User Centered Design

What is User-Centered Design(UCD)

User-centered design (UCD) is an iterative design process in which designers focus on the users and their needs in each phase of the design process.

In UCD, design teams involve users throughout the design process via a variety of research and design techniques, to create highly usable and accessible products for them.

Note: Focus is on gaining a deeper understanding of who will be using the product.

User Centered Design

UCD is an iterative process

UCD is an Iterative Process

In user-centered design, designers use a mixture of *investigative* methods and tools (e.g., surveys and interviews) and *generative* ones (e.g., brainstorming) to develop an understanding of user needs.

User Experience (UX)

User experience is a person's perceptions and responses that result from the use or anticipated use of a product system or service.

The field of user experience centers on the idea that we must design products around people, rather than teaching people how to use products: user-centered design (UCD), not technology-centered design.

In order to do so, we must understand people—their behaviors, attitudes, needs, and goals.

User Experience (UX)

A good UX depends on the following points:

- How does a person feel when using the product?
- How accessible is it for the person to navigate the product? Can everyone use it?
- How usable is the product? Does it work as intended?
- How easy is it for the person to navigate and find the necessary information?
- How well-planned and intuitive are the steps a user needs to take to accomplish a task?
- How logical is the sequence of actions a user needs to perform to accomplish their goal with ease?
- Does it make it easy for them to achieve their initial goal?
- How well structured is the content available? Does it follow a logical hierarchy?
- How useful is the product?

Design Thinking

Design thinking is a methodology which provides a solution-based approach to solving problems.

It's extremely useful when used to tackle complex problems that are ill-defined or unknown—because it serves to understand the human needs involved, reframe the problem in human-centric ways, create numerous ideas in brainstorming sessions and adopt a hands-on approach to prototyping and testing.

Design Thinking

- Design thinking is an iterative, non-linear process which focuses on a collaboration between designers and users. It brings innovative solutions to life based on how real users think, feel and behave.
- This human-centered design process consists of five core stages **Empathize, Define, Ideate, Prototype and Test.**
- It's important to note that these stages are a guide. The iterative, non-linear nature of design thinking means you and your design team can carry these stages out simultaneously, repeat them and even circle back to previous stages at any point in the design thinking process.

Design Thinking

Interaction Design Foundation
interaction-design.org

Five Stages of the Design Thinking Process

Stage 1: Empathize—Research Your Users' Needs

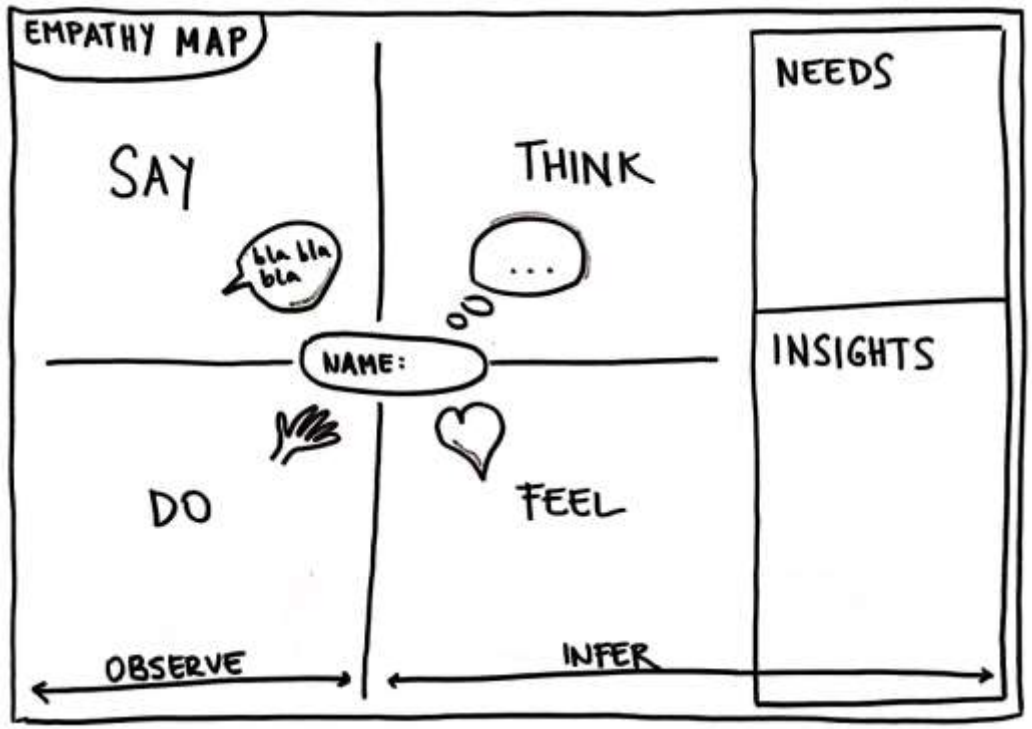
The first stage of the design thinking process focuses on **user-centric research**. Designers need to build empathy for their users in order to take the right course of action.

