Design thinking and User experience

Software Engineering

Test your knowledge of prior concepts

What are some key benefits of considering accessibility in UX? ?
Select all that apply.

- ☐ Adresses societal structures and products rather than a person's ability
- ☐ Creates solutions that often help everyone
- ☐ Ensures underrepresented and excluded groups are taken into account

Test your knowledge of prior concepts

Which phase of the design sprint helps the team find solutions to build on?

- Understand
- Ideate
- Prototype
- Test
- Decide

Test your knowledge of prior concepts

What can a researcher learn when they properly empathize with users during user research?

- The wants, desires, and fears of their users
- The opinions, feelings, and biases of their users
- The needs, behaviors, and motivations of their users
- The hopes, dreams, and assumptions of their users

Test your knowledge of prior concepts

Which of the following are examples of pain points? Select all that apply.

- ☐ Completing the checkout process for a food delivery app
- ☐ Being asked to submit credit card information when no payment is required
- ☐ Struggling to interact with a button on a mobile app's homepage because it's extremely small
- ☐ Receiving the same response to three different questions from an automated chatbot

Test your knowledge of prior concepts

Which of the following statements about user personas is true?

- ○ Personas can help identify patterns of behavior in users.
- ○ A persona is a real user who provides real reviews on a product.
- ○ Personas are modeled after the characteristics of the UX designer.
- ○ UX designers should avoid creating backstories for personas.

Test your knowledge of prior concepts

Which of these user stories includes a type of user, an action, and a benefit?

- As a yoga instructor, I want to create a consistent class schedule so that my clients know how to confidently plan their weekly exercise.
- As a scientist, I want access to my colleagues' published research.
- I want a bookshelf so I have somewhere to store my book collection.
- As a chef, I want access to the freshest ingredients and the highest-quality cooking utensils.

Test your knowledge of prior concepts

Fill in the blank: Designing products with accessibility and inclusivity in mind ensures that you _____.

- ○ create a different solution for every single user.
- ○ focus on creating one solution for as many people as possible
- ○ create an identical experience for all users
- ○ include solutions that benefit specific individuals, which improves the user experience for all users.

Test your knowledge of prior concepts

Which of the following is a complete problem statement?

- Akiko is a construction consultant who is building a skyscraper.
- Hakim is an accountant who needs to collect expense reports from their coworkers.
- Angelo needs a toolbox and shingles to fix the leak in their roof.
- Bella is a dance choreographer who needs to create a practice video because some of their students have school during the day and can't attend lessons in person.

Test your knowledge of prior concepts

Identify the steps of the ideation process in the correct order.

- Brainstorming, documenting ideas, focusing on quantity, not allowing evaluation, gathering a diverse team, questioning obvious solutions, and evaluating the ideas.
- Documenting ideas, brainstorming, focusing on quantity, questioning obvious solutions, gathering a diverse team, and evaluating the ideas.
- Gathering a diverse team, brainstorming, documenting ideas, questioning obvious solutions, focusing on quantity, and evaluating the ideas.

Test your knowledge of prior concepts

You're a UX designer working on a gaming app in a competitive market space. You want to figure out what your competitors' strengths and weaknesses are, and how to create a better product. What should you do?

- ○ Conduct informal research online
- ○ Conduct a competitive audit
- ○ Create a marketing plan
- ○ Contact each company directly

Contents

- Create storyboards to come up with ideas about solutions to user needs.
- Create wireframes on paper and digitally in the design tool Figma.
- Build paper prototypes to create interactive designs.
- Design low-fidelity prototypes in Figma.

Modules

Storyboarding and wireframing.

Creating paper and digital wireframes.

Building low-fidelity prototypes.

Understand Ethical and Inclusive design

Storyboarding and wireframing

Use research to inform ideation:

- Come up with ideas for designs that meet users' specific needs, your designs must be based on insights from **actual user research**, not assumptions.
- The designs you create will be supported by **research**, feedback from **user interviews**, and learnings from **observations**.
- Together, empathy maps, personas, user stories, and user journey maps help us create a problem statement.

Storyboarding and wireframing

Use research to inform ideation:

- **Empathy maps** explore users' four main motivations: what the user says, thinks, does, and feels. The insights gathered from empathy maps help you come up with ideas for solutions that address the user's real problems.
- **Personas** place the users who you're designing for front-and-center. By creating detailed user profiles, you can clearly envision potential users that you'd design for.
- **User stories** determine which user needs are the most critical to address with your designs. This direction will help focus your ideation.
- **User journeys** help you come up with ideas for designs that truly support the users' needs and solve their problems.
- A **problem statement** is a clear description of the user's need that should be addressed. The problem statement you created in the last course will guide the focus of your ideation.

Storyboarding and wireframing

Goal statements:

- To focus the scope of your designs, we'll create a product goal statement.
- One or two sentences that describe a product and its benefits for the user.
- Cover who the product will serve, what the product will do, and why the product solves the user’s need.

Storyboarding and wireframing

Build goal statements:

- You need to understand the problem that users are facing before you can design a solution to address that problem.
- Transition from identifying the **problem** to defining the **goal**.

Storyboarding and wireframing

Build goal statements:

1- Revisit problem statement:

PROBLEM STATEMENT

_____ is a/an _____

user name — user characteristics

who needs _____

user need

because _____.

insight

Storyboarding and wireframing

Build goal statements:

1- Revisit problem statement:

PROBLEM STATEMENT

Sawyer (user name) is a/an construction business owner (user characteristics)

who needs to attend local trade show conferences (user need)

because they need to network to find more clients (insight).

Storyboarding and wireframing

Build goal statements:

2- Transition from identifying the problem to defining the goal

GOAL STATEMENT

Our _____ will let users _____

product (what) — perform specific actions (what)

which will affect _____

describe who the action will affect (who)

by _____.

describe how the action will positively affect users (why)

We will measure effectiveness by _____.

describe how you will measure the impact

Storyboarding and wireframing

Build goal statements:

2- Transition from identifying the problem to defining the goal:

A strong goal statement:

- Describes a specific action users can take or what the product will do.
- Defines who the action will affect.
- States the positive impact of the action or why the product solves the user's need.
- Outlines success in measurable terms.

