

Web Design

Building User Interfaces

Cole Nelson

Make a copy of today's ICA and share it with your group members!

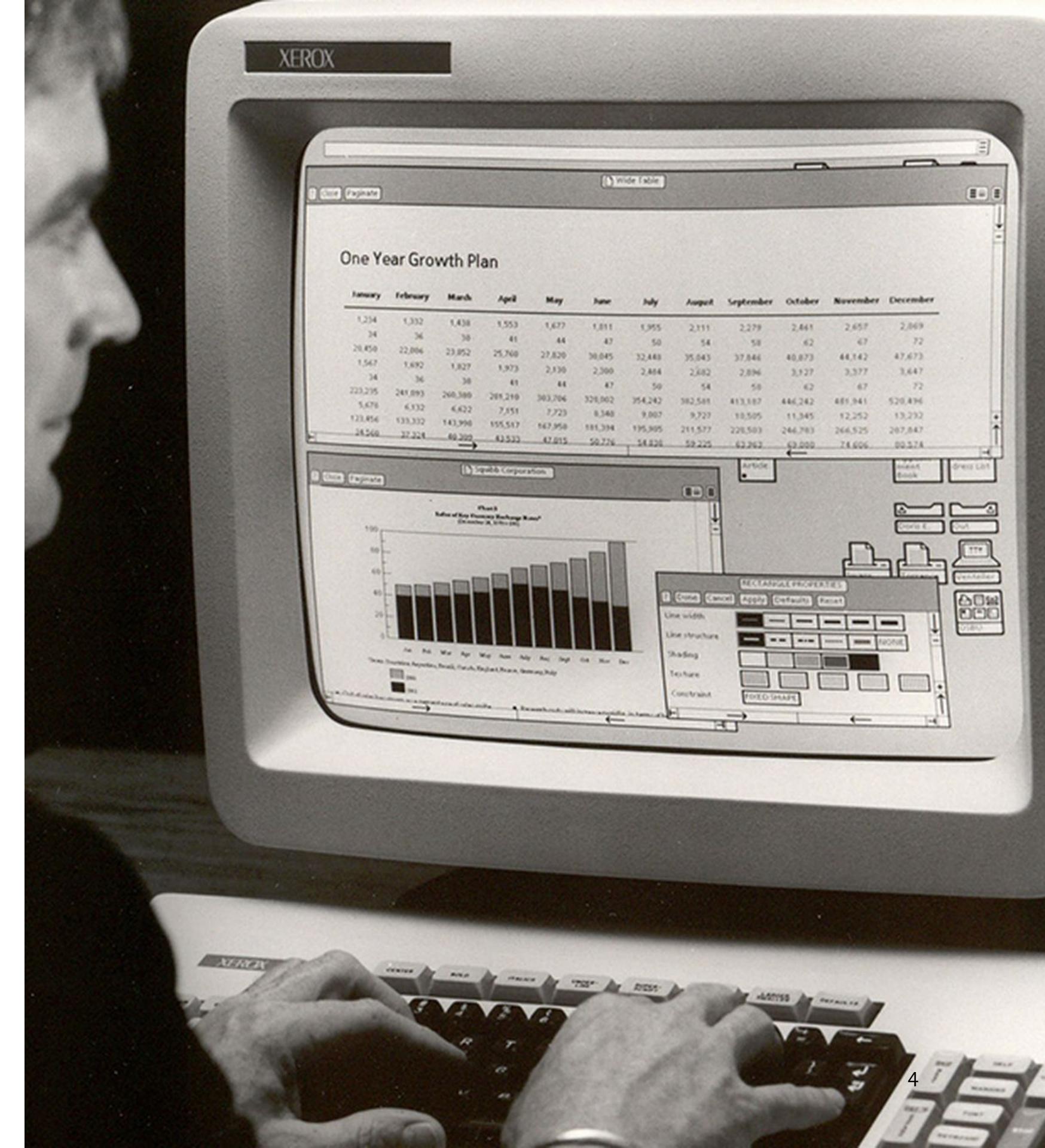
Learning Objectives

1. Be able to deconstruct a desktop application
2. Be able to deconstruct a web application
3. Be able to explain the differences between designing for the desktop and designing for the web

Designing for the Desktop

The WIMP Paradigm¹

Definition: *Windows, icons, menus, and pointer*, or WIMP, is a design paradigm that current desktop interfaces follow that dates back to the Xerox Alto (1973).



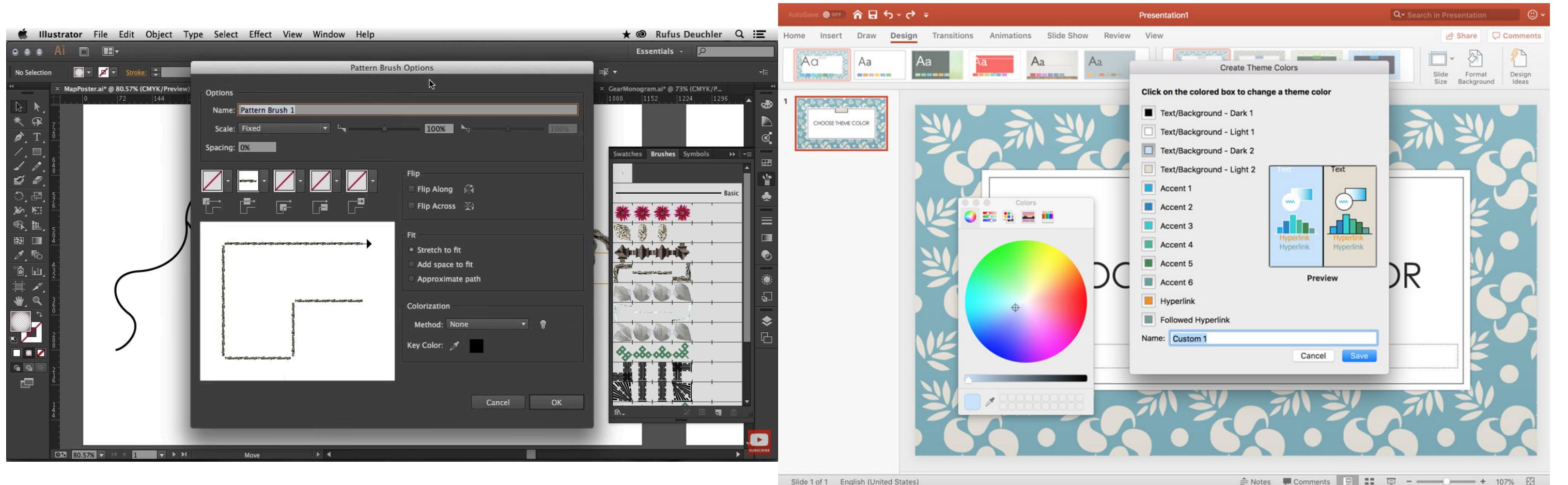
¹Image source

Elements of the WIMP Paradigm: *Windows & Icons*

Definition: Windows are resizable containers of individual applications.

Primary windows contain elements for the main functionality of the application, such as a canvas. *Secondary* windows support main windows through *modal* or *modeless* operations.

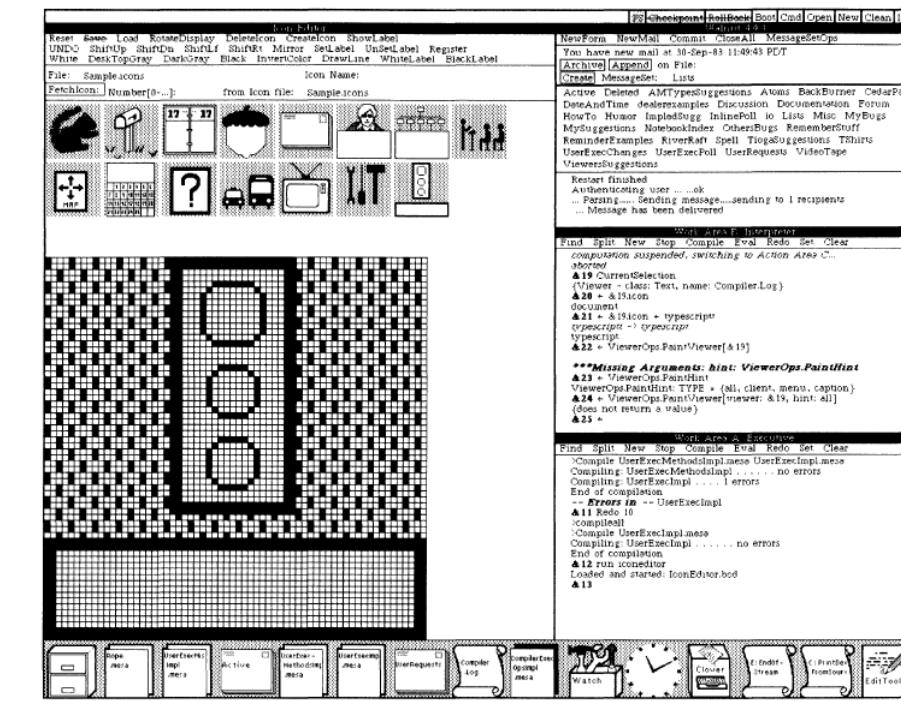
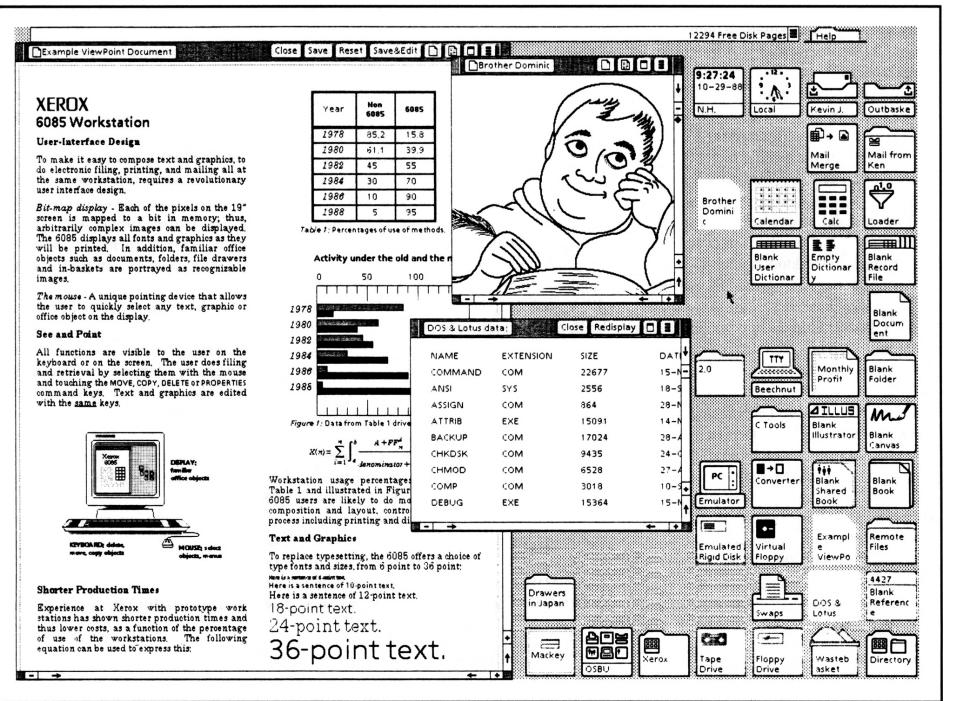
2



² Image source: [Left](#), [Right](#)

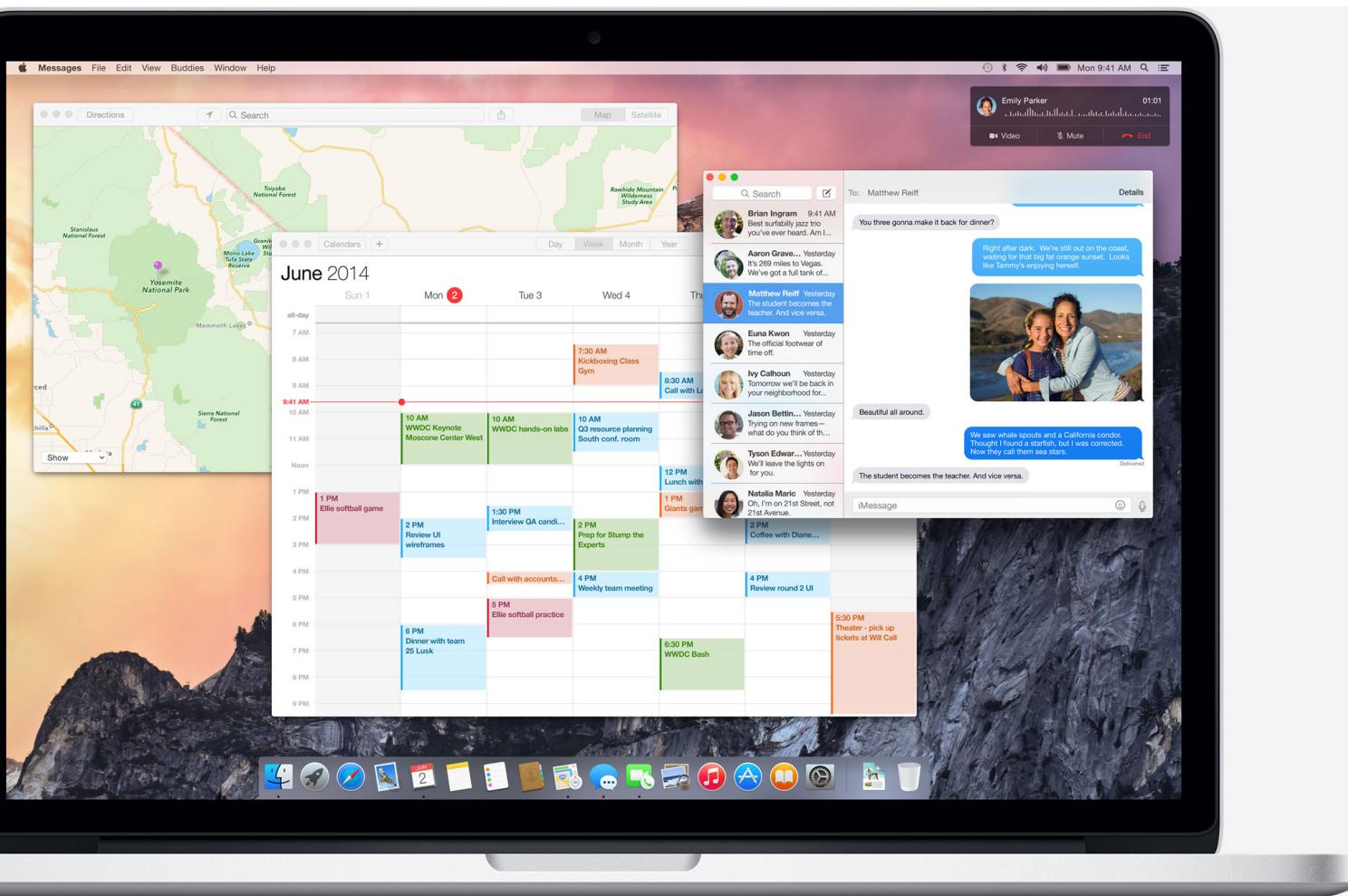
Window Organization³

Definition: Windows can be organized in a way that overlaps several windows or tiles them across the screen.