It's important to understand how the user feels when interacting with a certain product or interface; does the layout of this website evoke feelings of frustration? What emotions does the user go through when navigating this app?

In building empathy, designers can create products which truly please the user and make their lives easier. Without this empathy, the design process lacks that all-important user-centricity which often marks the distinction between product

Empathy Map

Empathy maps help team members understand the user's mindset.



Empathy Map

Definition: An empathy map is a tool used to articulate what we know about a particular type of user. It externalizes user knowledge in order to 1) create a shared understanding, and 2) aid in decision making.

Characteristics:

- The map is split into 4 quadrants: Says, Thinks, Feels, Does.
- It shows user's perspective regarding the tasks related to the product.
- It is not chronological or sequential.
- There is one empathy map for each **persona** or user type (1:1 mapping).

Why use it:

- To build empathy for your users
- To force alignment and understanding about a user type

When to use it:

- Beginning of any design process
- When categorizing research notes from a user interview

A persona is a **fictional, yet realistic, description of a typical or target user** of the product.

A persona is an archetype instead of an actual living human, but personas should be described as if they were real people.

Empathy Map

One User vs. Multiple-Users Empathy Maps

Empathy maps can capture one particular user or can reflect an aggregation of multiple users:

One-user (individual) empathy maps are usually based on a user interview or a user's log from a diary study.

Aggregated empathy maps represent a user segment, rather than one particular user. They are usually created by combining multiple individual empathy maps from users who exhibit similar behaviors and can be grouped into one segment.

Empathy Map

Process: How to Build an Empathy Map

1. Define scope and goals
    a. What user or persona will you map?
    b. Define your primary purpose for empathy mapping