Storyboarding and wireframing

Build goal statements:

2- Transition from identifying the problem to defining the goal

GOAL STATEMENT

Our TradeConference app (product (what)) will let users expand their business (perform specific actions (what))

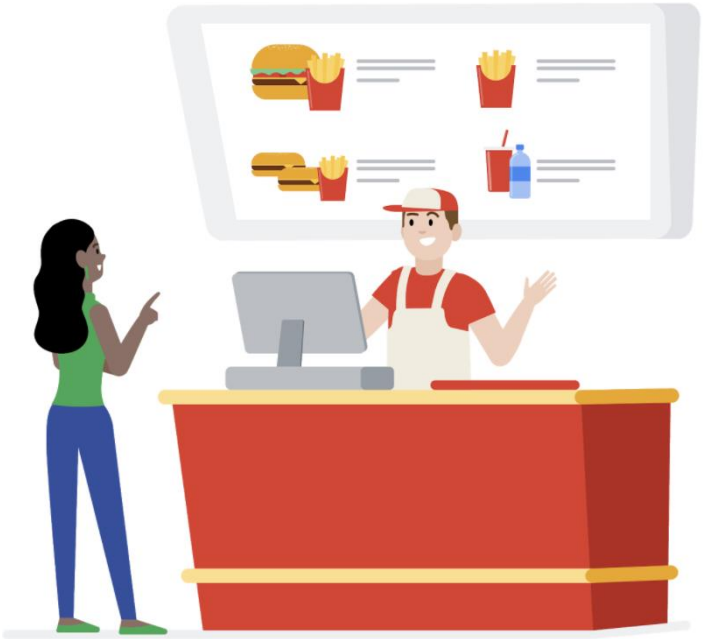
which will affect how business owners connect with new clients (describe who the action will affect (who))

by giving them the ability to connect with clients at local trade shows. (describe how the action will positively affect users (why))

We will measure effectiveness by analyzing show attendance. (describe how you will measure the impact)

Storyboarding and wireframing

Outline a user flow:



Predict users' needs before they know what they want or need!

Storyboarding and wireframing

Outline a user flow:

User flow:

- The path taken by a typical user on an app or website so they can complete a task from start to finish.
- Map how users achieve a specific goal as they move through a product.

You need to determine:

- What actions will users take in the app?
- What decisions will users make?
- What screens will users experience after taking action or making a decision?

Storyboarding and wireframing

Draw a user flow:

Action: The actions users take when moving through a product design are represented as circles.

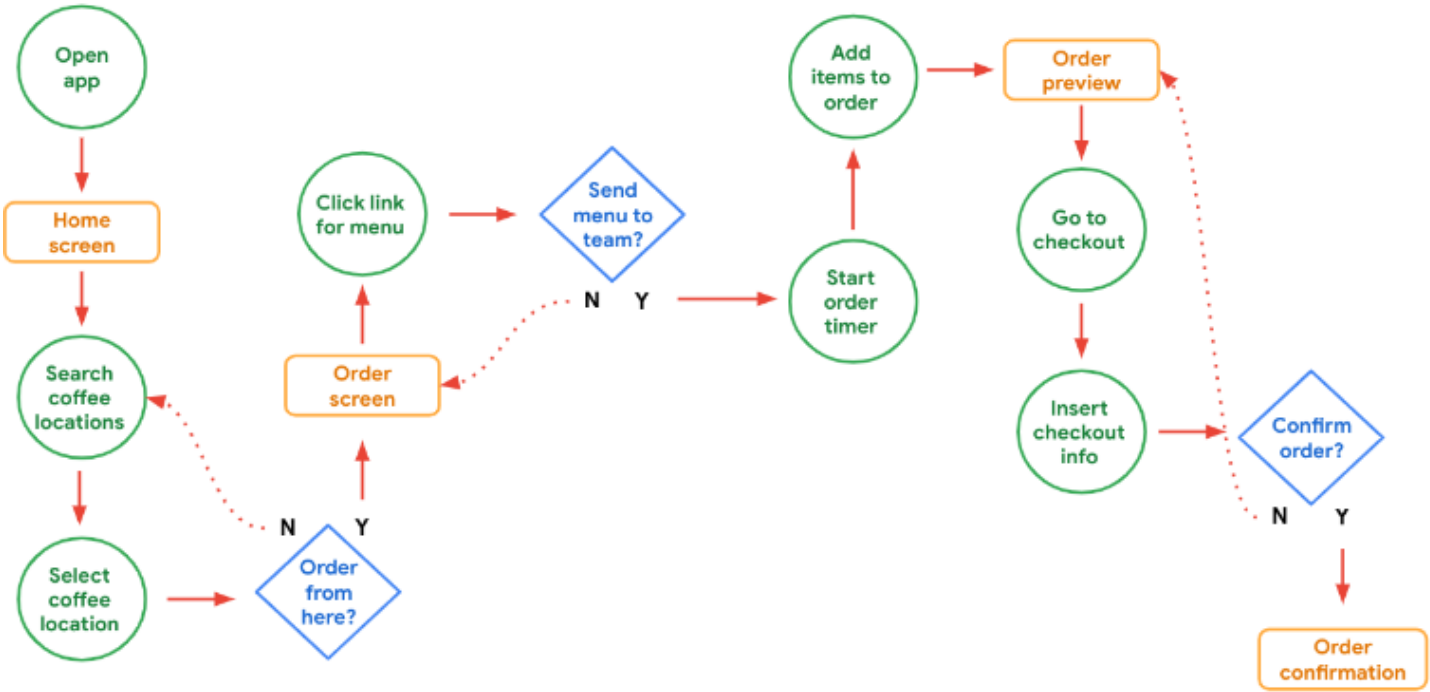
Screen: The screens of a digital product that users will experience while completing tasks are represented as rectangles.

Decision: Diamonds represent points in the user flow where users must ask a question and make a decision.

User flow direction: Solid lines indicate forward direction through the user flow, and the dotted lines indicate backward direction or returning to a previous page.

