

# Knowledge base

As a hiring manager, I want to know if the UX design candidate has a good portfolio website that has relevant case studies that show me a good process. A good process means they follow the steps to get to a good design outcome. Doesn't have to always be linear, but the candidate should have used the methodologies listed below in order to have followed a 'good design process'. Let's take a look at the steps followed by methodologies and outcomes of those methodologies.

1. User research
2. Interaction design
3. Visual design

## User research methodologies.

This step helps the designer understand its customer, the problem and the current hacks customers use to solve this problem. Methodologies include...

User Experience (UX) research employs various methodologies to gather insights about users and their interactions with products or services. Here are some key UX research methodologies:

1. **Interviews:** Researchers conduct one-on-one conversations with users to explore their experiences, needs, and challenges. This is a qualitative method. Interviews are helpful when seeking deep insights into user behaviors, motivations, and attitudes. Outcomes include rich, detailed narratives about user experiences and pain points. Example: Interviewing customers about their online shopping habits to improve an e-commerce platform. Tools: Video calling apps like Zoom and Google Meet, Scheduling apps like Calendly, Sourcing and interviewing apps like DScout.
2. **Usability Testing:** Researchers observe participants as they interact with a product or prototype to complete specific tasks. This can be both qualitative and quantitative. It's useful for identifying usability issues and areas for improvement in a design. Outcomes include task completion rates, time-on-task, and qualitative feedback on user experience. Example: Testing a new mobile app interface to see how easily users can navigate and complete core functions. Tools: Design softwares like Figma for designing and prototyping, video calling apps to share the prototype, in-person testing using a phone or laptop, UserTesting, Lookback, and Maze for remote usability testing.
3. **Surveys:** Researchers collect data from a large number of users through structured questionnaires. This can be both qualitative and quantitative depending on the question types. Surveys are helpful for gathering broad insights and quantifiable data from a large user base. Outcomes include statistical data on user preferences, behaviors, and satisfaction levels. Example: Sending out a survey to understand user satisfaction with a recently launched feature. Tools: SurveyMonkey, Google Forms, Qualtrics and Typeform for creating and distributing surveys.
4. **A/B Testing:** Researchers compare two versions of a design to see which performs better with users. This is a quantitative method. It's helpful for making data-driven

decisions between design alternatives. Outcomes include statistical comparisons of user behavior and preference between two versions. Example: Testing two different call-to-action button designs to see which leads to higher conversion rates. Tools: Optimizely, Google Optimize, and VWO for implementing and analyzing A/B tests.

5. **Card Sorting:** Participants organize topics into categories that make sense to them. This can be both qualitative and quantitative. It's useful for creating or improving the information architecture of a website or app. Outcomes include insights into users' mental models and how they categorize information. Example: Having users group product categories to inform the navigation structure of an e-commerce site. Tools: OptimalSort, UserZoom, and Maze for online card sorting exercises or online whiteboarding tools like Miro.
6. **Contextual Inquiry:** Researchers observe and interview users in their natural environment as they perform tasks. This is a qualitative method. It's helpful for understanding how users interact with products in real-world contexts. Outcomes include detailed observations of user behavior and environmental factors affecting product use. Example: Observing how nurses use a medical charting system during their shifts to identify improvement areas. Tools: Dscout and EthOS for remote contextual inquiries.
7. **Eye Tracking:** Researchers use specialized equipment to track where users look on a screen or physical product. This can be both qualitative and quantitative. It's useful for understanding visual attention and cognitive processing during user interactions. Outcomes include heat maps, gaze plots, and metrics on visual engagement with design elements. Example: Analyzing how users visually process a website homepage to optimize content placement. Tools: Tobii, SMI, and GazePoint for eye tracking studies.
8. **Concept testing:** Researchers present early-stage ideas or prototypes to potential users and gather feedback on their viability and appeal. Concept testing is valuable for validating ideas before significant resources are invested in development. Outcomes include user preferences between different concepts, potential improvements, and early indicators of market viability. Example: Presenting multiple homepage designs to users to determine which one resonates best with the target audience. Software tools: UsabilityHub, Maze, UserTesting, Validately
9. **Diary Studies:** Participants log their thoughts, experiences, and activities related to a product or service over an extended period, providing qualitative longitudinal data. Diary studies are useful for understanding long-term user behavior and how products fit into users' daily lives. Outcomes include insights into usage patterns, contextual information, and how user perceptions change over time. Example: Having users document their fitness app usage over a month to understand engagement patterns and motivation factors. Software tools: Indemo, Dscout, EthOS, Lookback

## User research artifacts

The research methodologies can lead to the creation of artifacts that help the product, engineering and larger design team understand the customer and their needs. These artifacts can include.

