

PREGRADO



UNIDAD 2 | USER EXPERIENCE DESIGN & PROTOTYPING

UI DESIGN

SI385 | IHC y Tecnologías móviles



Al finalizar la unidad, el estudiante crea diseños visuales en base a la experiencia propuesta para el usuario, tanto web como móvil.

AGENDA

INTRO

UI DESIGN ELEMENTS

WIREFRAMES, MOCKUPS, PROTOTYPES

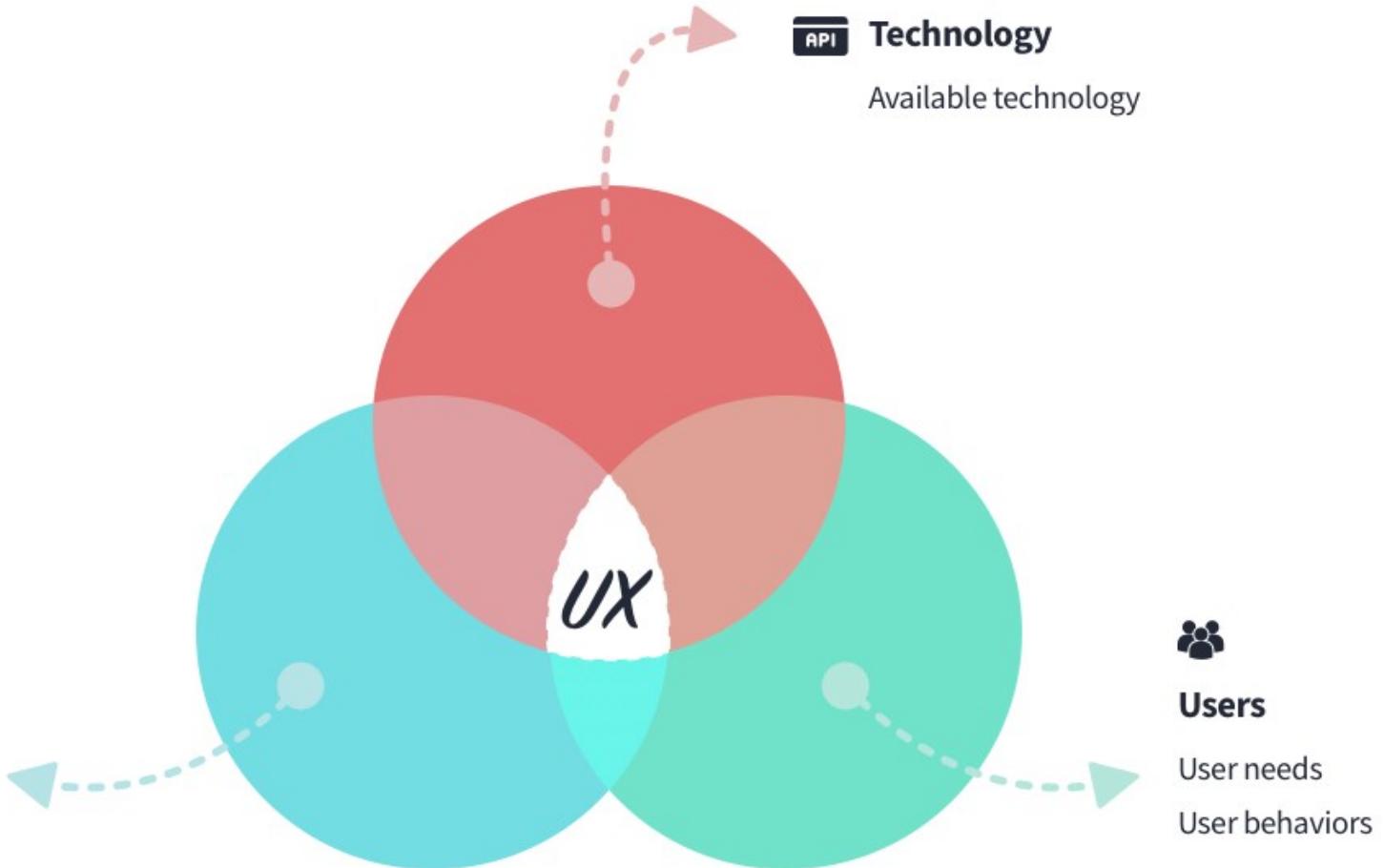
USER FLOW





Business

Marketing needs
Financial needs



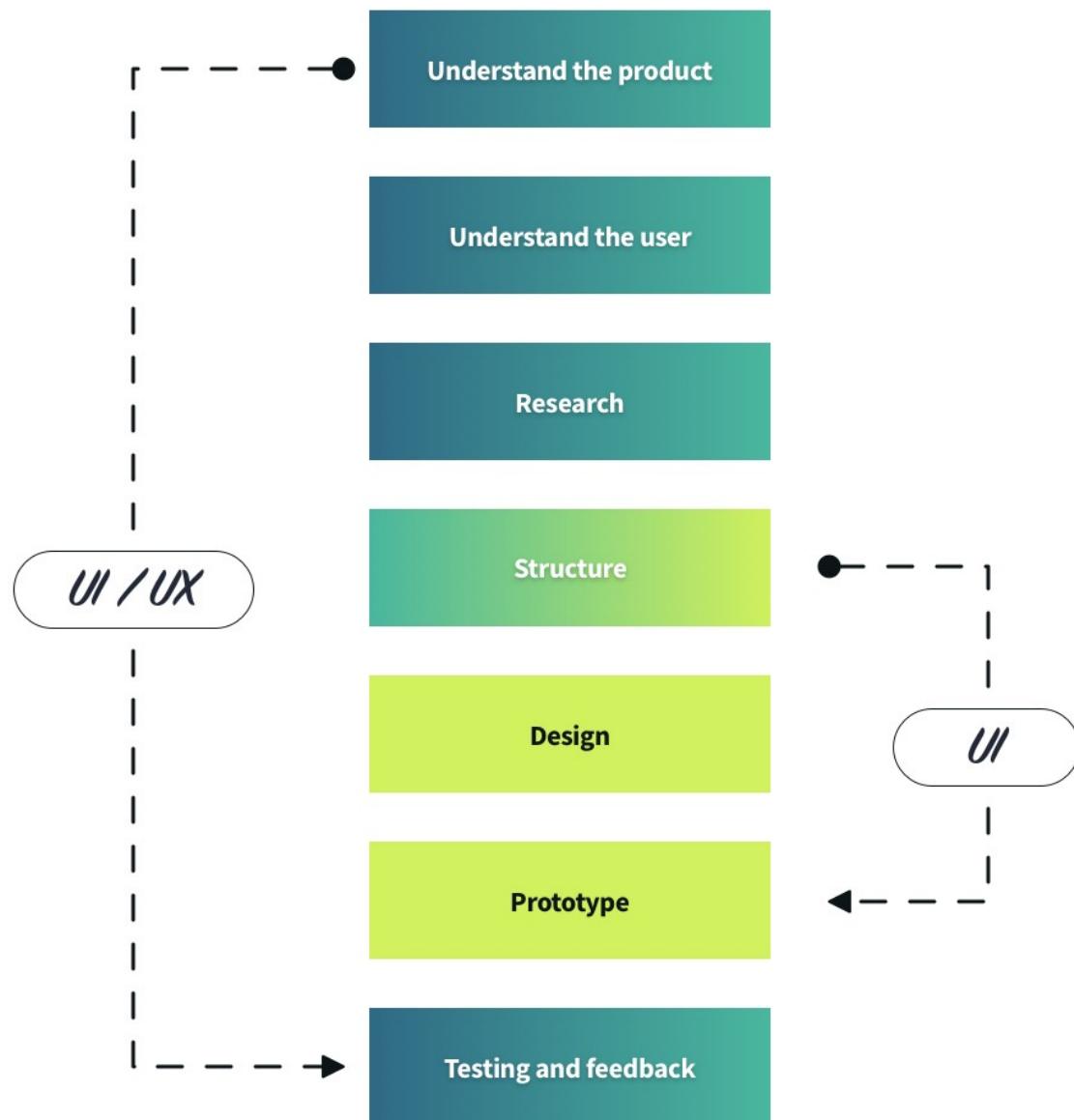
Technology

Available technology



Users

User needs
User behaviors





Information Architecture

Content inventory

Content audit

Navigation and mapping



Wireframes

Low fidelity (sketches)

High fidelity



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USER FLOW



Design

Elements

The things that make up a design

- Line
- Shape
- Direction
- Size
- Texture
- Colour

Principles

What we do to those elements

- Balance
- Proximity
- Alignment
- Repetition
- Contrast
- Space

LINE



A line is a mark between two points. There are various types of lines, from straight to squiggly to curved and more. Lines can be used for a wide range of purposes: stressing a word or phrase, connecting content to one another, creating patterns and much more.

COLOR

Color is used to generate emotions, define importance, create visual interest and more. CMYK (cyan/magenta/yellow/black) is subtractive; RGB (red/green/blue) is additive.

Some colors are warm and active (orange, red); some are cool and passive (blue, purple).

There are various color types (primary to analogous) and relationships (monochromatic to triad) worth learning more about as well.

TEXTURE



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created by Paper Leaf Design. www.paper-leaf.com

SHAPE

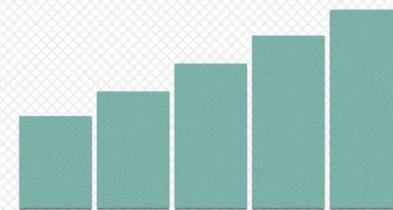


Height + width = shape. We all learned basic shapes in grade school - triangles, squares, circles and rectangles. Odd or lesser seen shapes can be used to attract attention.