Storyboarding and wireframing

Example of a user flow:



Storyboarding and wireframing

Storyboarding user flows:

Storyboarding and wireframing

Storyboarding user flows:

Storyboard: a series of panels or frames that visually describe and explore a user's experience with a product.

- As a tool to **visualize potential solutions** to problems the user is facing.
- Storyboard should focus on just the **most important parts** of a user's experience with the product.
  - **Character**: States the user in the storyboard.
  - **Scene**: Gives designers a way to imagine the user's environment.
  - **Plot**: benefit offered by the design.
  - **Narrative**: Describes the problem the user is facing and how the design will solve this problem.

Storyboarding and wireframing

Storyboarding user flows:

Two common types of storyboards in UX design:

- **Big-picture storyboards:** focus on what the user needs, their context, and why the product will be useful to the user, often used early in the design process when designers are trying to get stakeholders to support their ideas.
- **Close-up storyboards:** concentrate on the product and how it works. They're best used in the middle to the end of the design process.

Storyboarding and wireframing

Storyboarding user flows:

Create a big-picture storyboard:

- Start with a problem statement: establish character and set the scene
- Goal statement: determine a plot (the benefit or solution of your design)
- Set up the storyboard

Scenario: An app that allows users to recruit qualifies, new, or substitute musicians to join their band. 1. The drummer in Dan's band quite so he needs to find a replacement. 2. Dan finds and opens the app. 3. Dan scrolls through the app and finds an experienced drummer who lives nearby. 4. A former band member did not have experience with rock music so having relevant experience is important. 5. Dan selects a drummer and taps submit to schedule an interview. 6. Dan is happy and his band schedules several gigs.

You brought the user, Dan, on a journey to find a new drummer for his band. You've addressed his pain points and helped him find a qualified drummer. Your user is delighted with the app experience. Big-picture storyboards can really help immerse you in the experience of a user, which leads to better products overall.

Storyboarding and wireframing

Storyboarding user flows:

Create a big-picture storyboard:

PROBLEM STATEMENT

Dan (user name) is a/an lead guitarist in a band (user characteristics)

who needs to hire a new drummer (user need)

because they are having issues replacing the previous drummer (insight).

Storyboarding and wireframing

Storyboarding user flows:

Create a big-picture storyboard:

GOAL STATEMENT

Our Bandmate app (product) will let users recruit new or substitute musicians (perform specific actions)

which will affect users who need new band members (describe who the action will affect)

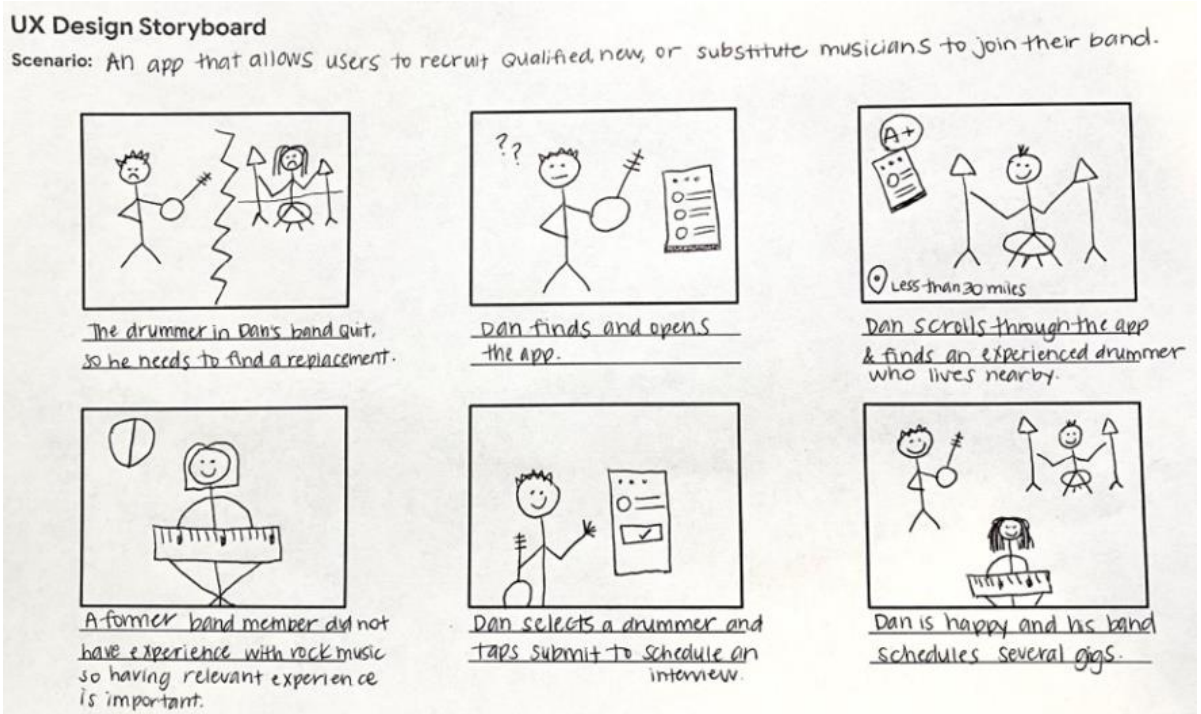
by letting them easily find qualified musicians to hire (describe how the action will positively affect them).

We will measure effectiveness by reading user reviews and tracking successful hires (describe how you will measure the impact).

