



Experiment No. 10

Title: Validation of Wireframes and Prototypes



Batch: B-2**Roll No.: 16010422234****Experiment No.: 10**

Aim: To validate the effectiveness and usability of the wireframes and prototype

Resources needed: Wireframing/Prototyping Tool, Web Resources

Theory:

Creating wireframes and prototypes are crucial stages in the UX design process, forming the base for developing user-friendly and efficient digital interfaces. Wireframes are basic depictions of a website or application, concentrating on arrangement, organization, and features while not including specific design elements like colors and pictures. This first stage allows designers and stakeholders to see a digital product's fundamental structure, ensuring that all essential elements are present and organized logically. Wireframes usually emphasize the arrangement of important elements such as navigation bars, content sections, and interactive elements.

Prototypes enhance wireframing by incorporating interactivity and more detailed elements. Prototypes can vary from basic clickable wireframes to interactive simulations that closely mimic the final product. This enables designers to evaluate user interactions and flows, making sure that the navigation and functionality are user-friendly and effective. Creating prototypes early in the design process can help identify potential usability issues, ultimately lowering the chances of expensive alterations down the line. It also offers a physical product that real users can use to obtain important feedback.

Reviewing wireframes and prototypes ensures they align with user requirements and anticipations. Usability testing involves real users interacting with prototypes to accomplish tasks and is a widely used method for validation. This procedure includes watching users go through the wireframes or prototypes, and taking note of any problems or misunderstandings they experience. Designers can gather qualitative and quantitative data to understand how effective their designs are and discover areas in need of enhancement. This repeated process improves the design, enhancing its user-friendliness and efficiency.

Efficient wireframing and prototyping tools are essential in the UX design process. Applications such as Balsamiq, Figma, and Sketch offer a variety of features for creating and testing wireframes and prototypes effectively. These tools provide pre-made UI elements, easy-to-use interfaces for dragging and dropping, and the capability to mimic user actions. Selecting the appropriate tool is influenced by elements like project intricacy, requirements for teamwork, and

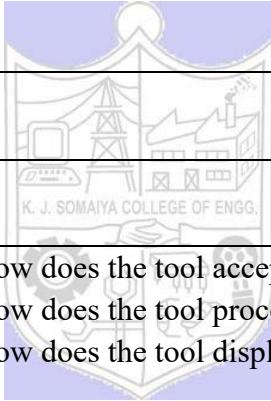
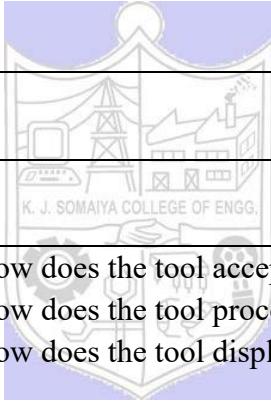
financial limitations. Every tool has its advantages, and choosing the right one can greatly improve the design process.

Procedure:

Discuss one Wireframing/Prototyping tool selected and elaborate on the same.

1(a). Choose a wireframing/prototyping tool that fits your needs.

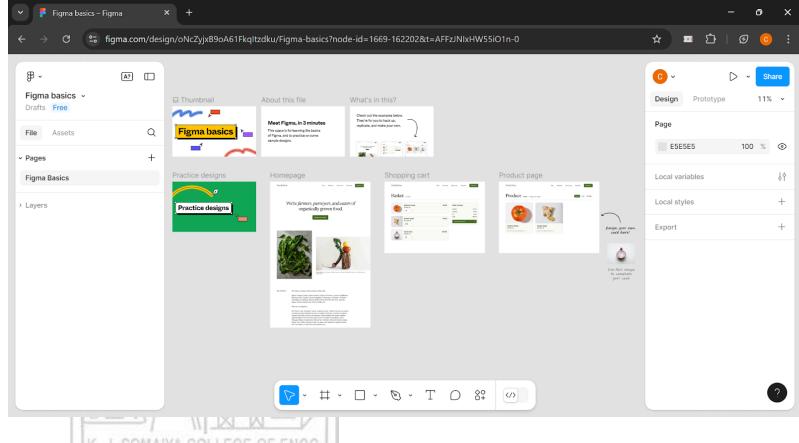
1(b). Explain the tool searched for each technique in the format given below.

