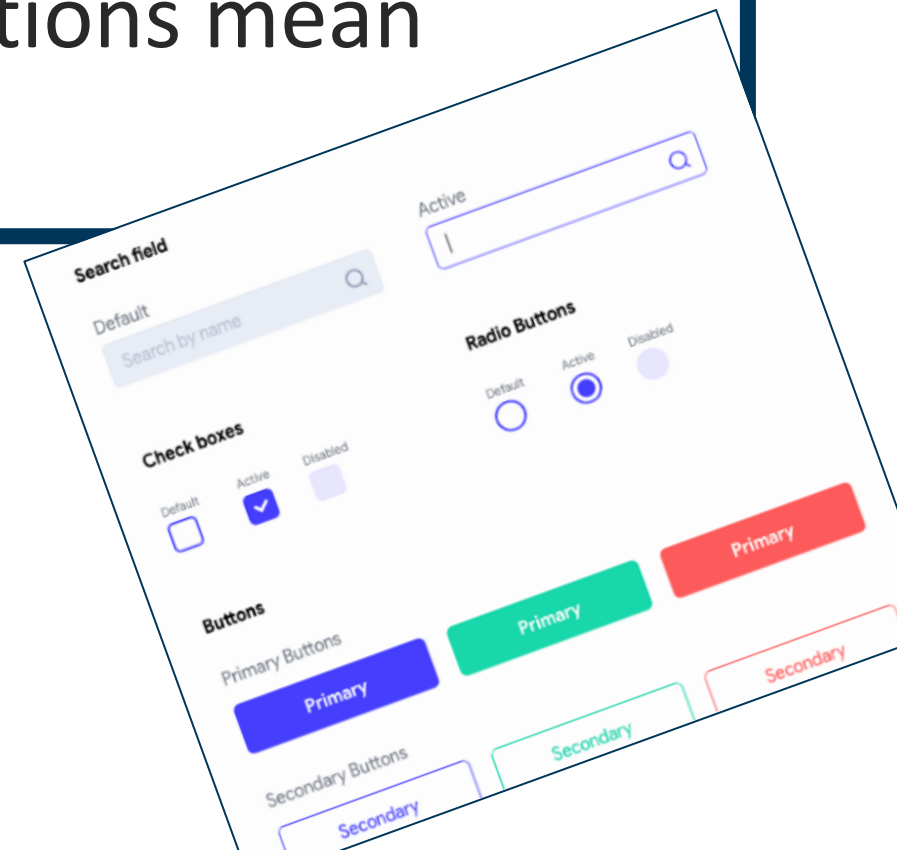


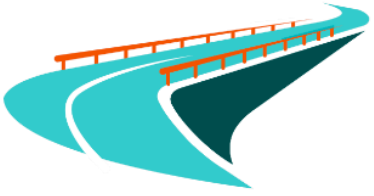
2



Consistency & standards

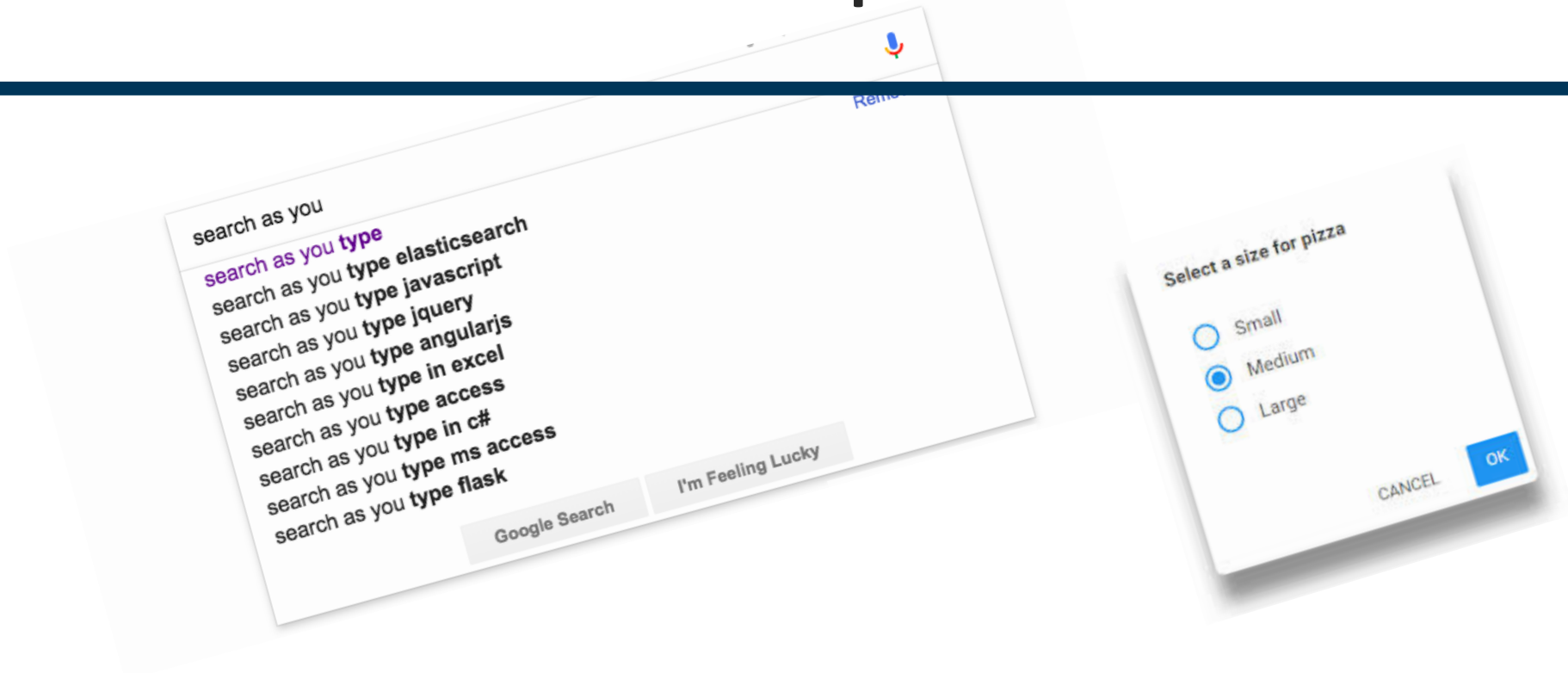
Users should not have to wonder whether different words, situations, or actions mean the same thing. .





Error prevention

Even better than good error messages is a careful design which **prevents** a problem **from occurring** **in the first place**





Which app is better to **prevent error when selecting dates** ??

