



**CHENNAI INSTITUTE OF TECHNOLOGY  
AND APPLIED RESEARCH**

**CCS370**

**UI and UX Design Laboratory**

Name of the : .....

Register Number : .....

Dept/Section : .....

Year/Semester : .....

**VISION OF THE INSTITUTION**

To be a globally recognized Centre for Engineering and Technology by imparting knowledge, relevant skills and human values to address global challenges through applied research, innovation and entrepreneurship.

**MISSION OF THE INSTITUTION**

1. To impart quality technical education and inculcate a culture for life long learning.
2. To nurture industrial collaboration for building aspirations for career in emerging technologies.
3. To create next generation socially responsible leaders through holistic development and building professional
4. competencies. To facilitate stimulating environment, conducive for research,

## LIST OF EXPERIMENTS

1. Designing a Responsive layout for an societal application
2. Exploring various UI Interaction Patterns
3. Developing an interface with proper UI Style Guides
4. Developing Wireflow diagram for application using open-source software
5. Exploring various open source collaborative interface Platform
6. Hands on Design Thinking Process for a new product
7. Brainstorming feature for proposed product
8. Defining the Look and Feel of the new Project
9. Create a Sample Pattern Library for that product (Mood board, Fonts, Colors based on UI principles)
10. Identify a customer problem to solve
11. Conduct end-to-end user research - User research, creating personas, Ideation process (User stories, Scenarios), Flow diagrams, Flow Mapping
- 12.** Sketch, design with popular tool and build a prototype and perform usability testing and identify improvements

## **EXP1**

**AIM:** Designing a responsive layout for an societal application

### **PROCEDURE:**

#### **Setting Up the Figma File:**

Create a new Figma project and set the canvas size to a common mobile breakpoint (e.g., 320px wide). This helps you start with a mobile-first approach. As you design, you'll expand the canvas width for larger breakpoints.

#### **Components and Styles:**

Create components for reusable UI elements like buttons, headers, and form fields. Define text and color styles to maintain consistency throughout your design.

#### **Design for Mobile:**

Begin by designing your user interface for the mobile layout. Place components and arrange elements according to the content hierarchy. Keep in mind touch-friendly sizes and spacing.

#### **Viewport Resizing:**

To simulate different screen sizes, use Figma's built-in viewport resizing feature. Select the viewport and resize it to the desired width. This helps you visualize how your design adapts to different breakpoints.

#### **Creating Variants:**

For each component, create variants that represent different states or sizes. For example, a button might have a normal state, a hover state, and a larger size for tablet layouts.

#### **Auto Layout:**

Figma's Auto Layout feature is incredibly useful for responsive designs. Use Auto Layout to ensure that components within a container adjust their positions and sizes automatically when the container's size changes.

#### **Constraints:**

Apply constraints to components to define how they respond to resizing. Constraints define whether components stick to the left, right, top, or bottom of their parent container.

#### **Spacing and Margins:**

Use relative spacing and margins to maintain consistent padding between elements. This ensures that spacing adapts proportionally to different screen sizes.

## **Grid Systems:**

You can create grids in Figma to help align and organize your design elements. Define grids for different breakpoints to maintain alignment as you scale your design.

## **Media Queries and Styles:**

Use Figma's Components and Styles features to apply different styles for each breakpoint. Create styles for typography, buttons, and other UI elements that change based on the screen size.

## **Preview and Prototype:**

Figma allows you to create interactive prototypes. Link artboards to show how the design flows between different screens and breakpoints. Preview the prototype to get a sense of the user experience.

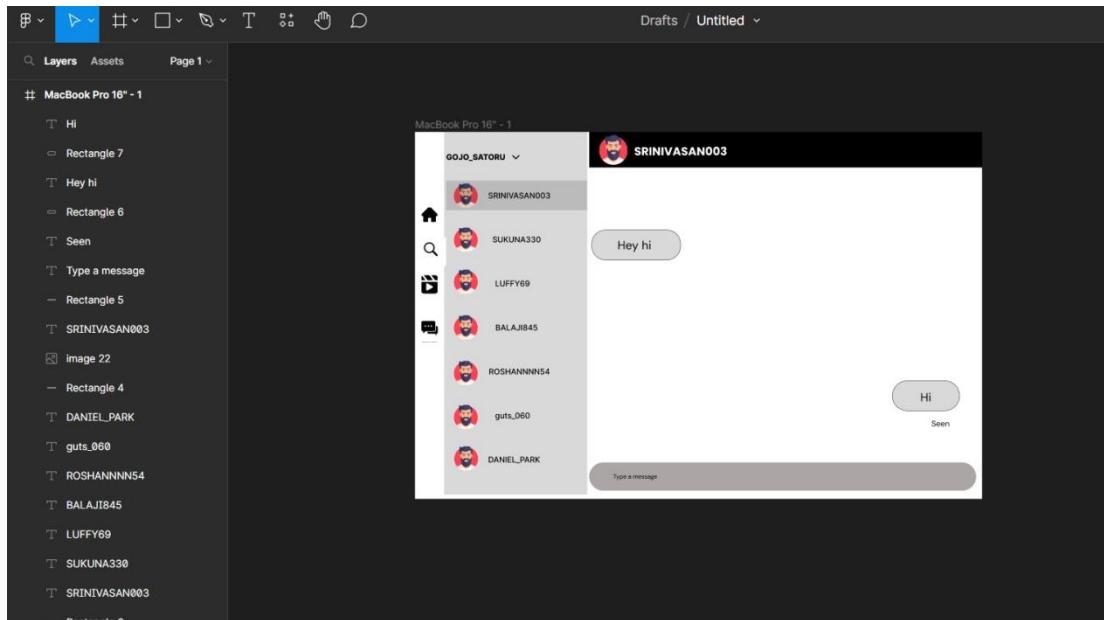
## **User Testing and Feedback:**

Share the Figma prototype with stakeholders or users to gather feedback. Use this feedback to iterate and refine your responsive design.

## **Documenting Guidelines:**

Figma allows you to create design systems and style guides. Document your responsive design guidelines, including breakpoints, constraints, and component variations, to maintain consistency as your project progresses.

## **Example design:**



**INFERENCE:** Building a societal application using Figma offers the advantage of real-time collaborative design, facilitating remote teamwork on responsive layouts, interactive prototypes, and user testing. With version control, design systems, and UI kits, Figma streamlines the design process while fostering consistency and efficient communication among team members. Its export and handoff features aid seamless transition from design to development, and its adaptability empowers iterative refinement, making Figma a versatile and user-centric tool for crafting effective societal applications.

**RESULT:** From this expt we learnt to build an societal application using figma

## ***EXPT2:***

**AIM:** Exploring various ui interaction patterns

## **PROCEDURE:**

### **Clicks/Taps:**

Users perform a single click (on desktop) or tap (on mobile devices) on buttons, links, or interactive elements to trigger actions like opening a page, submitting a form, or revealing additional information.

### **Hover/Mouseover:**

When users move their cursor over an element, it triggers a visual change or displays additional information, providing contextual cues. For example, buttons might change color or tooltips may appear.

### **Swipe/Gesture:**

On touch-enabled devices, users use swiping gestures to scroll through content, navigate between pages, or dismiss items. These gestures enhance navigation and engagement.

### **Drag and Drop:**

Users click and hold an element, drag it to a new location, and release to perform actions such as reordering items, moving files, or customizing layouts.

### **Scrolling:**

Scrolling allows users to vertically or horizontally navigate through content that doesn't fit within the visible area. It's a fundamental way to explore lengthy web pages or lists.

### **Accordion:**

Accordions allow users to expand and collapse sections of content, conserving space while providing a way to reveal additional information or options.

### **Modal/Popup:**

Modals or popups are temporary overlays that appear on top of the main content. They require user interaction before users can proceed, providing focused attention on a specific task.

### **Toggle Switch:**

Toggle switches represent binary options that users can switch on or off. They're often used for settings or toggling between modes.

## Radio Buttons and Checkboxes:

Radio buttons allow users to select a single option from a list, while checkboxes enable multiple selections. They're commonly used in forms and settings.

## Menu:

Menus display a list of options or actions that users can select, often accessed through buttons or icons, providing a hierarchical structure to navigate within an app.

## Progress Bar/Loader:

Progress bars or loaders indicate the status of an ongoing task or loading process, keeping users informed about the system's activity.