There are three basic types of shape: geometric (triangles, squares, circles etc), natural (leaves, animals, trees, people), and abstracted (icons, stylizations, graphic representations etc).



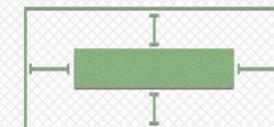
SIZE



Size is how small or large something is: a small shirt vs. an extra large shirt, for example. Use size to define importance, create visual interest in a design (via contrasting sizes), attract attention and more.

VALUE

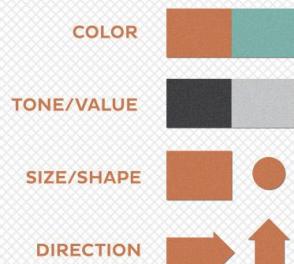
Value is how light or how dark an area looks. A gradient, shown above, is a great way to visualize value - everything from dark to white, all the shades in-between, has a value. Use value to create depth and light; to create a pattern; to lead the eye; or to emphasize.



Space is the area around or between elements in a design. It can be used to separate or group information. Use it effectively to: give the eye a rest; define importance; lead the eye through a design and more.



CONTRAST

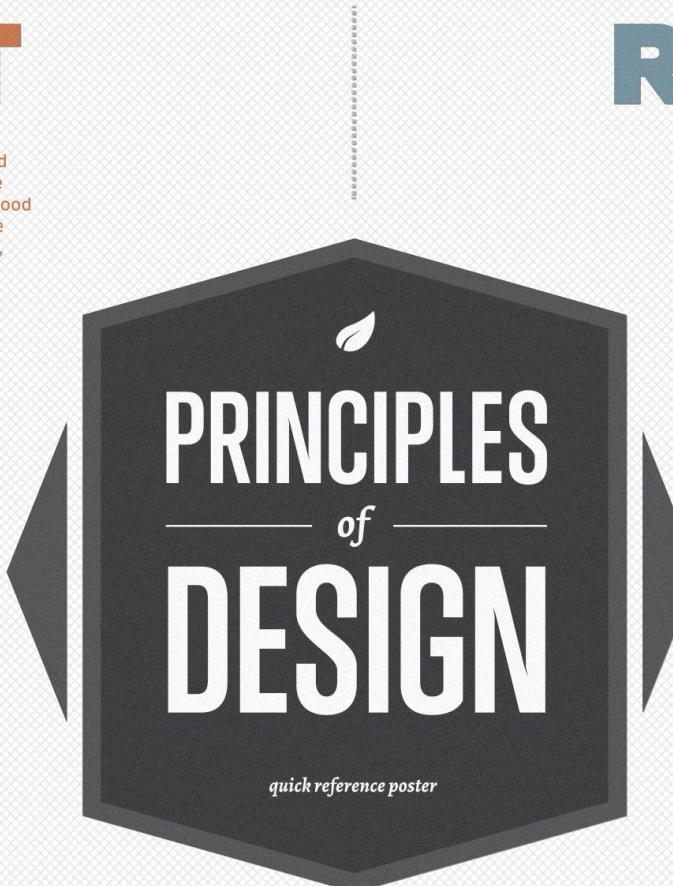


Unique elements in a design should stand apart from one another. One way to do this is to use contrast. Good contrast in a design – which can be achieved using elements like color, tone, size, and more – allows the viewer's eye to flow naturally.

To the left, you can see 4 ways to create contrast in your design.

ALIGNMENT

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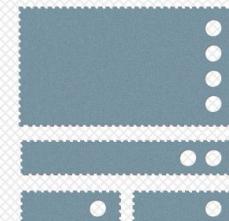


REPETITION

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The short version?

Establish a style for each element in a design and use it on similar elements.



PROXIMITY

Proximity allows for visual unity in a design. If two elements are related to each other, they should be placed in close proximity to one another. Doing so minimizes visual clutter, emphasizes organization, and increases viewer comprehension.