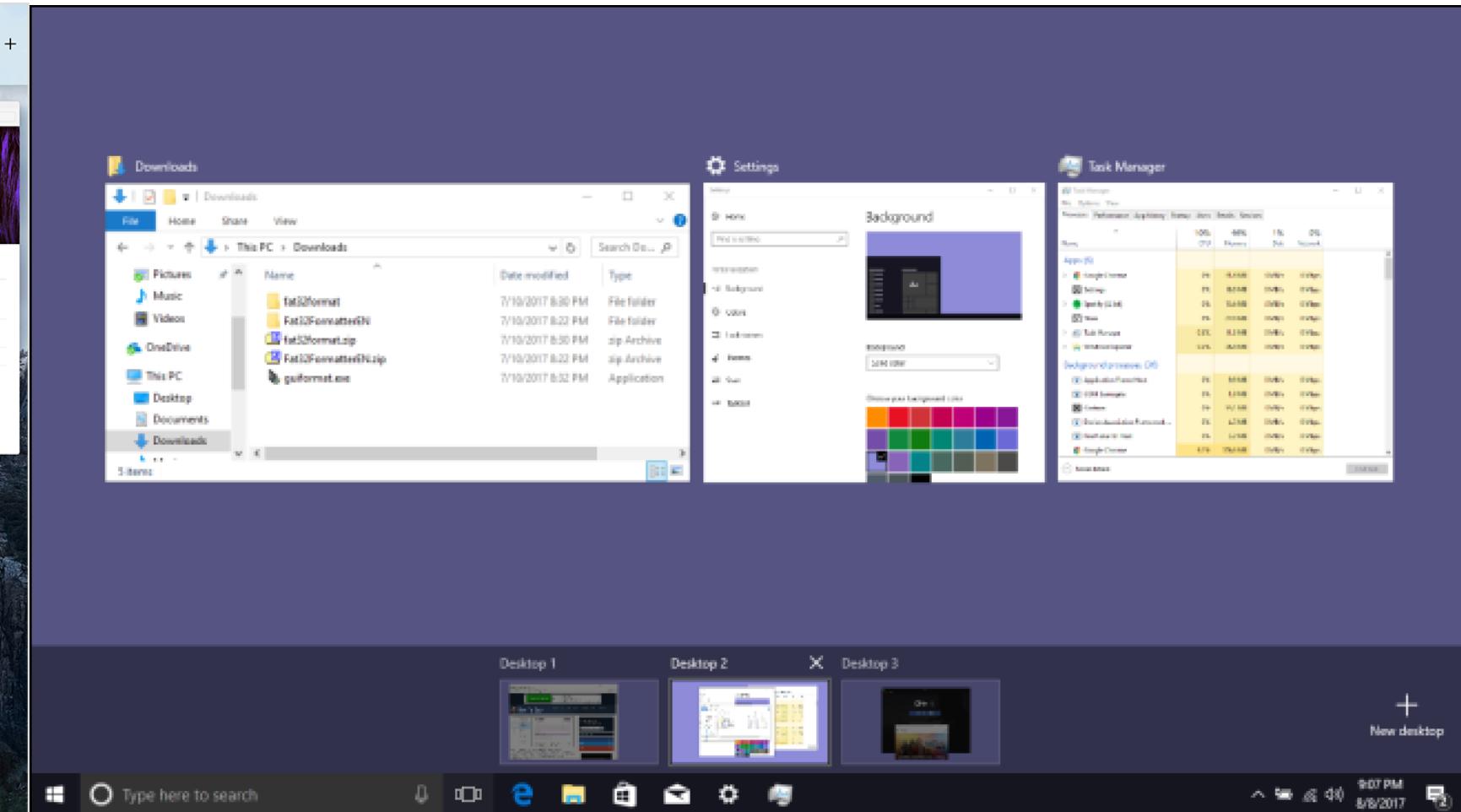
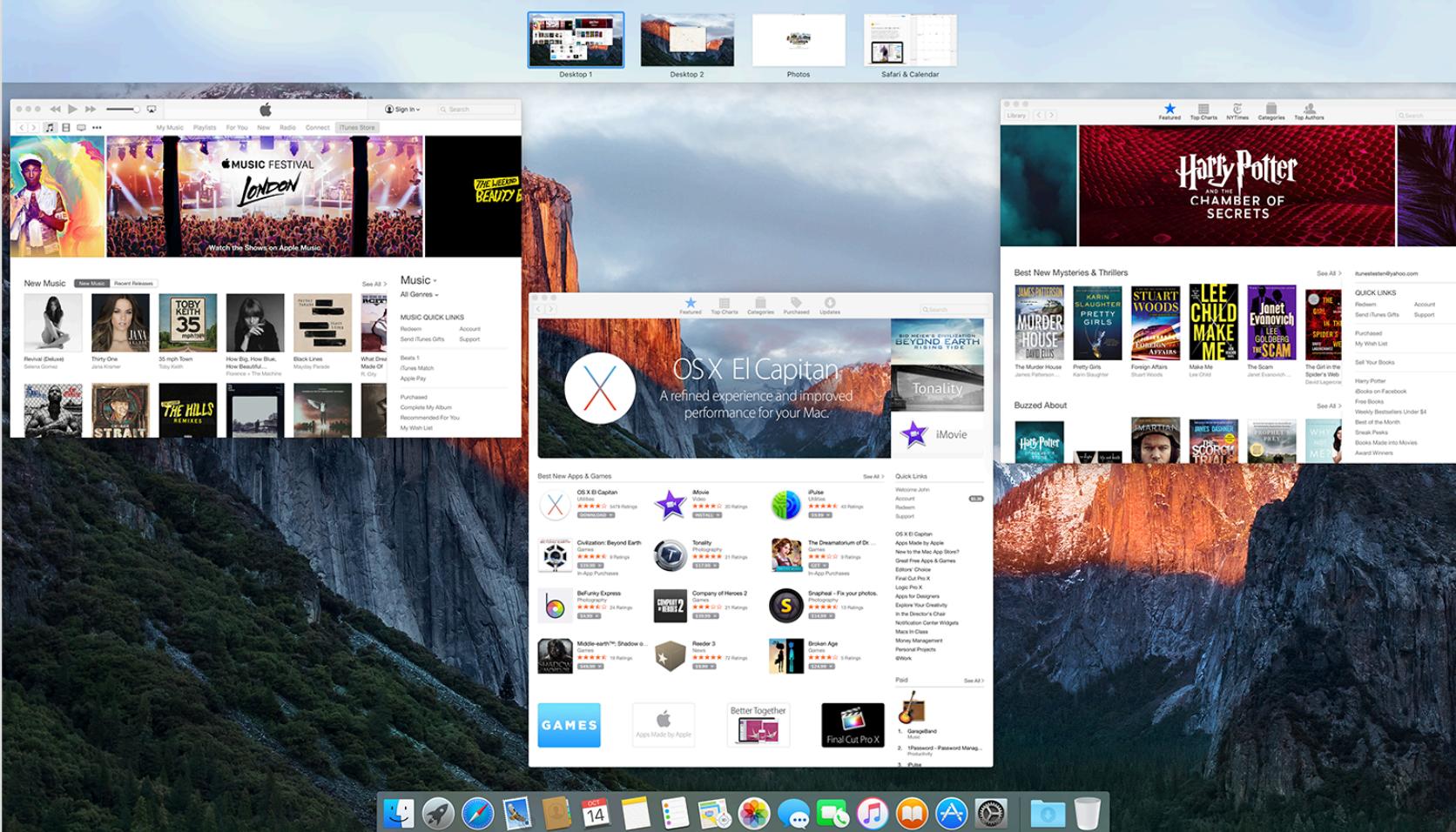


³ Image source: [Left](#), [Right](#)

4



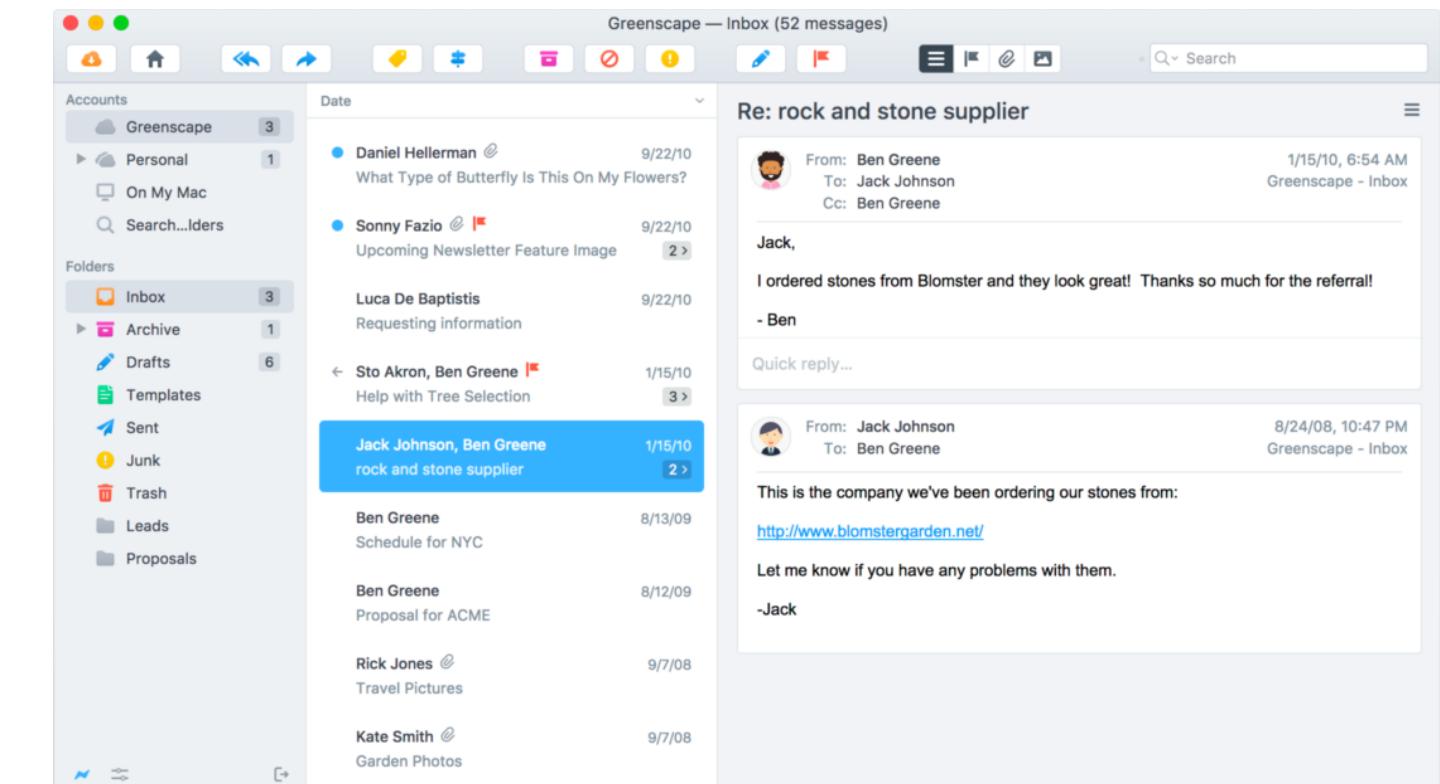
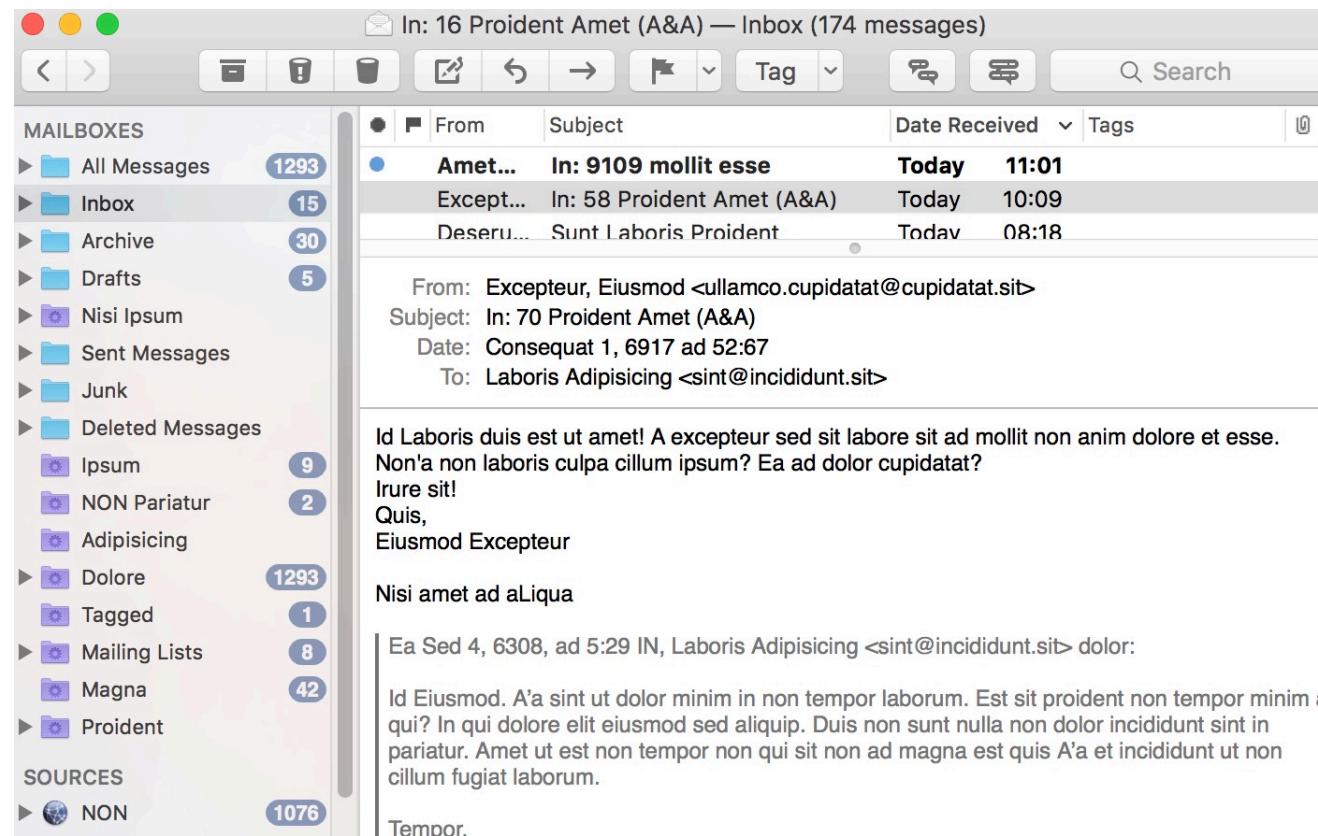
⁴ Image source: [Left](#), [Right](#)



⁵ Image source: [Left](#), [Right](#)

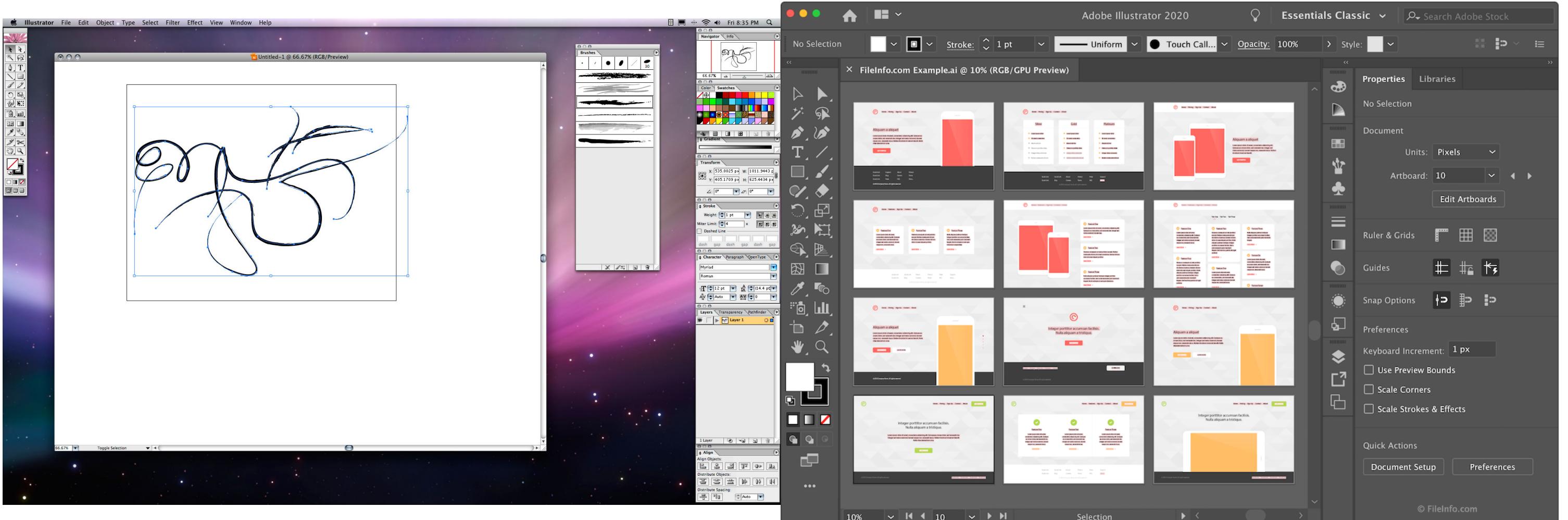
Window Structures⁶

Windows bring together dedicated *panes* in different configurations.



