UI & UX Design
SWE 4833

Key Frameworks in UX Design

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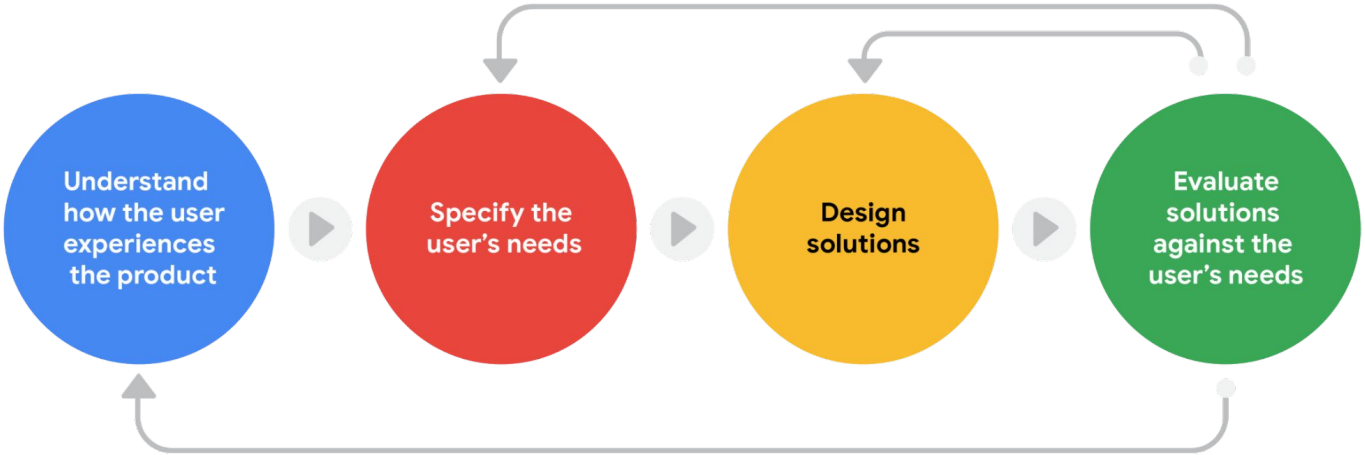
Key frameworks in UX design

- User-Centered Design
- The Five Elements of UX Design
- Design Thinking
- Lean UX
- Double Diamond

User-Centered Design



User-Centered Design

Puts the user front and center. Focusing on user's mean, considering their story, emotions, and the insights you've gathered about them. Sometimes it requires comparative analysis of similar products and always employes a lot of researches.

The key steps in the user-centered design process:

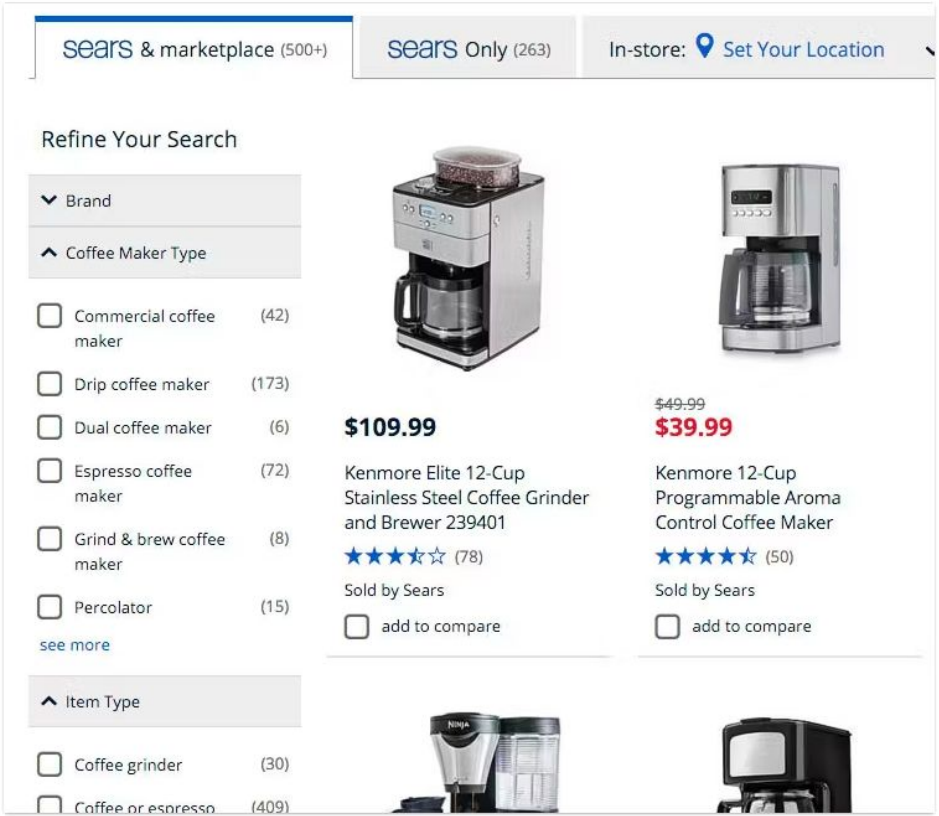
1. **Understand how the user experiences the product or similar products.** You want to know how users will engage with your design, as well as the environment or context in which they'll experience the product. Understanding this requires a lot of research, like observing users in action and conducting interviews, which we'll explore more later.

