UNIT 4: WIREFRAMING, PROTOTYPING AND TESTING

Sketching Principles - Sketching Red Routes - Responsive Design – Wireframing - Creating Wireflows - Building a Prototype - Building High-Fidelity Mockups - Designing Efficiently with Tools - Interaction Patterns - Conducting Usability Tests - Other Evaluative User Research Methods - Synthesizing Test Findings - Prototype Iteration.

Sketching Principles:

Sketching is a creative process, and while there are no strict rules, there are some principles to keep in mind:

Start Light: Begin with light, loose lines that are easy to erase or adjust.

Basic Shapes: Use basic shapes like circles, squares, and triangles as building blocks for more complex forms.

Proportions: Pay attention to proportions and relationships between objects in your sketch.

Perspective: Understand basic perspective principles to give your sketch depth and dimension.

Details Last: Focus on adding details after you've established the overall composition.

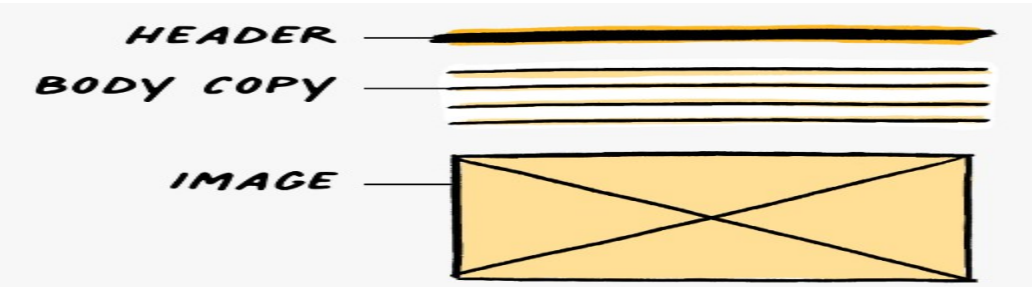
Shading: Use shading to create depth and define light sources.

Practice: Regular practice improves your sketching skills over time.

Experiment: Don't be afraid to experiment with different techniques and styles.

Reference: Use references when needed to better understand the subject you're sketching.

Critique: Be open to critique and feedback to improve your work.



How can you Enhance UX Sketching and Prototyping?

- Start the good old way- with a pen and paper.
- Keep it simple, specific and detail-oriented.
- Use a style guide for consistency.
- Use comments for clarity.
- Create interactive prototypes for clear communication.
- Use visual design cues.
- Test and iterate- over and over.

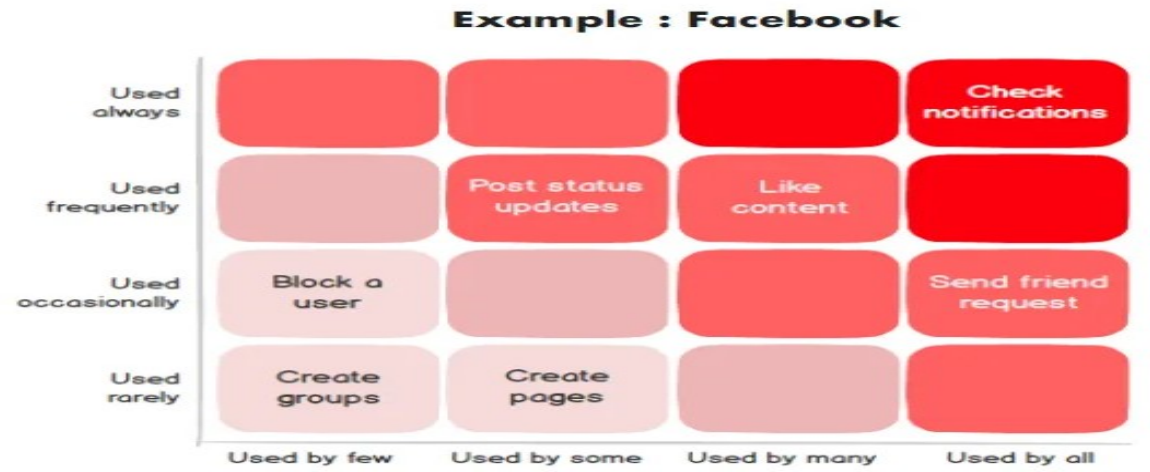
Sketching Red Routes:

What are red routes in UX design?