Imagine how ridiculous it would be if the proximity icons on this graphic were located on the other side of this document.



UI Design Elements

Language (Lenguaje)

Colour (Color)

Imagery (Imágenes)

Typography (Tipografía)

Icons (Íconos)

Language

El lenguaje como herramienta de diseño

El nombre del producto tiene el poder de establecer el estado anímico (mood) desde el primer contacto en la experiencia.

Un conjunto de palabras puede aplicarse para establecer la dirección del diseño. Los tonos pueden variar según la intención y decisiones de la marca (estricto, científico, entretenido, divertido, entre otros).

Language

Clear

jargon-free, offers context

Concise

economical, frontloaded

Useful

directs next action

Language

Original

Failure

An authentication error has occurred

OK

Clear

Sign-in error

You entered an incorrect password

OK

Clear, Concise

Wrong password

OK

Clear, Concise, Useful

Wrong password

[TRY AGAIN](#) [RECOVER PASSWORD](#)

Color



Color

El color también establece el mood, dado que los humanos responden a él de forma emotiva y subjetiva.

El color puede ayudar a mostrar estados como pasivo (inactive), activo (touch / hover) o activado (press / click).

COLOUR THEORY

QUICK REFERENCE SHEET

CMYK SUBTRACTIVE

CREATED WITH INK

WHEN WE MIX COLOURS USING PAINT, OR THROUGH THE PRINTING PROCESS, WE ARE USING SUBTRACTIVE COLOUR METHOD. SUBTRACTIVE COLOUR MIXING MEANS THAT ONE BEGINS WITH WHITE AND ENDS WITH BLACK; AS ONE ADDS COLOUR, THE RESULT GETS DARKER AND TENDS TO BLACK.



RGB ADDITIVE

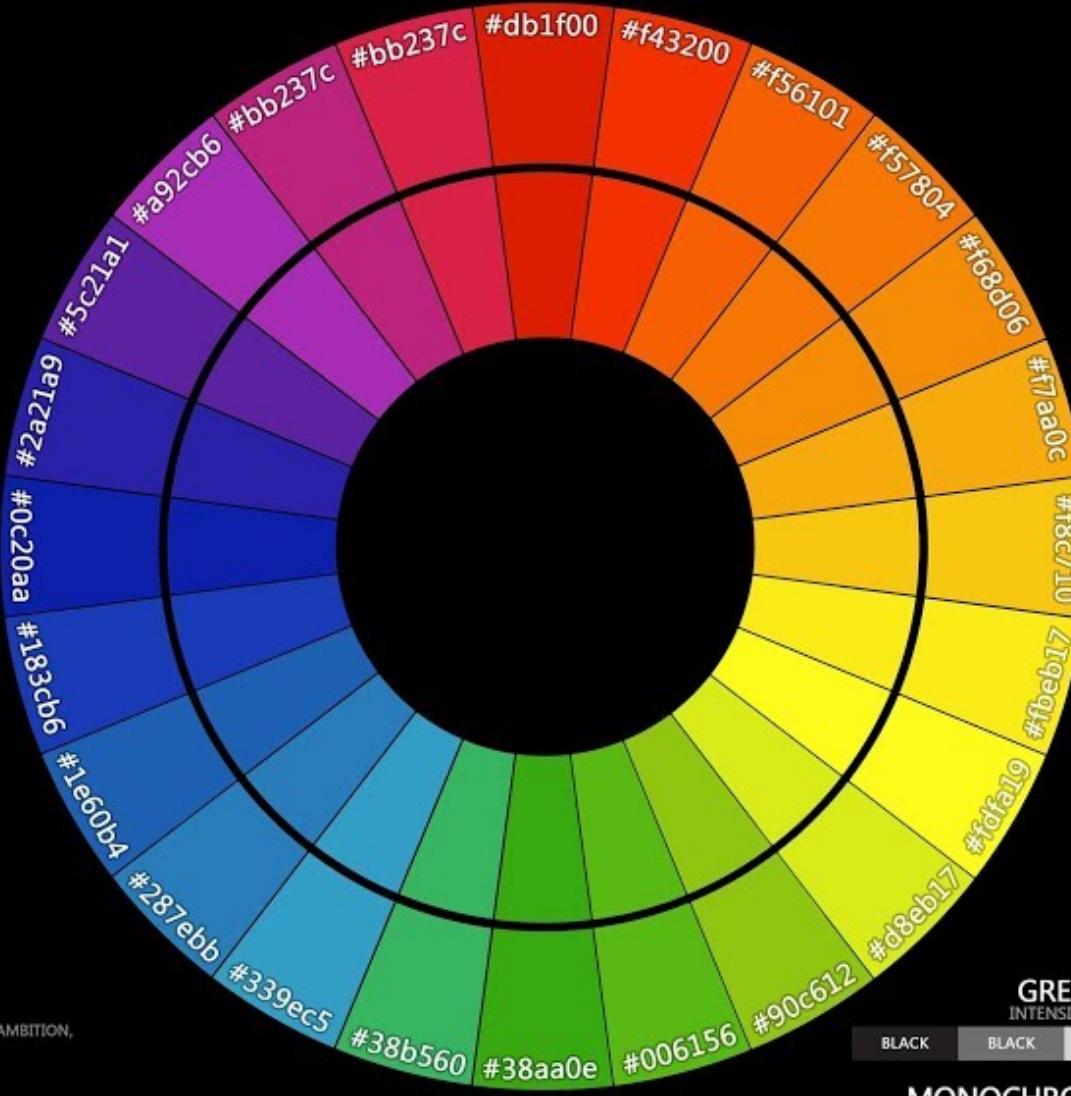
CREATED WITH LIGHT

IF WE ARE WORKING ON A COMPUTER, THE COLOURS WE SEE ON THE SCREEN ARE CREATED WITH LIGHT USING THE ADDITIVE COLOUR METHOD. ADDITIVE COLOUR MIXING BEGINS WITH BLACK AND ENDS WITH WHITE; AS MORE COLOUR IS ADDED, THE RESULT IS LIGHTER AND TENDS TO WHITE.



COLOUR MEANINGS

RED	INTENSE, FIRE, BLOOD, ENERGY, LOVE, PASSIONATE, STRONG.
RED VIOLET	ROYALTY, POWER, NOBILITY, WEALTH, AMBITION, DIGNIFIED, MYSTERIOUS.
BLUE	SKY, SEA, DEPTH, STABILITY, TRUST, MASCULINE, TRANQUIL.
GREEN	NATURE, GROWTH, FERTILITY, FRESHNESS, HEALING, SAFETY, MONEY.
YELLOW	SUNSHINE, JOY, CHEERFULNESS, INTELLECT, ENERGY, ATTENTION.
ORANGE	WARM, STIMULATING, ENTHUSIASM, HAPPINESS, SUCCESS, CREATIVE, AUTUMN.