2. **Specify the user's needs.** Based on your research, figure out which user problems are the most important to solve.

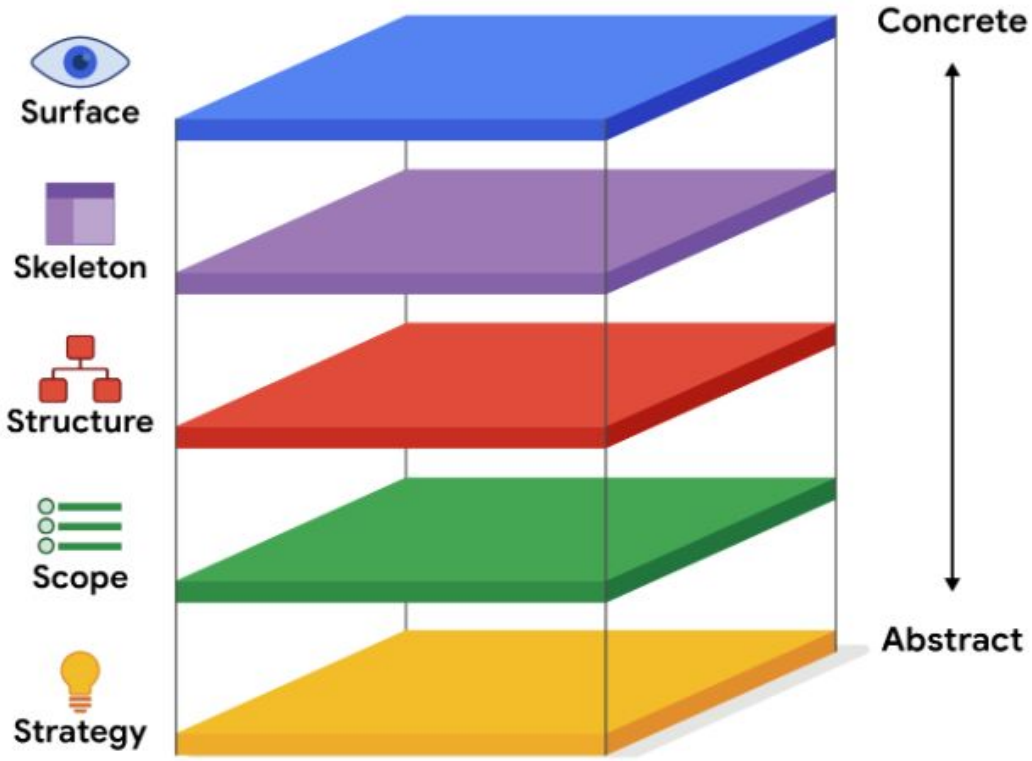
3. **Design solutions to those user problems.** Come up with lots of ideas for designs that can address the user problems you've identified. Then, start to actually design those ideas!

4. **Evaluate the solutions you designed against the user's needs.** Ask yourself, "Does the design I created solve the user's problem?" To answer this question, you should test the product you designed with real people and collect feedback.

User-Centered Design



The Five Elements of UX Design



The Five Elements of UX Design

These are the steps a designer takes to turn an idea into a working product. Think of these as a set of five layers, where each layer is dependent on the one below it.