Storyboarding and wireframing

Storyboarding user flows:

Create a big-picture storyboard:



Storyboarding and wireframing

Storyboarding user flows:

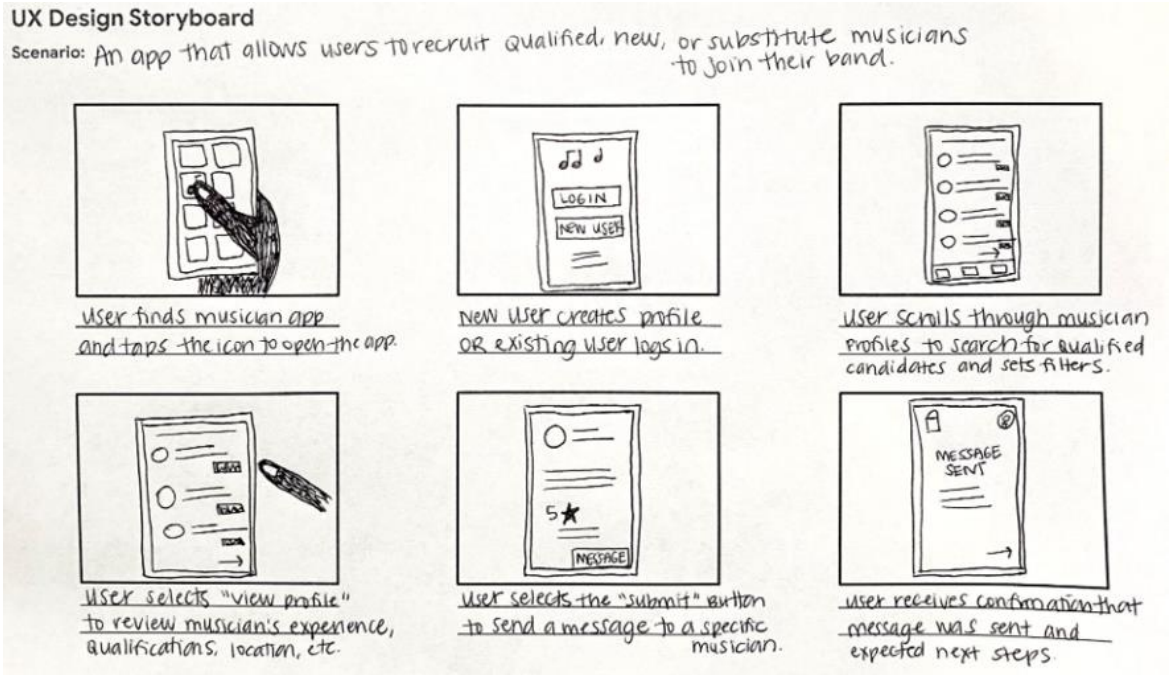
Create a close-up storyboard: *(concentrate on the product and how it works)*

- Start with a problem statement.
- Create a goal statement.
- Set up the storyboard.
- Add the storyboard scenario.

Storyboarding and wireframing

Storyboarding user flows:

Create a close-up storyboard: *(concentrate on the product and how it works)*



Storyboarding and wireframing

Introduction to wireframes:

A design solves a real problem that users are experiencing. A ***strong design*** *always* ***puts the user front and center.***

- **Fidelity in UX**: how closely a design matches the look-and-feel of the final product.
- **Low fidelity:** has a lower amount of complexity and is less refined or polished.
- **High fidelity:** closely matches the look-and-feel of the final product and is more refined or polished overall.
- **Wireframe:** a basic outline of a digital experience, like an app or a website (one kind of low-fidelity design), were created with wires.
- **Wireframe** establish the basic structure of a page. A good wireframe is all about **organizing** and communicating information clearly to your colleagues.

Storyboarding and wireframing

Introduction to wireframes:

- **Elements:** building blocks for creating a design. Elements to draw wireframes: Lines, shapes like squares and circles, and text.
- **Industry standards:**
  - **Body text** is represented by horizontal lines. (Short labels and headings are written out.)
  - **Images, photos, illustrations, and icons** are represented by squares or circle with large Xs drawn on top of them. (Simple shapes, like menu icons, can be drawn as they appear.)
  - **Calls to action**—like “submit” or “compose” buttons—are represented by rectangles or circles, whichever fits the basic shape the element has on the screen.

Storyboarding and wireframing

Introduction to wireframes:
Industry standards:

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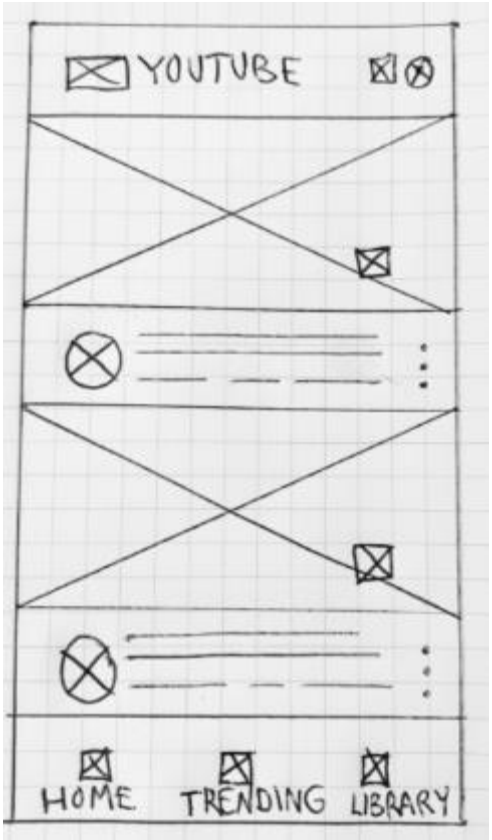
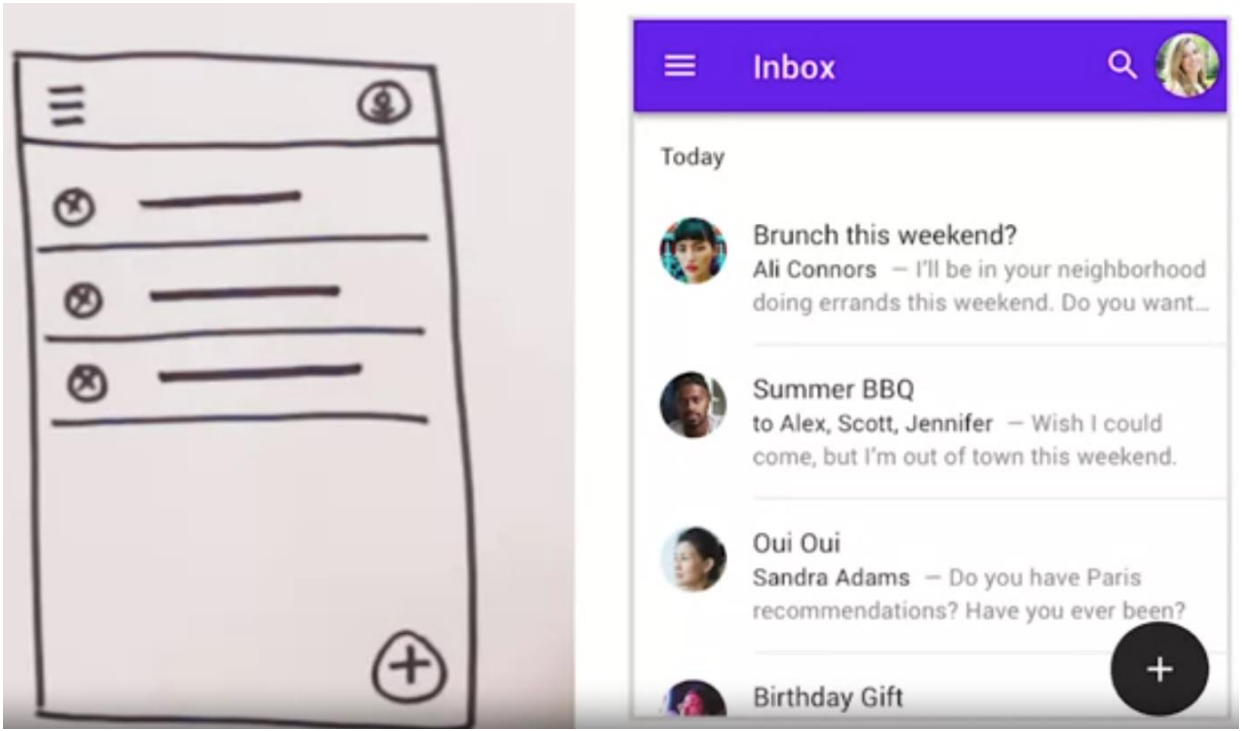