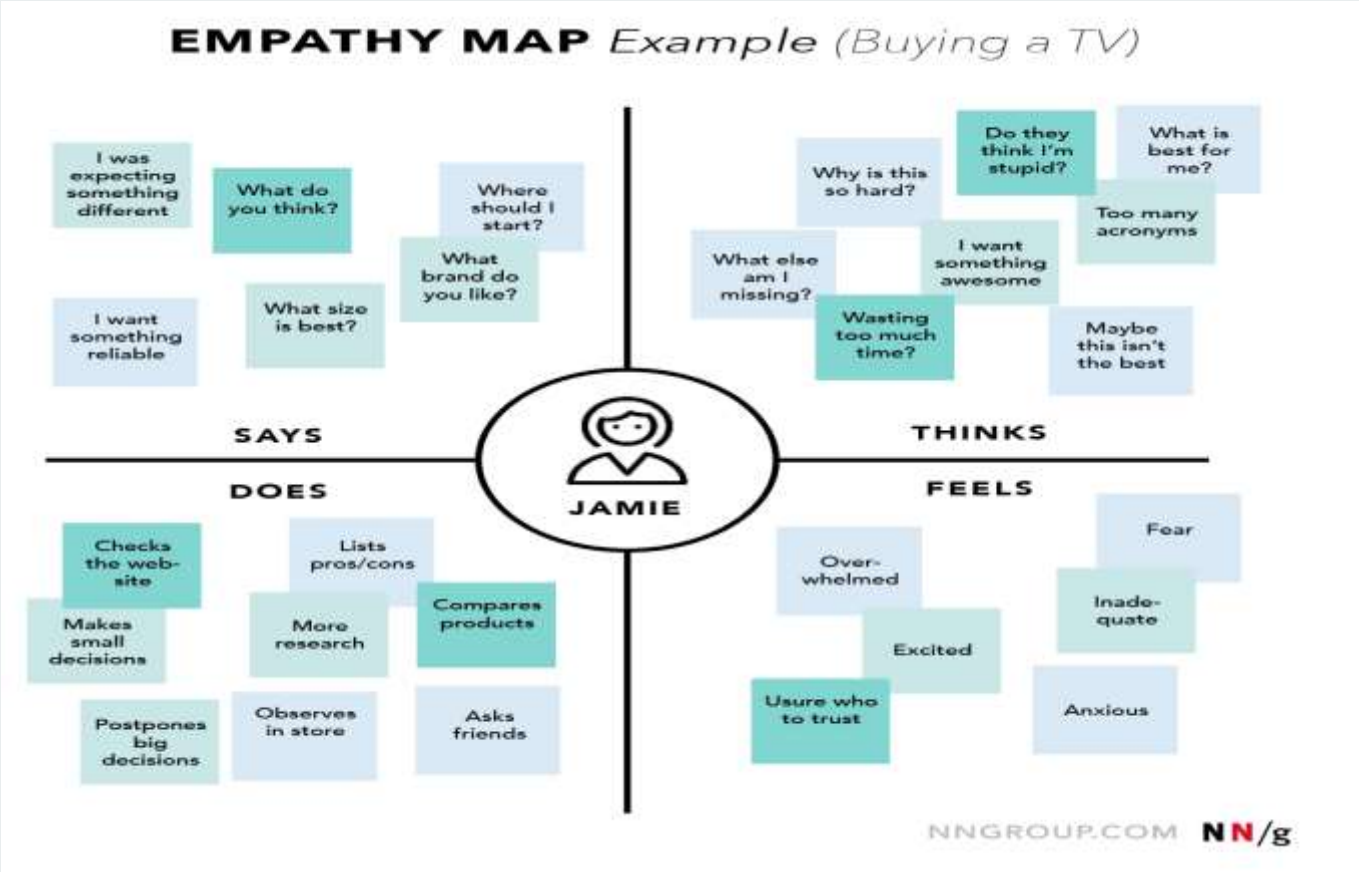
2. Gather materials

3. Collect research

4. Individually generate sticky notes for each quadrant

5. Converge to cluster and synthesize

Empathy Mapping Use Case



Empathy Mapping Use Cases

Empathy Maps help in empathizing with users, stakeholders, or customers by visualizing their thoughts, feelings, and behaviors. Here are some use cases for empathy maps:

1. Product Development
2. Marketing and Advertising
3. Customer Support and Service
4. Human Resource and Employee Engagement
5. Healthcare and Patient Experience
6. Social work and Community Engagement
7. User Research and Testing
8. Business Strategy and Innovation
9. Education and Training

Journey Map

What is a UIUX journey map?

A UIUX journey map is a visual representation of the steps a user takes when interacting with a product or service. It typically includes the user's goals, motivations, emotions, and pain points at each stage of the journey.

Why are UIUX journey maps important?

UIUX journey maps are important because they can help you understand your users' needs, pain points, and motivations. This information can be used to improve the user experience of your product or service, making it more intuitive and user-friendly.

There are many benefits to using UIUX journey maps, including:

- Improved understanding of your users
- Identification of opportunities for improvement
- Increased user satisfaction
- Reduced costs
- Increased sales

Journey Map

There are many different ways to create a UIUX journey map. However, the basic steps involved are:

1.Identify your target users.
2.Gather data about your users' needs, pain points, and motivations.
3.Map out the user's journey.
4.Analyze the data and identify opportunities for improvement.
5.Implement changes to improve the user experience

Here are some examples of UIUX journey maps from different industries:

- A customer journey map for an e-commerce website.
- An employee journey map for a software company.
- A partner journey map for a marketing agency.
- A supplier journey map for a manufacturing company.

Journey Map

Characteristics:

- The map is tied to a specific product or service.
- It is split into 4 swim lanes: phases, actions, thoughts, mindsets/emotions.
- It reflects the user's perspective:
  - Including her mindset, thoughts, and emotions
  - Leaving out most process details
- It is chronological.
- There is one map per persona/user type (1:1 mapping).