From
Fri, Feb 10 2014

Date occurs in the past

To
Fri, Feb 10 2014

Date occurs in the past

1

Check-in Date: 27 Wednesday July
Check-out Date: 28 Thursday July

Cancel Check-in Date

July 2016

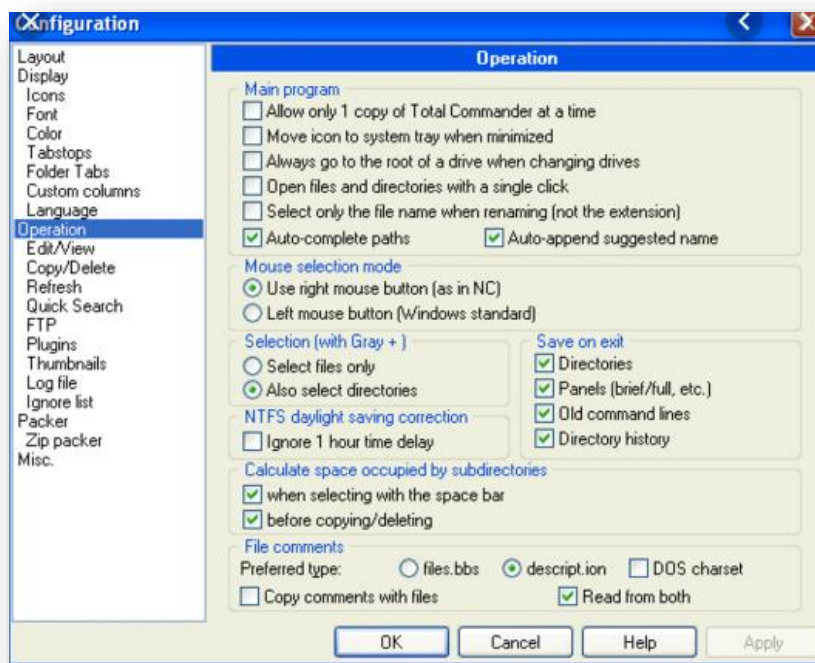
Mon	Tue	Wed	Thu	Fri	Sat	Sun
27	28	29	30	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
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2