Red routes are a matrix which helps prioritise your content and functionality based on usefulness to the most users. They can be particularly helpful when you have 2 equally distinct user groups. It's quite a simple exercise that you can do internally with data on an existing app or with user interviews.

Identifying Red Routes

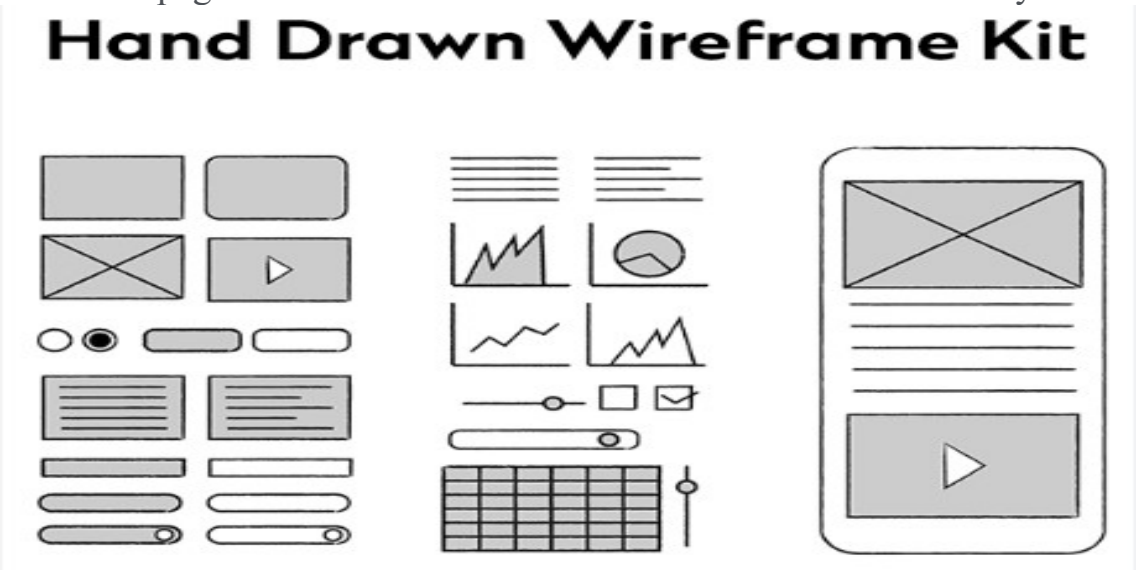
- Critical
- End-to-end tasks with multiple steps or actions
- Frequently utilised
- Built for scale
- Key value drivers
- Objectively successful
- Tied to critical product metrics



Responsive Design:

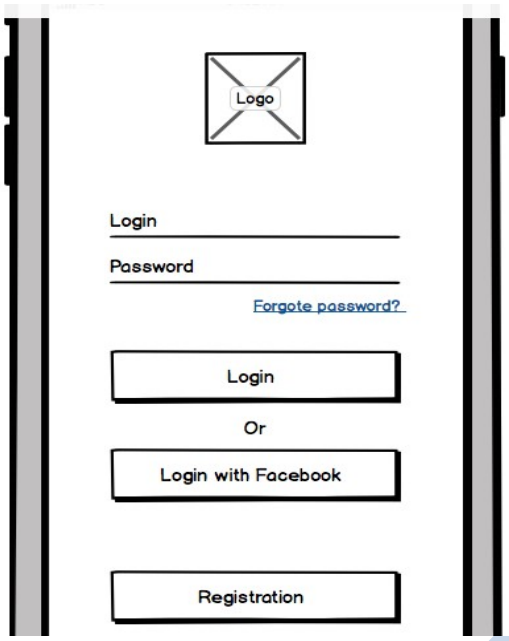
What is a responsive wireframe?