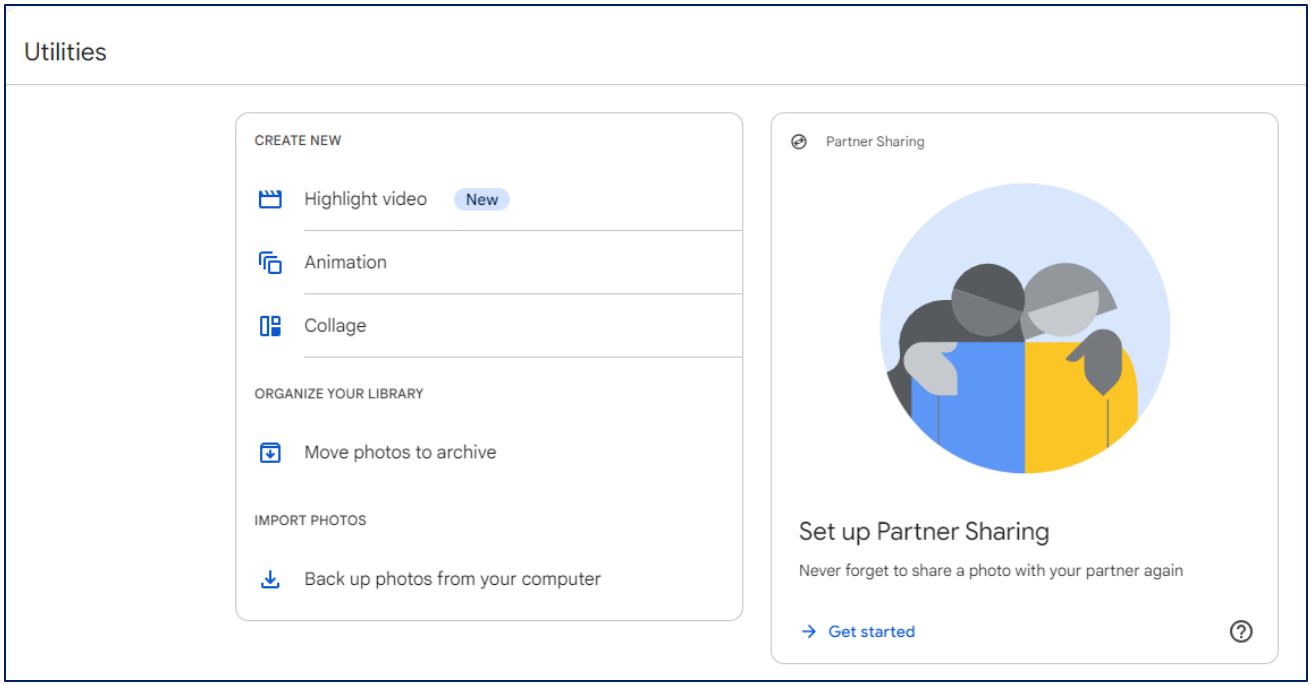
Storyboarding and wireframing

Introduction to wireframes:



Storyboarding and wireframing

Draw your first wireframe:



Storyboarding and wireframing

Benefits of wireframing:

- Inform the elements to include in your design.
- Get stakeholders to focus on structure
- Catch problems early.
- Save time and effort.
- Iterate quickly.

Modules

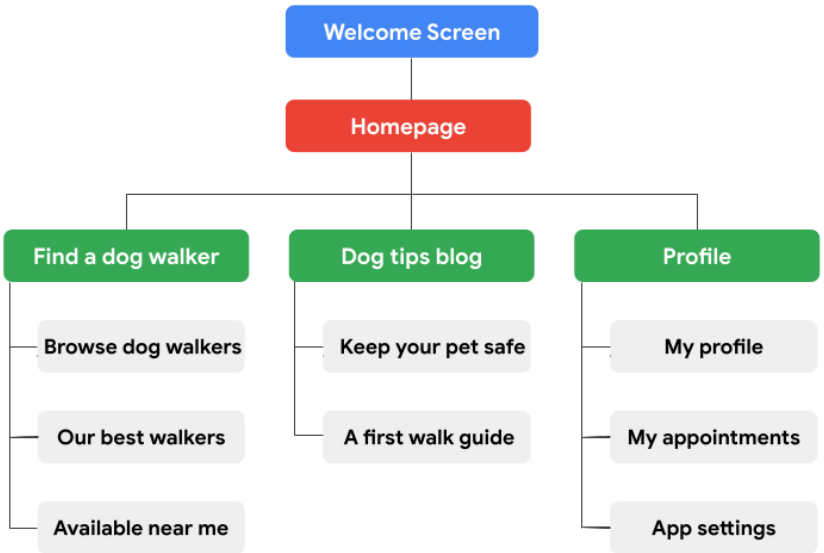
Storyboarding and wireframing.