⁶Image source: [Left](#), [Right](#)

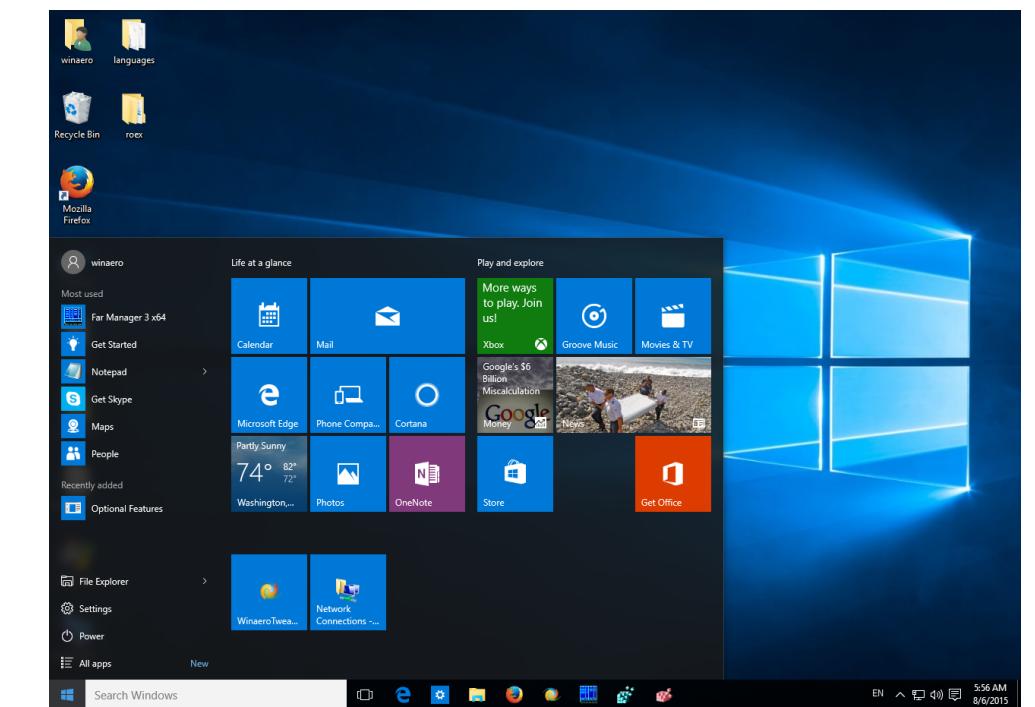
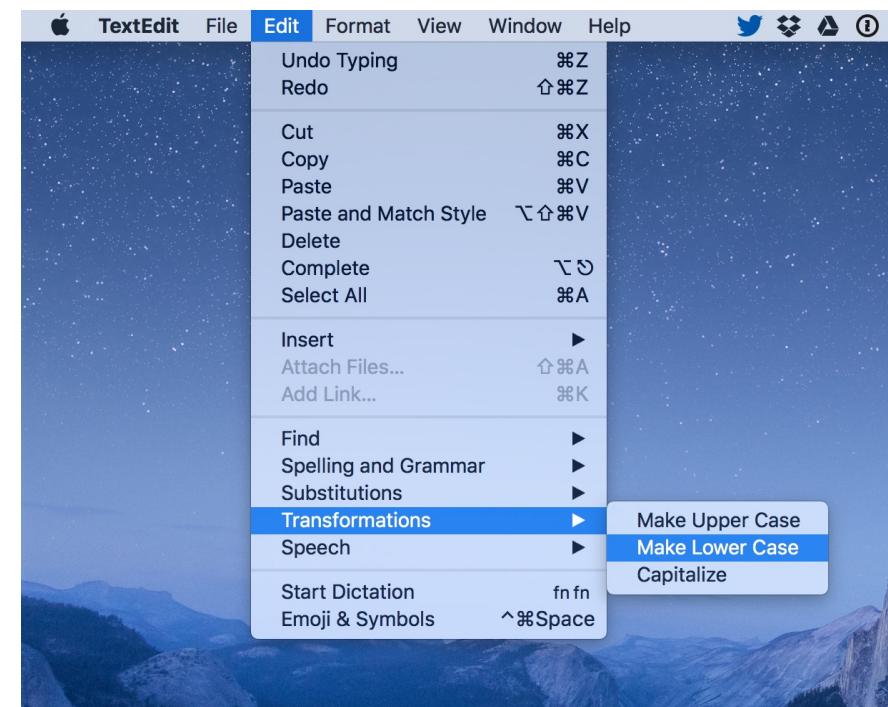
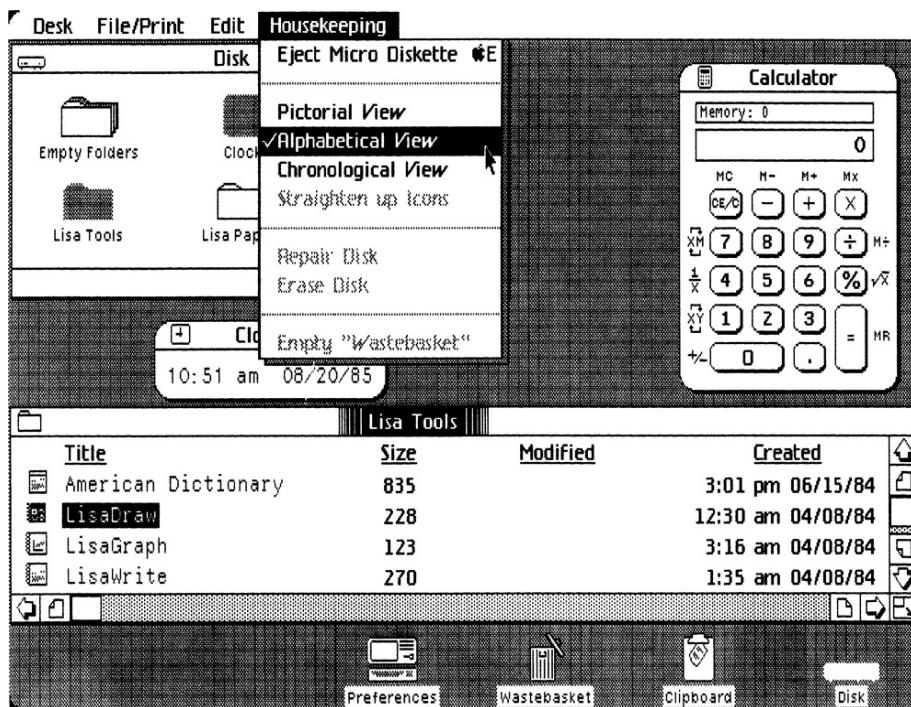
Secondary windows can be docked, stacked, and floating.⁷



⁷ Image source: [Left](#), [Right](#)

Elements of the WIMP Paradigm: Menus & Pointers⁸

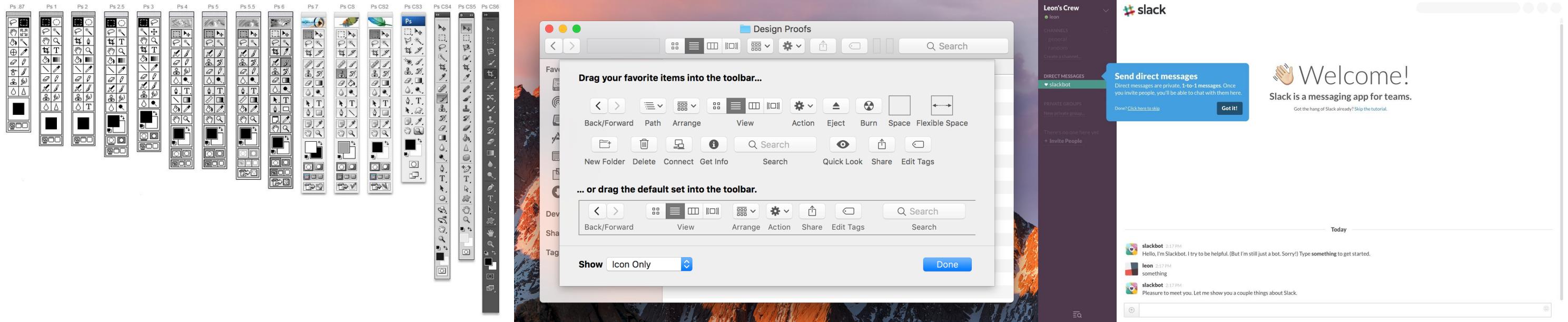
Definition: Menus list all the functions of the an application. Menu lists serve *educational* and *reference* purposes.



⁸ Image source: [Left](#), [Center](#), [Right](#)

Toolbars, Palettes, Sidebars, & Tooltips⁹

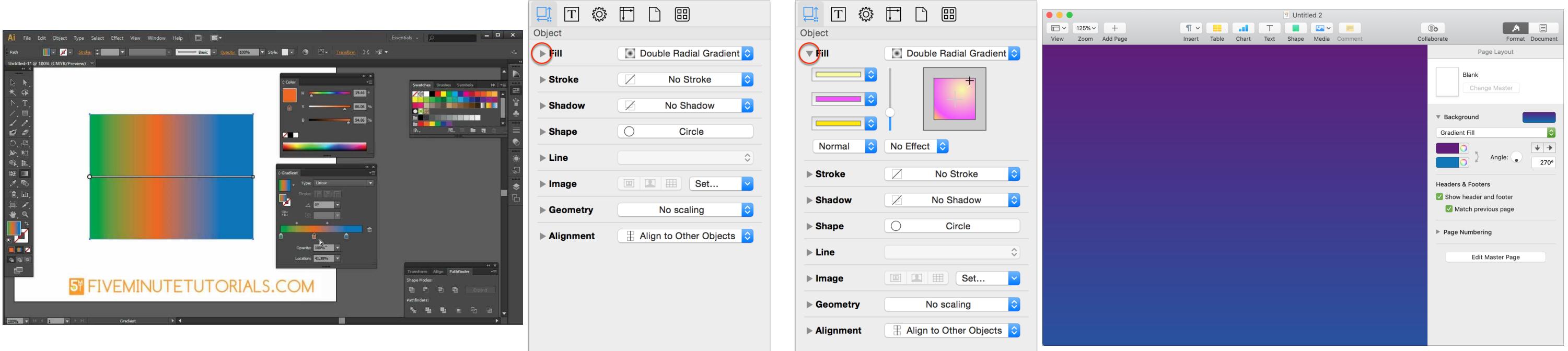
Definition: *Toolbars, palettes, sidebars, and tooltips* facilitate (visual and manipulation) access to frequently used functions.



⁹ Image source: [Left](#), [Center](#), [Right](#)

Tool Palettes¹⁰

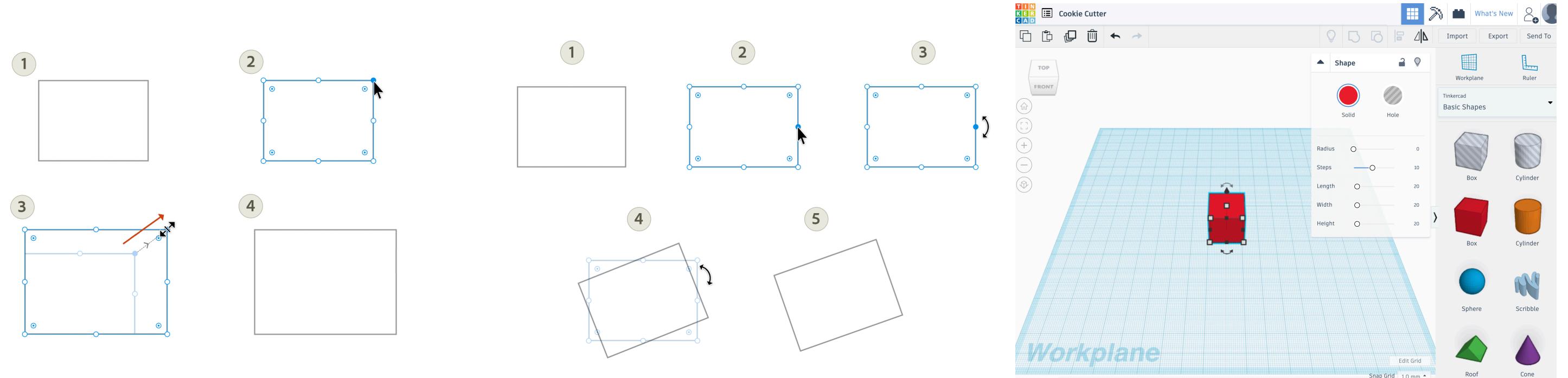
Definition: Tool palettes provide *advanced controls* for a particular function rather than frequently accessed functions.



¹⁰ Image source: [Left](#), [Center](#), [Right](#)

Pointing¹¹

Definition: *Pointing* on an application canvas enables a range of advanced capabilities for *direct manipulation*.



¹¹ Image source: [Left](#), [Center](#), [Right](#)

ICA C: Web Design

Deconstruct a desktop application into its basic structures...

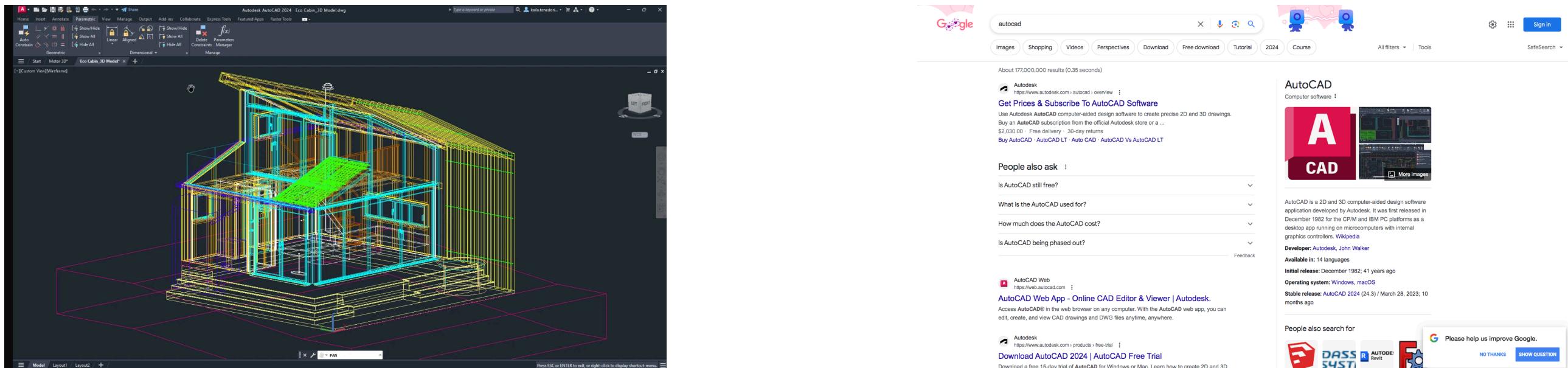
- Choose a desktop application.
- Choose a task.
- Do your analysis!

Designing for the Web

Desktop Applications vs. Websites¹²

Desktop Applications: Complexity in user interface design.