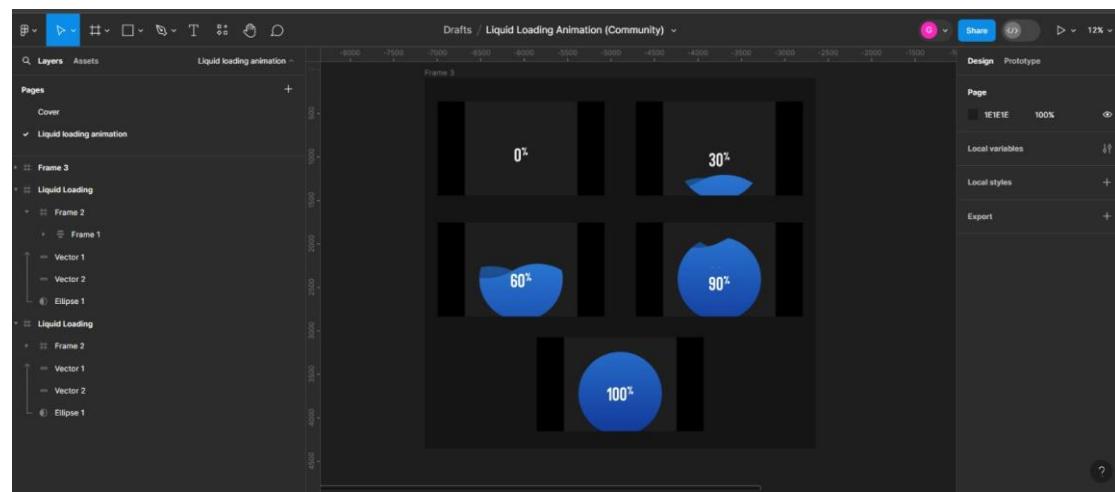
## Search and Filters:

Search bars allow users to input keywords for finding specific content, while filters refine search results based on various criteria, improving content discovery.

**INFERENCEx**: This lab experiment is designed to explore how users interact with different UI elements and assess their effectiveness in achieving specific goals. By analyzing user behavior and performance data, the researchers can determine which UI interaction patterns are most effective for specific tasks and user contexts. This information can then be used to design more user-friendly and efficient interfaces.

**Result:** From this expt we learnt to build various ui interaction patterns using figma.

## Example Design:



## EXPT 3

**AIM:** Developing an interface with ui styled guide lines

## **PROCEDURE:**

### **Define Your Brand and Audience:**

Clearly understand your brand identity and target audience. Determine the visual tone, colors, typography, and overall style that align with your brand's personality and resonate with your users.

### **Create a Design System:**

Establish a design system that outlines the core components, styles, and guidelines for your interface. This includes typography, color palette, buttons, form elements, icons, spacing, and more.

### **Typography Guidelines:**

Define font families, sizes, weights, and line heights for headings, subheadings, body text, and other UI elements. Ensure legibility and readability across different devices.

### **Color Palette:**

Select a cohesive color palette that reflects your brand's identity. Define primary, secondary, and accent colors, along with their uses and combinations for various UI components.

### **Iconography:**

Choose a set of icons that match your brand and interface style. Ensure icons are consistent in size, style, and meaning, and provide guidelines for their usage.

### **Buttons and Interactive Elements:**

Define button styles, including normal, hover, active, and disabled states. Establish guidelines for interactive elements like links, checkboxes, radio buttons, and more.

### **Spacing and Layout:**

Set guidelines for margins, padding, and spacing between elements to ensure a visually balanced and organized layout. Establish a grid system for consistent alignment.

## **Form Design:**

Outline guidelines for form fields, labels, placeholders, and error messages to create a user-friendly and accessible form experience.

## **Responsive Design:**

Define how UI elements and layouts should adapt to different screen sizes and devices. Consider breakpoints and how components will reflow as the screen size changes.

## **Visual Consistency:**

Ensure visual consistency across different sections of the interface. Elements like headings, buttons, and icons should have a uniform appearance throughout the application.

## **Accessibility Guidelines:**

Incorporate accessibility guidelines to ensure your interface is usable by people with disabilities. Provide high contrast, readable fonts, and accessible interactions.

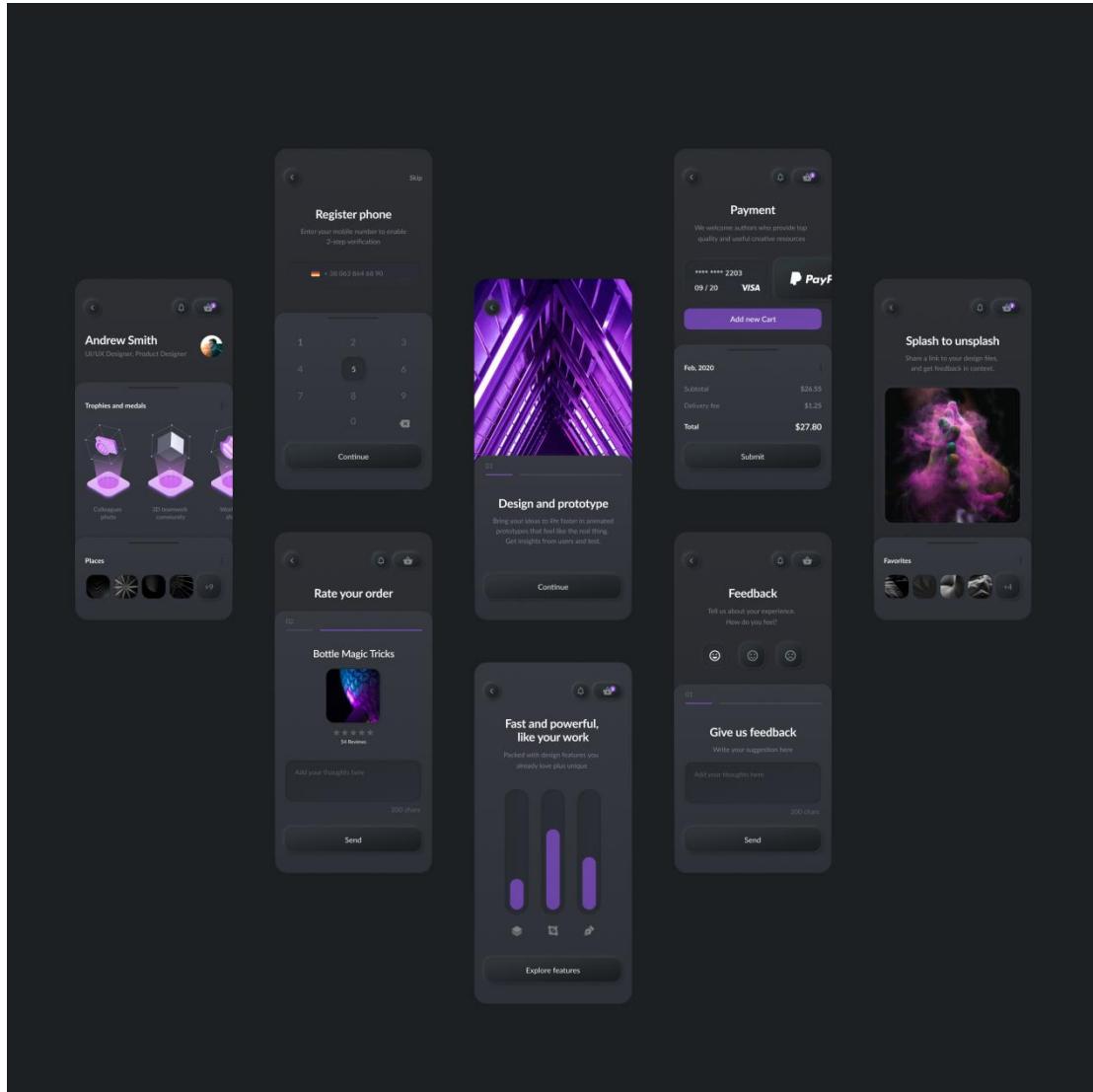
## **Documentation:**

Compile all style guidelines, components, and rules into a comprehensive document or design tool. This documentation serves as a reference for designers, developers, and stakeholders.

## **Iterate and Update:**

Regularly review and update your UI style guidelines as the application evolves or new design trends emerge. Maintain consistency while staying adaptable to changes.

## Example Design:



## INTERFERENCE

Developing an interface with UI style guidelines involves crafting a user-centric design system that unifies visual elements and interactions. By defining typography, color palettes, buttons, spacing, and responsive layouts, you ensure a consistent and visually appealing experience. These guidelines facilitate efficient design and development collaboration, enhance user recognition and usability, and reinforce brand identity. Regularly updating and iterating on these guidelines maintains a cohesive interface while accommodating evolving design trends and user needs.

## RESULT:

From this expt we learnt how to Develop an interface with ui styled guide lines

## **EXPT 4**

**AIM :** Developing a wireflow diagram for application using open source software

### **PROCEDURE:**

#### **Choose Tools:**

Select open-source software for wireframing and flowcharting. For wireframing, you can use tools like "Pencil Project" or "MockFlow". For flowcharting, "Draw.io" or "Dia" are good choices.

#### **Understand Application Flow:**

Before you start, have a clear understanding of how users will navigate through your application. Outline the main screens and the flow between them.

#### **Wireframe Main Screens:**

Use your chosen wireframing tool to create rough sketches of the main screens of your application. Focus on layout, content placement, and key elements.

#### **Connect Screens:**

Use arrows or connectors provided by the wireframing tool to depict the flow between screens. Indicate how users will move from one screen to another.

#### **Add Annotations:**

Label the connectors with the actions or interactions that trigger the transition. For example, "Click 'Login'" or "Swipe to Next Page."