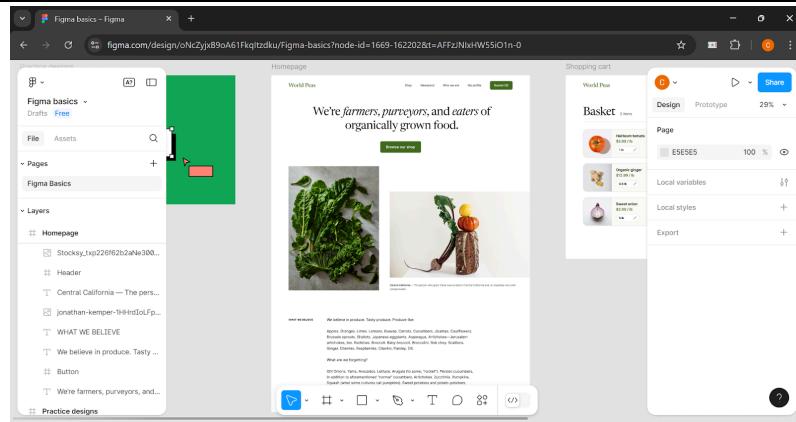
Type of Tool	
Name: Of the Tool (Include Company Name, Website etc.)	
License/ Open Source	
Explanation of Tool	
Procedure	<ol style="list-style-type: none"> 1. How does the tool accept the input? 2. How does the tool process the data? 3. How does the tool display the output/result?
Conclusion	Whether the tool will be selected for laboratory activities?

Results:

Attached print out about each selected tool in prescribed format.

Type of Tool	Wireframing Tool
Name: Of the Tool (Include Company Name, Website etc.)	Figma (by Figma, Inc.) https://www.figma.com/
License/ Open Source	Freemium model (Free for individuals with paid options for

	teams and enterprises)
Explanation of Tool	<p>Figma is a cloud-based design tool that enables users to collaborate in real-time on the design and prototyping of interfaces for web and mobile applications. It combines powerful design features with prototyping capabilities, allowing designers to create, test, and share designs all in one platform. Figma's real-time collaboration is a standout feature, making it ideal for teams working together on UI/UX projects.</p> 
Procedure	<p>1. How does the tool accept the input?</p> <p>Ans: Figma allows users to start a new design by creating a frame (which can represent a screen or webpage) or importing existing assets. Users can drag and drop elements from the built-in library or import external assets like images, icons, and fonts. Designers can also use vector tools to create custom shapes and components directly in Figma. The tool supports keyboard shortcuts for quick actions and the use of templates for standard layouts.</p>



2. How does the tool process the data?

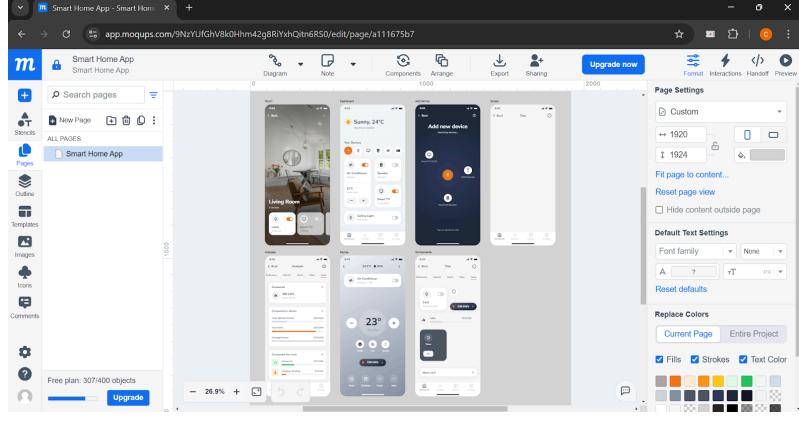
Ans: Once the design elements are in place, Figma processes the data by allowing users to manipulate the design through layers, groups, and components. Figma supports vector editing, enabling precise control over shapes, lines, and paths. The tool's components feature allows for the reuse of elements across multiple frames, ensuring consistency throughout the design. The real-time collaboration feature processes input from multiple users simultaneously, syncing changes in real-time across all connected devices.