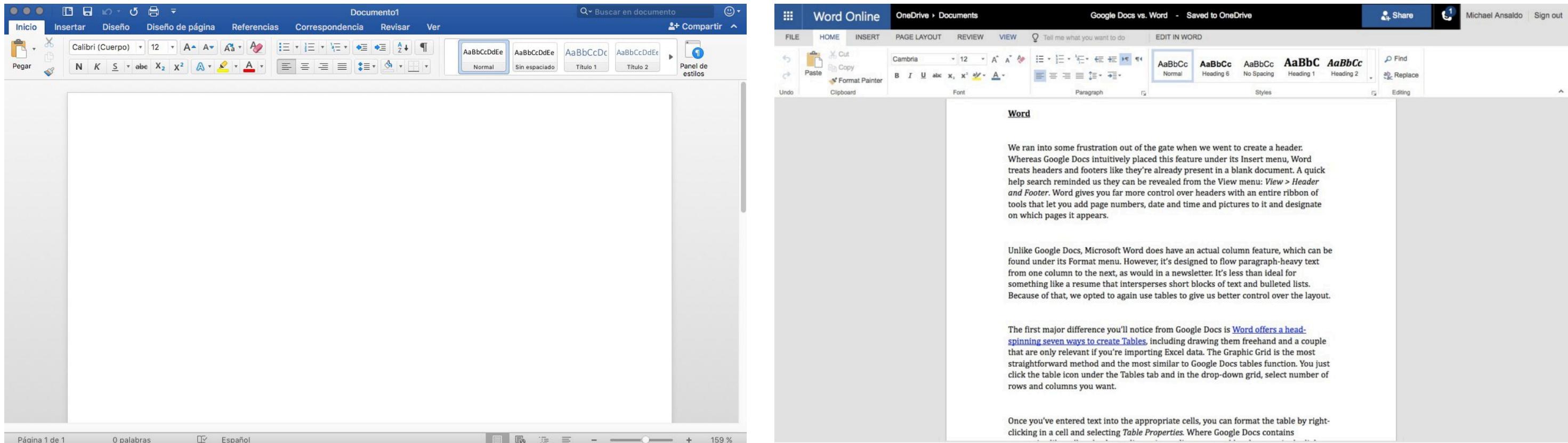
Websites: Complexity in information structure.



¹² Image source

Web Applications¹³

This is by no means a comprehensive definition!



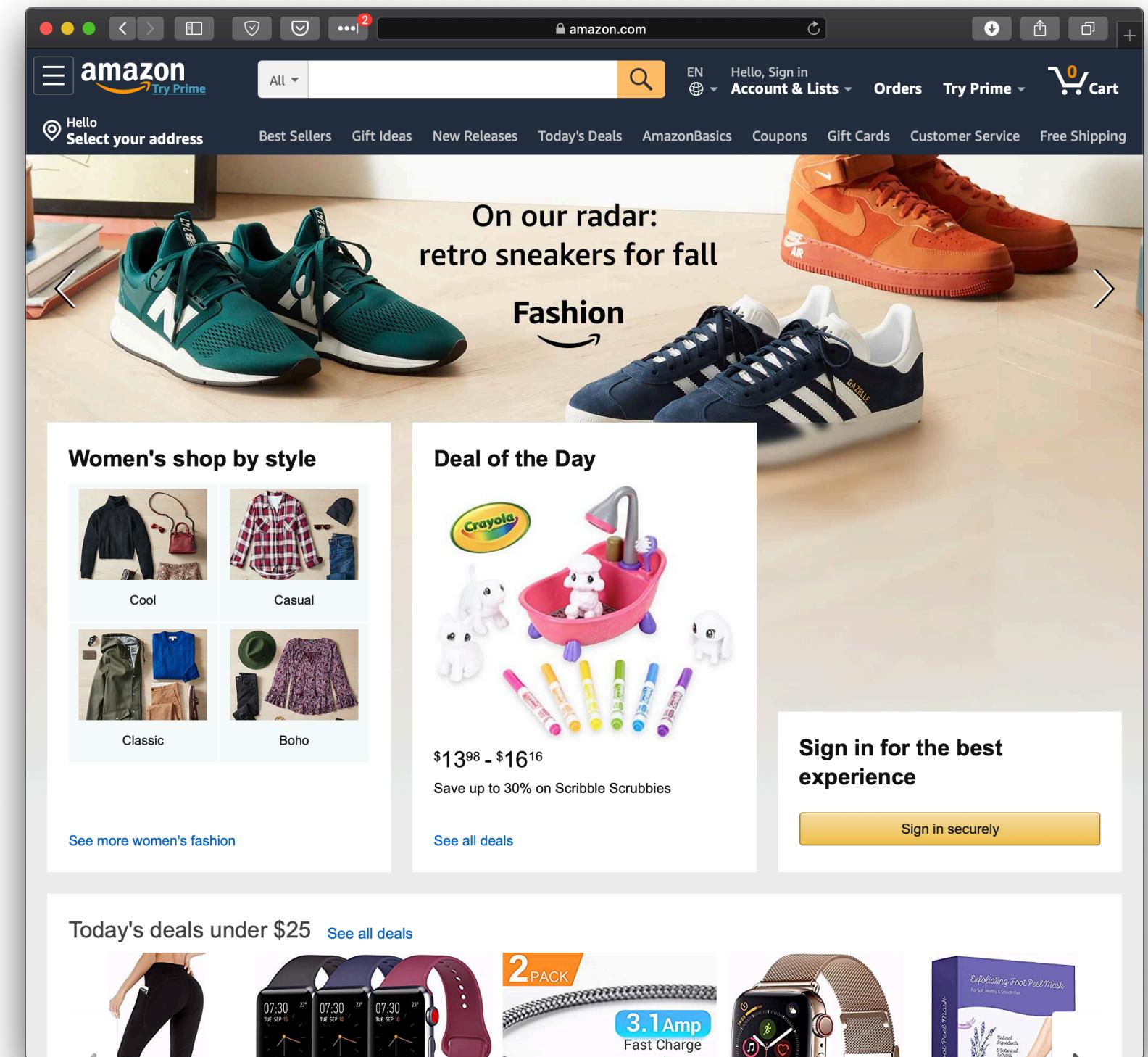
¹³ Image source: [Left](#), [Right](#)

The Page

Since its inception, the *page*, has been the building block of web content.

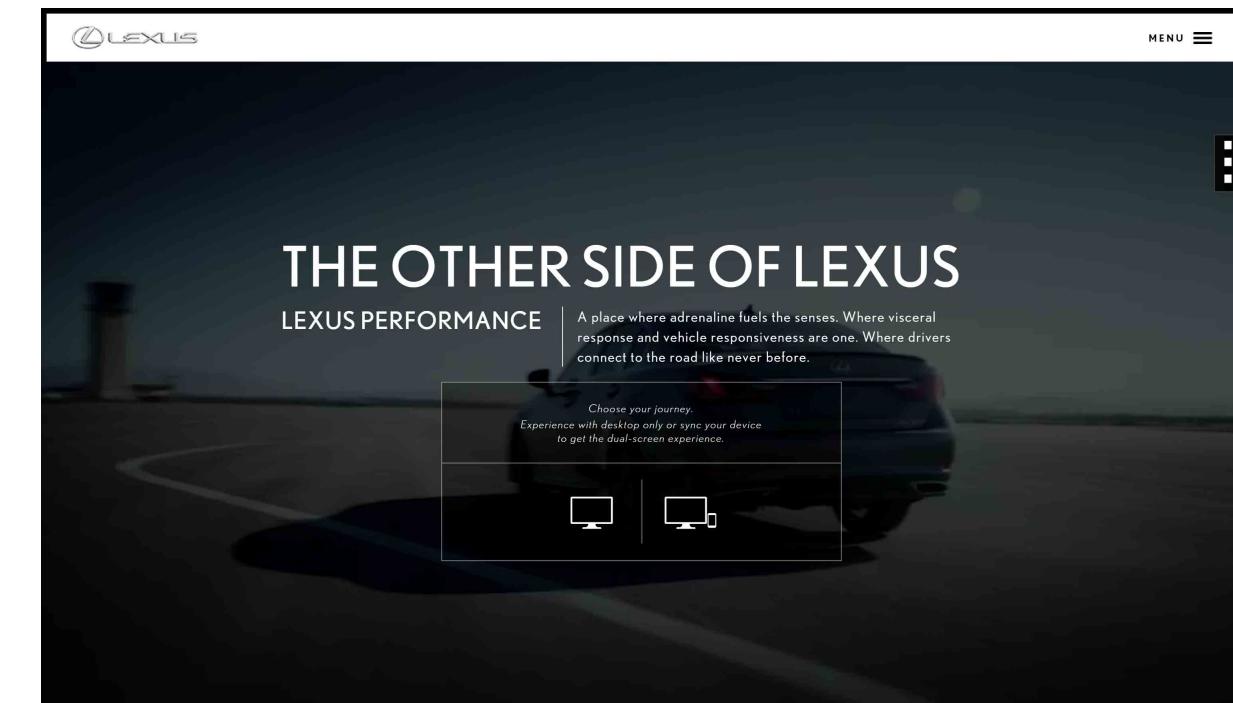
If the web is made out of pages, how do we organize and help users navigate them?

Using primary and secondary navigation aids.



Primary Navigation Aids¹⁴

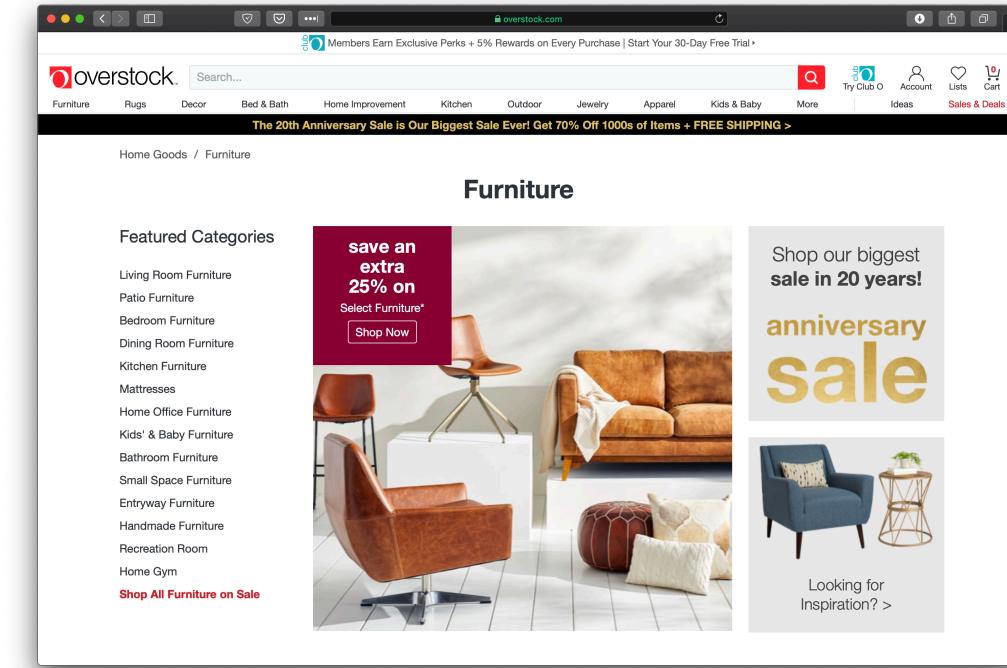
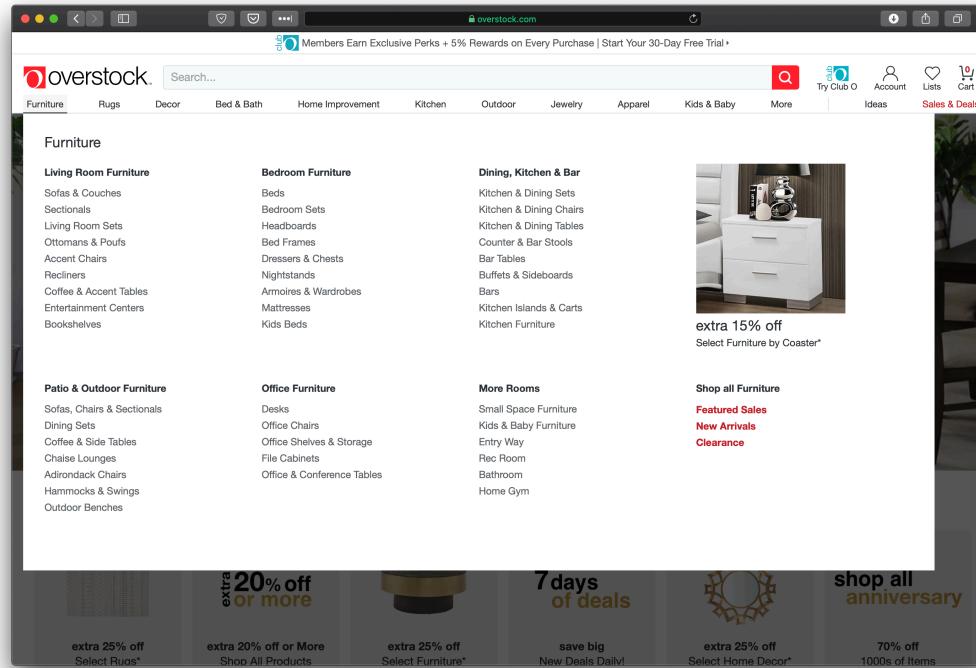
Definition: Primary navigation aids take the form of menus/menubars and reflect the major areas or sections of a website.



¹⁴ Image source: [Left](#), [Right](#)

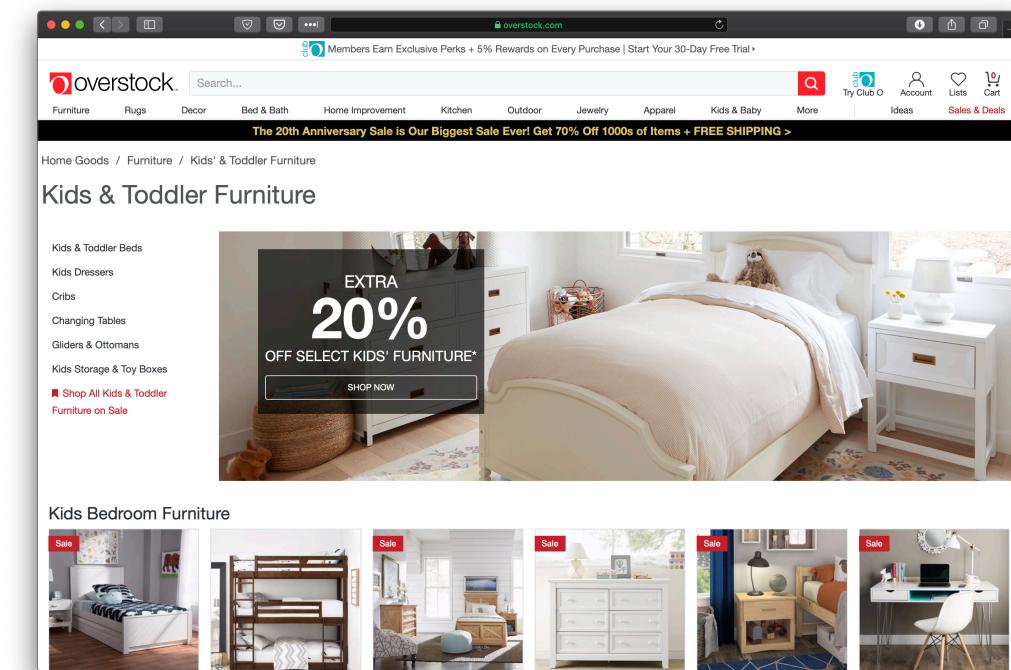
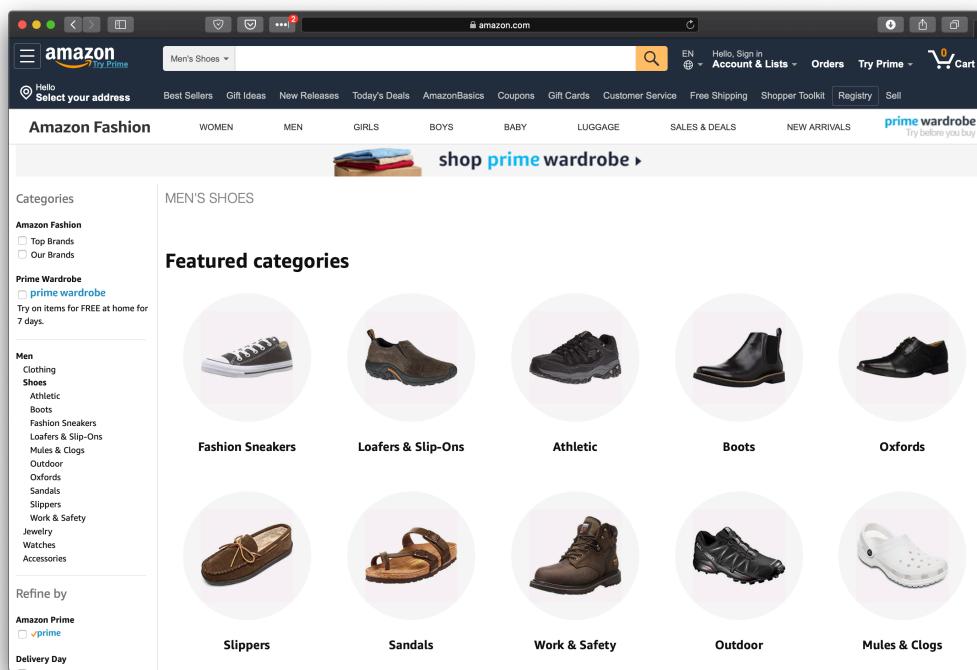
Secondary Navigation Aids

Definition: Secondary navigation aids provide comprehensive links to specific content on the site as *fat navigation*, *left-hand navigation*, *footer navigation*, etc.