Why use it:

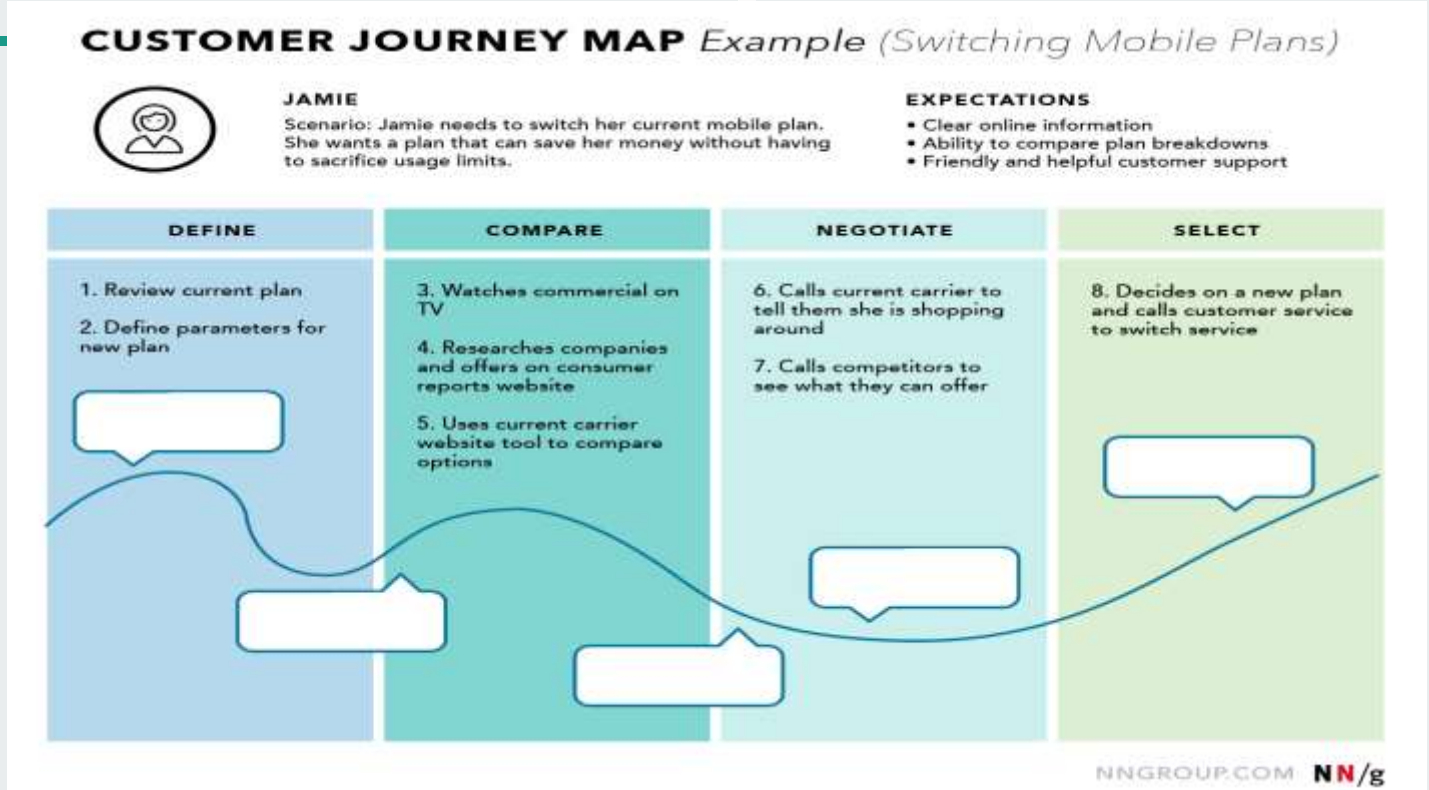
- To pinpoint specific customer journey touchpoints that cause pain or delight
- To break down silos to create one shared, organization-wide understanding of the customer journey
- To assign ownership of key touchpoints in the journey to internal departments

When to use it:

- At any point in the design process, as a reference point amongst a team throughout a product design

Journey Map

Customer journey maps focus on a specific customer's interaction with a product or service.



https://github.com/rahul-thakoor/guides/blob/master/src/pages/user-experience-research/customer-journey-maps/index.md

Employee Journey Map

An employee journey map is a visual representation of the steps an employee takes throughout their entire employment lifecycle, from the initial job application to their eventual departure. It typically includes the employee's goals, motivations, emotions, and pain points at each stage of the journey.