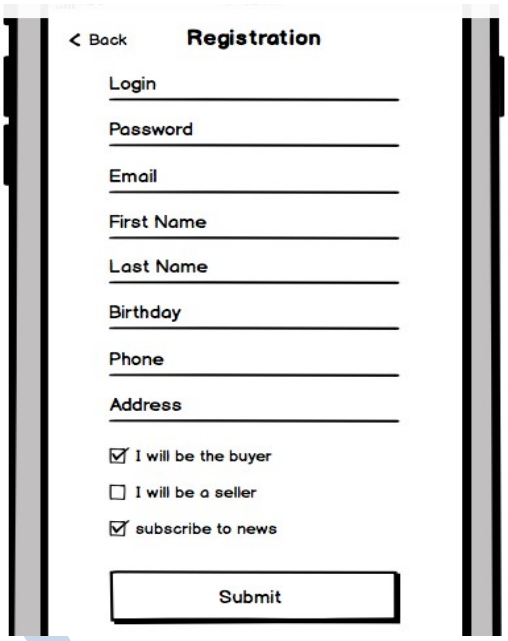
Responsive wireframes are sets of wireframes with different layouts for the same design that: Show how web content adapts to different grid widths. Help define the page structure. Show how content works with different layouts.



Wireframing:

Wireframing is a process where designers draw overviews of interactive products to establish the structure and flow of possible design solutions. These outlines reflect user and business needs. Paper or software-rendered wireframes help teams and stakeholders ideate toward optimal, user-focused prototypes and products.