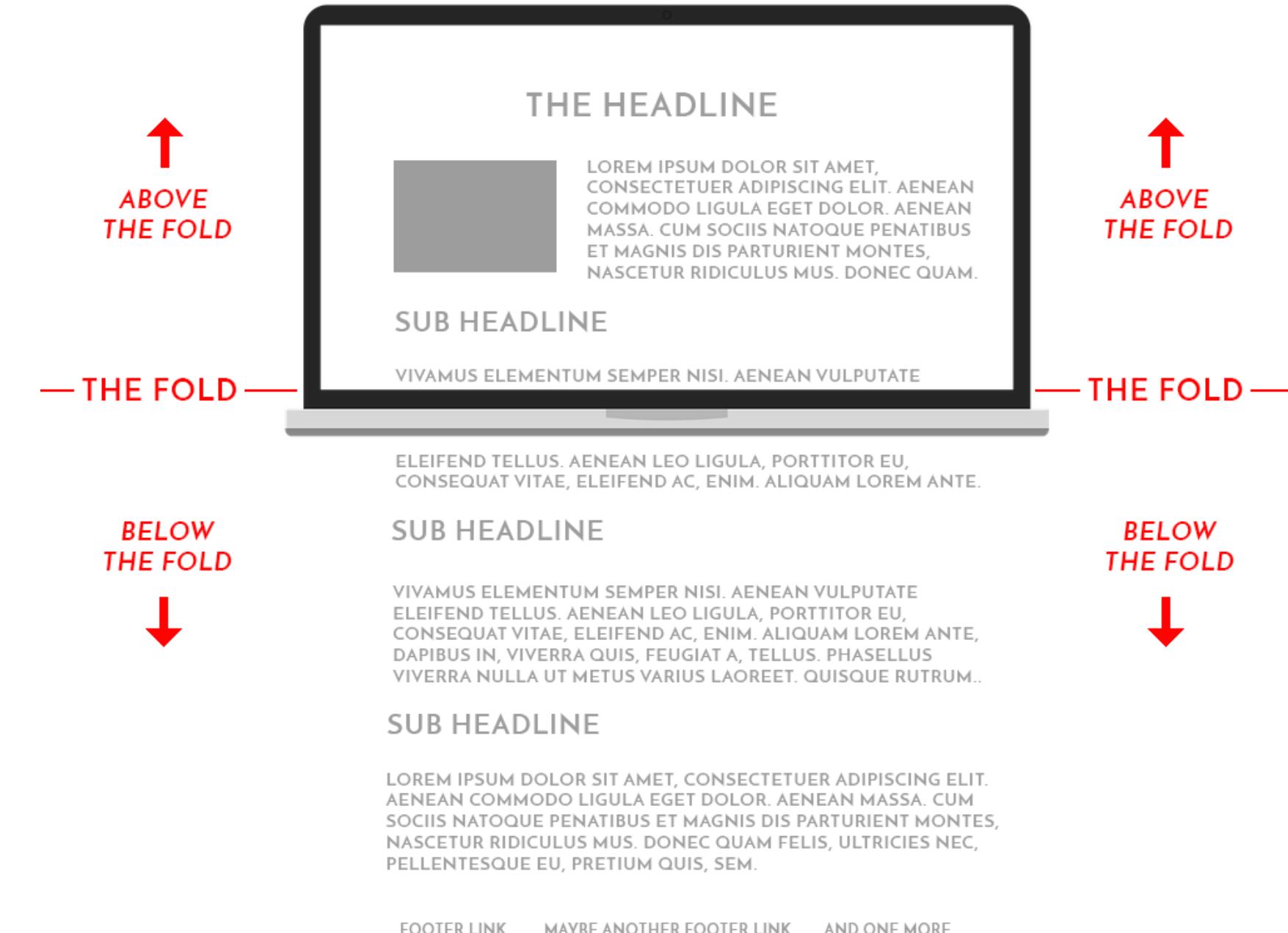
How do we get home?

A key problem in complex sites is to get back to previous pages or other pages that are higher in the navigation hierarchy. *Breadcrumbs* and *hierarchical lists* are solutions to this problem.

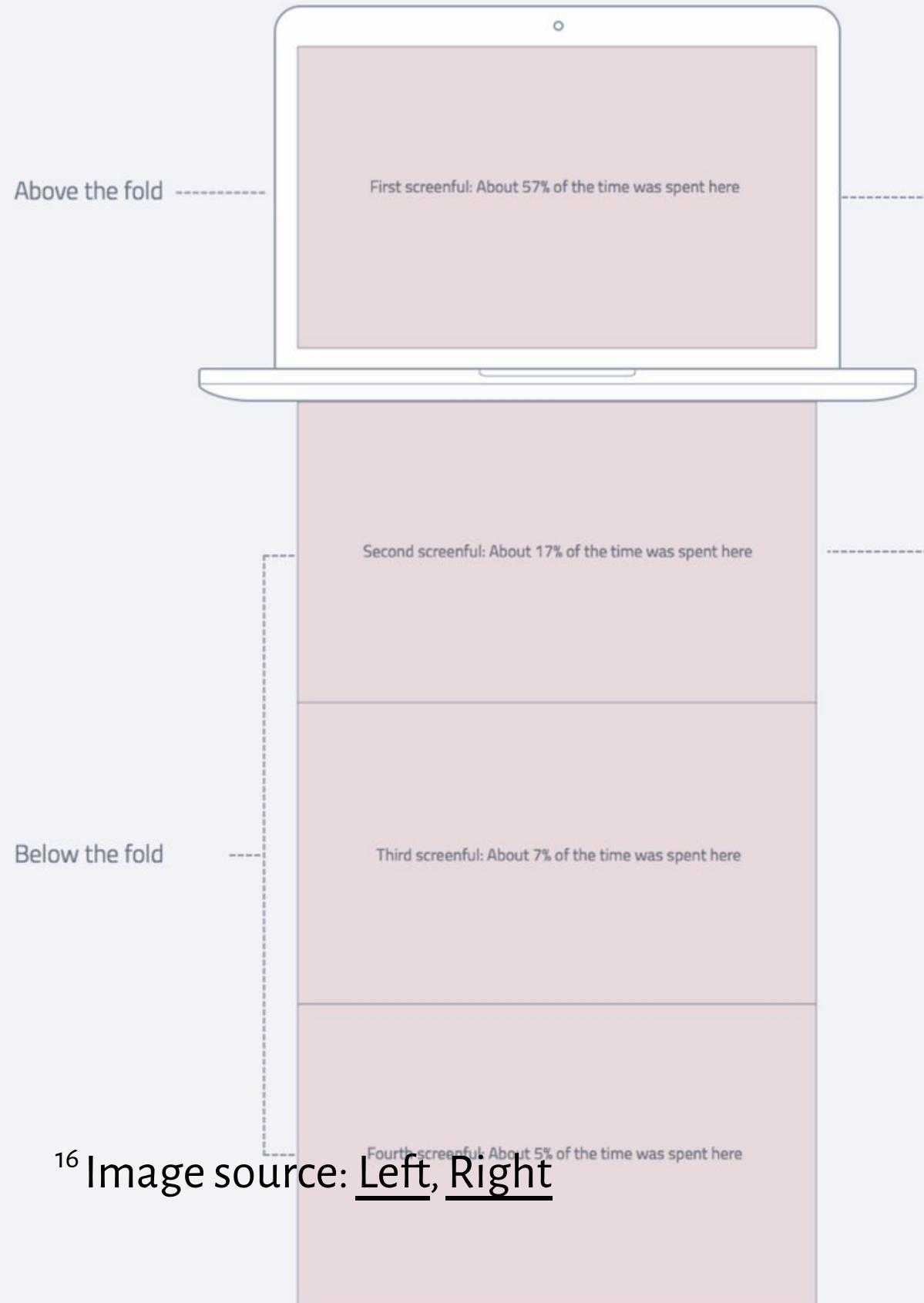


Organizing Page Content: The Fold¹⁵

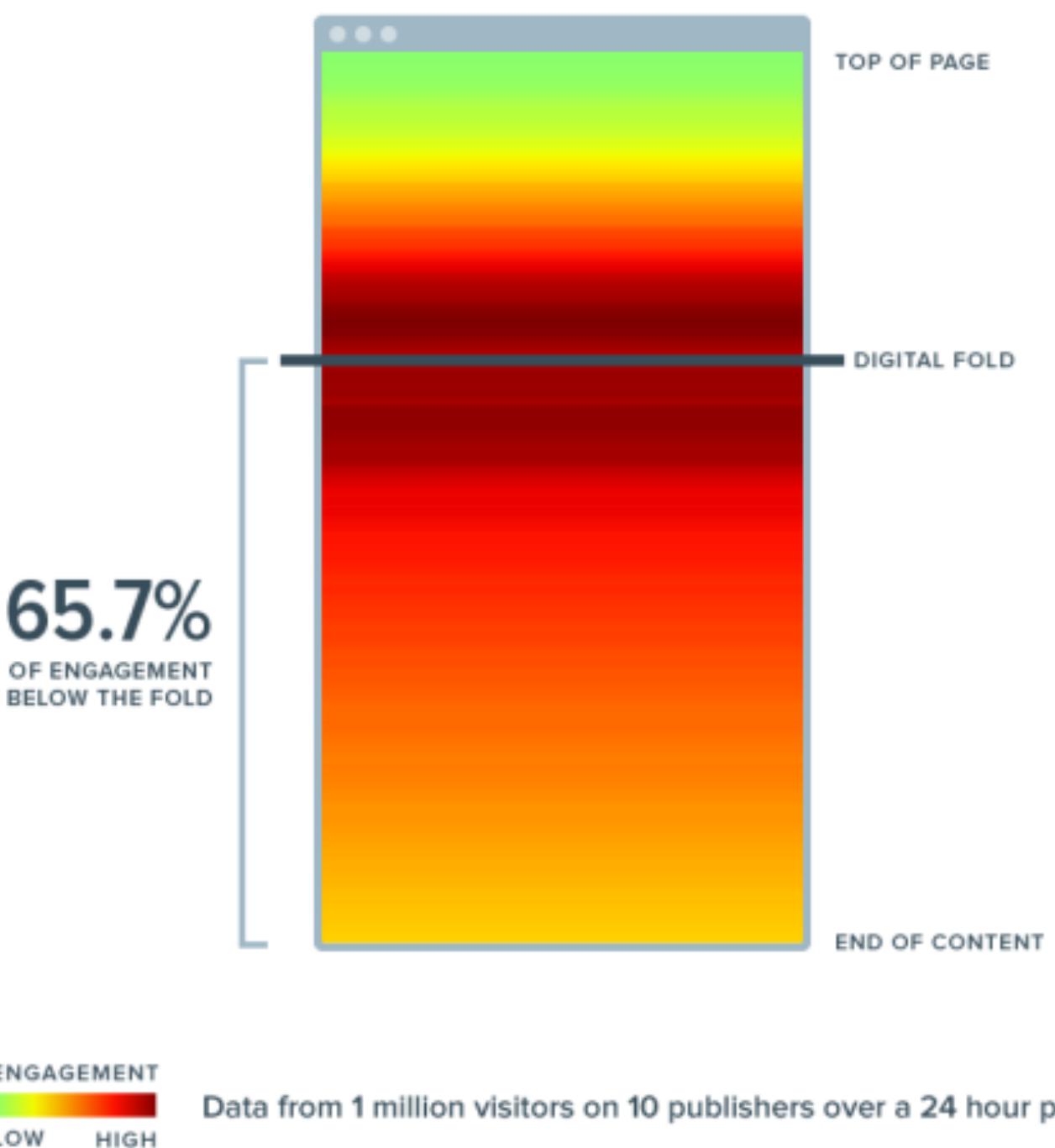
Definition: The *fold* is the dividing line between the area that is visible when a page first loads and the remainder of the page.



¹⁵ [Image Source](#)



WHERE WE SPEND TIME READING



¹⁶ Image source: [Left](#), [Right](#)

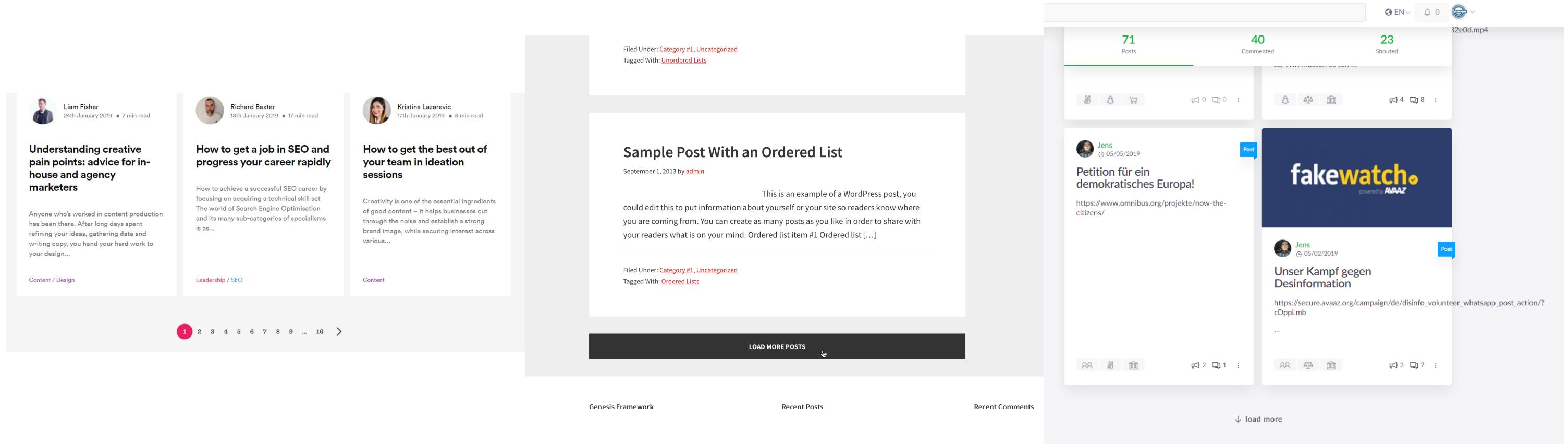
Organizing Page Content: Fitting It All in¹⁷

Large volumes of content is either broken into discrete pages through *pagination* or incrementally loaded through *infinite scroll*.