GREYSCALE INTENSITY OF BLACK

BLACK BLACK BLACK

MONOCHROMATIC COLOURS OF A SINGLE HUE

BLUE	BLUE	BLUE
RED	RED	RED
YELLOW ORANGE	BLUE	VIOLET

ANALOGOUS

COLOURS THAT ARE ADJACENT TO EACH OTHER ON THE COLOUR WHEEL

RED	RED ORANGE	YELLOW ORANGE
YELLOW	YELLOW GREEN	GREEN

COMPLEMENTARY

COLOURS OPPOSITE TO EACH OTHER ON THE COLOUR WHEEL

BLUE GREEN	RED ORANGE	YELLOW VIOLET
BLUE	ORANGE	YELLOW GREEN
BLUE VIOLET	YELLOW ORANGE	GREEN

TRIADIC

THREE COLOURS SPACED EQUALLY APART ON THE COLOUR WHEEL

RED	YELLOW	BLUE
BLUE VIOLET	RED ORANGE	YELLOW GREEN
ORANGE	GREEN	VIOLET
YELLOW ORANGE	BLUE GREEN	RED VIOLET

SPLIT COMPLEMENT

A COLOUR AND THE TWO COLOURS NEXT TO ITS COMPLEMENT ON THE COLOUR WHEEL

YELLOW	BLUE VIOLET	RED VIOLET
YELLOW GREEN	VIOLET	RED
GREEN	RED VIOLET	RED ORANGE
BLUE GREEN	RED	ORANGE
BLUE	RED ORANGE	YELLOW ORANGE
BLUE VIOLET	ORANGE	YELLOW
VIOLET	YELLOW ORANGE	YELLOW GREEN
RED VIOLET	YELLOW	GREEN
RED	YELLOW GREEN	BLUE GREEN
RED ORANGE	GREEN	BLUE
ORANGE	BLUE GREEN	BLUE VIOLET
YELLOW ORANGE	BLUE	VIOLET

VISUAL IDENTITY DECIDING ON KEY COLORS

RED

Visceral, bold, courageous, energetic. Stimulates appetite and the pituitary gland. Increases heart rate, creates urgency often seen in clearance, used for impulsive shoppers.

ORANGE

Friendly, cheerful, confident, fun, vitality, lighter shades appeal to upscale market. Signifies aggression, Creates call to action: Buy, Sell, Subscribe. Found in impulsive shoppers.

YELLOW

Represents optimism, clarity, warmth, positivity. Eyes see yellow first, great for POS display.

BLACK

Prestige, serious, bold, classic, powerful, works well for expensive products.

GREEN

Balance, harmony, health, growth, freshness, deep greens are associated with prestige. Used to relax in stores, associated with wealthy, has long been a symbol of fertility.

BLUE

Trustworthy, strong, dependable, secure, preferred by men, popular in corporate because its productive and non-invasive.

PURPLE

Wise, creative, imaginative, royalty, lavender evokes nostalgia, sentimentality. Used often in beauty, or anti-aging products, used to soothe or calm.

WHITE

Suggests cleanliness and sterility, gives a sense of refinement, indicates space and openness, encourages the clearing of clutter, clarity, purity, simplicity, sophistication, freshness

Imagery

TOPICS WEBINARS SUBSCRIPTION

universitet

MY LESSONS PROFILE Q

Content Marketing

Advanced training in executing an effective inbound marketing strategy

BUY FOR \$15



Marketing Software

Marketing software training and certification for HubSpot Marketing Platform users.

BUY FOR \$15



Sales Software

HubSpot CRM and HubSpot Sales software training and certification for HubSpot Sales Platform users.

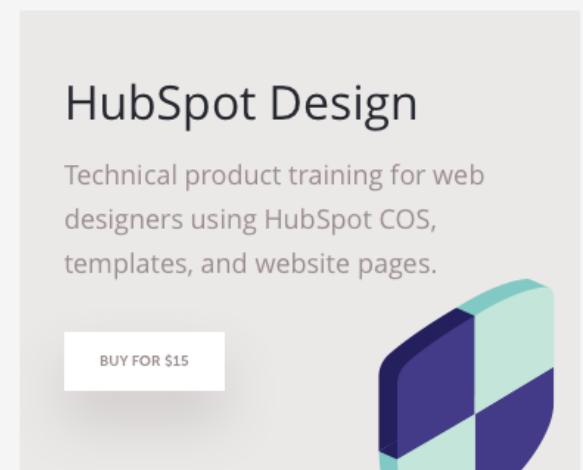
BUY FOR \$15



HubSpot Design

Technical product training for web designers using HubSpot COS, templates, and website pages.

BUY FOR \$15



Imagery

Formas, ilustraciones, fotografías, rendering en 3D, etc.

Pueden servir como contenido, mood y navegación en el contexto de UI design.

Icons

Icon vs Symbol:

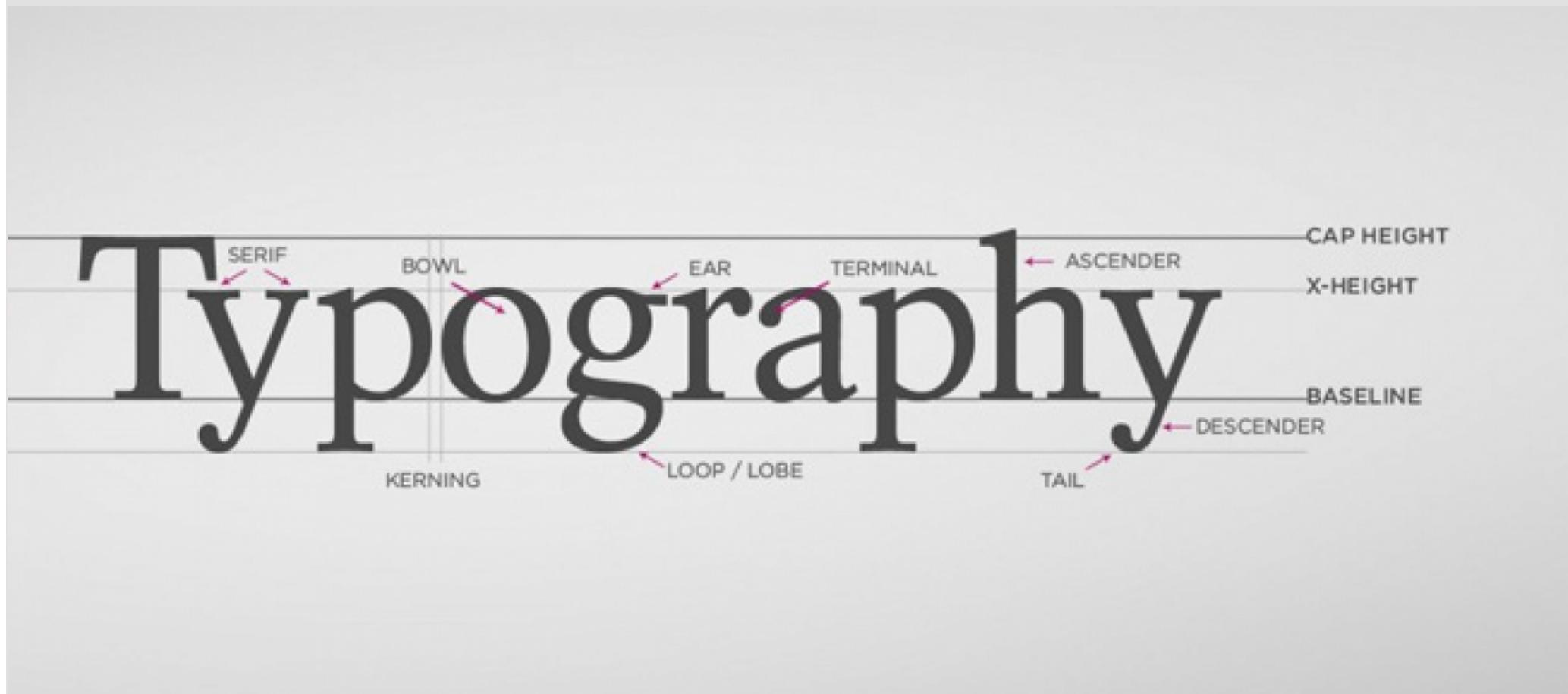
Icon, representación visual de algo relativamente realista (pictorial).