Creating paper and digital wireframes.

Building low-fidelity prototypes.

Creating paper and digital wireframes

Information architecture (IA): organizes content to help users understand where they are in a product and where the information they want is.



Creating paper and digital wireframes

IA is made up of three pieces:

- **Organization:** how different pieces of information connect in a product.
- **Hierarchy:** where a larger category is placed at the top and specific categories related to the overall category are placed underneath. Peer information is placed side by side (or on the same level as each other).
- **Sequence:** enables users to move through an app via certain orders or steps.

Creating paper and digital wireframes

Basic principles of IA:

- **Object:** Content is “living” and something that changes and grows over time.
- **Choice**: People actually need fewer choices that are well-organized.
- **Disclosure:** Only show users what they need to decide if they want to delve further.
- **Exemplar:** Show examples of content when describing the content of the categories.
- **Front doors:** Give people who arrive at other pages the chance to view useful information and navigation aids from wherever they come on board.
- **Multiple classification**: People have different ways of searching for information.

Creating paper and digital wireframes

Basic principles of IA (cont):

- **Focused navigation:** Make sure menus relate to the same areas and don't mix subjects and confuse the user.
- **Growth:** The amount of content in a design will grow over time. Make sure the website is scalable.

Creating paper and digital wireframes

Create paper wireframes:

- Gather materials: The materials needed are gathered in one place.
- Write a list of the elements you need to include in your wireframe
- Create five different versions of how to structure information on the page.
- Choose which elements to refine.
- Combine elements into a refined wireframe.

Creating paper and digital wireframes

Transition from paper to digital wireframes

Moving from paper to digital wireframes:

- Is my paper wireframe complete?
- Have I received feedback on my paper wireframe?
- Am I ready to consider basic visual cues?

Keep in mind (transition from paper to digital):

- Use actual content for important pieces of text. For large chunks of body copy, use a placeholder text like **Lorem ipsum**.
- Hold back on adding expressive content, like color or images.

Creating paper and digital wireframes

Transition from paper to digital wireframes:

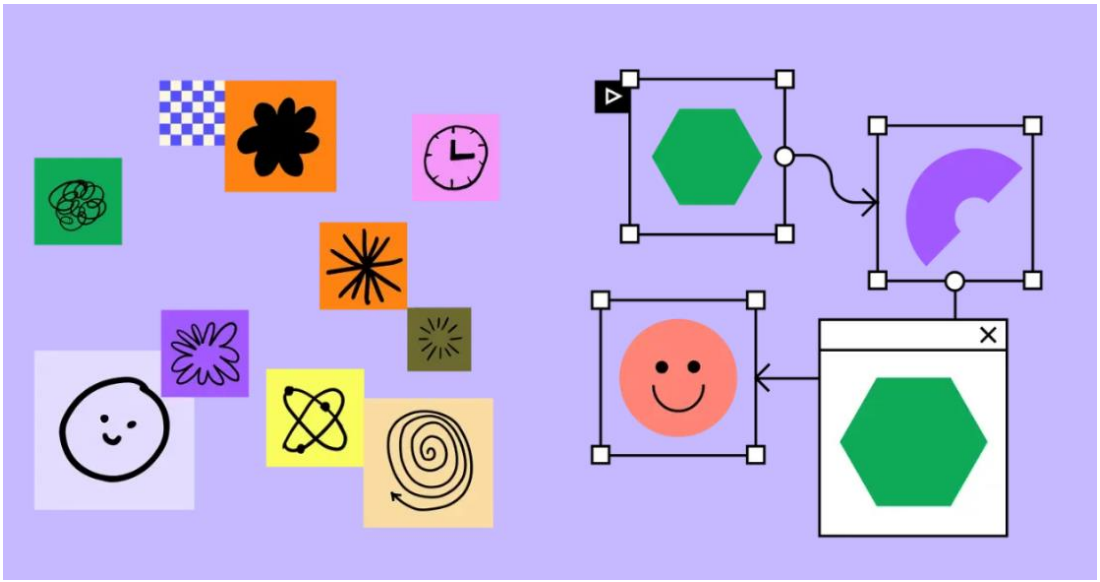
Benefits of Digital wireframe:

- Pay more attention to the details and making your design cleaner.
- It's important to get the structure right
- Easier to share

Creating paper and digital wireframes

Introduction to Figma:

- Simplifies the design process by allowing **teams to collaborate**.
- Widely used by the design community, so there are many plug-plug-ins made available by the design community



Creating paper and digital wireframes

Create a Figma account:
Read the instructions in the file
“**Create a Figma account.docx**”

Figma for Beginners courses

Figma Crash Course for Beginners 2024

1. Figma for Beginners by Figma
2. Learn Design by Figma
3. Figma by Jesse Showalter
4. Figma 101 by Shift Nudge
5. Free Figma UI UX Design Essentials Course
6. Figma UI Design Tutorial by A&JSmart
7. Figma Crash Course by Adrian Twarog
8. Learn Figma for UX/UI Design
9. Figma Tutorials by ArtTutor
10. Figma Certificate by UXtoast