¹⁷ [Image Source](#)

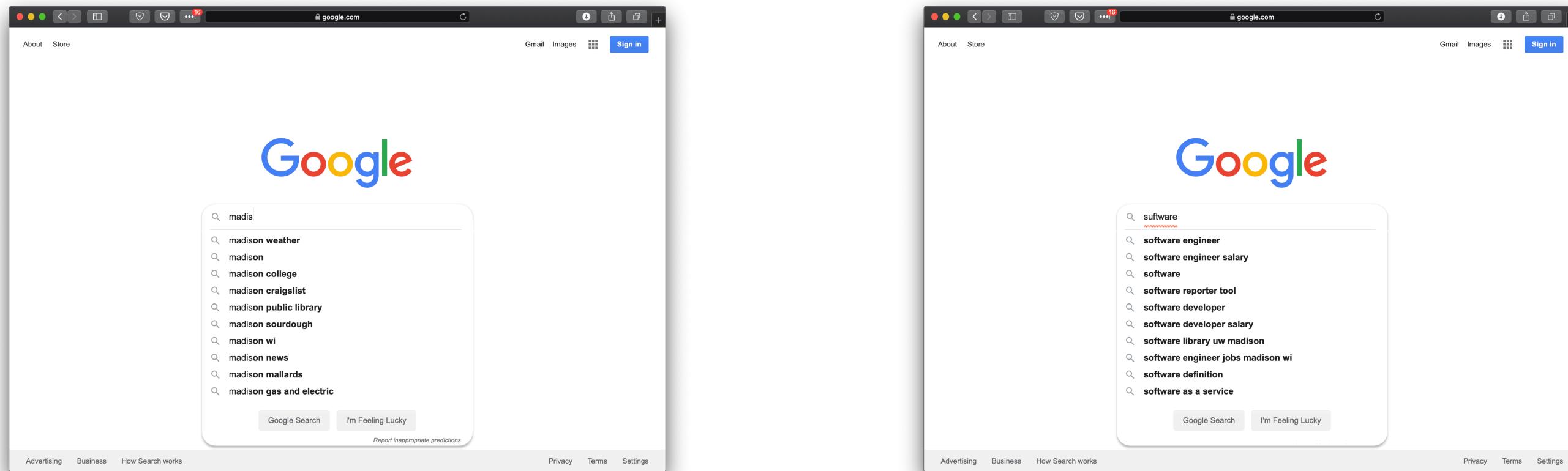
Examples of pagination and infinite scroll:¹⁸



¹⁸ Image source: [Left](#), [Center](#), [Right](#)

Search

Definition: Search, an alternative to page navigation, provides users with listings of content based on a search query.



Faceted search helps users narrow down a search once results are returned based on a simple query by providing functions to sort and filter the results.

This screenshot shows the Yelp search interface for restaurants. At the top, there's a search bar with "Near South Campus, Madison, WI". Below it, a navigation bar includes links for Restaurants, Home Services, Auto Services, More, Write a Review, and Sign Up. A sidebar on the left allows users to sort by Recommended, Highest Rated, or Most Reviewed. The main content area displays "Best Restaurants near South Campus, Madison, WI" with 165 results. It features filters for Neighborhoods (South Campus, Orchard Ridge Community, Capitol, Midvale Heights Community), Distance (Bird's-eye View, Driving, Biking, Walking), Price (\$, \$\$, \$\$\$, \$\$\$\$, Open Now, Delivery, Takeout, Good for Lunch), and Features (Delivery, Takeout, Open Now, Take-out). A map shows the locations of the restaurants numbered 1 through 26. A detailed result for "Asian Noodle" is shown, including a photo of the dish, address (902 Regent St, South Campus), phone number (608) 467-6210, and a 4-star rating from 3 reviews.

This screenshot shows the Zappos search interface for running shoes. At the top, there's a search bar with "running shoes" and a "SEARCH" button. Below it, a navigation bar includes links for Customer Service, Available 24/7 at (800) 927-7671, and Free Shipping, Free 365-day Return policy, & 24/7 Customer Service. Learn More. The main content area displays "Running Shoes" with 5727 items found. It features a "Narrow Choices" sidebar with filters for Gender (Women, Men, Boys, Girls), Product Type (Shoes, Clothing, Bags, Sporting Goods), and Brand (Search Brand, 361 Degrees, Acorn, adidas, adidas by Stella McCartney). The main area shows four pairs of Newton Running shoes (Distance 8, Gravity 8, Fate 5, Distance 8) with their respective prices (\$155.00, \$175.00, \$140.00, \$155.00) and star ratings. A "Customers Who Searched This Also Bought" section is visible at the bottom.

ICA C: Web Design

Deconstruct a website based on its **navigation**...

- Choose a website.
- Choose a task.
- Do your analysis!

Layout

Layout

Definition: Arrangement of visual elements on a canvas.¹⁹

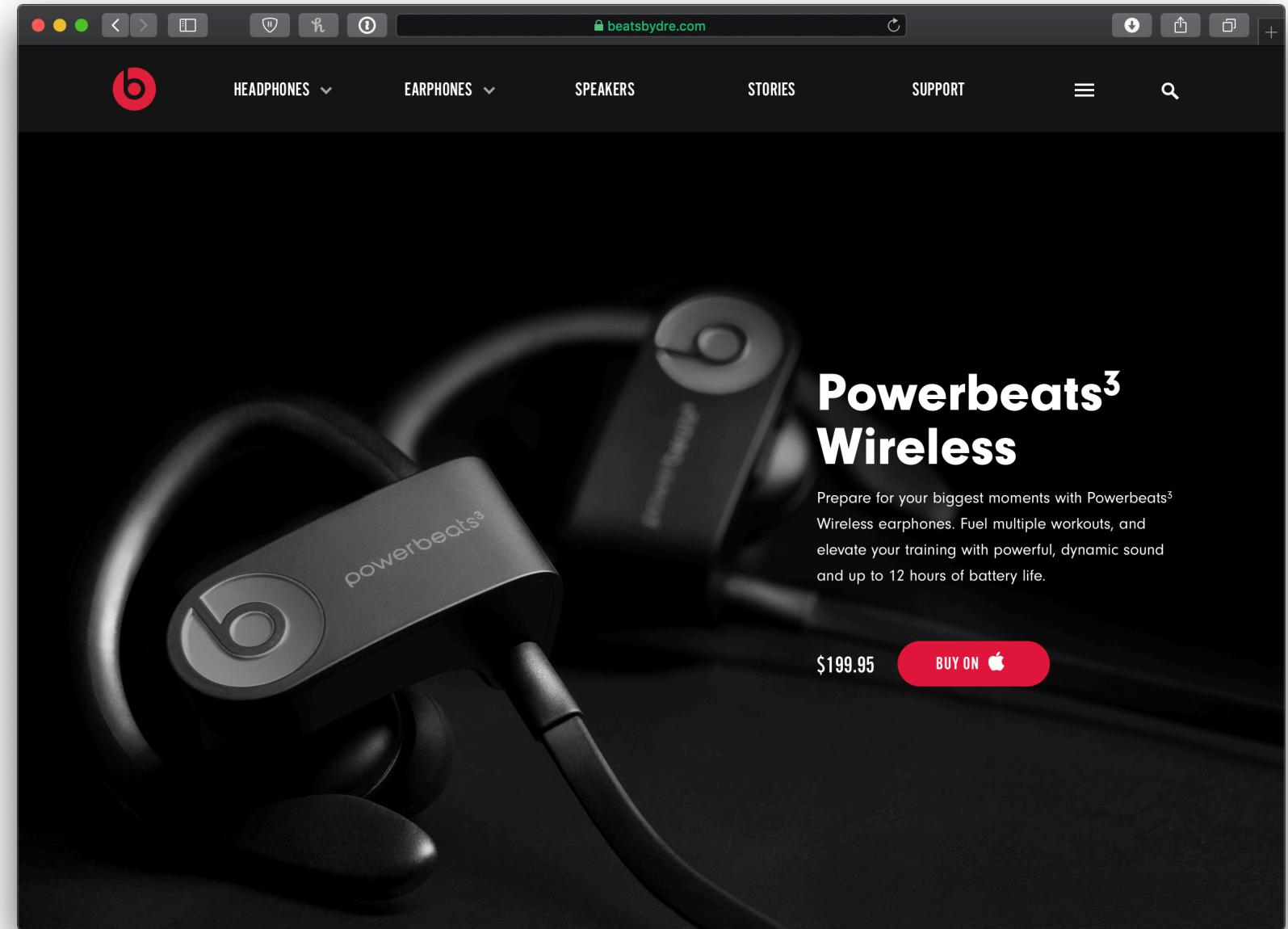
- Creating a focal point
- Following the golden ratio
- Using the rule of thirds
- Effectively using grids
- Integrating type
- Using negative space
- Grouping using gestalt theory
- Creating visual hierarchy
- Exploiting visual scan patterns
- Creating contrast/emphasis

¹⁹ These build on the visual design elements/principles that we covered last week.

Creating a focal point

Definition: Aka, center of visual interest, where the design directs the attention of the viewer first.

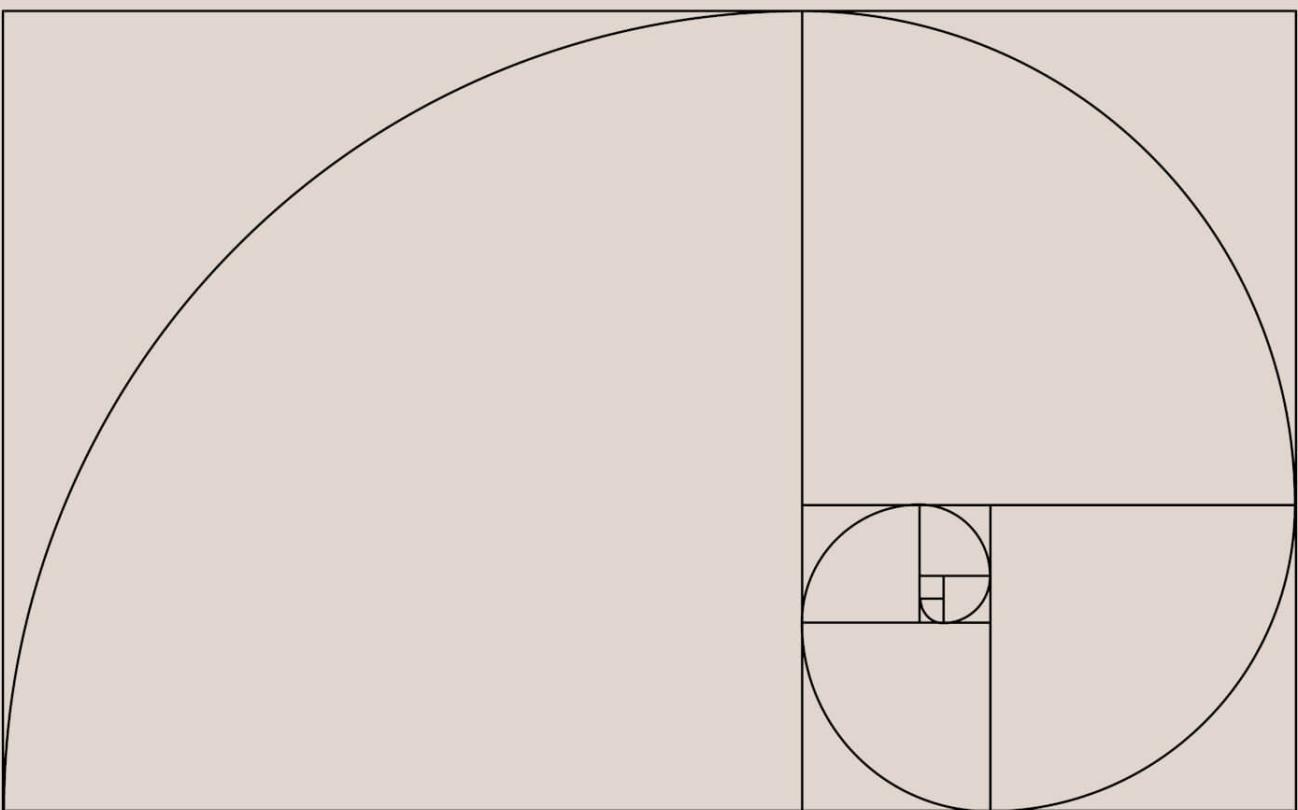
Pro Tip: Successful use locks attention to the focal point and gently guides it to its next destination.



Following the golden proportion²⁰

Definition: A ratio, 1 : 1 . 618, which creates a compositional grid that suggests an asymmetrical, but balanced placement of items on a layout and produces a universal aesthetic appeal.

The golden ratio



thesplashlab.com

²⁰ [Further reading on the golden ratio](#)



W/M

HOME ABOUT US SERVICES CONTACTS

Business goals achieved with design

We are a design team with a strong expertise in design for business. We create branding, business graphics, websites and mobile apps. Let us help you win the competition, reach your maximum and score the company goals beautifully.

PRICING Contact Us

The website features a large, stylized illustration of a person climbing a wall, overlaid with a golden ratio grid. The background has a subtle grid pattern. The overall design is clean and professional.