Symbol, no luce necesariamente como lo que representa (non-pictorial).

Actúan como elementos de interfaz representando ciertas acciones.

Pueden actuar como representación instantánea de un producto, marca o compañía.

Typography



Typography

Type puede funcionar en muchas formas en el context de una app o website.

Contenido que consumimos.

Parte de la interfaz en términos de botones o etiquetas.

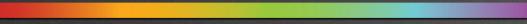
Parte del sistema de branding para dar al producto una identidad.

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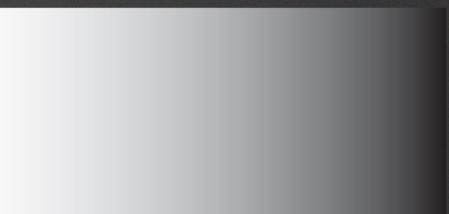
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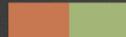
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TONE/VALUE



SIZE/SHAPE



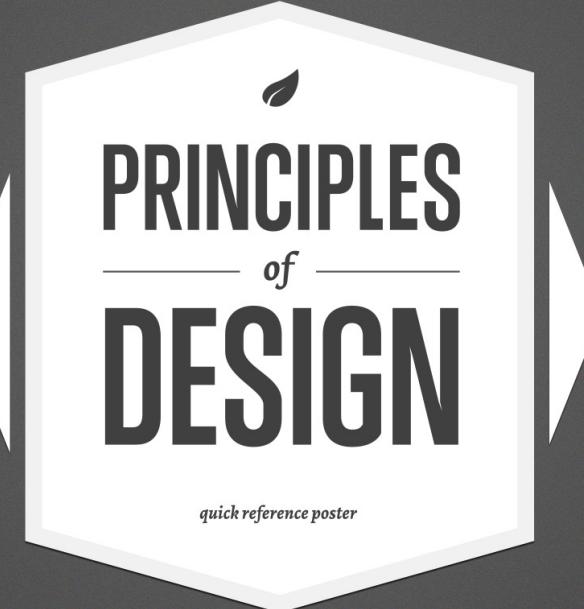
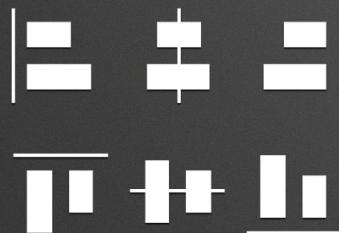
DIRECTION



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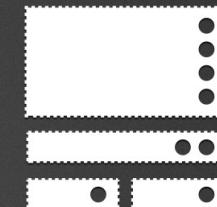


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a handy *paperleaf* resource

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USER FLOW



User Interface Design

From low-fidelity to high-fidelity

Wireframe

Es una alternativa de baja fidelidad (low-fidelity) para presentar un diseño.

Es la representación gráfica de una app o website incluyendo los elementos y contenido que son esenciales.

Es comparable con un blueprint de una construcción.

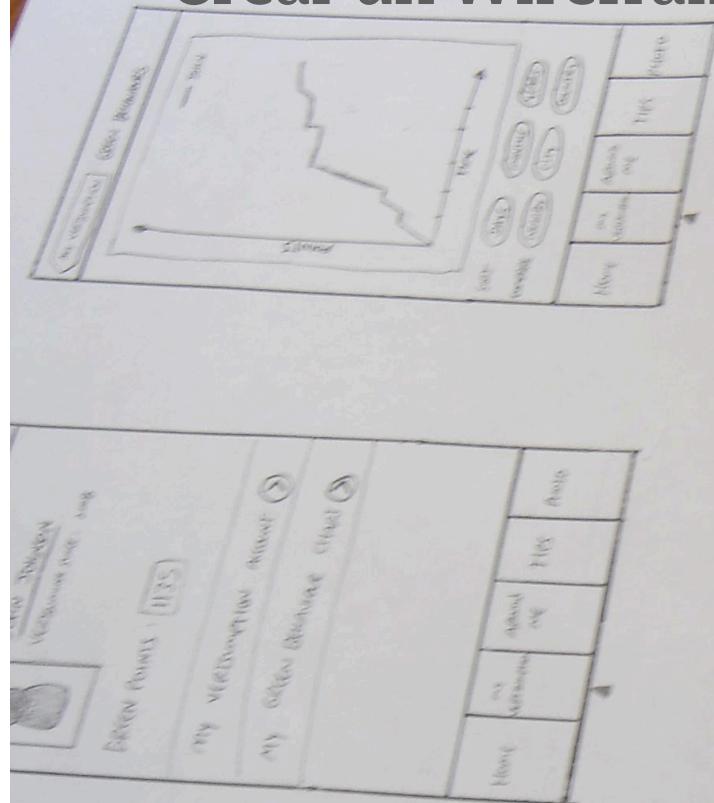
Características de un Wireframe

Muestra los principales bloques de contenido.

Dibuja el esquema y estructura de distribución.

Permite identificar lo básico de UI.