1. **Strategy:** What problem is this product intended to solve? This layer, the most abstract of the model, takes into consideration both user needs and business goals.

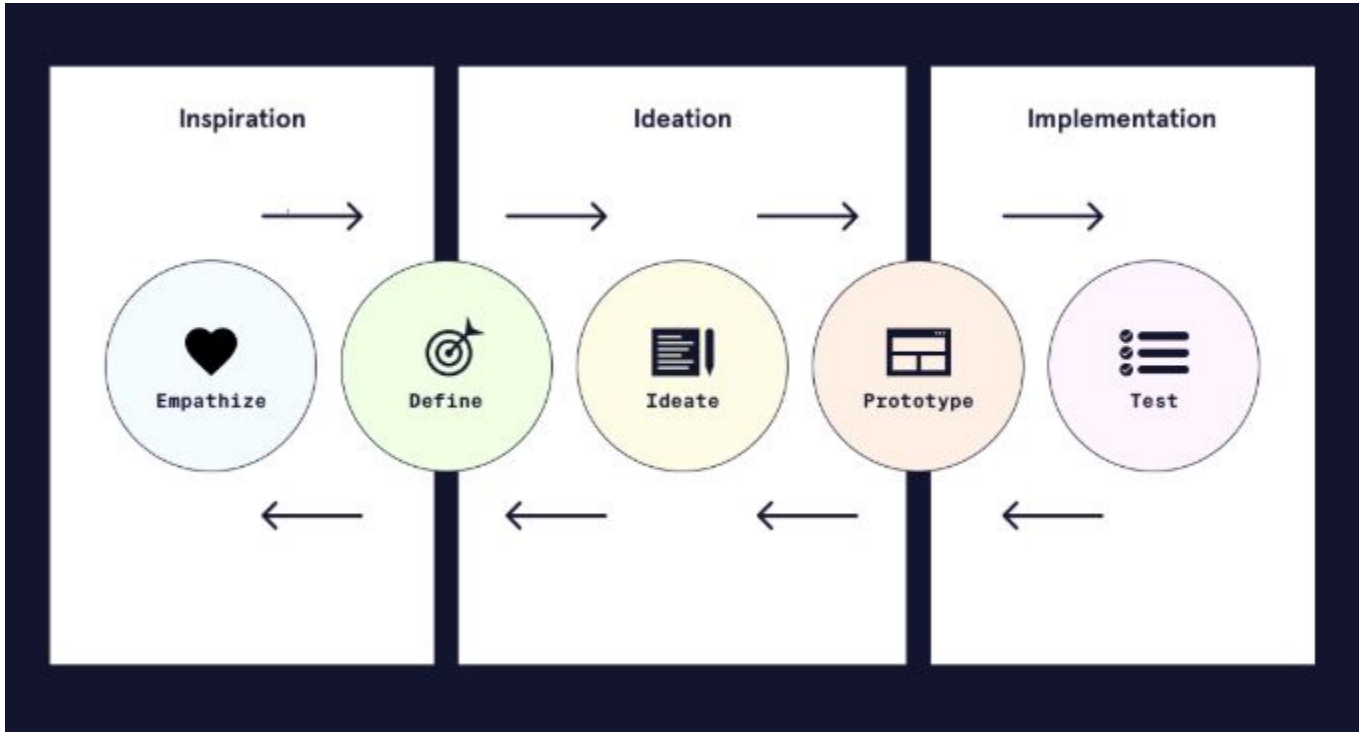
2. **Scope:** What is the product that will be created to solve the problem? Within this layer, the team defines functional requirements and content requirements.

3. **Structure:** How is the design organized and how do interactions work? This layer includes information architecture and interaction design.

4. **Skeleton:** How is information presented and arranged? This layer begins to consider UI design, navigation design, and information design. A common output at this stage is a set of wireframes.

5. **Surface:** How does the product look and feel to users? This stage emphasizes visual design, for example, what colors and typefaces are used, and is the stage where UI design is front and center.

Design Thinking




Empathy
Experiencing the feelings of another
You have similar personal experiences
Emotion
Sympathy
Understanding the suffering of another
You acknowledge another's circumstances
Recognition

Design Thinking

Design thinking is a user-centered approach to problem-solving. It helps designers create solutions that address a real user problem and are functional and affordable. There are five phases in the design process: empathize, define, ideate, prototype, and test.