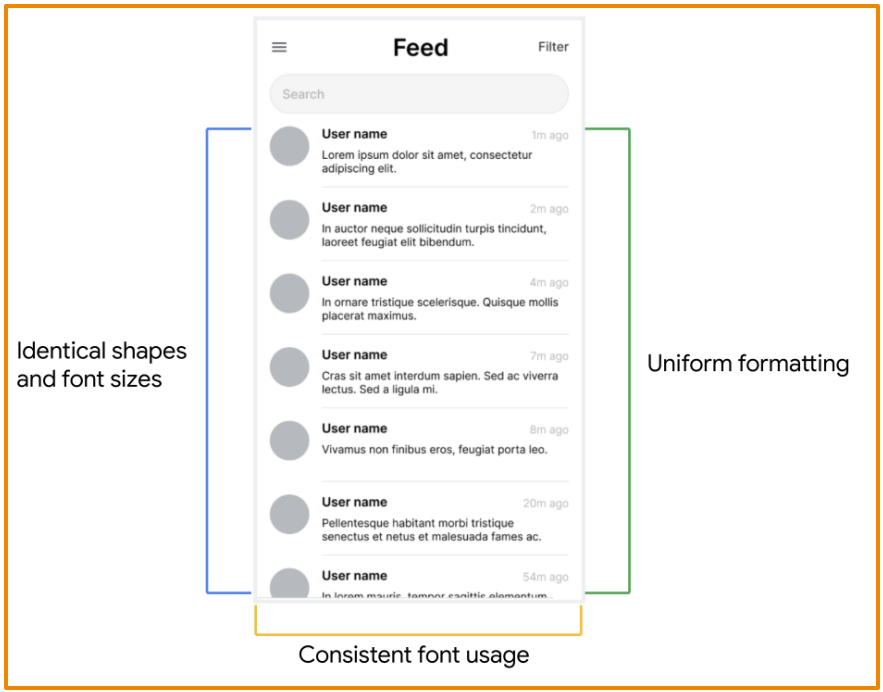
Creating paper and digital wireframes

Use Gestalt Principles when creating wireframes
Gestalt Principles:

- **Similarity**: elements that look alike (in shape, size, or color, for instance) are perceived to have the same function.
- **Proximity:** elements that are close together appear to be more related than things that are spaced farther apart.
- **Common:** elements located within the same closed area are perceived to be grouped together.

