



Introduction to User Interface Design Module 1

116U01E734

User Experience Design

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User Interface Design



What is user experience design?



What makes up user experience?



Evolution of UX Design,
Elements of user experience,
requirements, strategy



Design principles



User centric design



User Interface

-
- The layout or the structure of the elements on the screen as well as the functional behavior of such elements when manipulated by the user.
 - The user interface design should be **user-friendly**



User Experience

-
- The user experience has to do with the ability of a user to effectively and successfully manipulate a software.
 - users rate them according to appearance, functionality, interactivity among others

Comparison of User Interface (UI) and User Experience (UX)

UI	UX
Ui is what a user sees	UX is how a user feels
The UI designer is responsible for designing screens which users will interact with	UX designer makes sure the interaction is a pleasurable one
UI designer chooses Components and interaction styles used while performing operations	UX designer works on many factors including UI such as Latency rate, Overall time to perform operation etc.
a good UI contributes to a better UX	

User Interface

Interaction styles :

- Command line
- Graphical User Interface
- Voice Activated
- Gesture based
- Brain Controlled
- Any other such as face recognition, biometric, iris
....

User Interface

Interaction styles :

– Command line

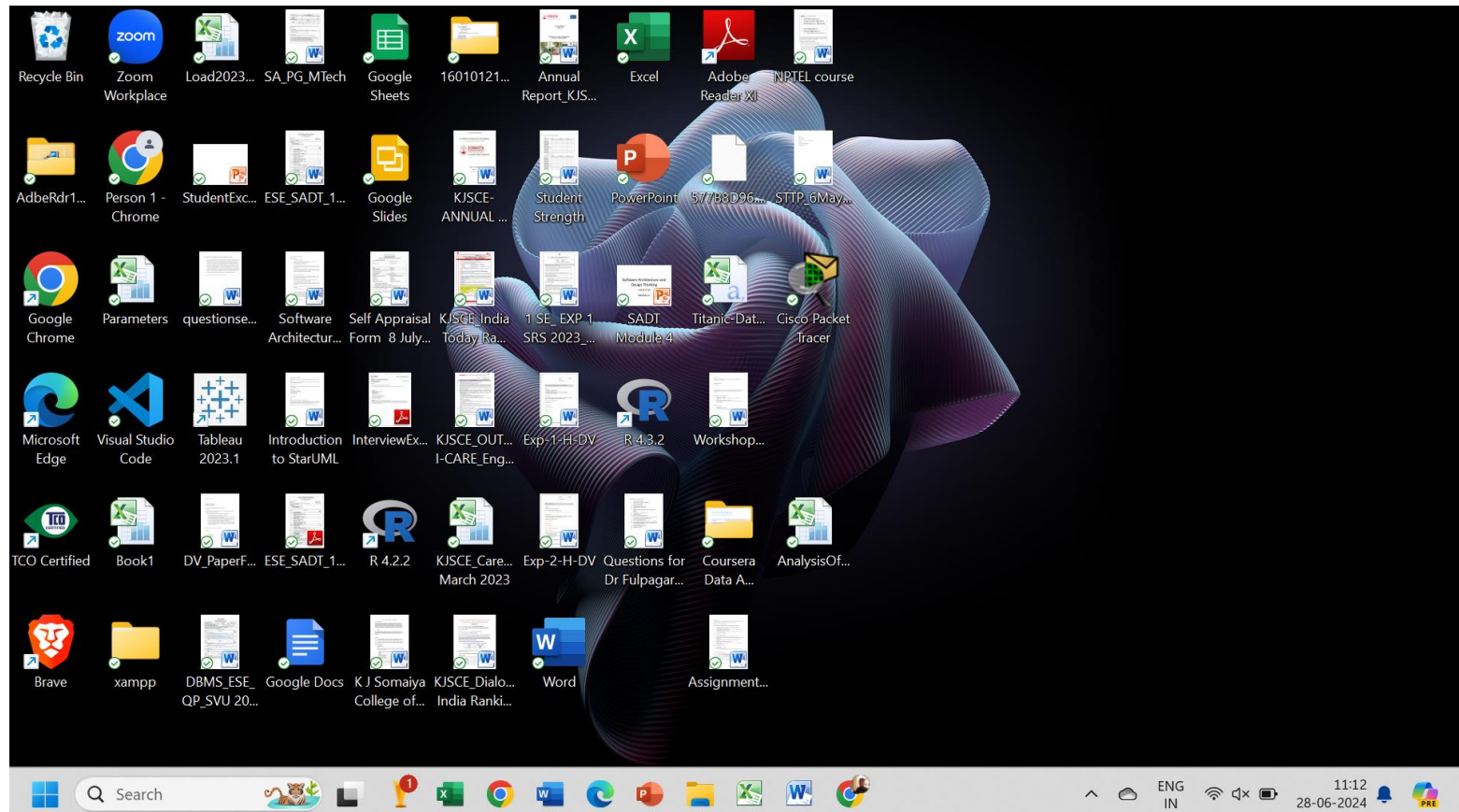


- Dry and boring
- Expects exact command
- Less user friendly
- Requires less resources

User Interface

Interaction styles :

– Graphical User Interface



User Interface

Interaction styles :

– Voice Activated

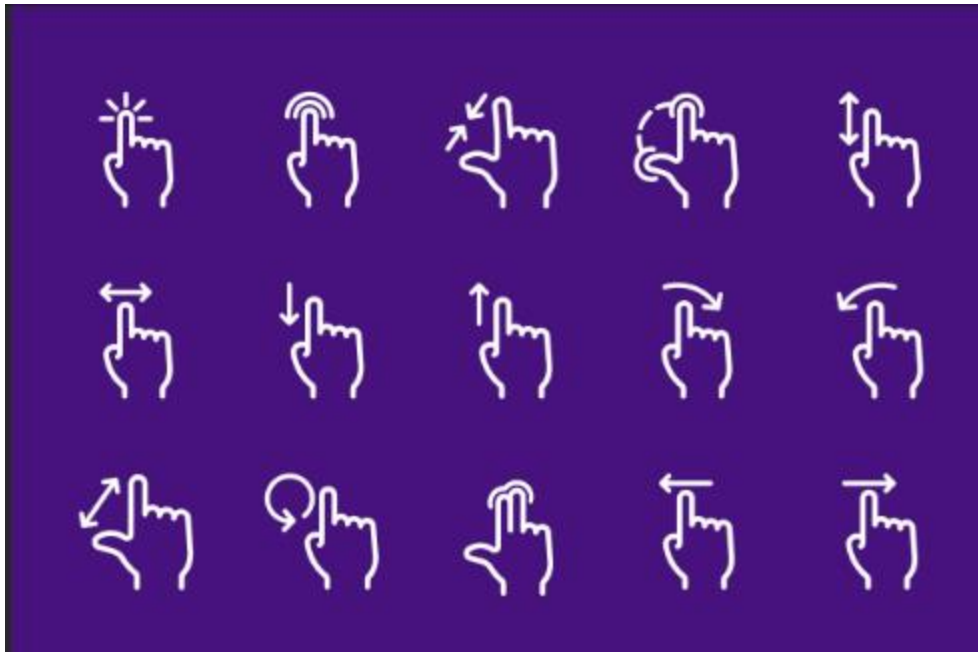


- Handsfree use
- Multitasking
- Continuous listening

User Interface

Interaction styles :