The employee journey map can be divided into several stages, including:

- Attraction
- Recruitment
- Onboarding
- Performance
- Development
- Retention

Employee Journey Map

Here are some of the benefits of creating an employee journey map

1. Improved understanding of the employee experience
2. Identification of opportunities for improvement
3. Increased employee satisfaction
4. Reduced costs

Here are some tips for creating an employee journey map
Start by identifying your target audience
Gather data from a variety of sources
Use visuals to communicate the data
Get feedback from employees

Employee journey map template

An employee journey map can help uncover employee experience issues and possible solutions. Use the example touchpoints and completed columns as jumping off points for the particular personas and situations you'd like to map.

Persona:

EMPLOYEE LIFECYCLE STAGES	Recruit	Onboard	Develop	Retain	Offboard
TOUCHPOINTS	▪ Applicant tracking system ▪ Recruiter outreach ▪ Interview	▪ Meeting with HR ▪ Role familiarization ▪ Team orientation	▪ Performance review system-review ▪ Performance review system-learning objectives ▪ Learning experience system (LXP)	▪ Talent management system ▪ HR ▪ New manager	▪ In-person conversation ▪ Exit interview
PROCESS	▪ Submits resume via multistep desktop-only ATS ▪ Receives no response for months ▪ (Finally) talks with warm, friendly team	▪ Benefits presentation ▪ Manager sets forth goals for first two weeks ▪ Meet-and-greet lunch with team	▪ 1-on-1 with manager ▪ Manager outlines goals and accomplishments ▪ Uses LXP to develop in areas targeted for growth	▪ Applies for promotion; receives an offer ▪ Accepts ▪ Introduced to new team	▪ Resigns verbally, then follows by email resignation ▪ Gives feedback, then receives final pay and benefits
EMPLOYEE EXPERIENCE/ FEELINGS	😕 😞 😐				
NOTES ON PAIN POINTS	▪ Recruiting process caused frustration, but team (including recruiter) mitigated some damage. Still, it's clear that we need to update our recruiting process and technology.				
NOTES ON NEXT STEPS	▪ HR strategizes to reverse "resume black hole." ▪ HR works with IT to find modern recruiting technology.				

KEY FOR EMPLOYEE EXPERIENCE/FEELINGS: 😐 = HESITANT, UNSURE 😞 = UNHAPPY, UNSATISFIED 😕 = HAPPY, SATISFIED

Five Stages of the Design Thinking Process

Stage 2: Define—State Your Users' Needs and Problems

In the Define stage, you will organize the information you have gathered during the Empathize stage. **You'll analyze your observations to define the core problems you and your team have identified up to this point**

Defining the problem and problem statement must be done in a human-centered manner.

The Define stage will help the design team collect great ideas to establish features, functions and other elements to solve the problem at hand—or, at the very least, allow real users to resolve issues themselves with minimal difficulty

In this stage, you will start to progress to the third stage, the ideation phase

Five Stages of the Design Thinking Process

Stage 3: Ideate—Challenge Assumptions and Create Ideas

During the third stage of the design thinking process, designers are ready to generate ideas

You've grown to understand your users and their needs in the Empathize stage, and you've analyzed your observations in the Define stage to create a user centric problem statement

With this solid background, you and your team members can start to **look at the problem from different perspectives and ideate innovative solutions to your problem statement**.

Five Stages of the Design Thinking Process

Stage 4: Prototype—Start to Create Solutions

This is an experimental phase, and the aim is to **identify the best possible solution for each of the problems identified during the first three stages**

The solutions are implemented within the prototypes and, one by one, they are investigated and then accepted, improved or rejected based on the users' experiences

By the end of the Prototype stage, the design team will have a better idea of the product's limitations and the problems it faces. They'll also have a clearer view of how real users would behave, think and feel when they interact with the end product.

Five Stages of the Design Thinking Process

Stage 5: Test—Try Your Solutions Out

Designers or evaluators rigorously test the complete product using the best solutions identified in the Prototype stage

This is the final stage of the five-stage model; however, in an iterative process such as design thinking, the results generated are often used to redefine one or more further problems

This increased level of understanding may help you investigate the conditions of use and how people think, behave and feel towards the product, and even lead you to loop back to a previous stage in the design thinking process

User Interface (UI)

User interface(UI), involves every visual part of a digital product/service that a user interacts with. This includes mobile apps, websites, screens, touchscreens, keyboards, and wearable technology such as smartwatches, to name a few.

You can think of it as the bridge between the user and technology.

A UI designer is responsible for designing every step that allows a user to interact with the digital product/service. This includes layouts, structure, buttons, colors, and animations.