Crear un Wireframe



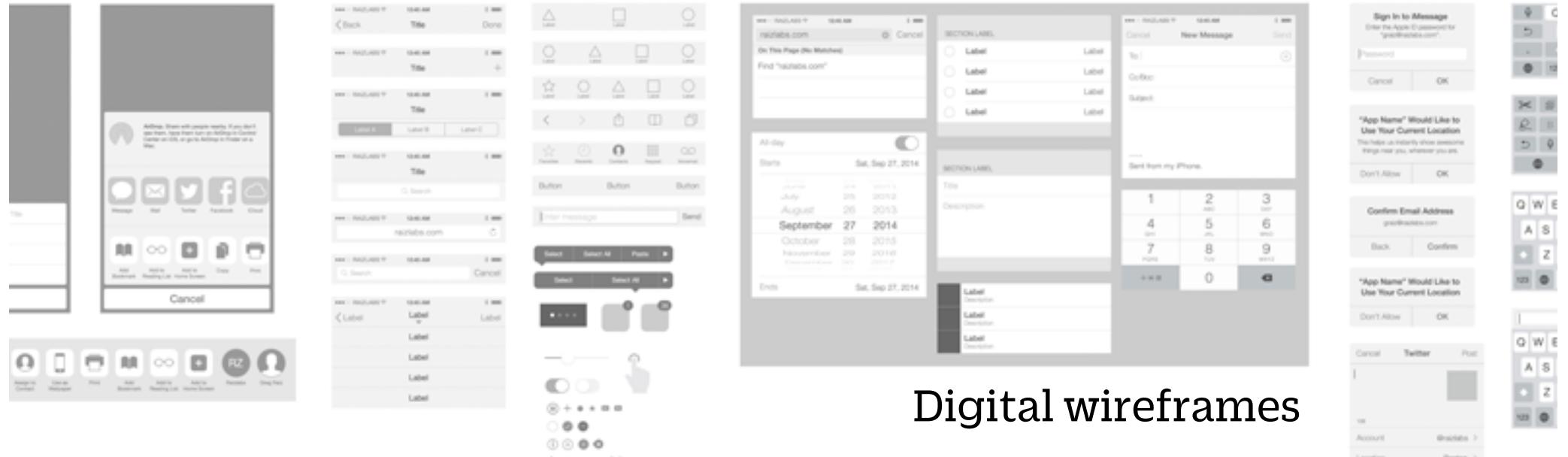
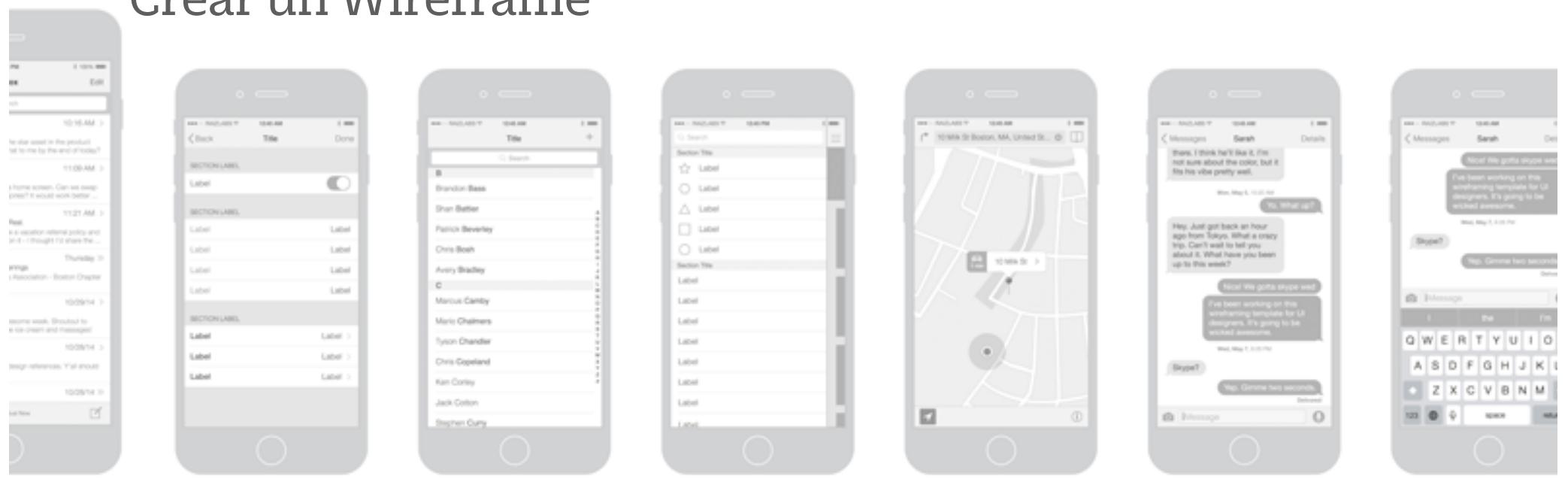
Elaborar un boceto (sketch) sobre papel.

Crear un Wireframe



Elaborar un boceto (sketch) sobre papel.

Crear un Wireframe



Digital wireframes

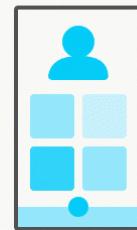
De low-res a high-res

Interface Design

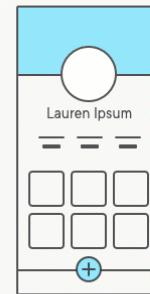
1.
Thumbnail
page level



2.
Blockframe
layout level



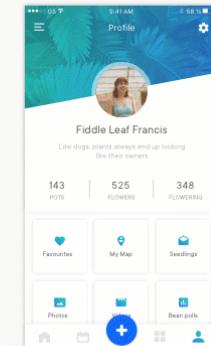
3.
Wireframe
component level



4.
Interface
styles level



5.
Prototype
interactions level



low-res ↔ high-res

Mockup / Mock-up

Es la representación visual de un producto.

A diferencia de un wireframe, aquí se muestra como luciría el producto.

Al igual que un wireframe, no es clickable.

Es una representación de media (mid) o alta fidelidad (high-fidelity) del diseño.

Ayuda a tomar decisiones finales sobre esquema de colores del producto, estilo visual, typography, entre otros.