– Gesture based

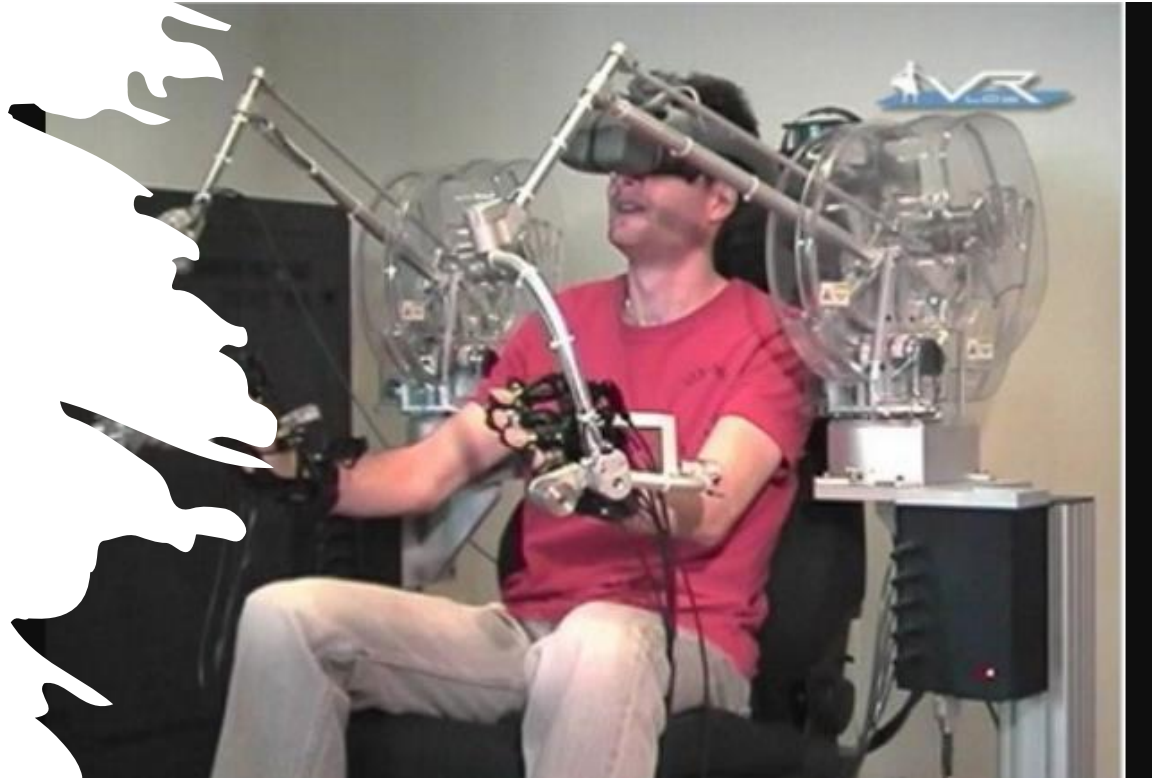


- Handsfree use
- Difficult to learn

User Interface

Interaction styles :