3. How does the tool display the output/result?

Ans: Figma displays the output in the design interface itself, where users can view and edit their work in real-time. It also offers a prototype mode, where designers can link frames together to simulate user interactions, such as clicks, swipes, and transitions. The prototype can be shared via a URL, allowing stakeholders to interact with the design in a browser as if it were a live website or app. Figma provides options to export designs in various formats, such as PNG, JPG, SVG, and PDF, for use in other tools or final implementation.

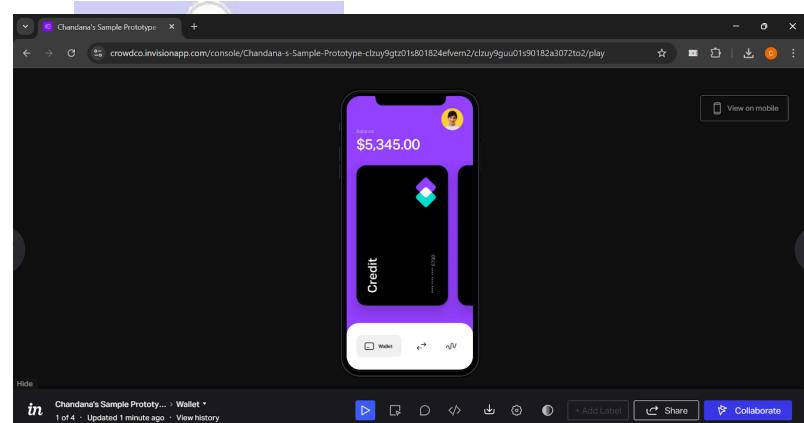
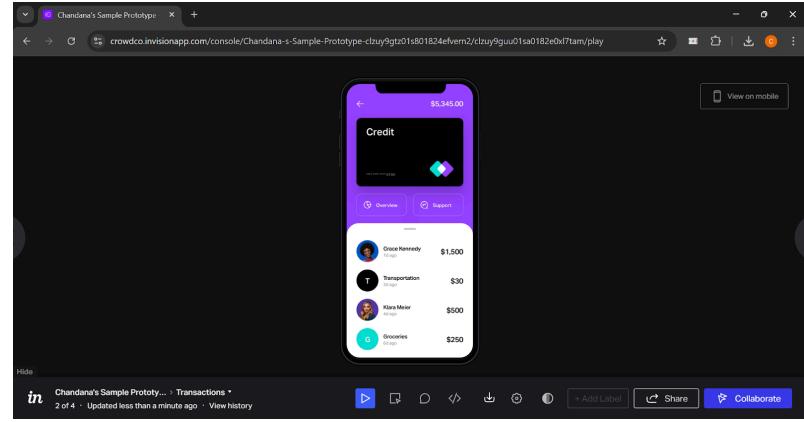
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	<p>World Peas</p> <p>Shop Newstand Who we are My profile Basket (3)</p> <p>Basket 3 items</p> <table border="1"> <tr> <td></td> <td>Heirloom tomato \$5.99 / lb 1 lb <input type="button" value="Remove"/></td> <td>\$5.99</td> </tr> <tr> <td></td> <td>Organic ginger \$12.99 / lb 0.5 lb <input type="button" value="Remove"/></td> <td>\$6.50</td> </tr> <tr> <td></td> <td>Sweet onion \$2.99 / lb 5 lb <input type="button" value="Remove"/></td> <td>\$14.95</td> </tr> </table> <p>Order summary</p> <table border="1"> <tr> <td>Subtotal</td> <td>\$27.44</td> </tr> <tr> <td>Shipping</td> <td>\$3.99</td> </tr> <tr> <td>Tax</td> <td>\$2.00</td> </tr> <tr> <td>Total</td> <td>\$33.43</td> </tr> </table> <p>Continue to payment →</p>		Heirloom tomato \$5.99 / lb 1 lb <input type="button" value="Remove"/>	\$5.99		Organic ginger \$12.99 / lb 0.5 lb <input type="button" value="Remove"/>	\$6.50		Sweet onion \$2.99 / lb 5 lb <input type="button" value="Remove"/>	\$14.95	Subtotal	\$27.44	Shipping	\$3.99	Tax	\$2.00	Total	\$33.43
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Conclusion	<p>Whether the tool will be selected for laboratory activities?</p> <p>Ans: Figma is a versatile tool that excels in both wireframing and prototyping, making it a strong candidate for use in laboratory settings where design collaboration and real-time feedback are critical. Its integration of wireframing, vector</p>																	