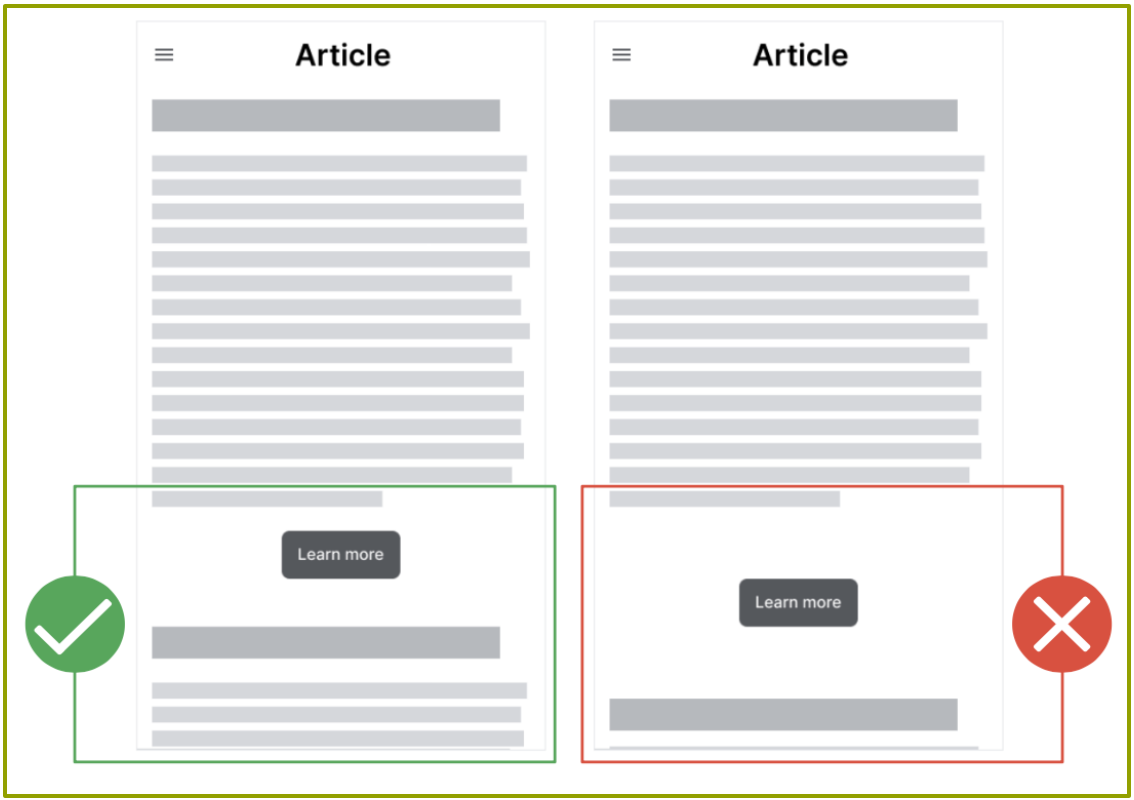
Creating paper and digital wireframes

Similarity



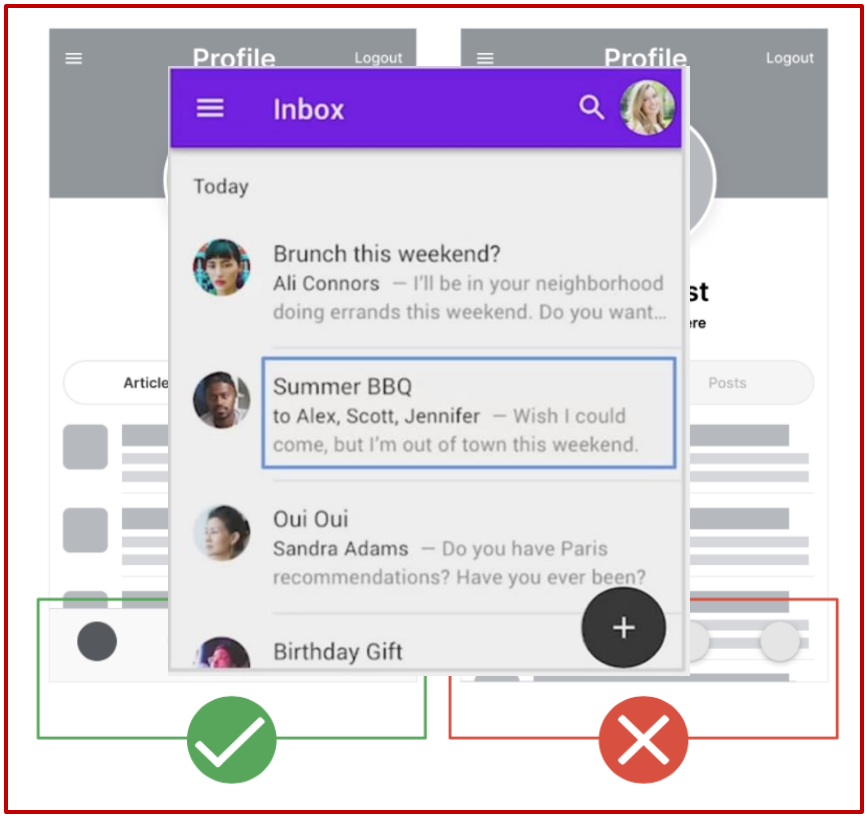
Creating paper and digital wireframes

Proximity



Creating paper and digital wireframes

Common



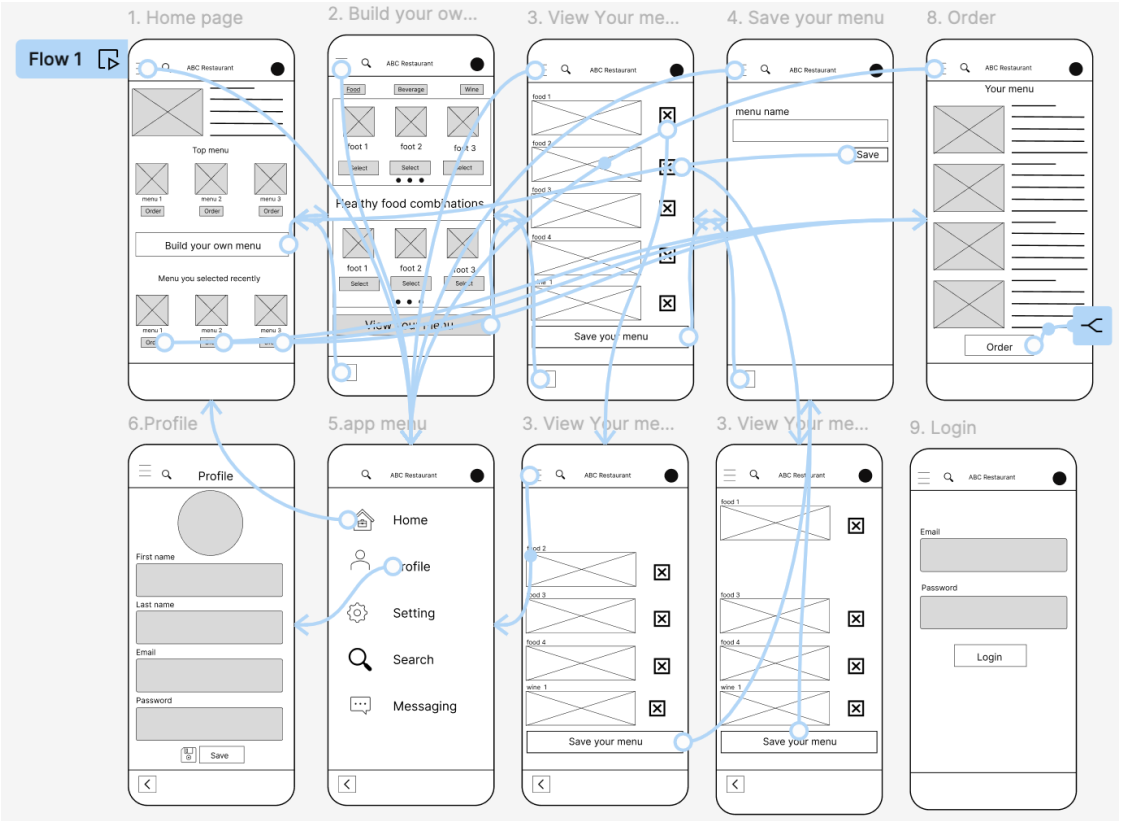
Building low-fidelity prototypes

Low-fidelity prototypes:

- **Prototype:** early model of a product that demonstrates its functionality, without actually building the entire product.
- **Low-fidelity prototype:** a simple interactive model that provides a basic idea of what the product would look like.
  - The biggest difference as we transition from a wireframe is the interactivity or the ability to click from one screen to another.
  - A low-fidelity prototype can be on **paper** or **digital**.
  - **Paper low-fidelity prototype**: interactivity might be a human acting as a computer and manually changing the design in real time.
  - **Digital low-fidelity prototype:** interactivity might be connected wireframes where you can click on a certain part of the wireframe

Building low-fidelity prototypes

Low-fidelity prototypes:



Building low-fidelity prototypes

Building low-fidelity prototypes in Figma:

Read file “Learn about lo-fi prototyping in Figma.docx”

Understand Ethical and Inclusive design

Recognize implicit bias in design:

- Implicit biases are the collection of attitudes and stereotypes we associate with people without our conscious knowledge.
- Implicit bias can have detrimental effects on those who are the subject of the bias.
- Being aware of your implicit biases and combating stereotypes is important work.
- User research helps us avoid assumptions about who our users are and helps us better understand users and give them what they need.
- By creating inclusive user experiences, designers help build a more equitable society.

Understand Ethical and Inclusive design

Deceptive patterns: UX methods that trick users into doing or buying something they wouldn't otherwise have done or bought.

- These can include a range of visual, interactive, audio, or motion elements added to e-commerce sites, ads..
- Ethically wrong and not a good business practice.

List of deceptive patterns:

- Forced continuity
- Sneak into basket
- Hidden costs
- Confirmshaming
- Urgency
- Scarcity

Avoid deceptive patterns.docx