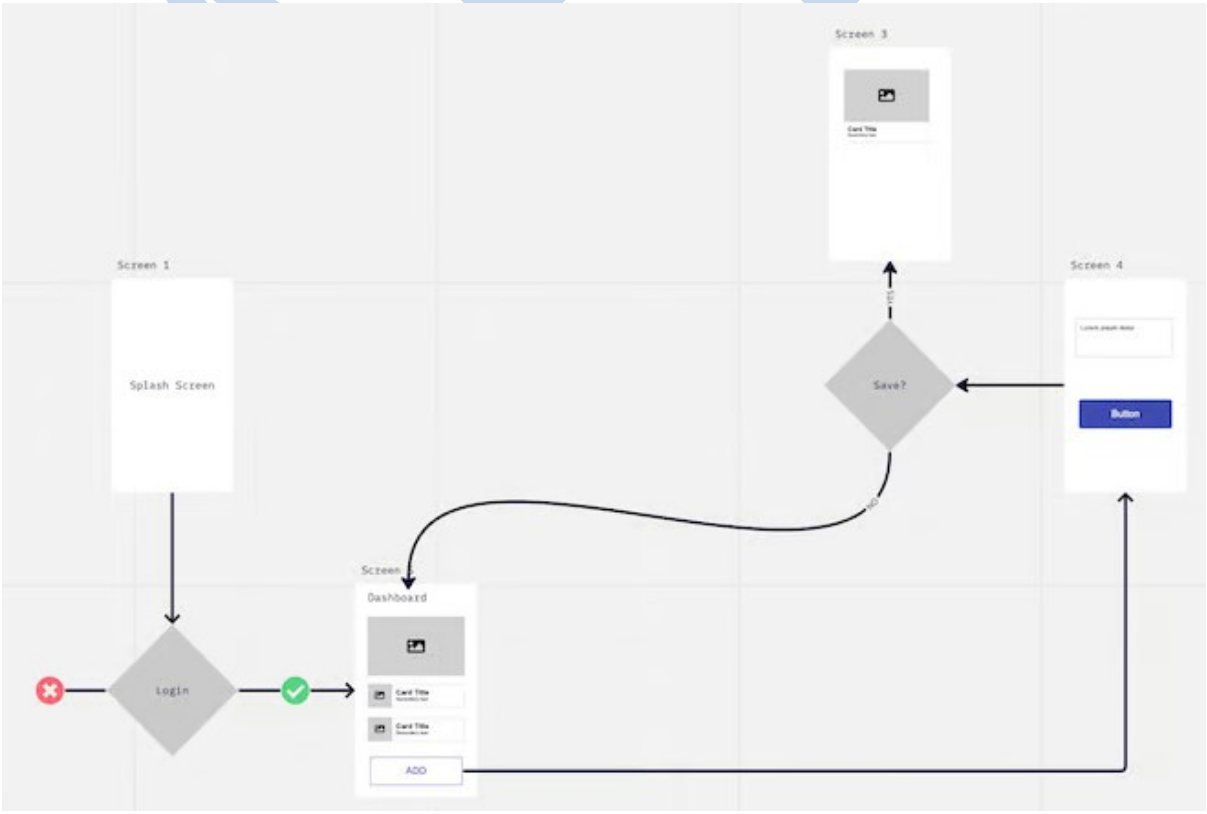




Creating Wireflows:

Wireflow:

Wireflows are a visual representation of the screens in an app, alongside their user interactions. They can vary from very low fidelity (see example below) to high fidelity screens with arrows linking them. Wireflows provide an overview of all the interactions on a screen, where they lead, and any decision points:



Wireflow creation process:

1. Describe the need and problem in a user story. For example, user signup — setting the username, email, and password .
2. Identify the key screens in the interface. ...
3. Connect the screens with arrows in the order users would move forward.

Building a Prototype:

Building a prototype is an essential step in the product development process. A prototype is a preliminary model or version of a product that allows you to test and validate your ideas, gather feedback, and identify potential issues before moving on to full-scale production. Here are the key steps to building a prototype:

Define Your Goals:

- Clearly define the purpose and objectives of your prototype.
- Determine what you want to learn or validate through the prototype.

Conceptualize and Design:

- Create a rough sketch or design of your product. This can be a simple hand-drawn sketch or a more detailed digital design.
- Decide on the materials and technologies you'll use for the prototype.

Choose the Prototype Type:

There are different types of prototypes, such as:

- Proof-of-Concept (PoC): To test the core concept and feasibility.
- Wireframe Prototype: To focus on user interface and layout.
- Functional Prototype: To demonstrate the functionality of the product.
- Visual Prototype: To show the visual design and aesthetics.

Create a Bill of Materials (BOM):

- List all the materials and components you'll need to build the prototype.

- Source or purchase these materials.

Build the Prototype:

- Assemble the materials and components based on your design.
- You can build the prototype yourself or work with a team or a prototyping service.
- Ensure that the prototype represents the key features and functions of the final product.

Test and Evaluate:

- Test the prototype to ensure it functions as intended.
- Gather feedback from team members, stakeholders, or potential users.
- Identify and document any issues or areas for improvement.

Iterate and Refine:

- Based on the feedback and test results, make necessary changes and improvements to the prototype.
- Repeat the testing and evaluation process as needed.

Document Your Prototype:

- Maintain detailed records of the prototype's design, materials, and any changes made.
- This documentation will be valuable for future iterations or when scaling up for production.