Using the rule of thirds

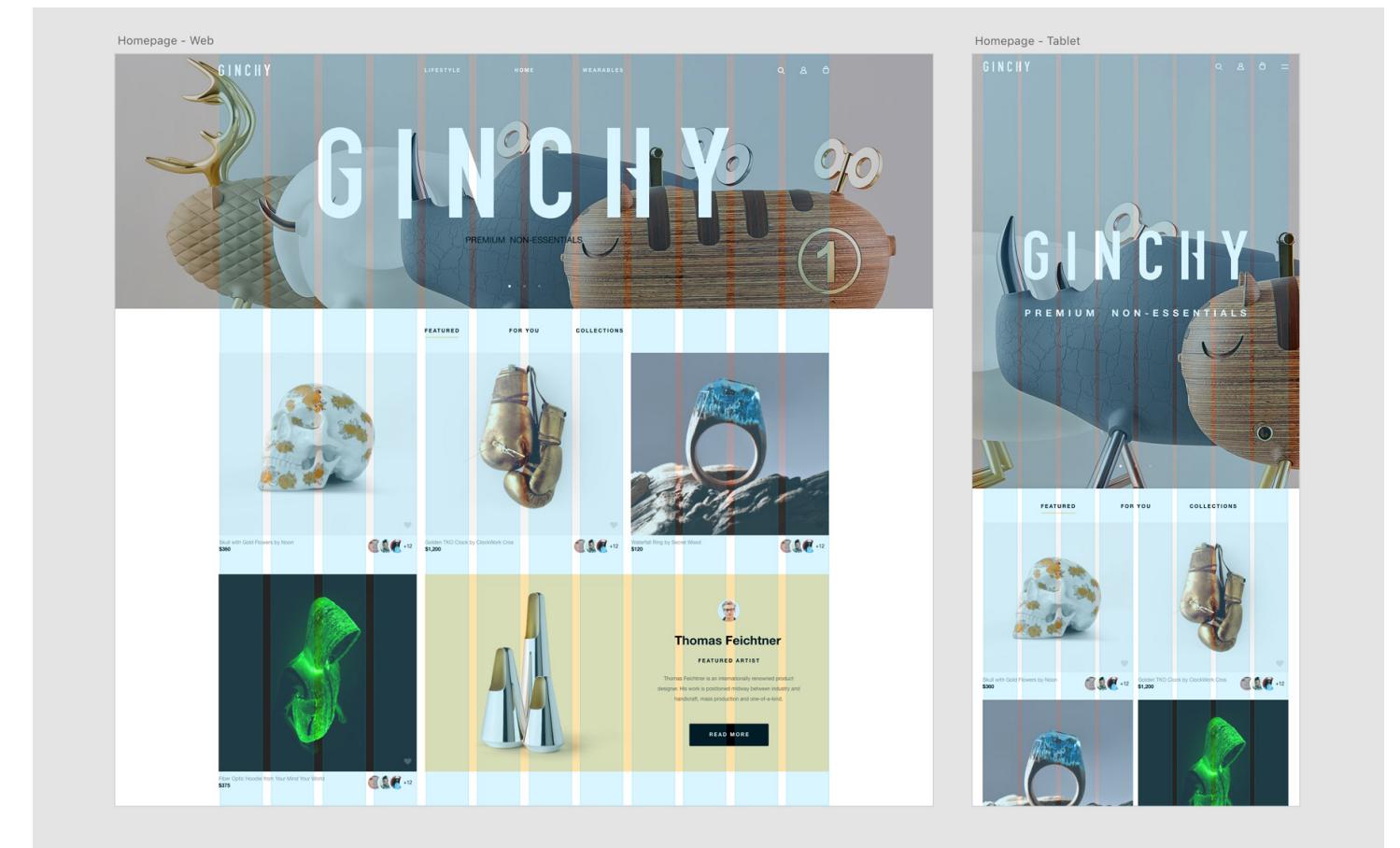
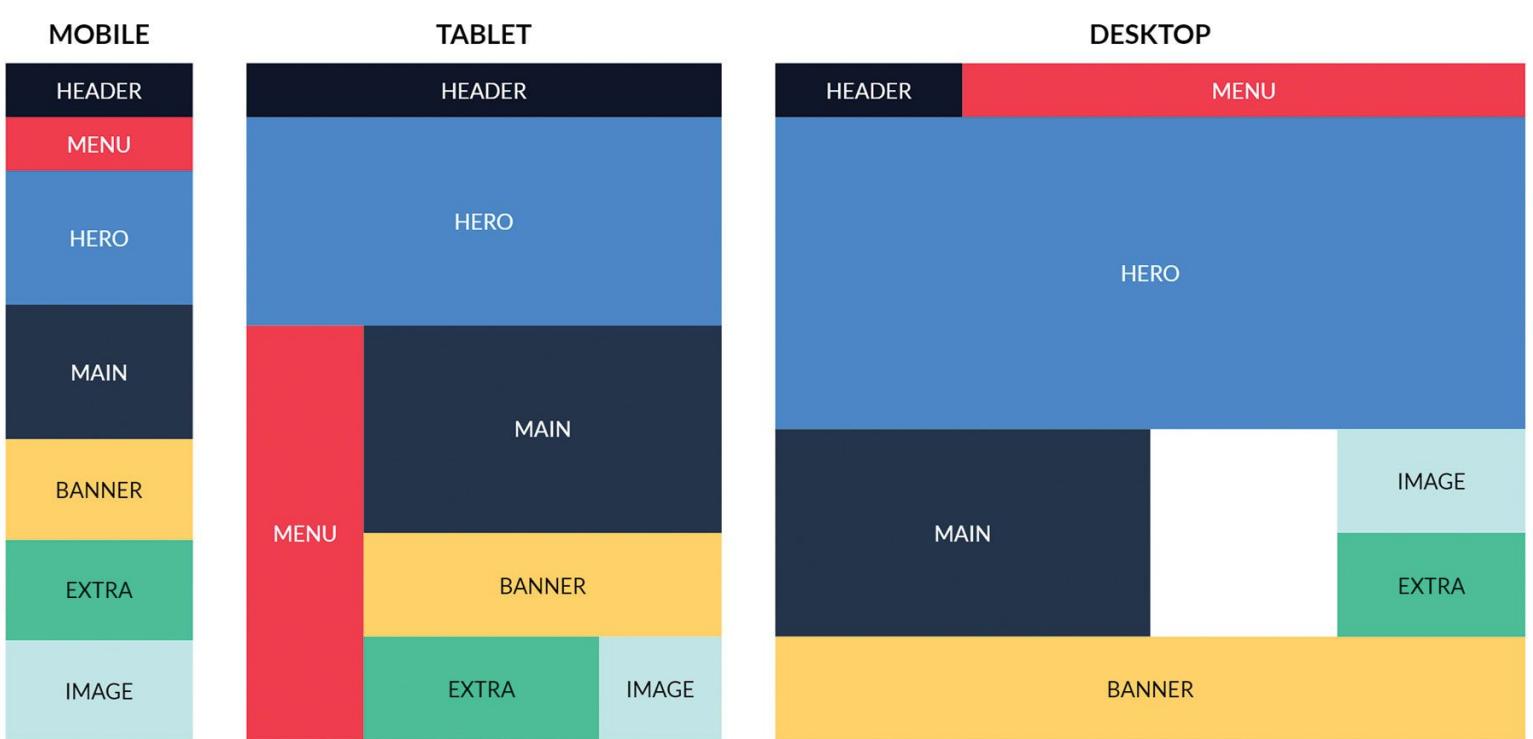
Definition: An approximation of the golden ratio that is easier and more flexible to use. When the canvas is divided into a 3x3 grid, the intersections serve as focal points.



Effectively using grids

Definition: Grids serve as a visual framework for organizing elements in an orderly and balanced fashion.





Integrating type

Definition: The use of *headlines* or *blocks of text* to guide the user's attention to messages.

IOTA makes it possible to securely store, sell, and access data streams.

Never has getting access to diverse, fine-granular data been this easy!

[ABOUT THE MARKETPLACE](#)

[TRY THE MARKPLACE](#)

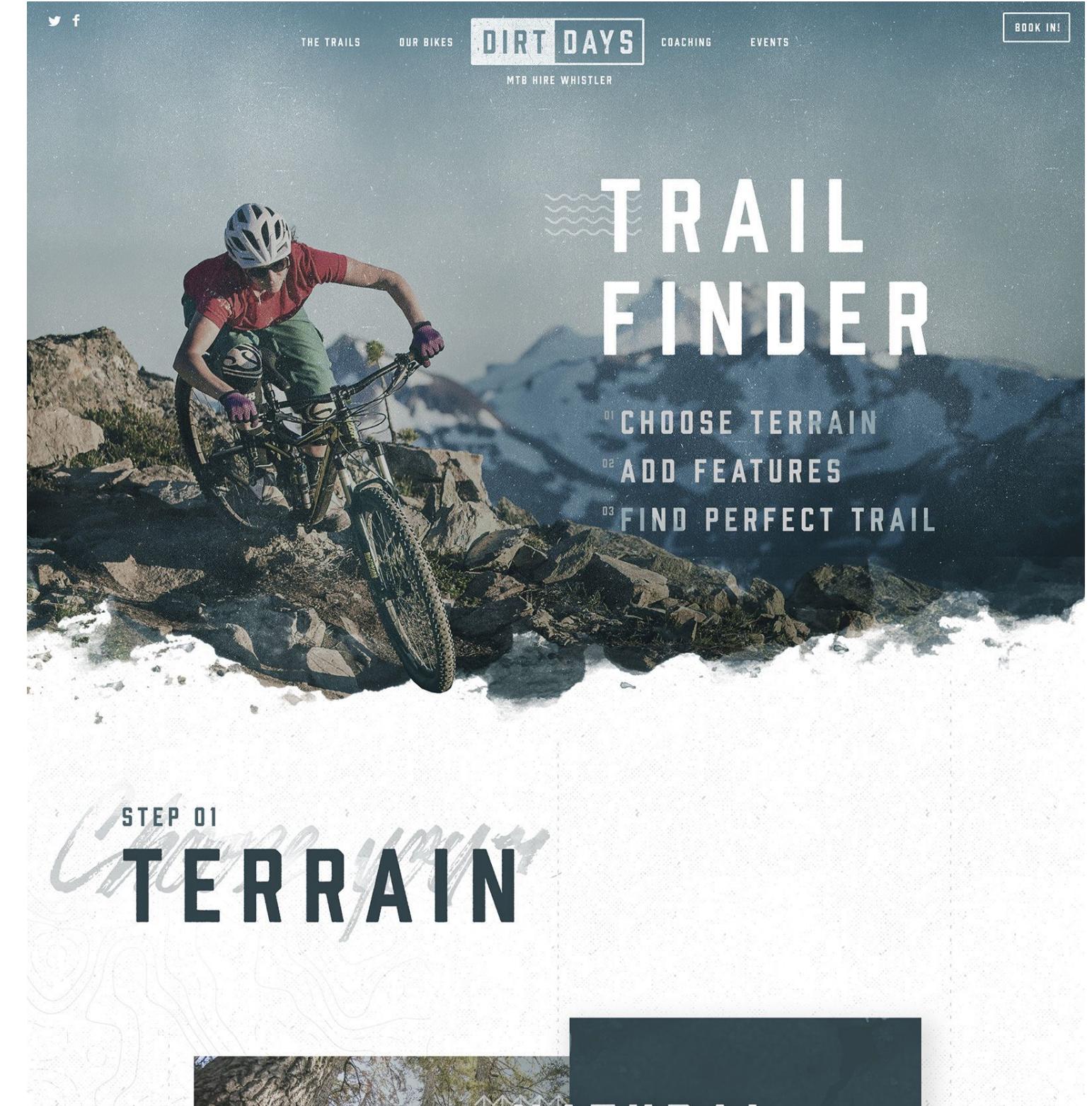
[PARTICIPANTS](#)

IOTA MARKETPLACE

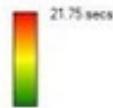
Placing imagery

Definition: The use of imagery to create a focal point or movement on the canvas.

Pro Tips: Place on top, not bottom; direction should be toward next focal point; never flip images; do not interrupt headlines; do not wrap text around images.



Media: Diapers-01.jpg
Time: 00:00:00.000 - 00:00:06.033
Participant Filter: All



Ex-^o gentle for the most sensitive skin.

So you have sensitive skin, add the chemicals and moisture
of a diaper and you have diaper rash.

Baby Wipes' unique high-absorbency natural-blend cotton
pulp provides cotton-soft, extra thick, gel-free protection
for your baby's sensitive skin. The chlorine-free materials and
absorbent polymers is non-toxic and non-irritating. Clinically
tested and pediatrician recommended for babies with allergies
and sensitive skin.



baby TM

If you are not satisfied with the baby leakage protection, you will get your money back. Read more about our leakfree guarantee at www.baby.com

Participant Filter: All
10.43 secs



Ex-^o gentle for the most sensitive skin.

So you have sensitive skin, add the chemicals and moisture
of a diaper and you have diaper rash.

Baby Wipes' unique high-absorbency natural-blend cotton
pulp provides cotton-soft, extra thick, gel-free protection
for your baby's sensitive skin. The chlorine-free materials and
absorbent polymers is non-toxic and non-irritating. Clinically
tested and pediatrician recommended for babies with allergies
and sensitive skin.



TM

If you are not satisfied with the baby leakage protection, you will get your money back. Read more about our leakfree guarantee at www.baby.com

Using negative space

Definition: Space left on the canvas from other design elements, used to provide a visual break and create balance.

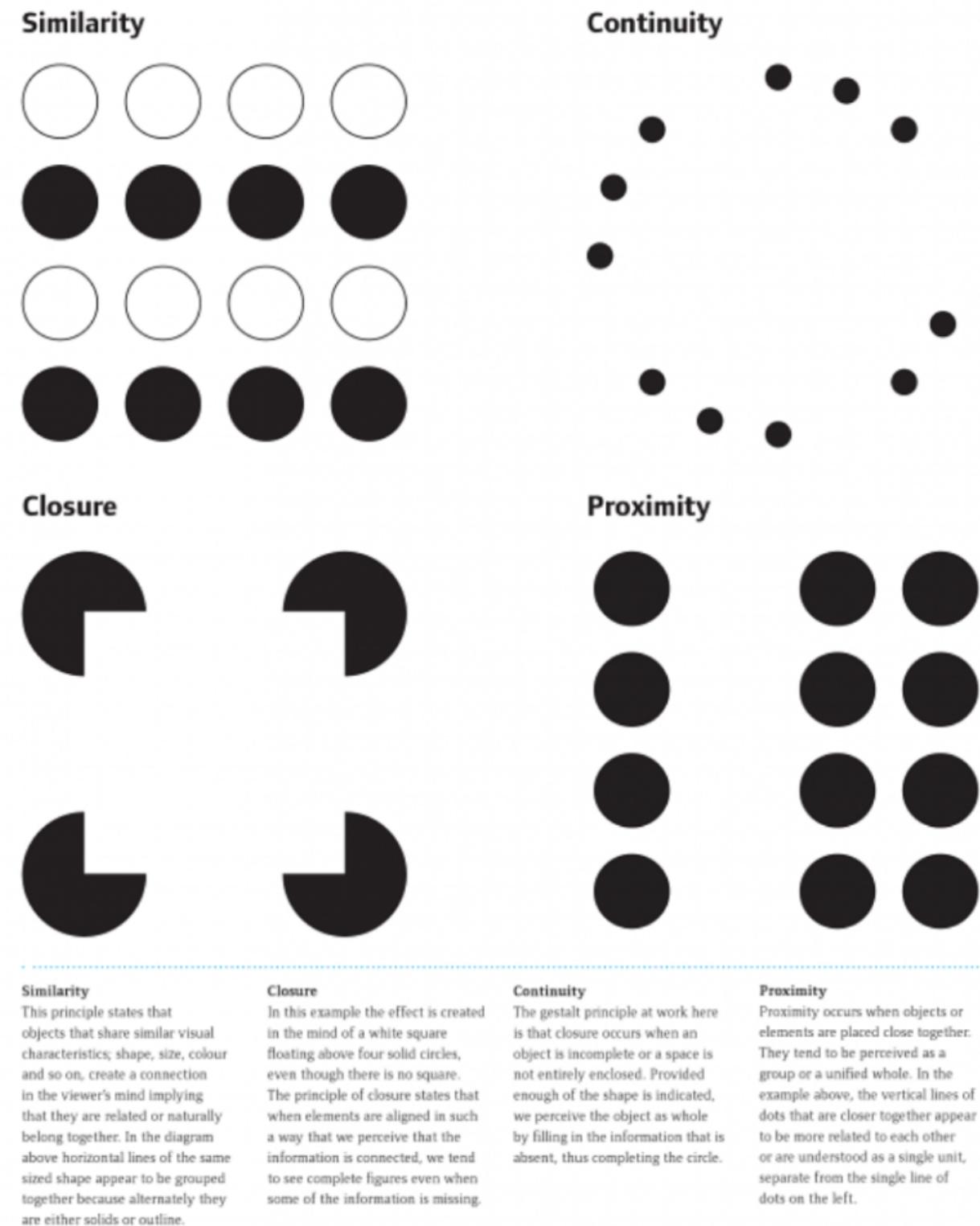


Grouping using Gestalt Theory

Definition: Visual perception principles that predict how users will perceive design elements.

Includes four key principles:

1. Proximity
2. Similarity
3. Continuity
4. Closure



Creating visual hierarchy

Definition: Using relative positioning and sizing to communicate what design elements are more important and should be looked at first.

You will read this last.