#### **Detail Interactions:**

Within each screen, include annotations or descriptions of how users can interact with various elements, such as buttons, links, and form fields.

#### **Flowchart Transitions:**

Open your flowcharting tool and create a new document. Create flowchart elements to represent screens and interactions. Use arrows to show the flow between screens.

#### **Organize Elements:**

Arrange the flowchart elements logically to reflect the sequence of actions users will take. Group related screens and interactions together.

#### **Label and Describe:**

Label each flowchart element with the screen name and describe the interaction that leads to that screen. This makes your diagram easy to understand.

## **Review and Refine:**

Review your wireflow diagram to ensure that the application's flow is accurately represented. Make any necessary adjustments or refinements.

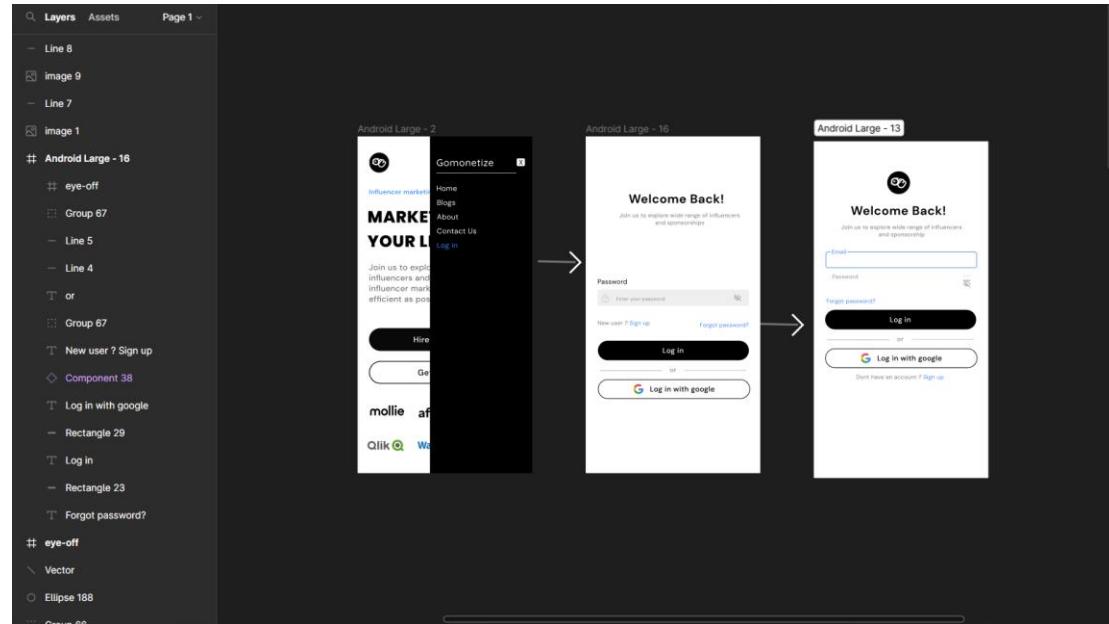
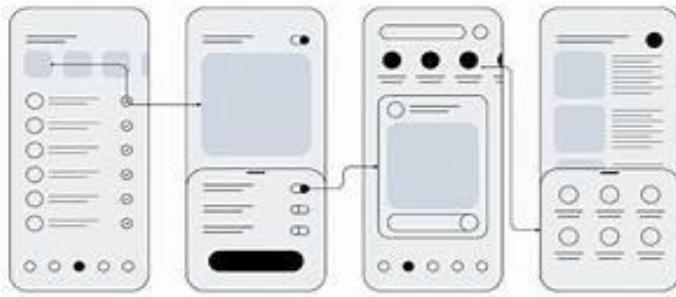
## **Export or Share:**

Save your wireflow diagram in a suitable format (e.g., PDF, PNG) using the respective open-source tools. You can also share the diagrams with team members for feedback.

## **Iterate as Needed:**

As your application's design evolves, revisit and update your wireflow diagram to reflect any changes in the user flow or interactions.

## **Example Design:**



## **INFERENCE:**

Creating a wireflow diagram for an application using open-source tools involves sketching main screens in "Pencil Project" for wireframing and using "Draw.io" for flowcharting. Connect screens with arrows to show user navigation and add annotations to describe interactions. Organize elements logically, label screens, and

detail interactions to provide a clear overview of the application's functionality. Sharing or exporting the diagram supports collaboration, making it a valuable tool for design communication and iteration.

## **RESULT:**

In this expt we learnt how to develop a wireflow diagram for application using open source software.

## **EXPT 5**

**AIM:** Exploring various open source and collaborative interface platforms

### **PROCEDURE:**

**Figma:** Figma is a popular cloud-based design tool that enables real-time collaboration. Multiple team members can work on the same project simultaneously, making it easy to create and iterate on UI/UX designs. It's widely used for its robust collaboration features and user-friendly interface.

**Adobe XD:** Adobe XD is another widely used design and prototyping tool that offers collaboration features. While not fully open-source, it's a powerful tool for designing and sharing interactive prototypes.

**InVision:** InVision is known for its prototyping capabilities and collaborative features. It allows designers to create interactive prototypes and gather feedback from stakeholders and team members.

**Sketch:** Sketch is a macOS-only design tool that's popular among UI/UX designers. While it's not open-source, it offers various plugins and integrations that can enhance collaboration and streamline the design process.

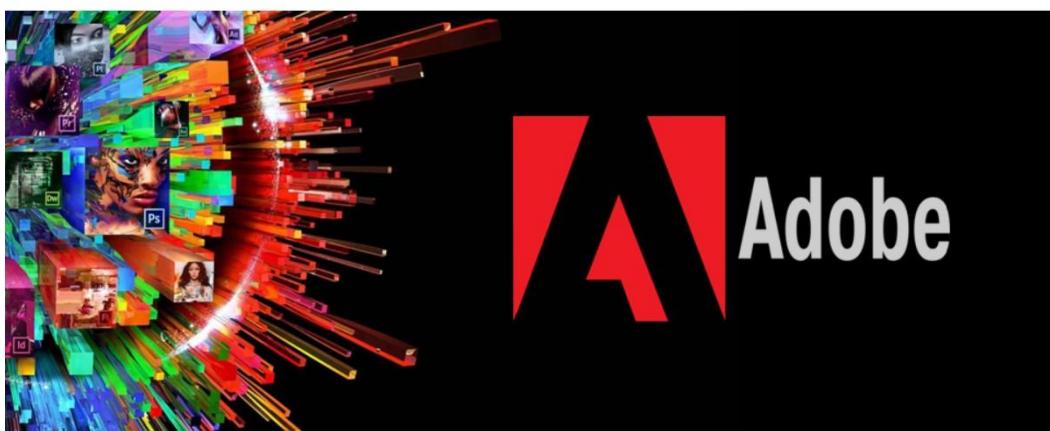
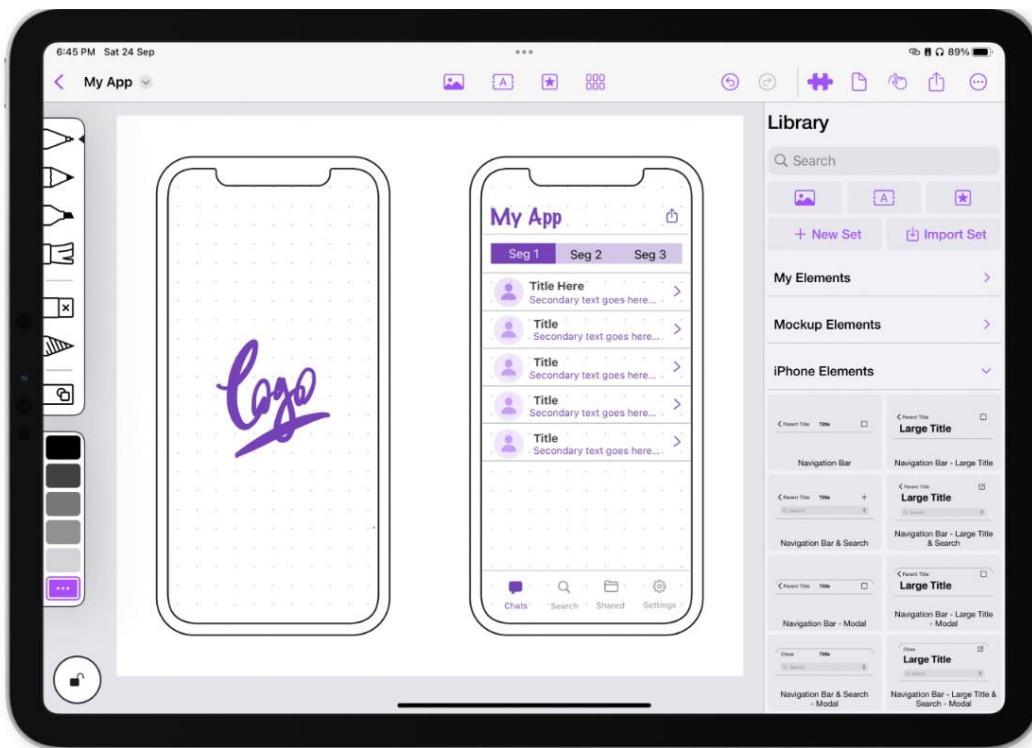
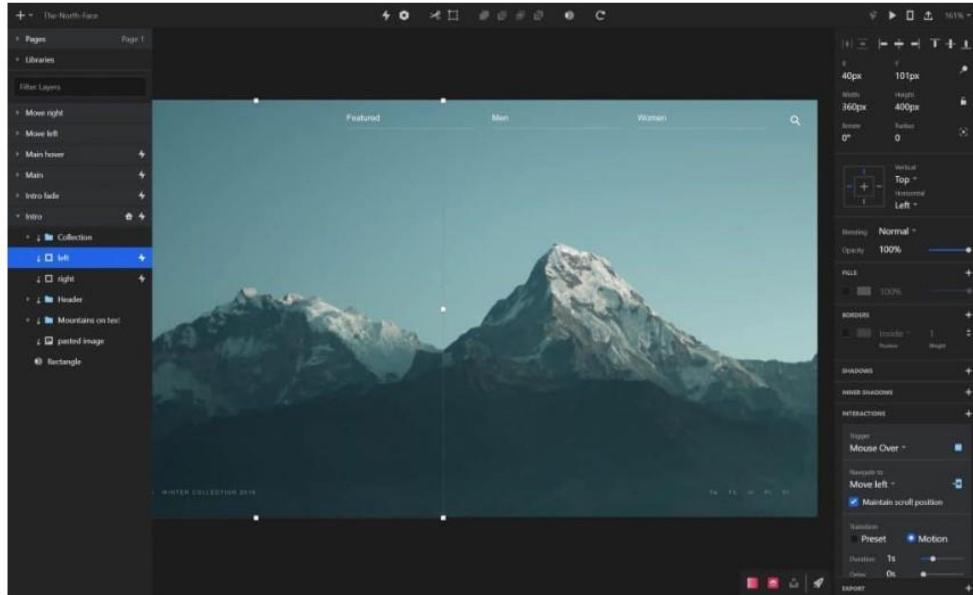
**Zeplin:** Zeplin is a collaboration tool specifically designed for UI designers and front-end developers. It helps bridge the gap between design and development by generating style guides and assets from design files.