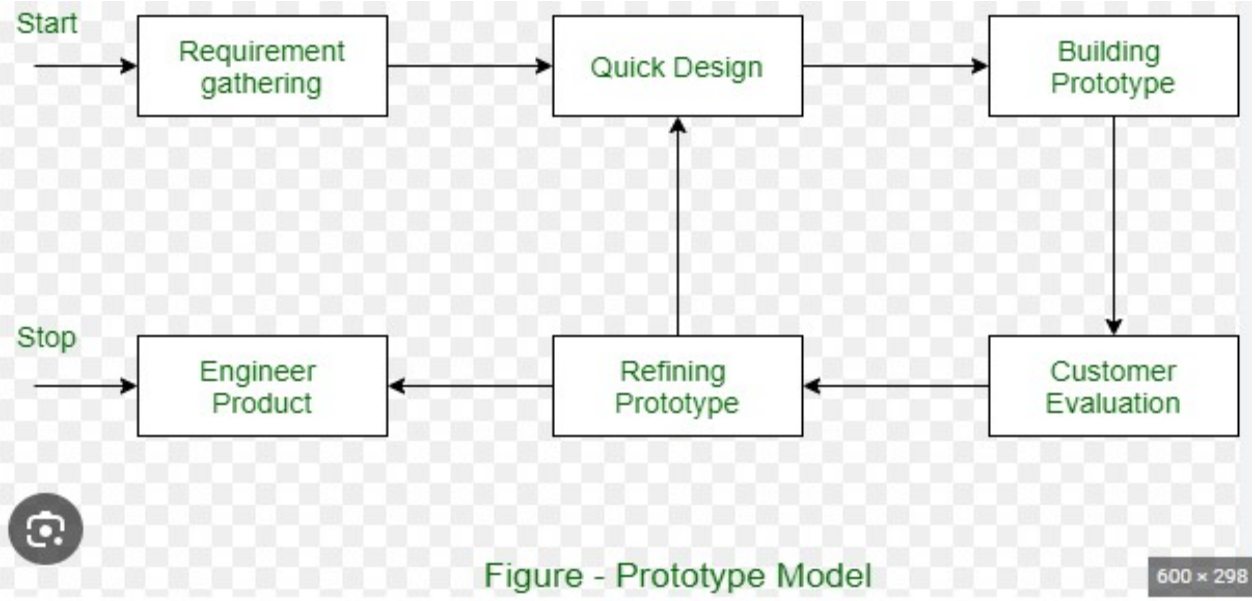
Present and Share:

- Share your prototype with investors, stakeholders, or potential customers to gather more feedback and generate interest.

Plan for Next Steps:

- Determine whether the prototype meets your goals and if it's ready to move to the next stage of development.

- If the prototype is successful, begin planning for mass production, marketing, and distribution.



Prototyping Tools:

- Figma
- InVision Studio
- Adobe XD
- WebFlow
- Axure RP
- Origami Studio

Building High-Fidelity Mockups:

What are low-fidelity wireframes?

Low-fi wireframes act as the initial blueprints for web pages and app screens – a rough approximation of the final product. They're especially useful in the early stages of product development because they put the focus on pure functionality, not aesthetics.

Advantages of Low-Fidelity Wireframes:

- Capturing ideas
- Foundational work
- Painless iteration

- Streamlined workflow

Disadvantages of Low-Fidelity Wireframes:

- Low visual impact
- Insufficient for tests

What are high fidelity wireframes?

A mockup becomes a high-fidelity prototype once interactions, transitions, or animations are added. With clickable menus and buttons, hi-fi prototypes provide a visceral sense of the user experience. This allows teams to tweak usability before final design approvals, testing, and hand-off to the developers.

Advantages of High-Fidelity Wireframes:

- Inspire enthusiasm
- Refined feedback
- Immersive experience
- Accurate testing

Disadvantages of High-Fidelity Wireframes:

- Resource intensive
- Revision resistant

Designing Efficiently with Tools:

Designing efficiently with tools and prototypes is a critical aspect of the UI/UX design process. Using the right tools can help streamline your design workflow and create more effective prototypes. Here are some tips on how to design efficiently with the help of design tools and prototypes:

1.Select the Right Design Tools:

Choose design tools that align with your project requirements and team collaboration needs. Popular tools for UI/UX design include Figma, Sketch, Adobe XD, and InVision.