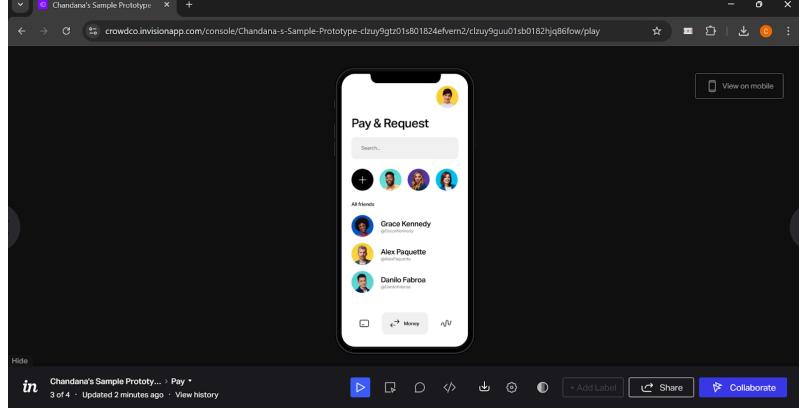
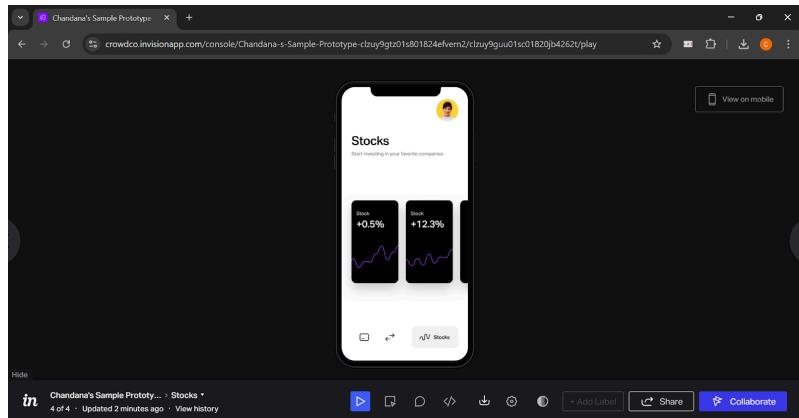
	design, and prototyping within a single platform simplifies the design process and enhances productivity. Given its features and ease of use, Figma is highly recommended for laboratory activities focused on user interface design and prototyping.
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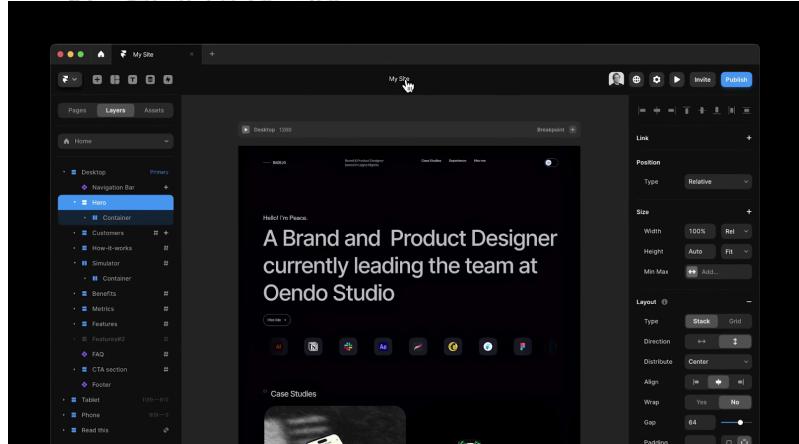
Type of Tool	Mockup Tool
Name: Of the Tool (Include Company Name, Website etc.)	Moqups (by Evercoder Software) https://moqups.com/
License/ Open Source	Freemium model (Free version with limited features, with paid options for advanced features)
Explanation of Tool	Moqups is an online tool designed for creating wireframes, mockups, and diagrams. It offers a user-friendly interface with drag-and-drop functionality, making it easy to quickly create and modify designs. The tool provides various templates and pre-built elements that help in constructing mockups efficiently. Moqups is web-based, meaning it can be accessed from any device with an internet connection.
Procedure	<p>1. How does the tool accept the input?</p> <p>Ans: Moqups allows users to create new mockups by choosing from templates or starting from scratch. Elements can be added to the mockup by dragging them from the sidebar into the workspace. Users can also upload images, icons, and other assets to be used in the mockup.</p> 