1. **Empathize phase:** The goal is to understand users' needs and how users think and feel. This involves a lot of user research, such as conducting surveys, interviews, and observation sessions, so you can get a clear picture of who your users are and the challenges they are facing.

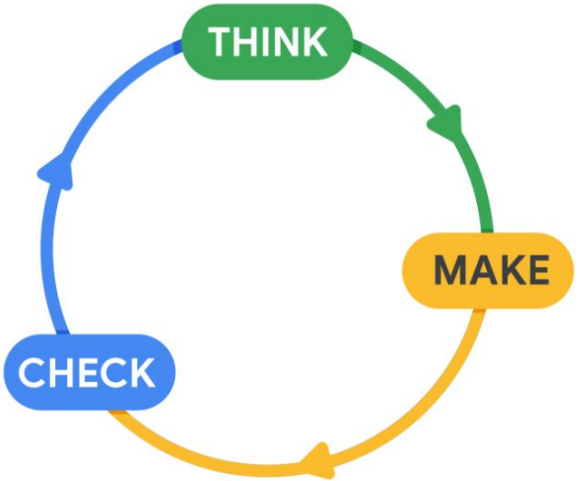
2. **Define phase:** Create a clear problem statement, a description of the user's need that your designs will address, based on your research findings. This will drive your team toward a clear goal for the design of the product.

3. **Ideate phase:** The goal of ideation is to come up with as many design solutions as possible.

4. **Prototype phase:** A prototype is an early model of a product that demonstrates its functionality. Explore potential solutions by creating prototypes of the product to gather feedback.

5. **Test phase:** Users provide feedback about your designs, before the product is built by engineers and launched to the public. You can use this feedback to make changes and improvements to your designs, as many times as you need.

Lean UX



Lean UX

The Lean UX process focuses on reducing wasted time and resources, and producing a workable product as soon as possible. The process is iterative, meaning the team continues to update and make revisions to the product as they gather user research and stakeholder feedback. The Lean UX process is broken into three steps:

1. **Think**. Explore the problems that users are experiencing and consider how you could solve them with your design. This step is all about gathering research, so you can form a clear idea of who the product is for and how it will help them.

2. **Make**. Start designing the product by creating sketches, wireframes, and prototypes. You'll also create a minimum viable product, or MVP for short, which is a simple prototype of your designs that you can test with the target audience. Be prepared to go back and update your prototype as you gather feedback!

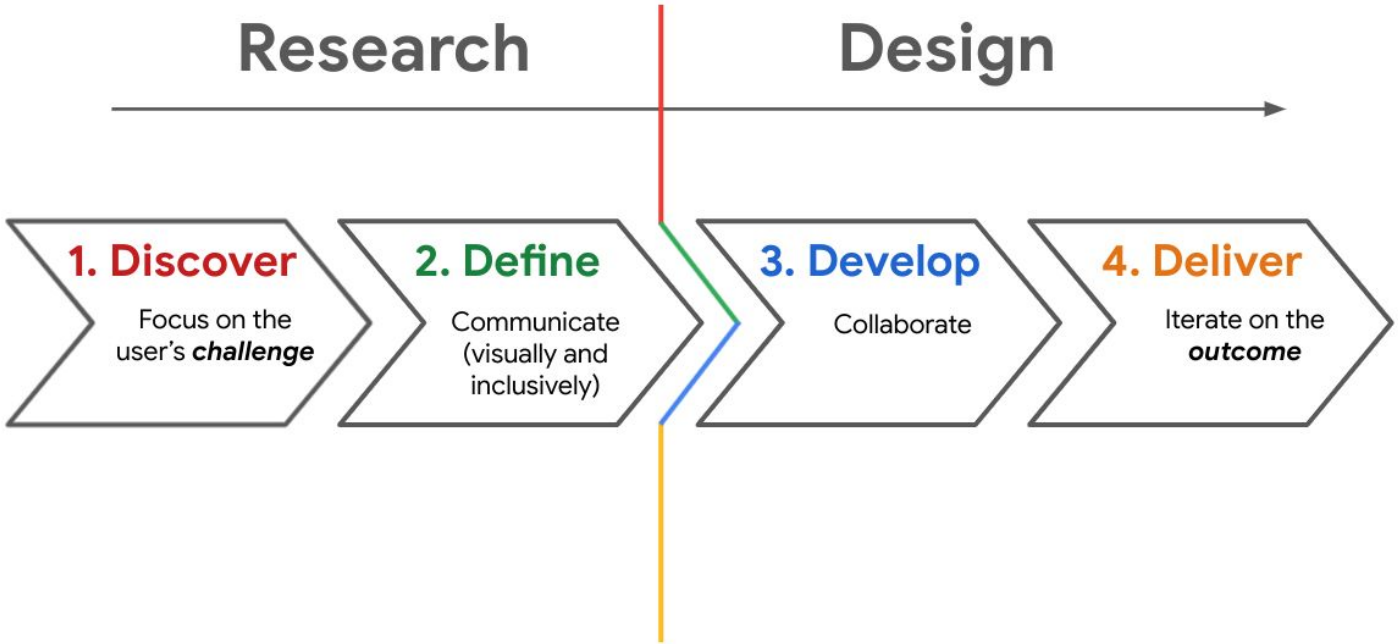
3. **Check**. Find out how users respond to your design and gather feedback from project stakeholders. Make adjustments to your designs accordingly, and repeat the three steps again, if necessary.