2.Wireframing and Low-Fidelity Prototyping:

Start with low-fidelity wireframes or prototypes to quickly explore and communicate design concepts without getting bogged down by details.

3.Design System and UI Kits:

Create or use design systems and UI kits to maintain consistency in your designs. These pre-designed components and styles can save you time and effort.

4.Responsive Design Features:

Utilize responsive design features in your tools to ensure your designs adapt to various screen sizes and orientations.

5.Plugins and Integrations:

Take advantage of plugins and integrations available in your design tools to extend functionality and automate repetitive tasks.

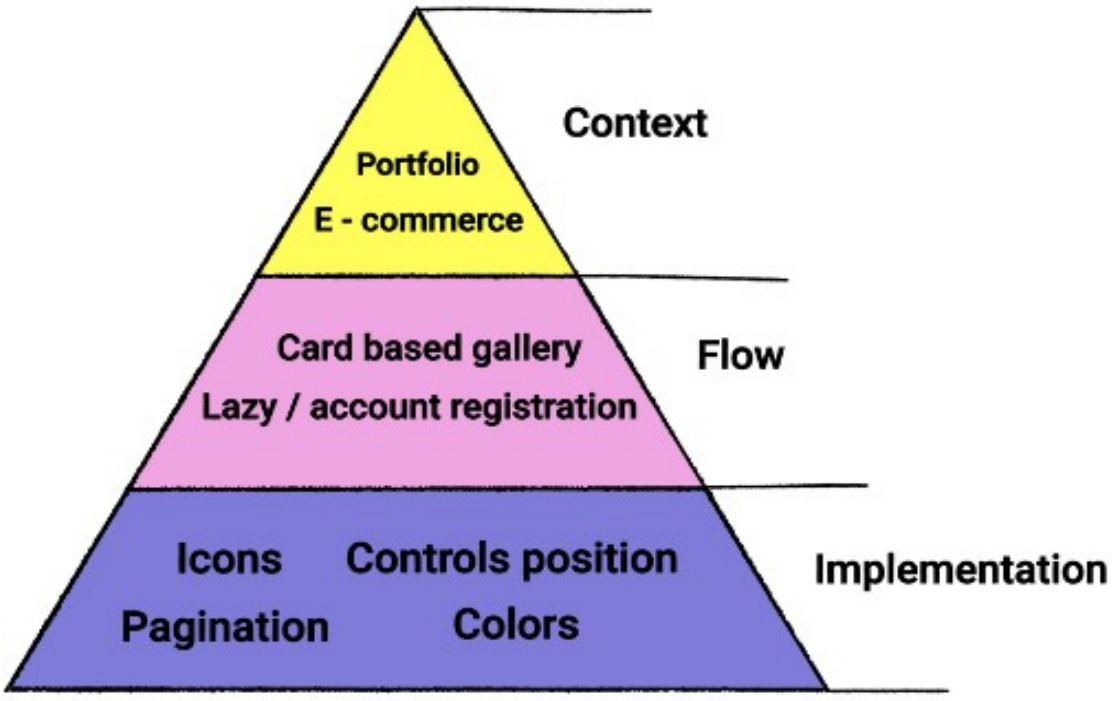
Art of Efficient Prototype:



Interaction Patterns:

Interaction design patterns are design patterns applied in the context human-computer interaction, describing common designs for graphical user interfaces. A design pattern is a formal way of documenting a solution to a common design problem.

Ietration Design Patterns:



Conducting Usability Tests:

How do you conduct a usability test?