**Miro:** Miro is a collaborative online whiteboard platform that can be used for various purposes, including UI/UX design. It's not a traditional design tool but can be useful for brainstorming, wireframing, and collaborative ideation.

**Framer:** Framer offers design, prototyping, and coding capabilities, making it a good choice for those who want more control over their design interactions. It also supports collaboration and sharing.

**Gravit Designer:** Gravit Designer is a vector design app with both online and downloadable versions. It's less complex than some of the other options but can still be a good fit for simple UI/UX projects.

## EXAMPLE DESIGN:



## **INFERENCE:**

The project involves the exploration of various open-source and collaborative interface platforms centered around UI/UX design. By leveraging tools such as Figma, Adobe XD, InVision, and more, the aim is to facilitate effective collaboration between designers and developers in creating user-friendly experiences. Through these platforms, teams can work in real-time, iteratively designing and prototyping interfaces, bridging the gap between design and development, and ultimately enhancing the efficiency and quality of the design process.

## **RESULT:**

From this expt we learnt about various open source and collaborative interface platforms

## **EXPT 6:**

**AIM:** Hands on design thinking process for a new product

### **PROCEDURE:**

**Empathize:** Begin by understanding the needs, wants, and challenges of your target users. Conduct interviews, surveys, and observations to gather insights into their behaviors and motivations. Develop empathy by putting yourself in their shoes to uncover hidden pain points.

**Define:** Synthesize the information you've gathered during the empathy phase to identify the core problems and opportunities. Create a clear and focused problem

statement that will guide your design process. The goal is to frame the challenge in a way that inspires innovative solutions.

**Ideate:** Generate a wide range of creative ideas. Organize brainstorming sessions and encourage participants to think outside the box. Use techniques like mind mapping, SCAMPER (Substitute, Combine, Adapt, Modify, Put to another use, Eliminate, Reverse), and "What If" scenarios to stimulate idea generation.

**Prototype:** Develop rough, low-fidelity prototypes of your ideas. These could be sketches, digital wireframes, or even physical models, depending on the nature of your product. Prototyping allows you to quickly visualize concepts and gather feedback before investing too much time and resources.

**Test:** Put your prototypes in front of users to gather feedback. This can be through usability testing, surveys, or interviews. Observe how users interact with your prototypes and pay attention to their reactions, frustrations, and suggestions. Use this feedback to refine and iterate on your design.

**Iterate:** Based on the feedback received during testing, make necessary refinements to your prototypes. Iterate on your design, incorporating user insights and making improvements to address any pain points or concerns that emerged during testing.

**Implement:** Once you've refined your design through iterative testing and improvements, it's time to move towards the final product. Develop high-fidelity prototypes or a minimum viable product (MVP) that represents a functional version of your idea.

**Feedback Loop:** Even after implementation, continue to gather feedback from users and stakeholders. This ongoing feedback loop ensures that your product remains user-centered and can be further refined based on real-world usage.



## INFERENCE:

The project follows a comprehensive design thinking process to create a new product, prioritizing user needs and innovative solutions. By empathizing with target users, defining precise problem statements, ideating through creative brainstorming, and rapidly prototyping concepts, the project aims to develop user-centric designs. These designs are rigorously tested and iterated upon based on real user feedback, ensuring the final product aligns seamlessly with user expectations. The process encourages

collaboration, continuous improvement, and a holistic approach to design and innovation, resulting in a product that effectively addresses user pain points and stands out in the market.

## **RESULT:**

From the above expt we learnt design thinking process for a new product

## **EXPT 7**

**AIM:** Brainstroming ideas for an proposed project

### **PROCEDURE:**

#### **User Needs and Problems:**

What are common challenges or pain points that your target audience faces?  
How can you simplify or improve a specific process for your users?  
What needs are currently underserved in the market?

#### **Technology and Innovation:**

How can emerging technologies like AI, IoT, or blockchain be applied to your project?  
Can you create a new tool, app, or platform that leverages existing technology in a unique way?  
Are there opportunities to use technology to improve efficiency or accessibility?

#### **Social Impact:**

How can your project contribute to sustainability or environmental goals?  
Is there a way to address social issues or promote inclusivity through your project?

## **Market Trends and Gaps:**

Are there trends in your industry that you can capitalize on?  
Are there gaps in the market where your project could fill a need?  
How can you differentiate your project from existing solutions?

## **Collaborations and Partnerships:**

Are there potential collaborations with other organizations, startups, or institutions?  
Can you leverage partnerships to enhance the value of your project?  
How can you tap into existing networks to gain traction?

## **Creative Twists:**

Can you combine two unrelated concepts to create something innovative?  
What if you turned common assumptions about your industry upside down?  
How can you inject an element of surprise or delight into your project?

## **User Experience and Design:**

How can you create a more seamless, intuitive, or enjoyable user experience?  
Are there opportunities to enhance the aesthetics and visual appeal of your project?  
Can you introduce gamification elements to engage users more effectively?

## **Scalability and Growth:**

How can your project be scaled to accommodate a larger user base over time?  
Are there features or functionalities that can be added in the future to keep users engaged?  
What strategies can you implement to ensure long-term sustainability?

## **BRAINSTORMED IDEAS FOR AN MOBILE APP:**

### **Clean and Minimalistic Interface:**

Use a clean and minimalistic design to convey a sense of professionalism and trust.  
Opt for a light color palette with shades of blue and white, which are commonly associated with healthcare and cleanliness.  
Keep the layout uncluttered, focusing on easy navigation and readability.

## **Intuitive Navigation:**

Design a user-friendly navigation system, such as a bottom navigation bar or a simple menu.

Ensure that users can easily access essential features like appointment booking, medical records, and medication reminders.

## **Personalized Dashboard:**

Provide users with a personalized dashboard where they can see their upcoming appointments, recent medical history, and medication reminders at a glance.

Use clear icons and labels to help users quickly identify different sections.

## **Appointment Booking:**

Create a streamlined appointment booking process with a date picker, available time slots, and an option to select preferred doctors or specialists.

Allow users to view doctor profiles, including their qualifications, specialties, and patient reviews.

## **Health Records and Reports:**

Design a digital health record system where users can access their medical history, test results, and diagnoses.

Implement visualizations like graphs and charts to help users track their health progress over time

## **Medication Reminders:**

Incorporate a medication reminder feature that allows users to set up alarms for taking their medications.

Use clear visuals to indicate which medications to take and when.

## **Virtual Consultations:**

Integrate video or chat-based virtual consultations with healthcare professionals.

Design an interface that allows users to schedule and join virtual appointments seamlessly.

## **Emergency Assistance:**

Include an emergency button on the home screen that connects users to emergency services or nearby healthcare facilities.

