

Unit – 4

Design Languages for different Google material platforms

Google Material Design is a design system developed by Google that aims to provide a unified look and feel across all its products and platforms. It includes guidelines for various components, layouts, and interactions. Here are some key design languages that align with Google Material Design principles:

1. Material Baseline Design Language:

Core Principles: Follow the fundamental principles of Material Design, including the use of bold colors, typography, and grid-based layouts.

Components: Utilize common Material Design components like buttons, cards, and tabs consistently across all products.

2. Material Mobile Design Language:

Responsive Design: Prioritize mobile-first design with responsive layouts to ensure a seamless experience on various screen sizes.

Touch Gestures: Design with touch interactions in mind, such as swiping, tapping, and pinching.

3. Material Web Design Language:

Adaptive Layouts: Implement responsive and adaptive layouts for web applications that can be accessed on different devices, including desktops and tablets.

Navigation: Leverage web-specific navigation patterns, such as breadcrumbs and multi-level menus.

4. Material Wear OS Design Language:

Micro interactions: Emphasize micro interactions and subtle animations suitable for smaller screens and limited input methods.

Card-based UI: Utilize a card-based UI

5. Material TV Design Language:

Lean back Navigation: Design for a "lean back" experience, emphasizing simplified navigation suitable for television interfaces.

Focus States: Ensure clear focus states for TV remote navigation.

6. Material Automotive Design Language:

Minimal Distraction: Prioritize minimalistic design to reduce driver distraction and ensure a safe user experience.

Voice and Gesture Controls: Integrate voice and gesture controls for hands-free interaction.

7. Material AR/VR Design Language:

Spatial UI: Design interfaces that consider the spatial nature of augmented reality (AR) and virtual reality (VR) environments.

3D Elements: Incorporate 3D elements and interactions to enhance the immersive experience.

Style guide and its importance

A style guide, also known as a brand or design style guide, is a document that outlines the rules, guidelines, and specifications for maintaining consistency in the design, writing, and overall presentation of a brand or product. Style guides play a crucial role in ensuring a unified and cohesive brand identity across various platforms and communication channels. Here are some key aspects of style guides and their importance:

1. Consistency:

Visual Consistency: Ensures a uniform look and feel across all design elements, including color schemes, typography, imagery, and layout.

Tone and Voice Consistency: Maintains a consistent tone, style, and voice in written communication, fostering a coherent brand personality.

2. Brand Identity:

Visual Identity: Establishes and reinforces the visual aspects of a brand, making it easily recognizable and memorable.

Brand Messaging: Defines the key messages and values associated with the brand, guiding the creation of marketing and communication materials.

3. Efficiency:

Streamlines Design Processes: Provides a reference for designers, developers, and content creators, saving time by eliminating the need to make decisions on every design element from scratch.

Facilitates Collaboration: Enables a cohesive approach to design and content creation across different teams and departments.

4. Professionalism:

Reflects Professionalism: A well-crafted style guide reflects attention to detail and professionalism, conveying a sense of reliability and trustworthiness to the audience.

5. Adaptability:

Adapts to Different Platforms: Helps maintain a consistent brand experience across various media, including print, digital, social media, and more.

Adapts to Growth: Facilitates scalability and growth by providing guidelines that can be applied consistently as the brand evolves.

6. User Experience:

Enhances User Experience: Consistent design and communication contribute to a positive user experience, as users become familiar with the brand's visual and written language.

7. Legal and Compliance:

Ensures Legal Compliance: Helps in adhering to legal and compliance standards, such as accessibility guidelines, copyright, and trademark requirements.

8. Training and Onboarding:

Supports Onboarding: Assists new team members in understanding and adopting the brand's design and communication standards quickly.

Apple Human Center Design Guidelines

It provides design principles and recommendations for creating a user-centered and intuitive user interface (UI) on Apple platforms. The guidelines cover various aspects, including measurements for UI components, to ensure consistency and a positive user experience

General guidelines for UI components on Apple platforms:

Typography: Text Size: Apple recommends using dynamic type sizes to allow users to adjust the text size based on their preferences. It's common to use different text sizes for headings, subheadings, and body text.

Buttons: Minimum Tap Target Size: Apple suggests a minimum target size of 44 x 44 points for interactive elements like buttons to ensure they are easy to tap.

Spacing: Margins and Padding: Use consistent margins and padding to provide visual clarity and ensure comfortable spacing between UI elements.

Icons:

Icon Sizes: Different platforms and contexts may have specific icon size recommendations. For example, iOS app icons are recommended to be 180 x 180 pixels for the App Store.