Mockup



Prototipo (Prototype)

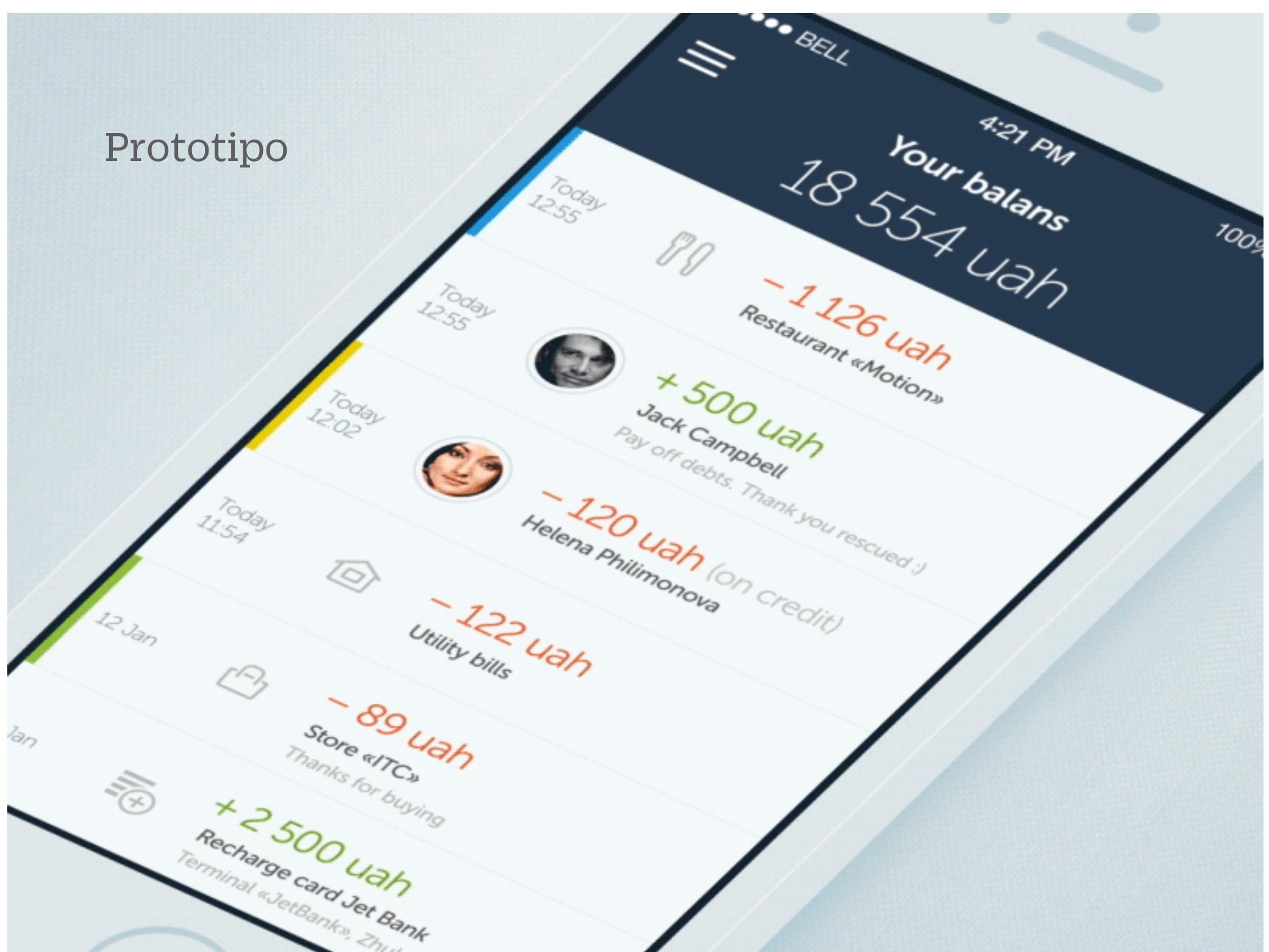
Es una representación de alta fidelidad del producto final que permite similar la interacción con el usuario.

Es clickable, permitiendo al usuario experimentar el contenido e interacciones en la interfaz.

¡No es el producto final!

Su objetivo es reducir costos de desarrollo hasta que la UI sea aprobada.

Prototipo



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User Flow Design

Es una serie de pasos que da el usuario para lograr una meta significativa.

Resoluciones

User goal

Task flow

Wireflow

User flow

1.

User goal

Goal or story level



DEFINITION

The name of the user flow—which could be a requirement, user journey step, story, or goal. **Bonus points:** name the user!

EXAMPLE

View saved photos,

As a recruiter I want to scrape personal LinkedIn data

1.

User goal

Goal or story level



2.

Task flow

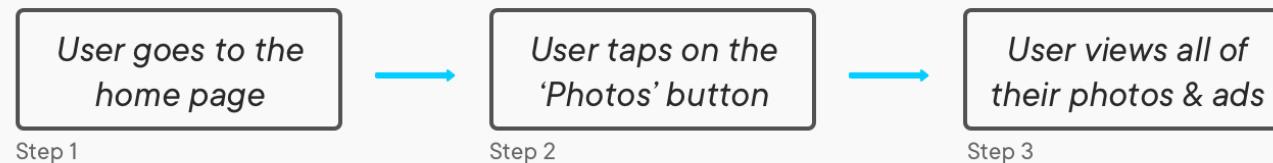
Action level



DEFINITION

A user flow with distinct steps of what the user does at each step to complete the goal or task.