UI design is all about the *look, feel*, and *aesthetics* of a digital product. It involves every visual aspect and appearance of the product the user interacts with.

The end goal of a UI designer is to make something visually appealing to the user that's easy to interact with.

Designing User Interfaces for the Users

User interfaces are the access points where users interact with designs. They come in three formats:

1. **Graphical user interfaces (GUIs)**—Users interact with visual representations on digital control panels. A computer's desktop is a GUI.
2. **Voice-controlled interfaces (VUIs)**—Users interact with these through their voices. Most smart assistants—e.g., Siri on iPhone and Alexa on Amazon devices—are VUIs.
3. **Gesture-based interfaces**—Users engage with 3D design spaces through bodily motions: e.g., in virtual reality (VR) games.

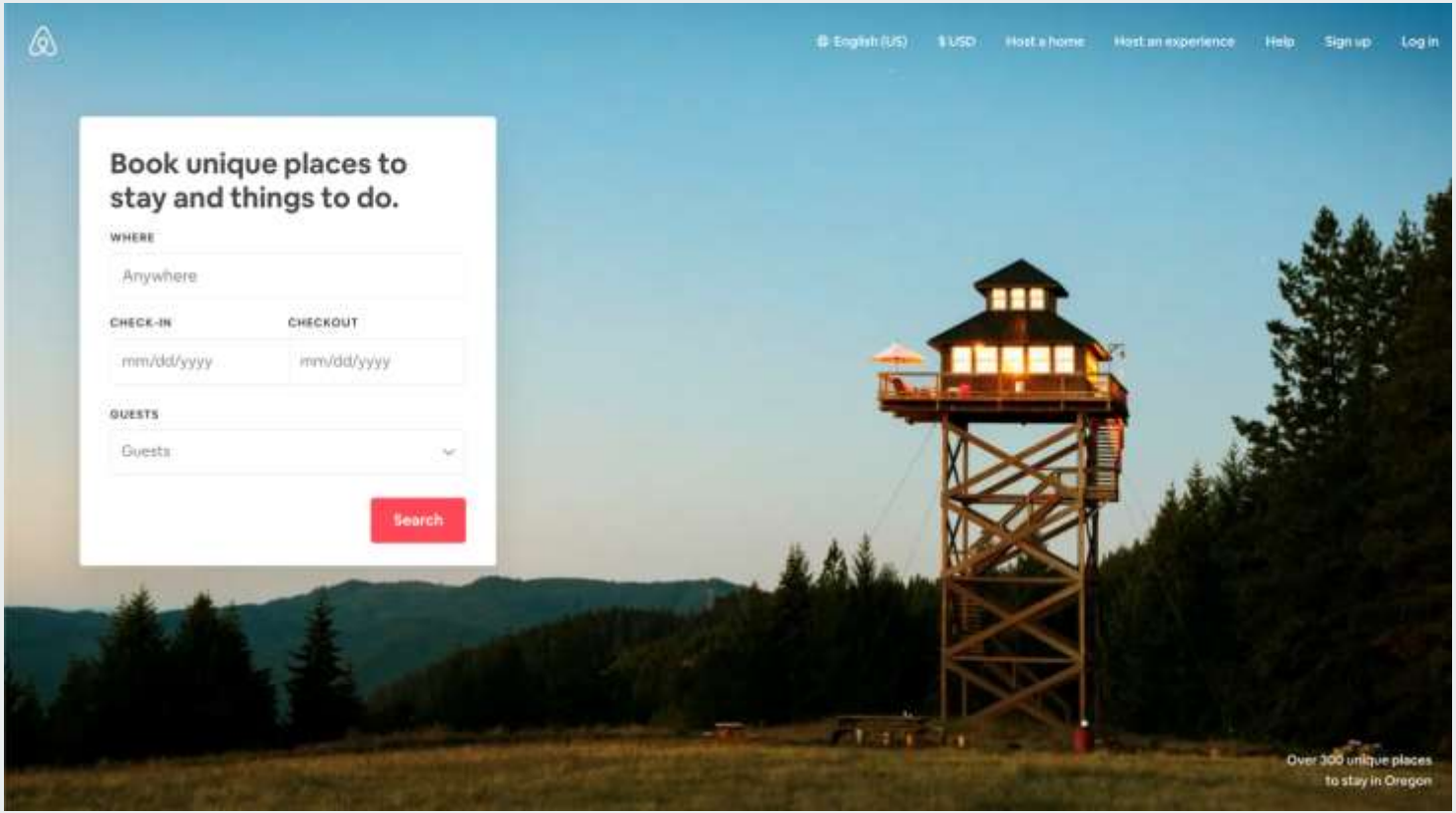
User Interface (UI) vs. User Experience (UX) Design