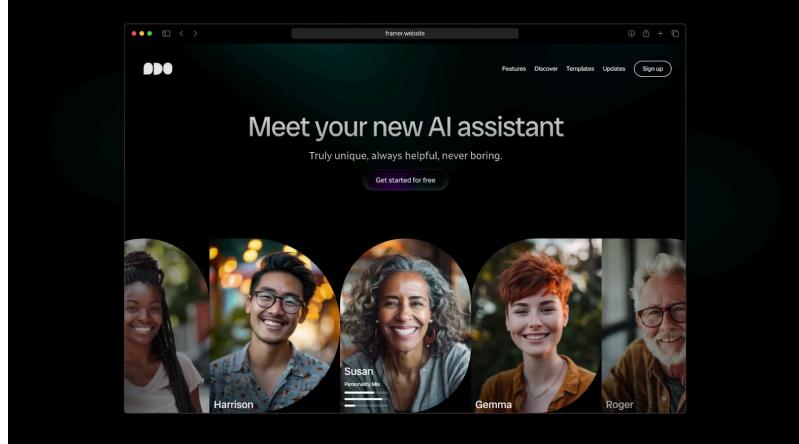
	<p>2. How does the tool process the data?</p> <p>Ans: Once elements are placed in the workspace, Moqups processes the data by allowing users to customize properties such as size, color, and position. Users can group elements, create layers, and manage object properties through a simple interface. The tool also supports real-time collaboration, enabling multiple users to work on the same project simultaneously.</p> <p>3. How does the tool display the output/result?</p> <p>Ans: Moqups displays the mockup directly in the browser, where it can be edited and reviewed. The final mockup can be exported in various formats, such as PNG, PDF, or SVG, for use in presentations or further development.</p>
Conclusion	<p>Whether the tool will be selected for laboratory activities?</p> <p>Ans: Moqups is an intuitive tool for creating mockups quickly and efficiently. Its ease of use, combined with its range of templates and elements, makes it ideal for laboratory activities where the focus is on generating visual representations of UI designs. Moqups is recommended for use in laboratory activities that require the creation of mockups.</p>

Type of Tool	Prototyping Tool
Name: Of the Tool (Include Company Name, Website etc.)	InVision (by InVisionApp Inc.) https://www.invisionapp.com/
License/ Open Source	Freemium model (Free for individuals with paid options for teams and enterprises)
Explanation of Tool	InVision is a leading prototyping tool that allows designers to create interactive and animated prototypes for web and mobile applications. The tool emphasizes collaboration, enabling designers to gather feedback from stakeholders directly within the platform. InVision also integrates well with other design tools like Sketch and Adobe XD, allowing for a seamless workflow.