Implement features like "ICE" (In Case of Emergency) contacts that can be accessed without unlocking the phone.

## **Educational Resources:**

Offer a section with health-related articles, tips, and information to educate users about various health topics.

Use engaging visuals and infographics to simplify complex medical concepts.

## **Accessibility Features:**

Ensure the app is accessible to users with disabilities by implementing features like voice commands, larger text options, and high contrast modes.

## **User Feedback and Ratings:**

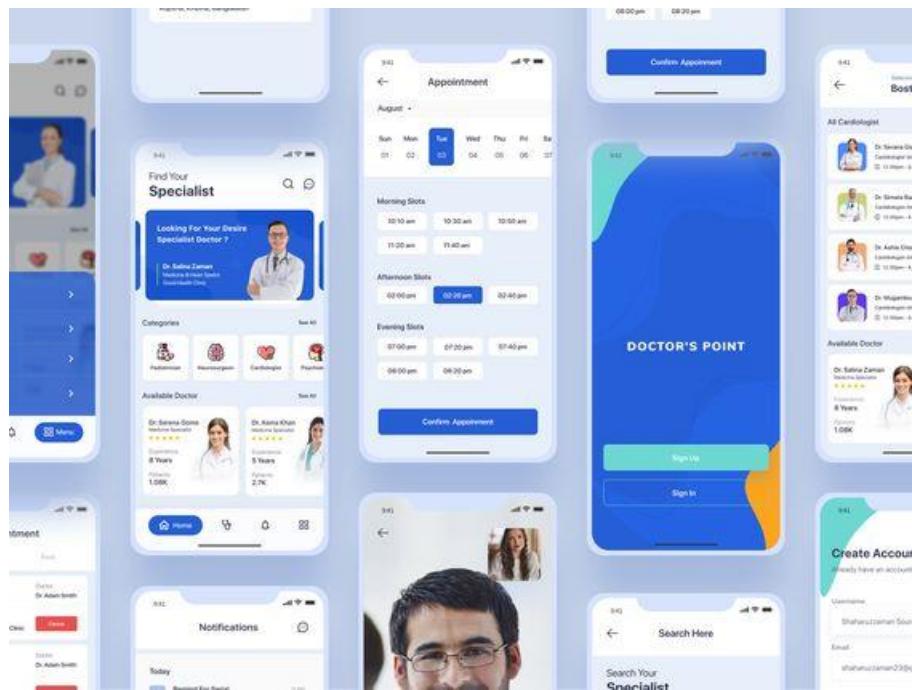
Allow users to provide feedback on doctors, services, and their overall app experience.

Display doctor ratings and patient testimonials to help users make informed decisions.

## **Security and Privacy:**

Emphasize the app's commitment to data security and patient confidentiality through clear messaging and secure login methods.

## DESIGN:



## INFERENCE:

The brainstorming session focuses on generating diverse and innovative ideas for a proposed project. Through collaborative and creative thinking, participants contribute a range of concepts that reflect varied perspectives and potential solutions. This process encourages a free flow of ideas without immediate judgment, fostering an environment where even unconventional or ambitious suggestions are welcomed. By harnessing the collective intelligence of the team, the brainstorming session aims to lay the foundation for a project with a rich pool of possibilities that can be further refined and developed into actionable strategies.

## RESULT:

From this expt we learnt how brainstorming works.

## EXPT 8

**AIM:** Defining the look and feel of the project

# **Introduction to Defining the Look and Feel:**

## **Purpose of Defining the Look and Feel:**

In the process of creating a compelling and user-centered project, defining the "look and feel" is of paramount importance. This stage encompasses visual design, user interface (UI) elements, typography, color palette, imagery, and overall aesthetic choices that collectively shape the user's perception and experience.

## **Significance of Visual Identity:**

The visual identity establishes the project's personality and sets the tone for user engagement. A well-defined visual identity not only makes the project memorable but also enhances brand recognition, user trust, and emotional connection. This section will delve into how the visual identity contributes to effective communication and fosters a sense of consistency.

## **Elements of Look and Feel Definition:**

### **Visual Design and Brand Consistency**

This section will explore how visual design elements such as logo, icons, and graphics contribute to brand consistency. It will discuss the importance of maintaining a cohesive visual language across all touchpoints to create a seamless and recognizable user experience.

### **User Interface (UI) Elements and Interaction Design**

Detailing the importance of UI elements such as buttons, navigation bars, and forms in guiding users through the project. It will emphasize the significance of intuitive navigation and user-friendly interactions that enhance usability and minimize friction.

### **Typography and Readability**

Exploring the role of typography in conveying information effectively. This section will discuss font choices, text hierarchy, and readability considerations to ensure that users can easily consume and comprehend the content presented.

### **Color Palette and Emotional Impact**

Discussing the psychological impact of color choices on user emotions and perceptions. This section will highlight the importance of selecting a color palette that aligns with the project's objectives and resonates with the target audience.

## **Imagery and Visual Content**

Addressing the role of imagery in storytelling and evoking emotions. This section will emphasize the significance of high-quality visuals, illustrations, and multimedia content that enhance the project's narrative and engagement.

## **Accessibility and Inclusivity**

This section will touch upon the importance of designing with accessibility in mind. It will cover considerations for color contrast, font size, and other accessibility factors to ensure that the project is usable by a diverse range of users, including those with disabilities.

## **Iterative Refinement and User Feedback**

Concluding with the iterative nature of defining the look and feel. This section will emphasize the value of gathering user feedback and continuously refining visual and experiential aspects to align with evolving user expectations and project goals.

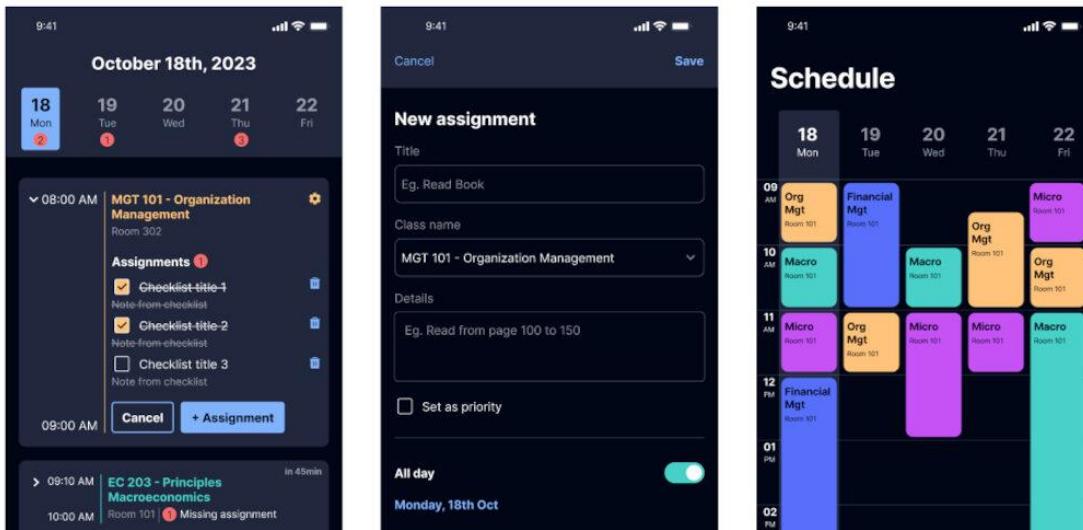
### **INFERENCE:**

The project centers on the crucial task of defining the visual identity and experiential aspects, encapsulating the project's essence. It highlights the significance of a consistent and well-crafted visual identity that resonates with users and builds brand recognition. By meticulously addressing elements like user interface, typography, color palette, and imagery, the project aims to create a holistic user experience that fosters engagement and emotional connection. The emphasis on accessibility ensures inclusivity, while the iterative process acknowledges the dynamic nature of design, allowing for continuous improvement based on user feedback and evolving requirements.

### **RESULT:**

From the above expt we learnt Defining the look and feel of the project

# DESIGN:



## EXPT 9:

### AIM:

Create a sample pattern library for that product ( mood boards, fonts, colors based on ui principles)

# Product Pattern Library

## Mood Boards:

### 1. Modern Minimalism

Description: Clean lines, ample white space, and minimalist aesthetics convey a sense of sophistication and simplicity.

Key Attributes: Minimalistic design, monochromatic color scheme, spacious layouts.

Keywords: Clean, Elegant, Contemporary.

### 2. Playful Interaction

Description: Vibrant colors, playful typography, and dynamic animations create an engaging and lively user experience.

Key Attributes: Bold colors, playful graphics, animated elements.

Keywords: Fun, Interactive, Energetic.

## Fonts:

### 1. Sans Serif - "OpenSans"

Description: OpenSans provides clear legibility and a modern touch, suitable for headings and body text.

Usage: Headings, body text, buttons.

Weights: Regular, Bold.

### 2. Display - "Bungee Inline"

Description: Bungee Inline adds a touch of uniqueness to headings and emphasizes creative aspects.

Usage: Headings, creative titles.

Weights: Regular.