1. **UX *design* is the careful planning and creation of the user experience and everything it entails.** It focuses first and foremost on creating a product or service that solves a particular user problem, making sure the proposed solution is easy and enjoyable to use.
2. **UI *design* is the process of designing how digital interfaces look and behave.** It covers all the visual and interactive properties of websites, software and apps—from colours and typography to buttons, scroll functions, animations and more.

Designing User Interfaces for the Users: Case Study

1. **UIs should also be enjoyable (or at least satisfying and frustration-free).**
    a. When your design predicts users' needs, they can enjoy more personalized and immersive experiences. Delight them, and they'll keep returning.
    b. Where appropriate, elements of gamification can make your design more fun.
2. **UIs should communicate brand values and reinforce users' trust.**
    a. Good design is emotional design. Users associate good feelings with brands that speak to them at all levels and keep the magic of pleasurable, seamless experiences alive.

User Interface Example



Airbnb's simple, inviting layout lets users satisfy their travel needs quickly, easily and enjoyably.

Story Boards

What is a UIUX storyboard?

A UIUX storyboard is a visual representation of the steps a user takes when interacting with a product or service. It typically includes the user's goals, motivations, emotions, and pain points at each stage of the journey.

Why are UIUX storyboards important?

UIUX storyboards are important because they can help you understand your users' needs, pain points, and motivations. This information can be used to improve the user experience of your product or service, making it more intuitive and user-friendly.

https://www.freecodecamp.org/news/airpeace-website-a-ux-case-study-e0ef593f2619/

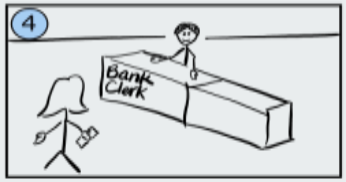
StoryBoard Usecase

Title: Banking Operation

The problem of money transaction

Sharing her problem with a friend

Going to her bank to asking for help



The employer figering out the problem

Telling her the new possibility of banking operations

Now she easily can do any banking operation at home and anywhere

https://www.freecodecamp.org/news/airpeace-website-a-ux-case-study-e0ef593f2619/

Wireframes

Wireframe

A wireframe is a sketch of the system to be built. It's simple, clear and allows everyone to read and understand easily.

Wireframe shows "just enough" information of the screen instead of the full details.
The actual screen design will be produced at a later stage by referencing the wireframe.

You can show the scenario to your customer visually to obtain consent about the requirements.
They serve as a blueprint that defines each Web page's structure or screen design, content and functionality.

Wireframes are created before any design work is started so that the focus is on layout without the distraction of color and visual elements.

https://www.freecodecamp.org/news/what-is-a-wireframe-ux-design-tutorial-website/

Prototype

A prototype is a draft version of a product that allows you to explore your ideas and show the intention behind a feature or the overall design concept to users before investing time and money into development.

A prototype can be anything from paper drawings (low-fidelity) to something that allows click-through of a few pieces of content to a fully functioning site (high-fidelity).

A prototypes are computer-based, and usually allow realistic (mouse-keyboard) user interactions.

https://www.freecodecamp.org/news/ui-ux-design-tutorial-from-zero-to-hero-with-wireframe-prototype-figma/

Prototype

High-fidelity prototypes take you as close as possible to a true representation of the user interface.

High-fidelity prototypes are assumed to be much more effective in collecting true human performance data (e.g., time to complete a task), and in demonstrating actual products to clients, management, and others.

Here are the benefits of a high-fidelity prototypes:

- It is much cheaper to change a product early in the development process than to make change after you develop the site. Therefore, you should consider building prototypes early in the process.
- Prototyping allow you to gather feedback from users while you are still planning and designing your Web site or targeted system.

Test

Test is one of the most important stages in the Design Thinking process, as it is where you discover whether your idea(s) solves the user problem uncovered during the Empathise stage.

It is rare to develop a perfect solution straight away, but getting honest feedback directly from users will help to guide ongoing development whilst ensuring that their needs are met.

THANK YOU