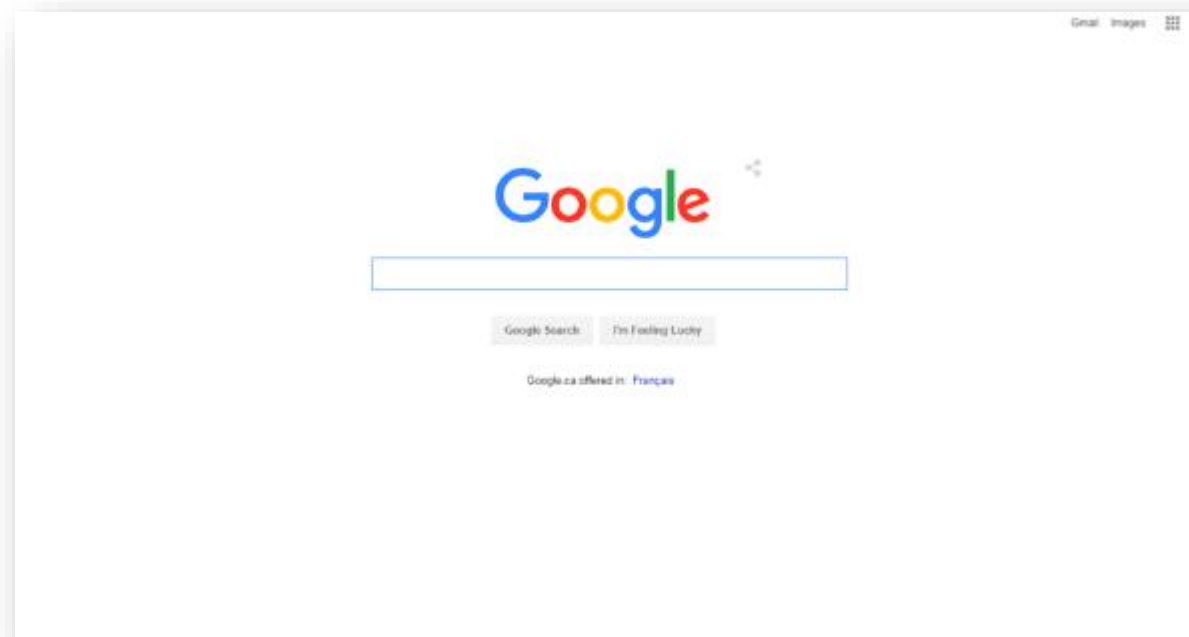


Aesthetic and minimalist design

BAD



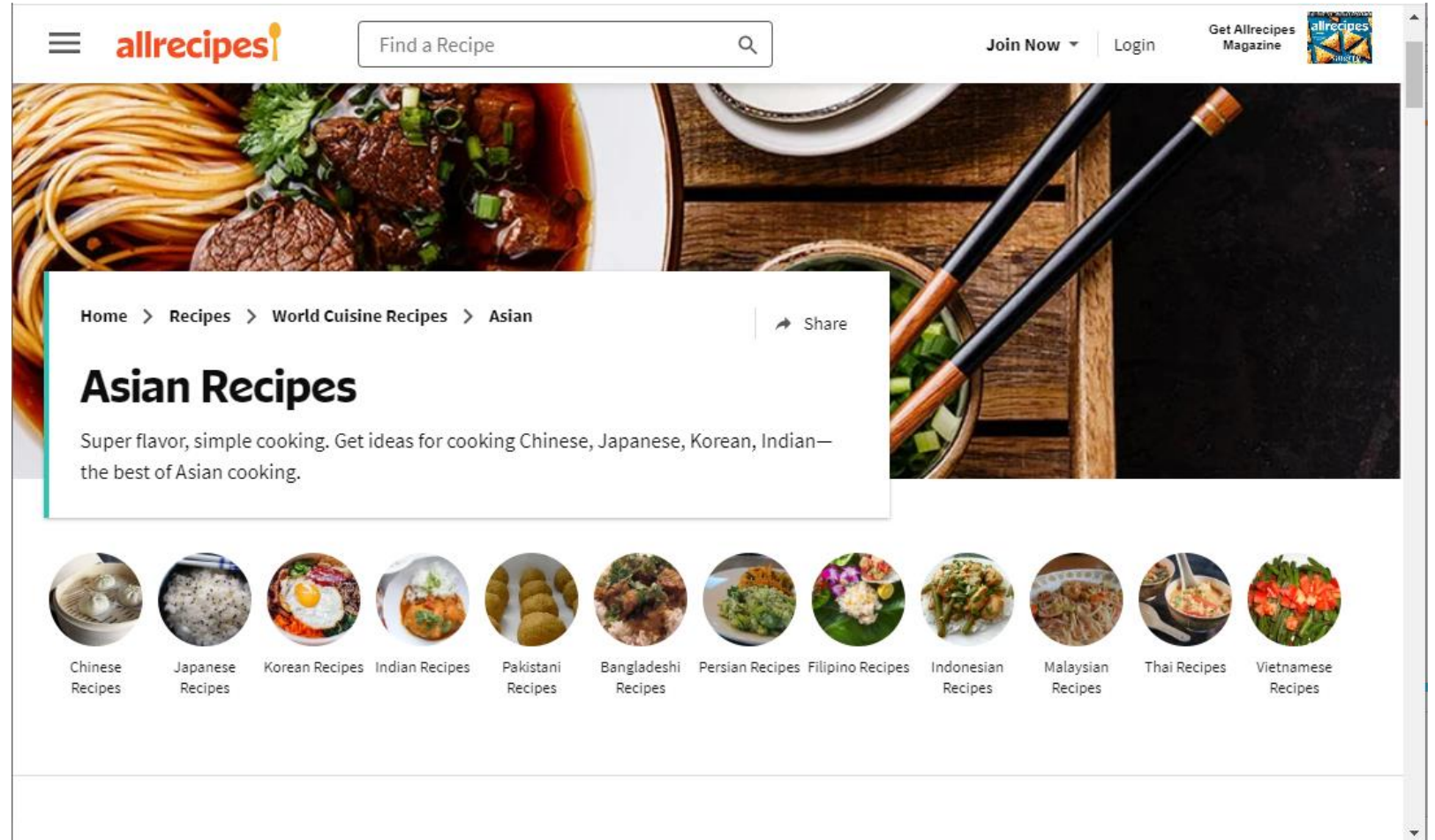
GOOD



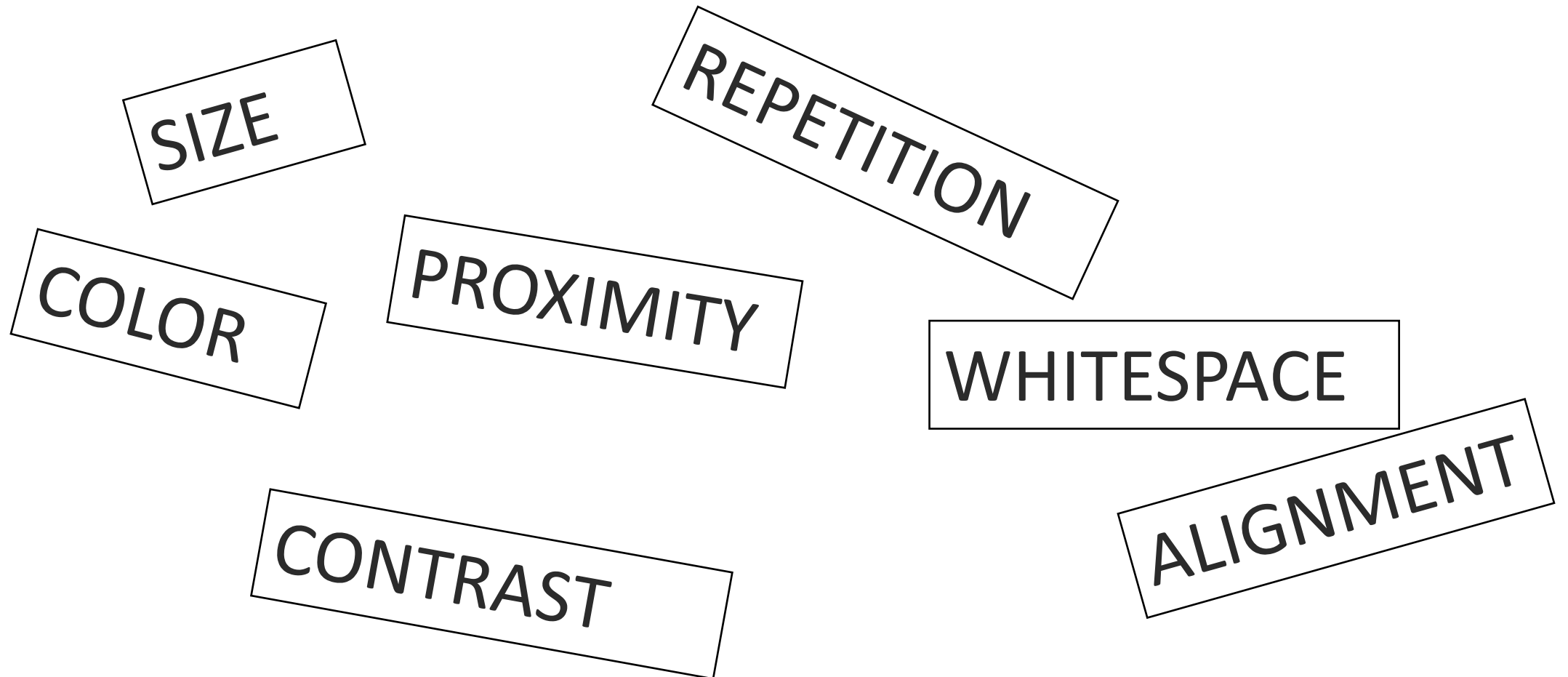


Answer the following 3 questions

- ✓ Where am I ?
- ✓ What is this page exactly about
- ✓ Where can I go from here?



HOW TO VISUALLY REPRESENT THE **HIERARCHY ?**



What We Do

Great UX design emerges from measurement and insight.

Great user experience combines **Research AND Design**.

Greatness is achieved through [User Centered Design](#) (Learn about our service).