## Colors:

### 1. Primary Palette:

Primary Blue: #007BFF

Secondary Blue: #6E86FF

Primary Green: #2ECC71

Primary Gray: #333333

### 2. Secondary Palette:

Accent Yellow: #FFD700

Accent Red: #FF5733

Accent Purple: #9B59B6

## **UI Principles:**

### **1. Consistency**

Maintain a consistent visual language across all interface elements, ensuring a coherent and unified user experience.

### **2. Contrast**

Use color contrast effectively to ensure text readability and emphasize important UI components.

### **3. Hierarchy**

Establish a clear hierarchy through font sizes, styles, and spacing to guide users' attention and convey information effectively.

### **4. Visual Feedback**

Provide visual cues such as hover effects, animations, and feedback states to enhance user interaction and engagement.

### **5. Accessibility**

Prioritize accessibility by using high contrast colors, legible fonts, and adhering to accessibility guidelines.

### **6. Mobile Responsiveness**

Design with mobile devices in mind, ensuring responsive layouts and touch-friendly interactions.

### **7. Microinteractions**

Incorporate subtle animations and microinteractions to enhance the user experience and make interactions feel intuitive.

## **INFERENCE:**

The provided sample pattern library offers a comprehensive guide for designing the product's visual identity and user interface. By curating distinct mood boards that capture the essence of modern minimalism and playful interaction, the project establishes a clear tone for the design direction. The carefully chosen fonts, including the sans-serif OpenSans for clarity and the display font Bungee Inline for creative emphasis, contribute to a versatile typographic hierarchy. The dual-color palette, comprising primary and secondary colors, adheres to UI principles, ensuring both aesthetic appeal and accessibility. Additionally, the outlined UI principles underscore the project's commitment to delivering a consistent, accessible, and engaging user experience across various devices, culminating in a holistic design approach that prioritizes both form and function.

## Example design:



## RESULT:

From this Expt we learnt how to Create a sample pattern library for that product  
( mood boards, fonts, colors based on ui principles)

## **EXPT 10**

**AIM:** Identify a customer problem to solve

### **PROBLEM STATEMENT:**

Many brands and aspiring influencers struggle to efficiently connect and collaborate in the fast-paced digital landscape. There is a clear need for a user-friendly website that seamlessly facilitates the grouping and matchmaking of influencers and brands, enabling streamlined communication, targeted partnerships, and effective collaboration. This platform should address challenges such as finding the right influencer-brand fit, managing negotiations, and tracking campaign performance, ultimately simplifying the process of forming mutually beneficial partnerships in the ever-evolving realm of influencer marketing.

### **STEP-BY-STEP APPROACH:**

Step-by-Step Approach to Solving the Problem Through UI/UX Design:

#### **Step 1: User Research and Empathy**

Conduct in-depth user research to understand the pain points and frustrations users experience while using the current website. Engage with both influencers and brands to gain insights into their unique needs and challenges. Develop empathy for their struggles to inform the design process.

## **Step 2: Information Architecture and Navigation Design**

Revamp the website's information architecture to create a clear and organized navigation structure. Categorize influencers by niche, follower count, and engagement rate, while also enabling brands to specify their requirements. Implement an intuitive search bar and advanced filters to make it easy for users to find relevant influencers or brands quickly.

## **Step 3: Transparent Communication System**

Introduce a transparent communication system to enhance the partnership process. Implement real-time messaging and collaboration tools, allowing influencers and brands to communicate directly on the platform. This feature not only reduces the need for external communication channels but also ensures all negotiation details are documented and easily accessible.

## **Step 4: User-Centric Profiles and Dashboards**

Redesign user profiles for both influencers and brands to showcase their portfolio, past collaborations, and performance metrics. Create customizable dashboards that provide insights into ongoing campaigns, engagement rates, and other relevant analytics. This empowers users with the data needed to make informed partnership decisions.

## **Step 5: Interactive Prototyping and User Testing**

Develop interactive prototypes based on the redesigned UI/UX. Conduct thorough user testing sessions with a diverse group of influencers and brands to validate the usability and effectiveness of the new design. Collect feedback to identify any remaining pain points and areas for improvement.

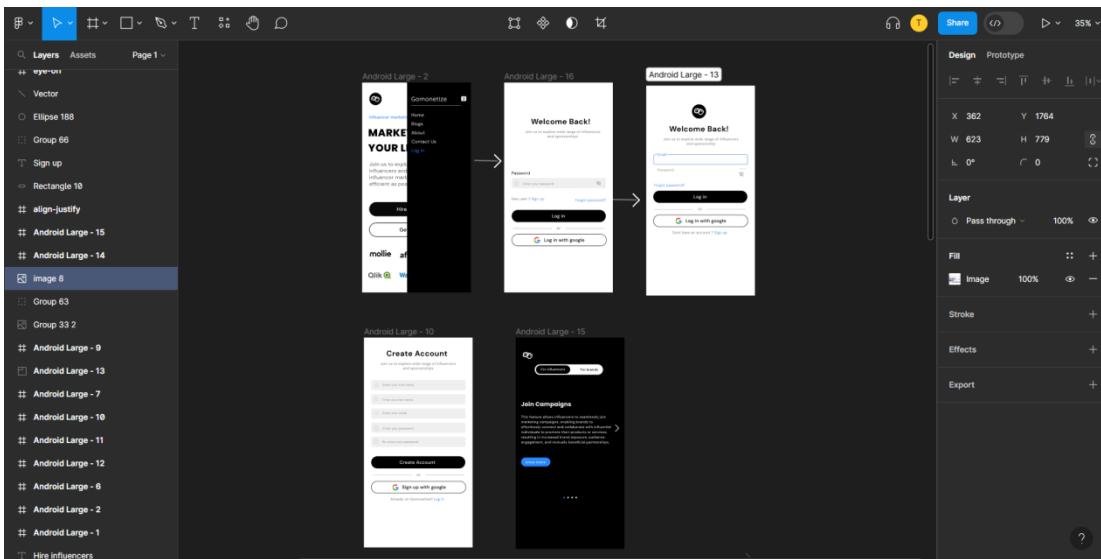
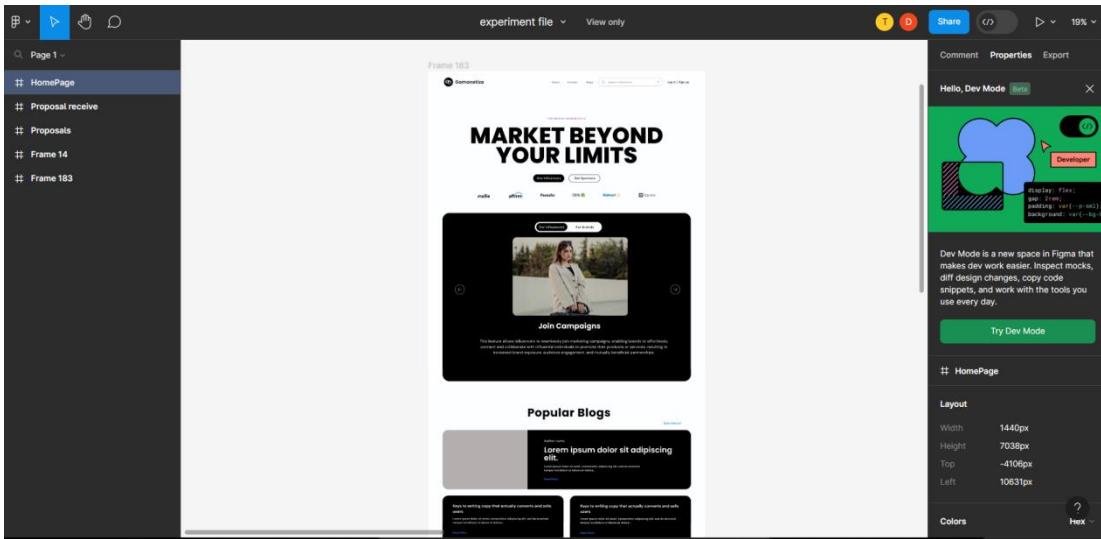
## **Step 6: Iterative Design Refinement**

Based on the user testing feedback, iterate on the design to refine the user experience further. Implement necessary adjustments to enhance usability, accessibility, and overall user satisfaction. Continue testing and iterating until the design meets users' needs and expectations.

## **Step 7: Launch and Continuous Improvement**

Launch the revamped website to users, ensuring a smooth transition and providing support for any questions or concerns. Monitor user interactions, gather feedback, and track key metrics to identify areas that require ongoing improvement. Regularly update the platform based on user feedback and evolving user needs.

# WEB DESIGN:



## INFERENCE:

The customer problem statement highlights usability challenges faced by users of an influencer-brand grouping website, including unintuitive navigation and a lack of transparency during collaboration. The step-by-step approach to solving these issues through UI/UX design emphasizes comprehensive user research and empathy, redesigning information architecture and navigation, introducing transparent communication tools, enhancing user profiles and dashboards, iterative testing, and ongoing improvement. This approach aims to create an intuitive and efficient platform that empowers influencers and brands to easily connect and collaborate, ultimately fostering more meaningful and successful partnerships while providing a seamless and satisfying user experience.