Lean UX

You keep in mind when using the Lean UX process:

- Move forward.
- Stay curious.
- Test ideas in the real world.
- Externalize your ideas.
- Reframe deliverables as outcomes.
- Embrace radical transparency

Double Diamond

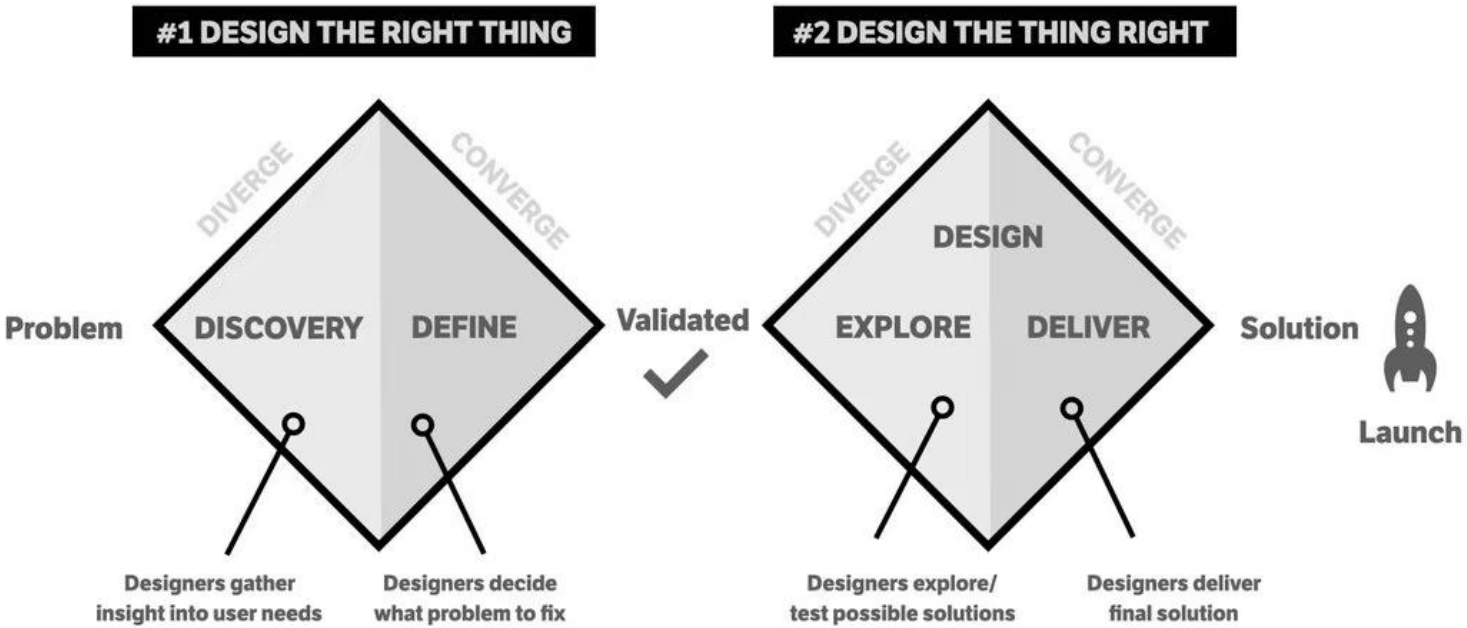


Double Diamond

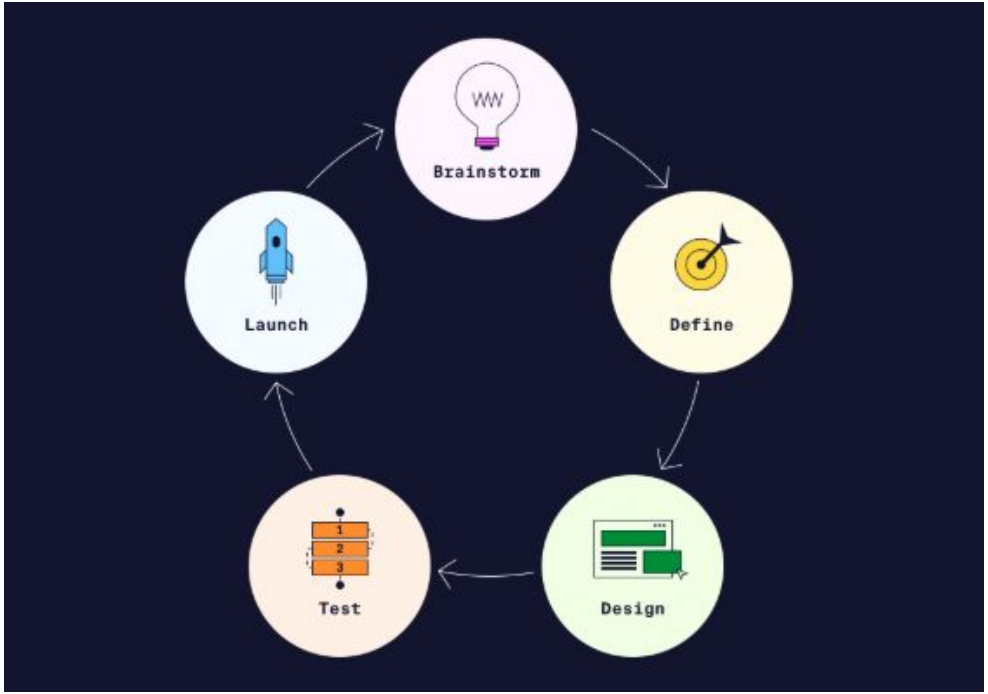
Double Diamond is a more traditional UX process, which breaks down UX design into two main phases (or “diamonds”): research and design. Each phase has two steps. When combined, these are the four steps:

1. **Discover** the problem. Gather information about potential issues users are facing.
2. **Define** the problem. Filter through the data, and focus on the main issue your product aims to solve.
3. **Develop** solutions for the problem. Begin designing your product as a work in progress. This is where wireframes and prototypes come into play.
4. **Deliver** the product. Review and test your product to prepare it for release.

The Traditional "Designer Centric" Double Diamond



Product Development Life Cycle



Product Development Life Cycle

The Product Development Life Cycle (PDLC) is a cross-functional, iterative process that can be viewed as five stages: brainstorm, define, design, test, and launch.

1. **Brainstorm**. Starting from a defined problem or pain point, the team brainstorms all possible solutions. Market or user research can help inspire ideas.

2. **Define**. The team aligns on specifications for the product by defining the vision, goals, target users, features, benefits, and success metrics.

3. **Design**. The product is designed from low-fidelity to high-fidelity, starting with sketches and wireframes and moving to prototypes and a completed interface.

4. **Test**. The product or prototype is tested to ensure it works as intended. Testing can range from informal internal testing of low-fidelity prototypes to usability testing of a high-fidelity prototype or final product by external users.

5. **Launch**. The final design is released to the public, but the cycle doesn't end here. Typically, testing continues even after the product has launched, and the cycle continues.

References:

1. https://www.linkedin.com/pulse/5-types-design-frameworks-mohab-abdelrahman/