A typical usability test will involve these four steps:

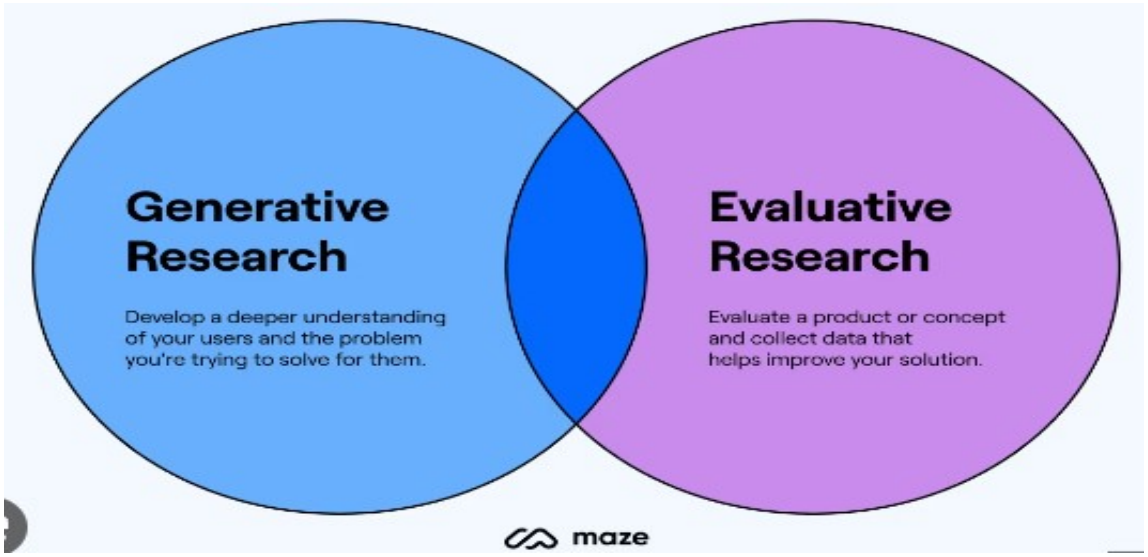
1. Find representative users from the target population. ...
2. Ask the users to perform representative tasks on the website. ...
3. Observe what the users do. ...
4. Summarize your results.



Other Evaluative User Research Methods:

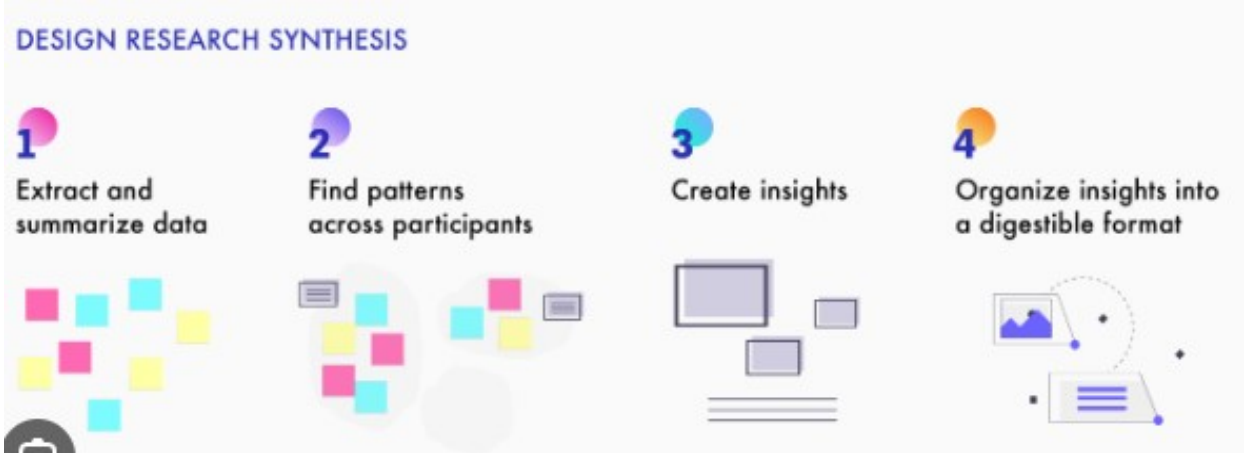
5 Key evaluative research methods

- Surveys. User surveys can provide valuable quantitative insights into user preferences, satisfaction levels, and attitudes toward a design or product. ...
- Closed card sorting. ...
- Tree testing. ...
- Usability testing. ...
- A/B testing.