Navigation Bar: Height: The standard height of a navigation bar is typically 44 points, but it can vary based on the platform and context.

Tab Bars: Icon Sizes: Tab bar icons should follow specific size guidelines to ensure proper rendering on various devices and screen resolutions.

Images:

Image Sizes: Depending on the context, Apple provides guidelines for different image resolutions and sizes to ensure optimal display on different devices.

Switches and Sliders: Minimum Touchable Area: For switches and sliders, consider the touchable area and ensure that users can easily interact with them.

UI/UX Design Principles and Laws**1. MAKE EVERYTHING A USER MAY NEED EASILY ACCESSIBLE**

It doesn't matter what kind of app you are designing — if users can't find what they want in a matter of minutes, they'll leave.

2. GIVE A FEW OPTIONS FOR CONTACTING YOU

Such toolbar options as Help, Support, and Contact should be easily accessible as well. At some point, your customers will need to get in touch with you and it should be as simple as possible.

3. BE CONSISTENT

Consistency refers to everything from the font, colors, and design that users see on every page to the menu on the front page which must be perfectly structured.

4. APPROACH THE DESIGN WITH UTMOST CLARITY

People who use your app don't have to wreck their brains to understand what to do, where to click, and what to choose.

5. PROVIDE USERS WITH FEEDBACK

Make sure that your users receive small feedback on whatever actions they are taking.

6. USE RECOGNITION INSTEAD OF RECALL

No one wants to guess what icon they should click. Hence, all icons should be as recognizable as possible, so their usage becomes intuitive.

7. CHOOSE STABLE WAYS OF INTERACTION

This point connects to consistency because the ways a user will be interacting with the app have to be logical. Every page must have the same way of interaction and include only functional images.

9. HEED THE DESIGN STANDARDS

There are certain graphics and icons that stay unaltered such as a question mark (?) indicating Help and hamburger icon (☰) representing the menu bar or a magnifier for the search bar. By following these UI standards for web application, you will avoid users' getting disoriented.

10. MIND THE ELEMENTAL HIERARCHY

Traditionally, things go from top to bottom and from left to right. In terms of app UI design, it means that the most important objects must be placed at the top of the page. This makes the UI clearer and process of using more natural and intuitive.

11. KEEP IT SIMPLE

The easier it is to navigate through the app, the more confident and happier your users feel.

User Experience (UX) design principles and laws provide guidelines and best practices for creating effective and enjoyable user interfaces. These principles help designers create products that are intuitive, user-friendly, and meet the needs of their target audience.

Here are some key UX design principles and laws:

1. Hick's Law:

States that the time it takes to make a decision increase with the number of choices available. Designers should aim to simplify choices and reduce cognitive load for users.

2. Fitts's Law:

Focuses on the relationship between the size of a target, the distance to the target, and the speed of reaching the target. Designers should prioritize making important elements larger and more accessible.

3. Gestalt Principles:

These principles, such as proximity, similarity, continuity, closure, and figure-ground, explain how humans perceive and organize visual elements. Designers can leverage these principles to create cohesive and meaningful designs.

4. Jakob's Law:

Users prefer your site to work the same way as all the other sites they already know. Consistency with established design patterns and conventions is crucial for a positive user experience.

5. Miller's Law:

States that the average person can only keep seven (plus or minus two) items in their working memory. Designers should consider this limit when presenting information and breaking it into manageable chunks.

6. Pareto Principle (80/20 Rule):

Suggests that 80% of effects come from 20% of causes. In design, this could mean focusing on the most critical features and content that will have the greatest impact on user experience.

7. Principle of Least Astonishment:

Users should be able to predict the effects of their actions based on previous experience. Interfaces should behave in a way that is consistent with user expectations.

8. Progressive Disclosure:

Revealing information gradually to users as needed can help prevent overwhelming them with too much information at once.

9. Aesthetic-Usability Effect:

Users often perceive aesthetically pleasing design as more usable. Aesthetics can influence users' perceptions of functionality and ease of use.

10. Zeigarnik Effect:

People remember uncompleted or interrupted tasks better than completed tasks. Designers can use this principle to encourage user engagement and completion of actions.

11. Information Architecture:

Organize and structure information in a way that is logical, intuitive, and easy for users to navigate.

12. Mobile-First Design:

Given the prevalence of mobile devices, designing for smaller screens first helps ensure a better user experience on various devices.

13. Accessibility:

Design with inclusivity in mind, ensuring that the product is accessible to users with disabilities. This includes considerations for visual, auditory, and motor impairments.

14. User-Centered Design (UCD):

Involves understanding the needs, behaviors, and preferences of users throughout the design process, ensuring that the final product meets their expectations and goals.