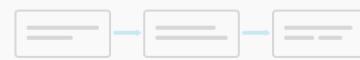
EXAMPLE



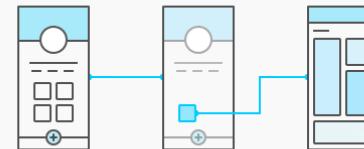
1.
User goal
Goal or story level



2.
Task flow
Action level



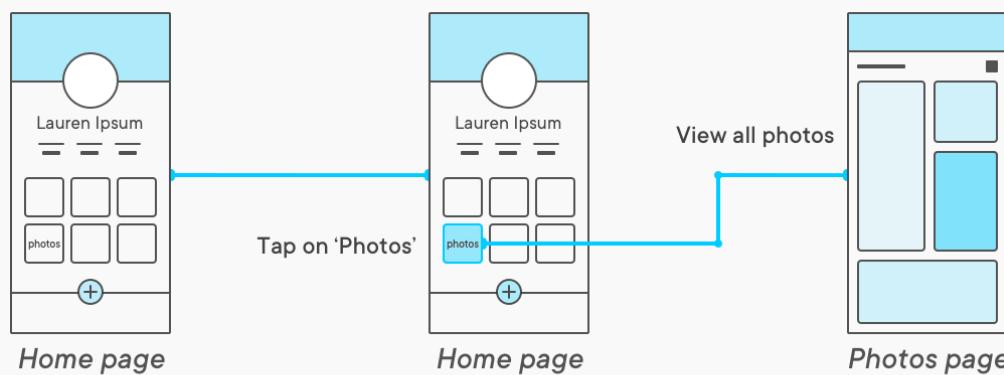
3.
Wireflow
Component level

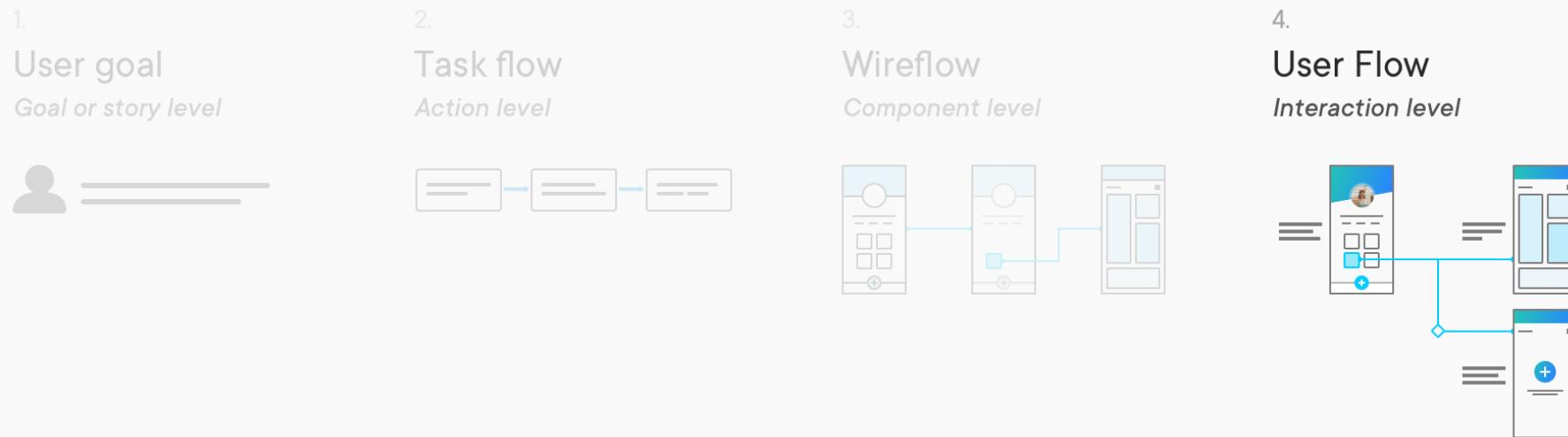


DEFINITION

A combination of wireframes and flowcharts. They document workflow & screen designs when there are few pages that change dynamically. *

EXAMPLE

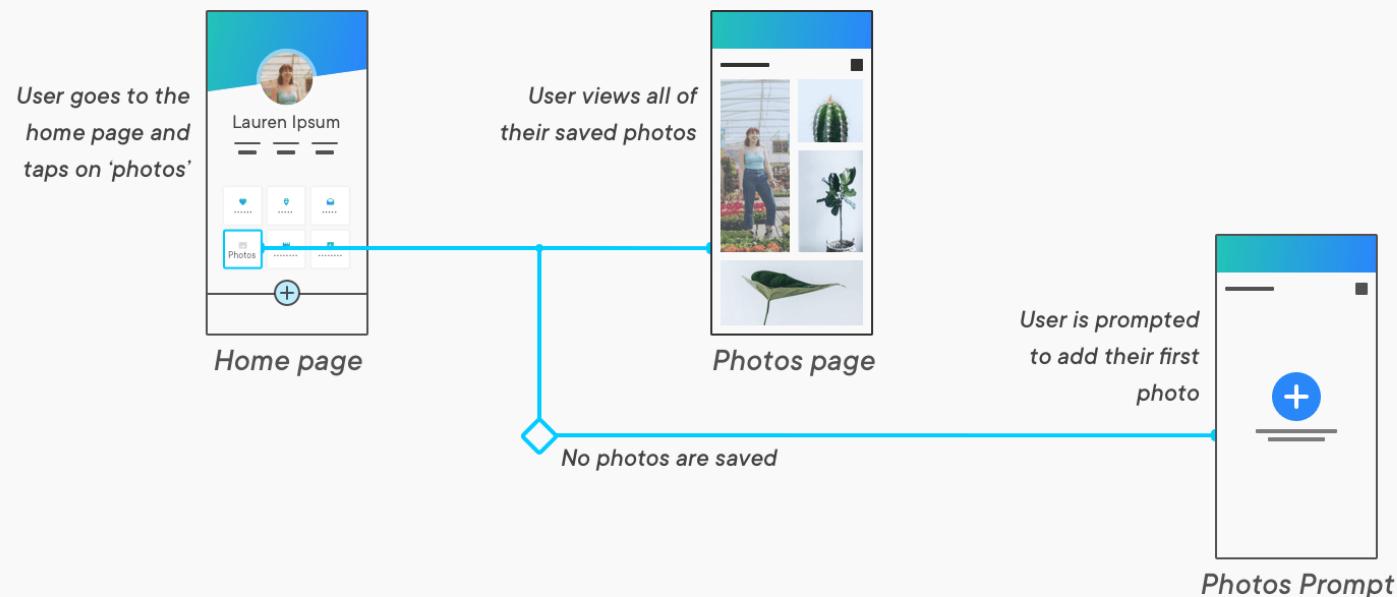




DEFINITION

A series of steps a user takes to achieve a meaningful goal. User flows show the pages, logic, and actions required to complete the goal.

EXAMPLE



User Flow

La meta en el nivel User Flow es que usuarios y developers entiendan el flujo.

¿Cómo llegar a este nivel? Nos preguntamos:

¿Qué sucede cuando las cosas no siguen el “happy path”?

¿Qué lógica o caso lleva una ruta alternativa?

¿Hay datos que van trasladándose?

¿Cambia algún estado en la interfaz? ¿Qué lo provoca?

De low-res a high-res

User Flow Design

1.

User goal

Goal or story level



2.

Task flow

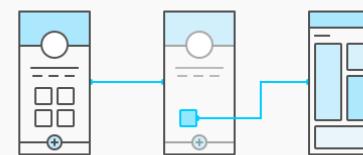
Action level



3.

Wireflow

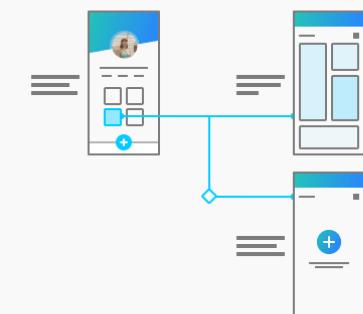
Component level



4.

User Flow

Interaction level



low-res ↔ high-res

RESUMEN

Recordemos

UI Design Elements

Wireframes, Mockups, Prototypes

User Flow Design



REFERENCIAS

Para profundizar

<https://brainhub.eu/blog/difference-between-wireframe-mockup-prototype/>

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

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



PREGRADO

Ingeniería de Software

Escuela de Ingeniería de Sistemas y Computación | Facultad de Ingeniería



UPC

Universidad Peruana
de Ciencias Aplicadas

Prolongación Primavera 2390,
Monterrico, Santiago de Surco
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T 511 313 3333
<https://www.upc.edu.pe>

exígete, innova