Procedure	<p>1. How does the tool accept the input?</p> <p>Ans: InVision allows users to import designs from tools like Sketch, Photoshop, and Figma, or start new projects directly within the platform. Designers can then add hotspots to link different screens together, creating a flow that simulates user interactions.</p> <p>2. How does the tool process the data?</p> <p>Ans: InVision processes the designs by enabling designers to add animations, transitions, and other interactive elements. The platform supports the creation of complex interactions, allowing for a high-fidelity simulation of the final product. Collaboration features allow team members to comment directly on the prototypes, ensuring feedback is collected and managed efficiently.</p>  
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Conclusion	<p>3. How does the tool display the output/result?</p> <p>Ans: The interactive prototypes can be viewed directly within InVision, where stakeholders can interact with them as if they were navigating a live app or website. Prototypes can also be shared via a link, making it easy to gather feedback from remote teams or clients. InVision also allows exporting design assets for use in development.</p> <p>Whether the tool will be selected for laboratory activities?</p> <p>Ans: InVision is an excellent tool for creating detailed and interactive prototypes, making it a great choice for projects where demonstrating user interaction is crucial. Its collaboration features further enhance its utility in laboratory settings where iterative feedback is important. InVision is recommended for laboratory activities that involve creating prototypes with interactive elements.</p>

Type of Tool	Proof of Concept Tool
Name: Of the Tool (Include Company Name, Website etc.)	Framer (by Framer B.V.) https://www.framer.com/
License/ Open Source	Freemium model (Free plan with advanced features available in paid plans)
Explanation of Tool	Framer is a powerful tool that focuses on creating interactive and animated prototypes, making it ideal for proof of concept (PoC) work. Framer allows designers to create complex interactions using code, offering a high degree of flexibility for simulating advanced features and animations. It is particularly useful for mobile app designs and dynamic web applications.
Procedure	<p>1. How does the tool accept the input?</p> <p>Ans: Framer allows users to start projects by importing designs from other tools or by creating new elements within Framer using its design and code interface. Designers can use Framer's in-built tools to draw, animate, and add interactive elements.</p>  <p>2. How does the tool process the data?</p> <p>Ans: Framer processes the input by allowing users to add code-based interactions and animations, providing a high level of control over how elements behave. This makes it possible to simulate complex user experiences that go beyond</p>

	<p>basic prototyping. Framer also supports real-time collaboration, enabling multiple users to work together on the PoC.</p> <p>3. How does the tool display the output/result?</p> <p>Ans: The result is displayed as a fully interactive prototype that can be tested in a web browser or on a mobile device. Framer allows sharing of prototypes via a URL, making it easy to present the PoC to stakeholders. The tool also offers options for exporting code snippets, which can be used in development.</p> 
Conclusion	<p>Whether the tool will be selected for laboratory activities?</p> <p>Ans: Framer is a highly flexible tool that excels in creating detailed proofs of concept, especially for projects that require advanced interactions and animations. Its ability to integrate design with code makes it particularly valuable for laboratory activities focused on testing innovative ideas and user experiences. Framer is recommended for laboratory activities where the creation of proof of concepts is required.</p>

Outcomes: Comprehend the role of user and designer in User Interface Design

Conclusion: (Conclusion to be based on the objectives and outcomes achieved)

The use of tools like Figma, Moqups, InVision, and Framer enhances wireframing, prototyping, and validation in UI/UX design. These tools allow early visualization, interaction, and

refinement, making usability issues easier to address before final development. This experiment validated wireframe and prototype usability, emphasizing the importance of tool selection based on project needs. Figma, chosen for its real-time collaboration, ease of use, and integration of design and prototyping, proved effective in aligning with user requirements and optimizing UI design, making it ideal for laboratory activities focused on user interface design.

Grade: AA / AB / BB / BC / CC / CD /DD

Signature of faculty in-charge with date

References:

1. Wilbert O. Galitz, “The Essential Guide to User Interface Design - An Introduction to GUI Design Principles and Techniques”, Wiley Computer Publishing, Second Edition, 2002
 2. Bill Scott, Theresa Neil, “Designing Web Interfaces Principles & Patterns for Rich Interaction”, O’rielly Media, First Edition, 2009
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