**RESULT:** In this expt we learnt how to identify a customer problem to solve.

## EXPT 11

**AIM:** Conduct end-to-end user research- User research, creating personas, ideation process, user stories, scenarios, Flow diagrams, Flow mapping

## **PROCEDURE:**

Conducting end-to-end user research and design involves several critical steps to ensure a user-centered approach. Here's an overview of the process:

### **User Research:**

**User Interviews and Surveys:** Conduct interviews and surveys with target users to understand their needs, preferences, pain points, and behaviors. Gather qualitative and quantitative data to inform the design process.

**Competitor Analysis:** Study competitors' products to identify gaps, strengths, and opportunities for differentiation. Analyze user feedback and reviews to gain insights into what users like and dislike about existing solutions.

### **Creating Personas:**

**Persona Development:** Based on the user research findings, create detailed user personas representing distinct user segments. Each persona should include demographics, motivations, goals, challenges, and behaviors.

Ideation Process:

**Brainstorming Sessions:** Organize brainstorming sessions with cross-functional teams to generate creative ideas for addressing user needs and solving identified problems. Encourage a free flow of ideas without judgment.

**Idea Prioritization:** Evaluate and prioritize the generated ideas based on factors such as feasibility, alignment with project goals, and potential impact on user experience.

### **User Stories and Scenarios:**

#### **User Stories:**

Develop user stories that outline specific tasks or actions users need to accomplish within the product. Use the "As a [user], I want to [do something] so that [benefit]" format to capture user needs and objectives.

#### **Scenarios:**

Create scenarios that describe how personas would use the product to achieve their goals. These narratives provide context and help in understanding the user's journey.

## Flow Diagrams:

### User Flow Diagrams:

Map out the step-by-step journey that users will take to achieve their goals within the product. Visualize interactions, decision points, and potential pathways.

Flow Mapping:

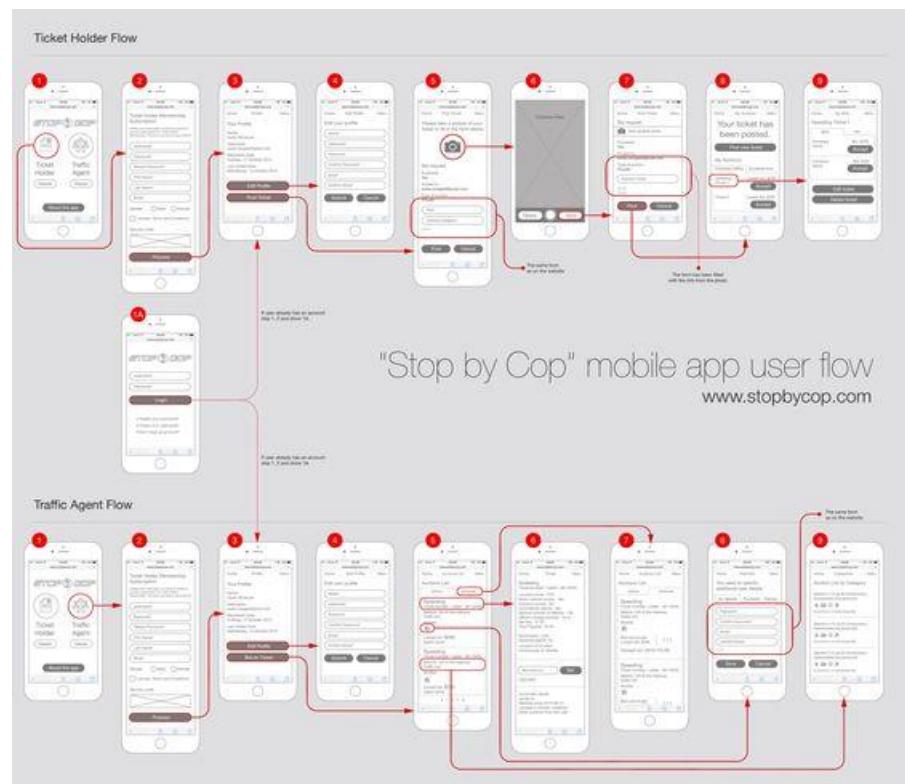
### User Journey Mapping:

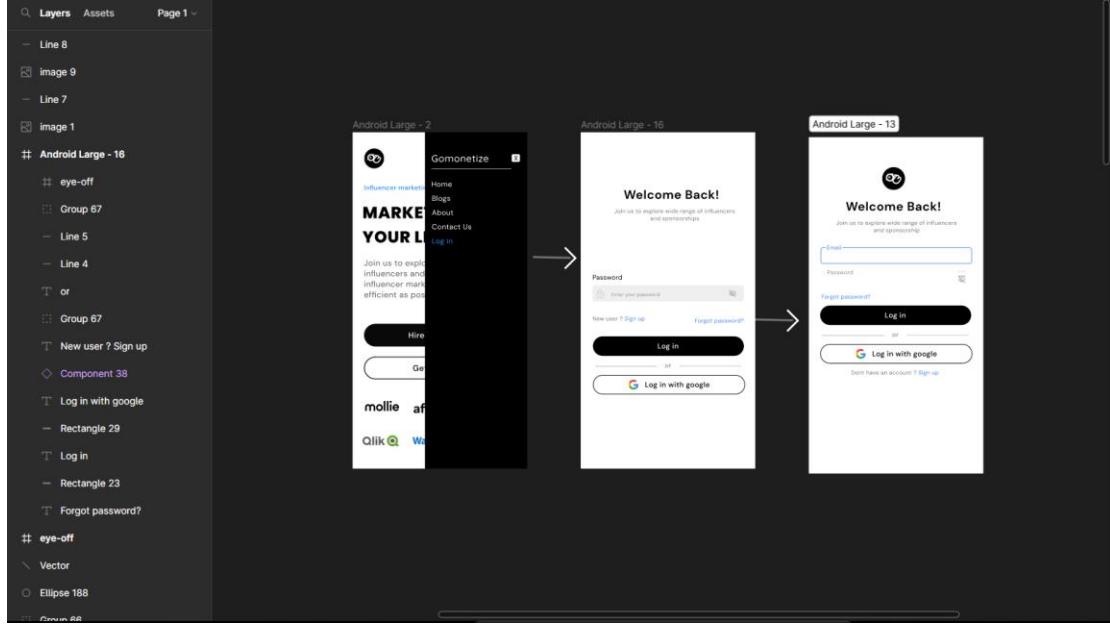
Create user journey maps to illustrate the end-to-end experience of a user. This includes touchpoints, emotions, pain points, and opportunities for improvement.

### Task Flow Mapping:

Map out specific task-oriented flows, such as a user signing up for an account or making a purchase. Highlight potential roadblocks and identify ways to streamline the process.

## EXAMPLE DESIGN:





## INFERENCE:

The end-to-end user research and design process involves a holistic approach to product development. Starting with in-depth user research, personas are crafted to represent user segments. The ideation process generates creative ideas that align with user needs. User stories and scenarios help refine the product's focus, while flow diagrams visualize user paths. User journey and task flow mapping provide insights into the user experience, enabling the identification of pain points and opportunities for enhancement. This comprehensive approach ensures that the final product is not only aesthetically pleasing but also tailored to the needs of the users it serves.

## RESULT:

In this expt we learnt how to Conduct end-to-end user research- User research, creating personas, ideation process, user stories, scenarios), Flow diagrams, Flow mapping

# EXP-12

## AIM:

Sketch, design, with popular tool and build a prototype and perform usability testing and identify improvements.

## PROCEDURE:

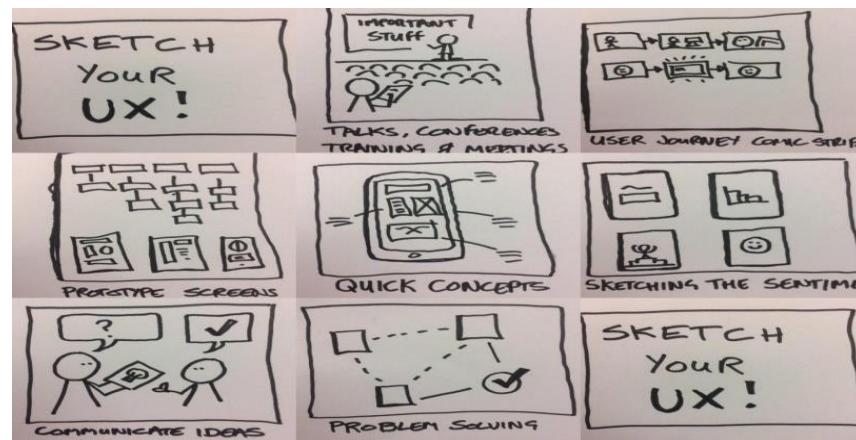
Certainly, let us walk through the process of sketching, designing, prototyping, performing usability testing, and identifying improvements using specific tools: Sketch for designing, Invision for prototyping, and Usability Hub for usability testing