UX Research



Usability Testing

User Research

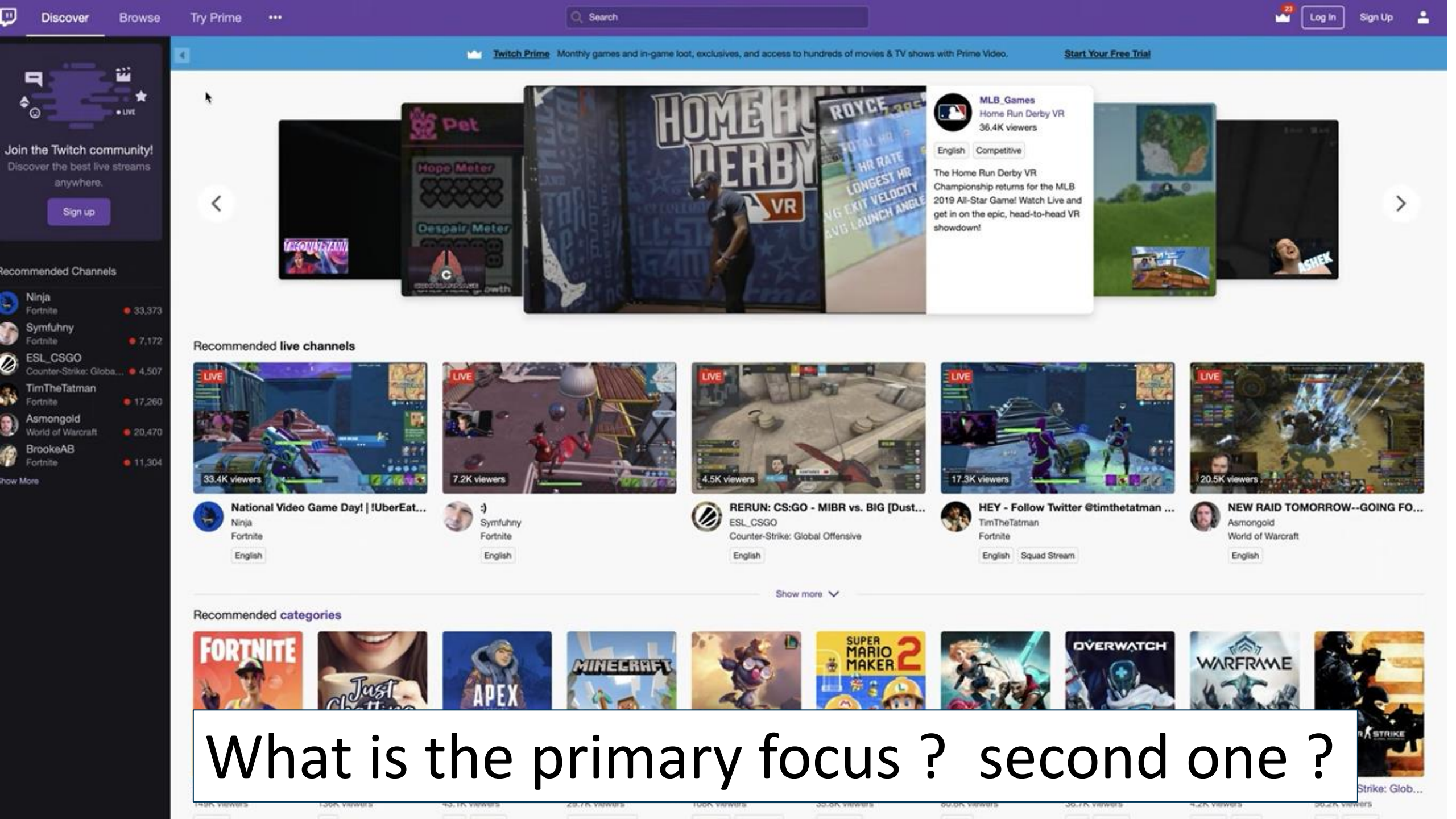
Accessibility Testing

Expert Reviews

Eye Tracking

UX Design

What is the primary focus ? second one ?



What is the primary focus ? second one ?