1. **User Personas:** A user persona is a one- or two-page document that summarizes a key user group, often including a photo, name, demographics, goals, frustrations, and behaviors. They help to synthesize and communicate user research findings in a relatable way, providing a shared understanding of the target audience across the team. User interviews, surveys, ethnographic studies, and user analytics all contribute to the creation of personas.
2. **User Scenarios:** User scenarios are short, narrative descriptions of how a user (often a persona) interacts with a product or service to achieve a specific goal. They help teams understand the context of use and anticipate potential user needs and pain points within a specific interaction. User interviews, usability testing, contextual inquiry, and field studies can inform the creation of user scenarios.
3. **User Journey Maps:** User journey maps are visual diagrams that illustrate the steps a user takes to achieve a goal while interacting with a product or service. They show the user's actions, thoughts, emotions, and pain points at each stage, revealing opportunities to improve the overall user experience. User interviews, contextual inquiry, service blueprinting, and analytics can inform the creation of user journey maps. According to Nielsen Norman Group, it's one of the best tools to understand and improve the customer experience.
4. **Empathy Maps:** An empathy map is a visual representation of what we know about a user, typically divided into quadrants labeled "Says," "Thinks," "Does," and "Feels." These quadrants show the internal and external thinking of the user. This artifact synthesizes observations and insights about a user's emotions, thoughts, and behaviors, helping the team develop empathy and understanding. User interviews, observational studies, and ethnographic research are key inputs to creating empathy maps.
5. **Mental Models:** Mental models are diagrams or descriptions of users' internal understandings of how a system works, which may or may not align with the actual system design. This shows how a user thinks a system should work. They help reveal discrepancies between the design and users' expectations, leading to more intuitive and user-friendly designs. User interviews, card sorting, and task analysis are helpful methods for understanding users' mental models.
6. **Affinity Diagrams:** An affinity diagram is a visual organization of research findings (notes, quotes, observations) grouped into related categories, often created using sticky notes on a wall or whiteboard. This artifact facilitates pattern recognition and reveals underlying themes and insights from large amounts of qualitative data. User interviews, field studies, usability testing, and surveys all generate data that can be organized using an affinity diagram.
7. **Research Reports:** Research reports are formal documents that summarize the research goals, methodology, findings, analysis, and recommendations, typically including data visualizations and key quotes. They provide a comprehensive record of the research process and its outcomes, enabling informed decision-making by stakeholders. All user research methods, including interviews, surveys, usability testing, and A/B testing, contribute to the content of a research report.
8. **Jobs to Be Done (JTBD) Framework:** JTBD focuses on identifying the underlying "jobs" that users are hiring a product or service to do, rather than focusing on

demographics or features. This artifact helps teams understand the motivations and circumstances that drive users to adopt a product or service, leading to more targeted product development and marketing efforts. User interviews (specifically, "jobs interviews" focusing on past purchase experiences), surveys, and contextual inquiry are used to uncover the jobs users are trying to accomplish. A Job Story is the most visual artifact: When [Situation], I want to [Motivation], so I can [Expected Outcome].

9. **Service Blueprints:** A service blueprint is a diagram that visualizes the end-to-end service experience, mapping out the customer actions, front-stage actions (what the customer sees), back-stage actions (what supports the front-stage), and support processes. They help identify potential points of failure and opportunities to improve the service delivery process. User journey mapping, stakeholder interviews, and process analysis are used to create service blueprints.
10. **Stakeholder Maps:** Stakeholder maps visually represent the different individuals and groups that have an interest in or influence over a project. They show their level of involvement and influence. These maps help in identifying communication pathways and influence of each stakeholder on product development. Stakeholder interviews and workshops are often used to create stakeholder maps.
11. **Usability Testing Reports:** These reports summarize the findings from usability testing sessions, including task completion rates, error rates, user feedback, and recommendations for improvements, often including screenshots or video clips. Usability testing reports identify usability issues and prioritize design changes to improve the user experience. Heuristic evaluations, think aloud, eye-tracking, and remote usability testing all generate the data for these reports.
12. **Contextual Inquiry Notes:** Contextual Inquiry notes are detailed documentation of observations and interviews conducted in the user's natural environment. These include direct quotes, behavioral observations, and environmental details. The notes create a rich understanding of the user's context, behaviors, and needs within their everyday environment. Contextual Inquiry, field studies, and ethnographic research are used to get the data for the notes.
13. **Heuristic Evaluation Reports:** These reports are detailed assessments of a user interface against established usability principles ("heuristics"). This document identifies usability problems and provides recommendations for improvement. Expert reviews utilizing Nielsen's 10 heuristics, and cognitive walkthroughs feed into the reports.
14. **Hill Statements (IBM):** A Hill Statement is a clearly articulated goal framed as "We will [something measurable] when [something happens]." This document helps focus the team on a specific, measurable outcome, and it provides a clear target for design efforts. User research, stakeholder interviews, and competitive analysis feed into the creation of Hill Statements, ensuring that the goal is aligned with user needs and business objectives.
15. **Playbacks (IBM):** Playbacks are structured presentations and discussions used throughout the design process to share research findings, design concepts, and prototypes with stakeholders. They visually present the design and user data. Playbacks ensure that everyone is on the same page and allows for early feedback and iteration.

All user research methods, design explorations, and prototyping activities contribute to the content of Playbacks.

16. **Sponsor User (IBM):** While not strictly an artifact, the Sponsor User is the practice of involving a real user directly in the design process, giving them a voice in decisions. They participate in design reviews, testing sessions, and other activities. This ensures a direct connection to user needs and real-world perspectives. The Sponsor User is selected based on user research, and their ongoing involvement informs the design process throughout.
17. **As-Is Scenario Map:** A diagram showing the current state of the user experience for a particular task or goal. It documents the user's existing workflow, pain points, and workarounds. This creates a baseline understanding of the user's current situation, which then guides the creation of a better, "To-Be" state. Contextual inquiry, user interviews, and task analysis are used to create As-Is Scenario Maps.
18. **To-Be Scenario Map:** Diagram showing the envisioned future state of the user experience, built on the insights gained from the "As-Is" map and user research. This outlines the ideal workflow and addresses the pain points identified in the current experience. The To-Be Scenario Map guides the design and development of solutions that meet user needs effectively. These are directly informed by insights from the As-Is Scenario Maps, user feedback on prototypes, and brainstorming sessions.