## WORKING:

### 1. Sketching:

Start by sketching out your initial ideas for the user interface using paper or digital sketching tools. In this case, you will use Sketch:

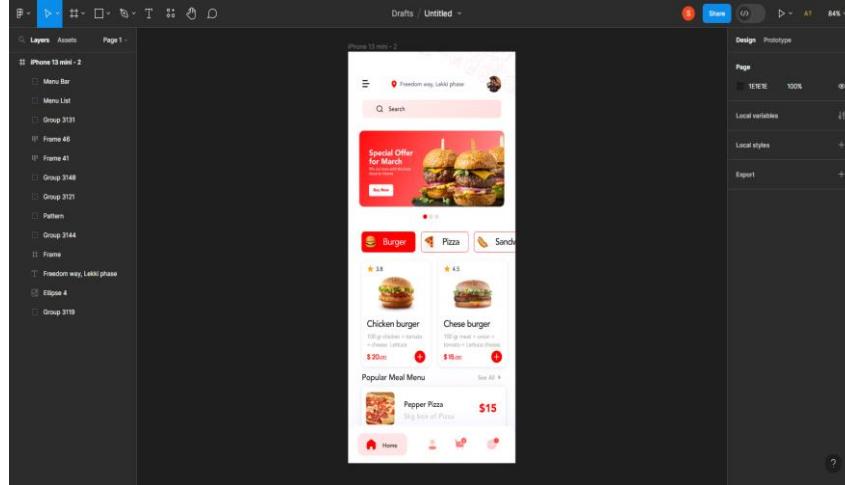
- Open Sketch and create a new artboard.
- Roughly sketch the layout and elements of your digital product. Focus on the placement of key elements, such as buttons, forms, and navigation.



### 2. Design:

Refine your initial sketch by creating a more detailed design in Sketch:

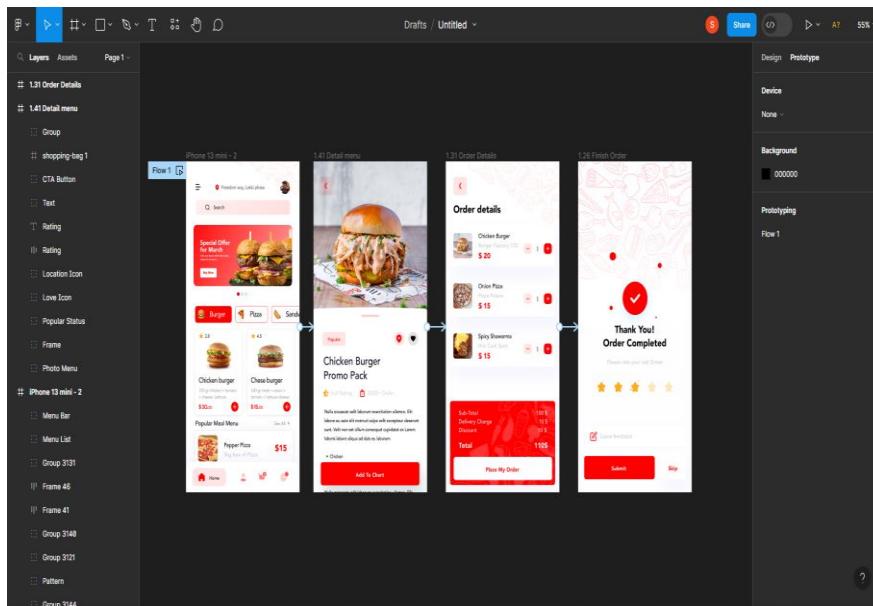
- Use the Sketch tools to create accurate wireframes and visual elements.
- Pay attention to typography, colour schemes, and overall visual consistency



### 3. Build a Prototype:

Once your design is ready, use Invision to create an interactive prototype:

- Export your design from Sketch to Invision.
- Use Invision's hotspot functionality to link different screens and create interactive transitions.
- Add animations to simulate user interactions and provide a more realistic experience.



### 4. Perform Usability Testing:

Now, let us use Usability Hub to conduct usability testing on your prototype:

- Upload your Invision prototype to Usability Hub.
- Create usability testing tasks for participants, such as navigating through specific sections or completing certain actions.
- Recruit participants through Usability Hub or other channels.

The screenshot shows the Invision app's interface for setting up a prototype test. On the left, there's a sidebar with navigation options like 'Welcome screen', '1. Prototype test' (which is selected), and 'Thank you screen'. Below that are time and credit settings ('0 to 2 mins' and '1 credit'), and 'Save and preview' and 'Save and continue' buttons. The main area is titled '1. Prototype test' and contains a 'Task flow' section with the sub-instruction 'Ask participants to complete a task'. There are two tabs: 'Task flow' (selected) and 'Free flow' (with the sub-instruction 'Ask questions while participants roam around'). Below these are 'Instruction' and 'Scaling' (set to 100% - Display at full size). A preview window shows a 'Start' screen with 'Title loading' and a 'Goal' screen with 'Title loading' and a 'Change' button. A note says 'A test is successful when the participant reaches a goal screen.' At the bottom, there's a checked checkbox for 'Show success screen'.

## 5. Identify Improvements:

After gathering feedback from usability testing, it is time to identify and address improvements:

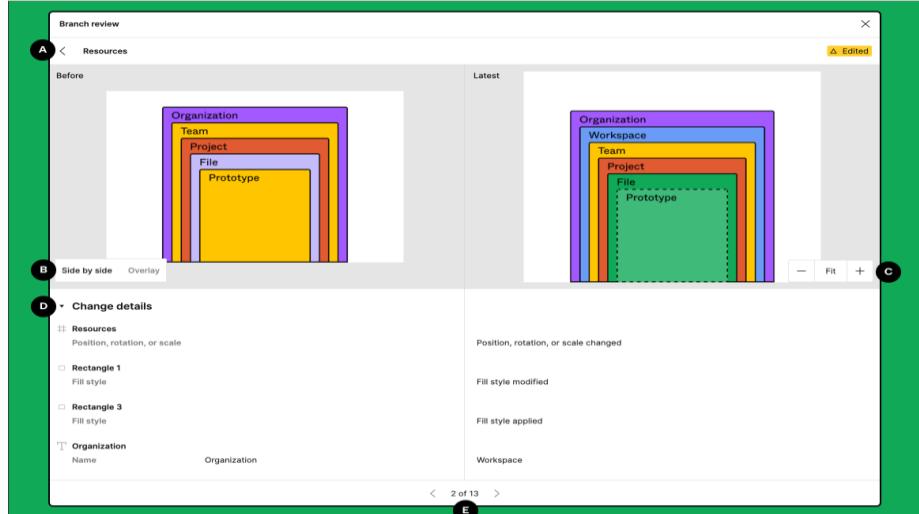
- Review the usability test results and analyse participant feedback.
- Look for patterns in the issues reported by participants, such as confusion in navigation or unclear labels.
- Prioritize the identified issues based on their impact on the user experience.

The screenshot shows a collaborative forum interface for a 'Design Critiques. Facilitators Aid (Community)' draft. The top bar includes a clock icon showing '03:00', a share button, and a zoom level of '44%'. The main content area is divided into three sections: 'Set-Up' (with 'DESIGN CRITIQUE' instructions), 'Step 1 - House Rules' (listing rules like 'Be present', 'Share your work in progress', 'Ask for feedback', and 'Send one responding "comment"'), and 'Step 2 Projects and Notes' (a table showing projects and notes). The table has columns for 'Project', 'Notes', 'Feedback', and 'Action'. The 'Feedback' column contains colored squares. The bottom right section is titled 'Step 3 - Before you go' with a 'Before you go' heading and a 'Bye' message. The footer features various icons for file operations and help.

## 6. Iterate on Design and Prototype:

Based on the feedback and improvements, update your design and prototype:

- Make necessary changes to your Sketch design based on the improvements you have identified.
- Update your Invision prototype to reflect the revised design.
- Ensure that the changes address the usability issues that were identified.



## 7. Repeat Usability Testing if Needed:

If you have made significant changes, consider conducting another round of usability testing to validate the improvements:

- Use Usability Hub to run additional usability tests on the updated prototype.
- Compare the results to previous tests to see if the changes have positively impacted the user experience.

## 8. Finalize Design and Prototype:

Once you have iterated and validated your design improvements, finalize the design and prototype:

- Polish your Sketch design to ensure a consistent and visually appealing interface.
- Update your Invision prototype with the final design and interactions.

Remember, the design process is iterative, and it is important to involve real users throughout to create a user-centred product. Using tools like Sketch, Invision, and Usability Hub can help streamline the process and ensure a more effective design and usability testing cycle.

## INFERENCE:

The outlined process showcases a systematic and user-centred approach to designing and improving digital products. By leveraging appropriate tools and integrating user feedback, designers can create more effective, user-friendly, and refined products that cater to the needs of their target audience.

## RESULT:

From this experiment we learnt to Sketch, design, with popular tool and build a prototype and perform usability testing and identify improvements.