Synthesizing Test Findings:

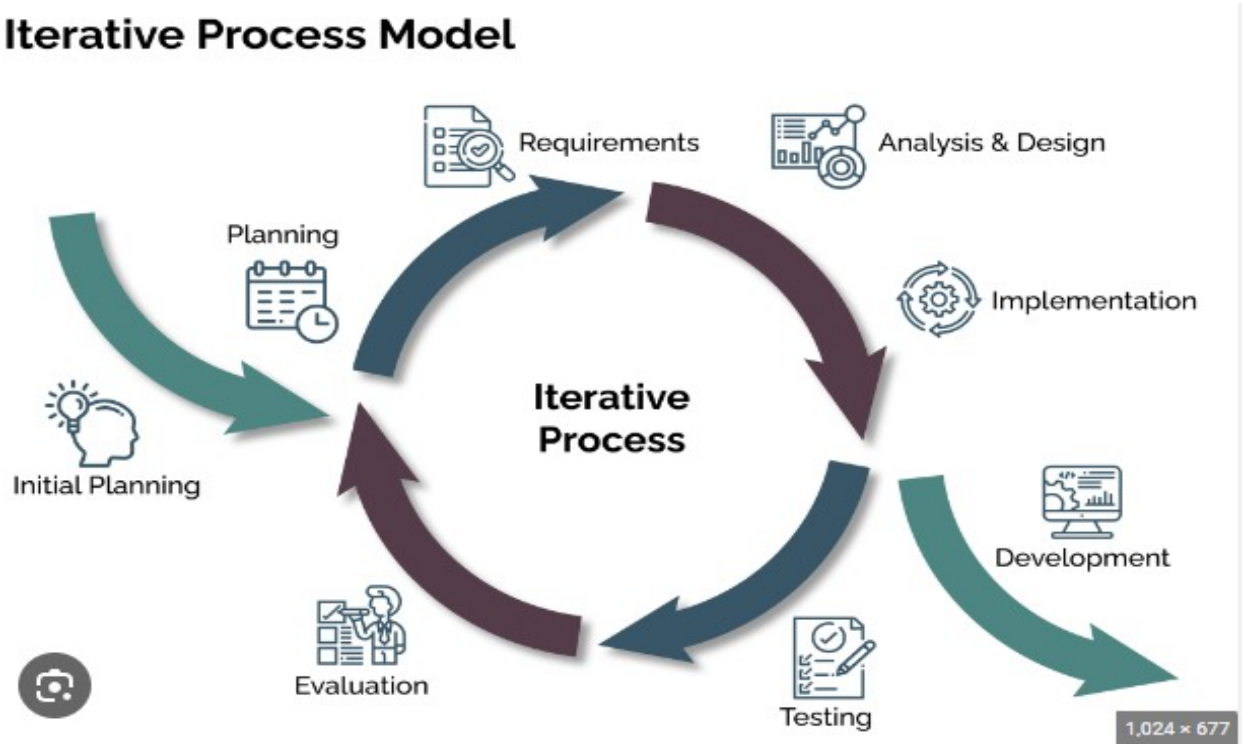
Synthesis is the step that comes after the designer has understood the problem statement. Once the UX research is conducted and sufficient raw data is received, it is converted to valuable insights. It is the process of creating intuitive concepts based on the facts that are being analysed.



Prototype Iteration:

What is prototype iteration?

Iterative prototyping is a method of creating and testing a product in small, incremental stages. It allows developers to quickly gather feedback, make adjustments, and improve the overall user experience.



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