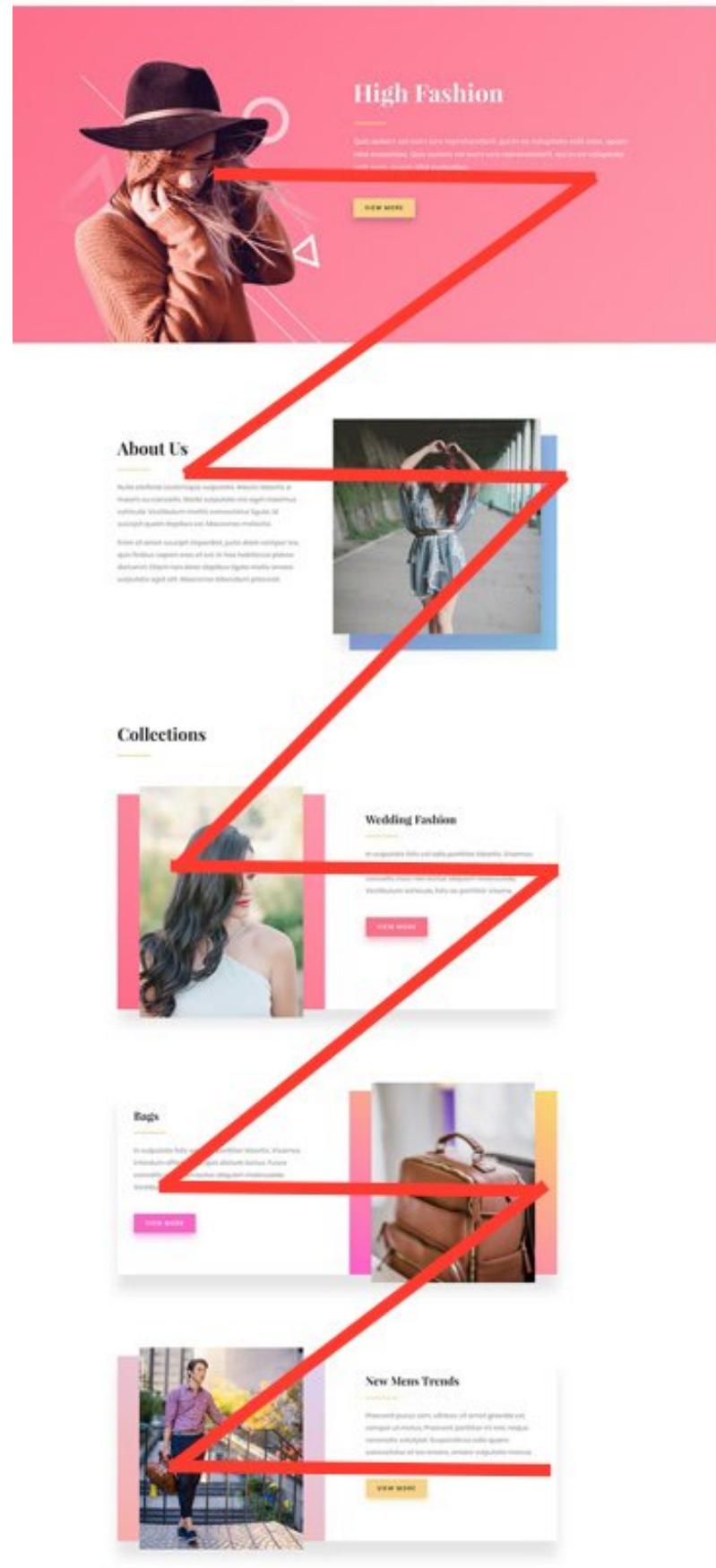
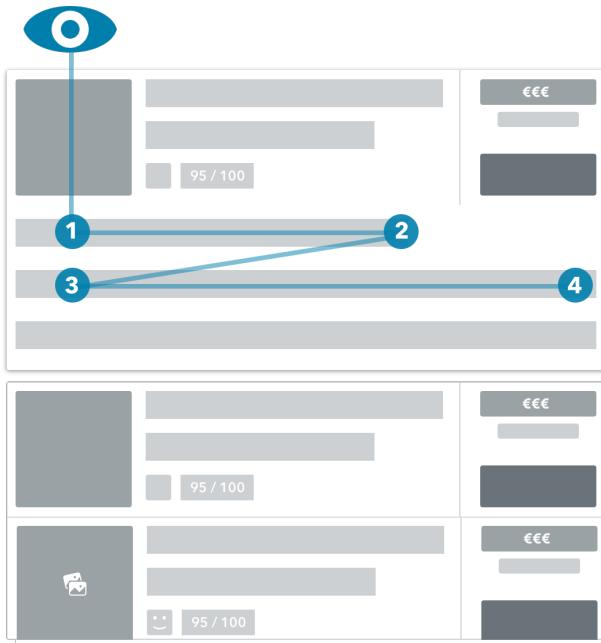
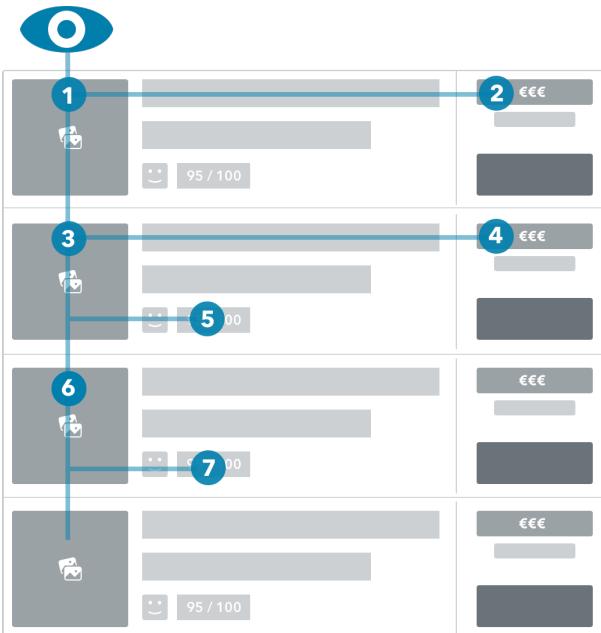
You will read
this first.

Then you will read this.

And then this one.

Exploiting visual scan patterns

Definition: Designing layouts that exploit common eye-scanning patterns, e.g., the F-pattern and the Z-pattern.



The screenshot shows a fashion website with several sections: 'About Us', 'Driving Industry Trends', 'Sourced from Around the Globe', 'Our Designers', and 'Stay in Touch'. A large red diagonal line starts from the top right corner and extends downwards and to the left, highlighting the overall layout structure of the page.



SPEAK TO AN AGENT
1-800-416-0599

Free credit monitoring and reports won't work to fix identity theft. We will.

Identity theft is more than credit card fraud. Free credit services don't look for threats like a criminal draining your 401(k), renting an apartment or committing crimes in your name. Our Advantage and Ultimate Plus memberships will. We detect¹ a wide range of threats and work to fix identity theft issues.

[START MEMBERSHIP >](#)

[GET 60 DAYS RISK-FREE!*](#)

How LifeLock works to help protect you from identity theft.

Our proprietary technology alerts you to wide range of identity threats.² If you have an identity theft problem, our U.S.-based team of specialists will work to fix it.



DETECT & ALERT

We can detect a wide range of threats and will alert you by phone,³ email and text of the suspicious activity.⁴



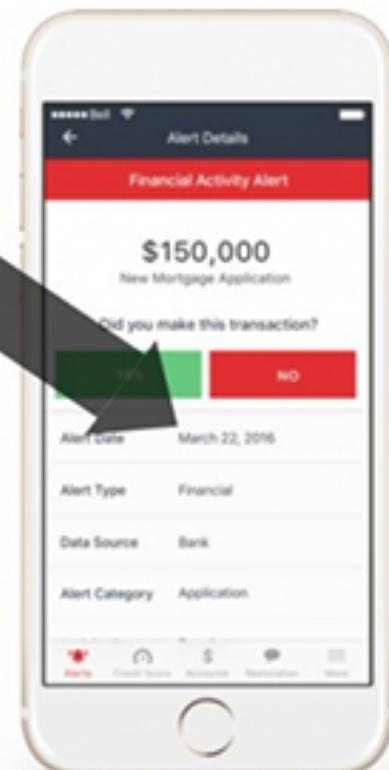
RESTORE

If you become a victim of identity theft while a LifeLock member, a dedicated U.S.-based Identity Restoration Specialist will work with you from start to finish to help fix the issue. With our \$1M Service Guarantee⁵, we'll spend up to \$1M on lawyers and experts if needed.



REIMBURSE

If you have money stolen due to identity theft, we'll replace it, as provided by your plan.⁶



Creating contrast and emphasis²¹

Definition: Using contrast and emphasis to establish visual hierarchy by manipulating features of design elements, including position, size, color, typographic characteristics.

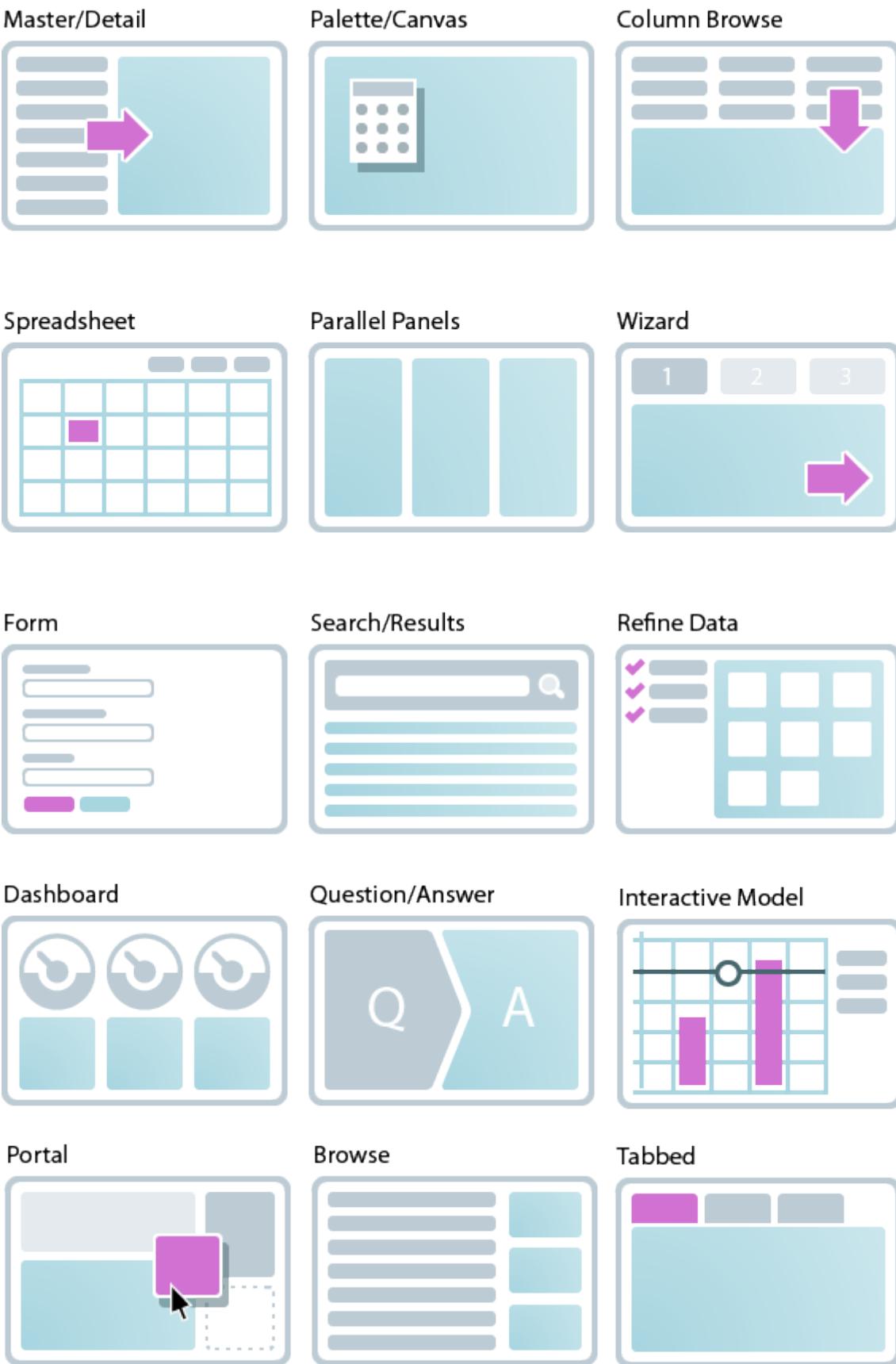
TABLE 10.1. Opposing features that can create contrast.

| Contrast Type | Feature 1 | Feature 2 |
|----------------------|---|--|
| Spatial contrast | Filled space High density | Empty space Low density |
| Layout contrast | Top High Right Isolated Symmetrical | Bottom Low Left Grouped Asymmetrical |
| Form contrast | Simple Representational Geometric Angled | Complex Abstract Organic Curved |
| Direction contrast | Vertical Static | Horizontal Moving |
| Style contrast | Technical and precise Playful | Hand-drawn and irregular Serious |
| Size | Large Long Wide | Small Short Narrow |
| Color contrast | Dark Black and white Warm colors Vivid | Light Colorful Cool colors Muted |
| Texture contrast | Fine Smooth | Coarse Rough |
| Typographic contrast | Serif Roman style (regular) | Sans serif Bold style |

²¹ Neil, 2010, 12 Standard Screen Patterns

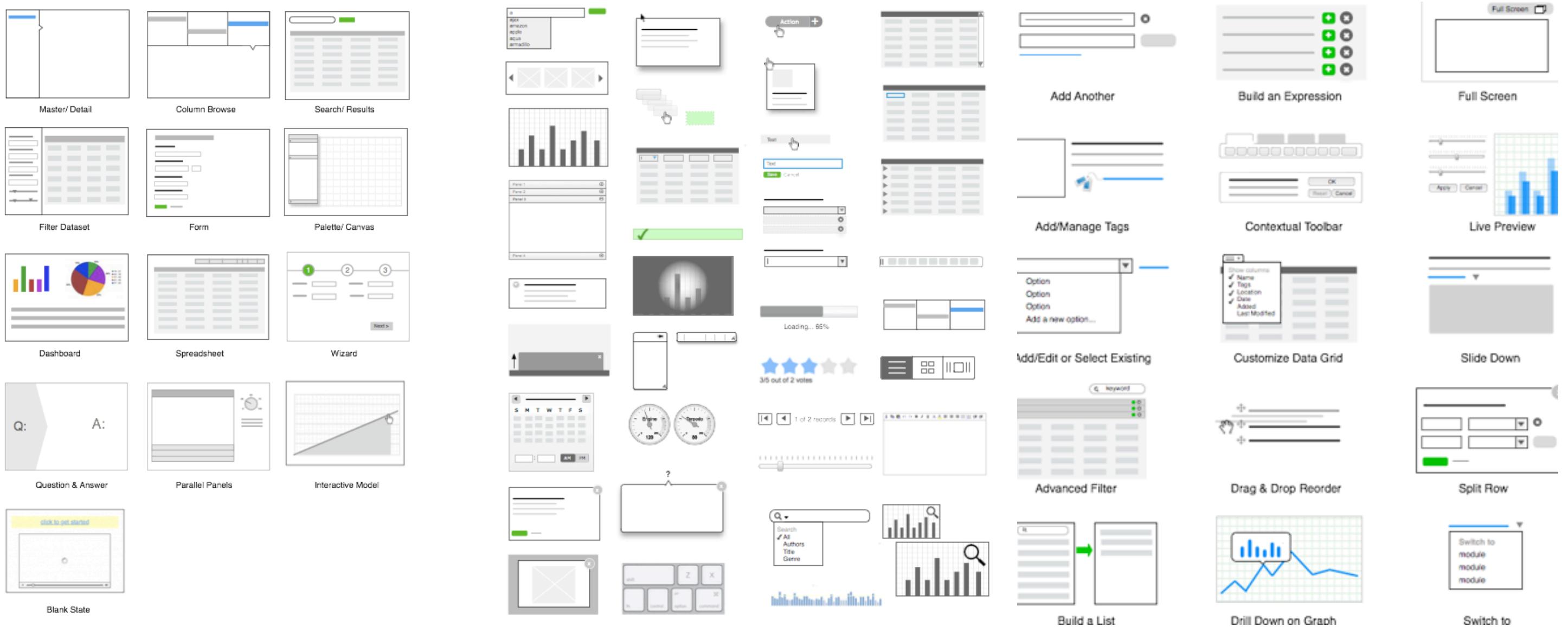
Design Patterns in UX

In the last decade, designers have also developed and refined patterns for overall structure and organization, components and controls.²¹



²¹ Neil, 2010, 12 Standard Screen Patterns

Source²²



²² Neil, 2010, 12 Standard Screen Patterns

ICA C: Web Design

Deconstruct a website based on its **layout**...

- Choose a webpage *from* your chosen website.
- Do your analysis!

Pros & Cons of Design Patterns

Pros:

1. Reducing design time and effort
2. Improving the quality of design solutions
3. Establishing familiarity across systems
4. Providing a baseline or state of the art

Cons:

1. Not every design problem will warrant a pattern
2. Patterns may not exist for new design spaces

Questions?