- Brain Controlled

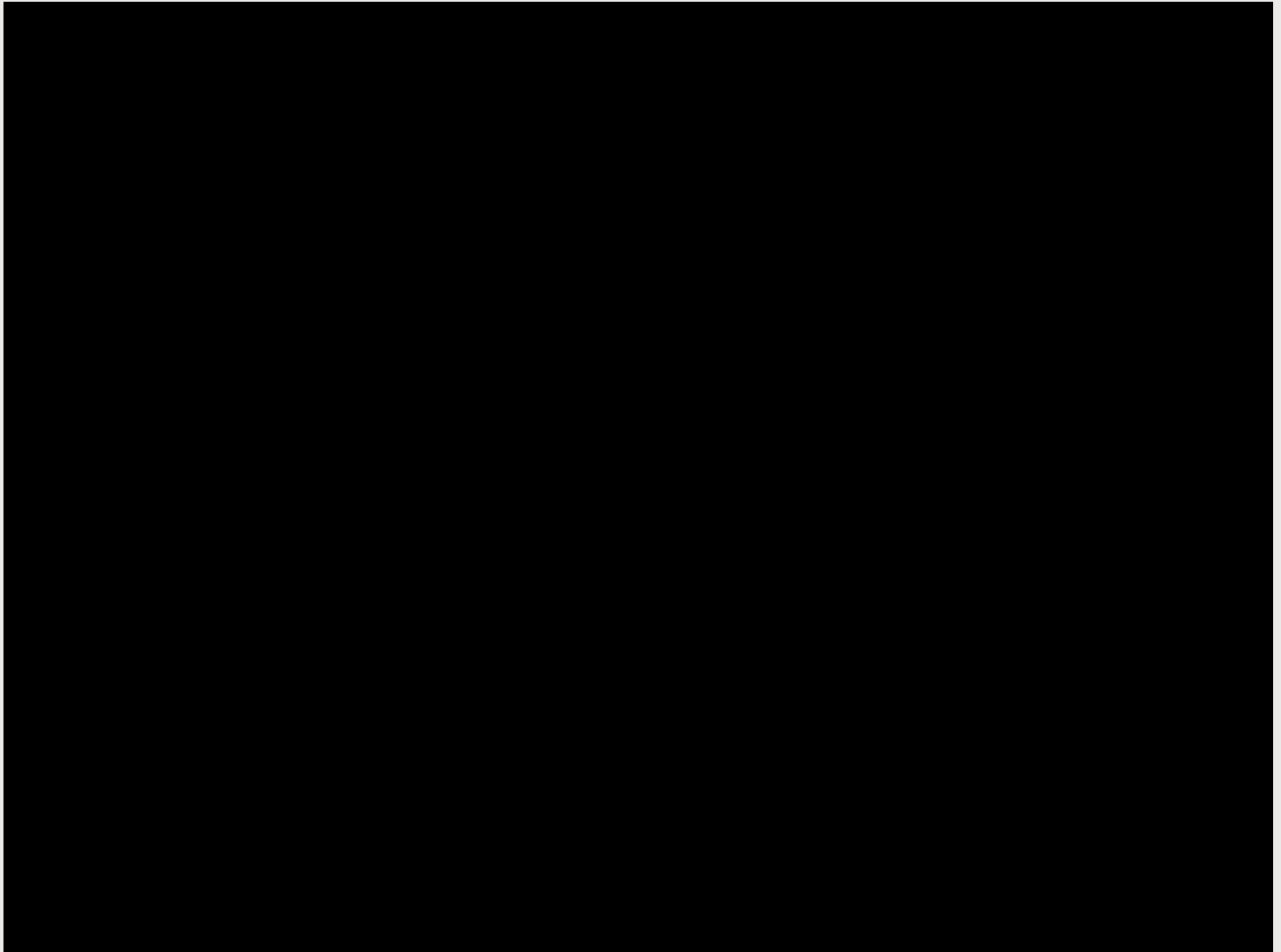


- Physically Challenged
- Requires precision

User Interface

Interaction styles :

- Any other
 - Face recognition:
 - easier, no need to remember password
 - Depend on light condition, more resources needed
 - Biometric/ iris
 - easier, no need to remember password
 - Special scanner needed, issues with some human



User Interface

Interaction Components:

- Hardware
 - Software
-
- **Hardware**
 - Devices
 - Sensors
 - Actuators
 - **Software**
 - Screen components



User Interface

Interaction Components:

– Hardware

- Touch screen
- Mouse
- Joystick
- AR-VR





User Interface

Interaction Components:

– Software

- Screen components
 - Label
 - Textbox
 - Date picker
- Language of communication
-

User Experience

Definition:

- How a user feels while/after using the system
- Not restricted ONLY to computer system but ALL devices/ gadgets used these days





User Experience

User Experience

- Name systems
 - You use for ordering food online
 - Travel from one place to another

User Experience

Expectations from the system

- Intuitive
- Easy to learn
- Allow to make error
- Look beautiful

User Experience

Feeling while/ after using the system

- Anxious
- Frustration
- Surprise
- Angry
- Helpless
- Happy
- Comfortable

Overcoming these feelings through

- Good User Interface
- Intuitive
- Familiarity
- Use of latest technology

User Experience

Improvement in user experience:

- Familiarity with
- User experience (UX) refers to the overall interaction that users have when using a product, service, website, or application.

Making up User Experience (UX)



- Refers to the overall interaction that users have when using a product, service, website, or application.
- Considers every aspect of the user's interaction and is characterized by a seamless and enjoyable experience that meets the user's needs and expectations.
- Involves elements such as **intuitive navigation, aesthetically pleasing design, efficient functionality**, and **responsive customer support**.

Making up User Experience (UX)

- **Create user-centric solutions by:**
 - Understanding user behaviors
 - Conducting research
 - Implementing design principles to optimize the overall satisfaction and usability of the product

Making up User Experience (UX)

- **The Design Processes of User Experience**
 - **Researching**
 - **Analyze**
 - **Designing**
 - **Testing**
 - **Launching**



Making up User Experience (UX)

- **The Design Processes of User Experience**
 - **Researching**
 - Done thoroughly to attain accuracy from start to finish.
 - Gather fundamental information about their product or service — such as about the target users, their needs, and the data needed for their product. Subsequently, the collected data and information will become a basis for the next steps of the process.



Making up User Experience (UX)

- **The Design Processes of User Experience**
 - **Analyze**
 - analyze, plan, and map it out for further understanding.
 - Discover the possible ways and solutions to make interface
 - Visualize the feasible content and outlook of the UX that can meet the expectations of the users.



Making up User Experience (UX)



- **The Design Processes of User Experience**
- **Designing**
- Develop the whole product and create multiple versions to try and find the final best solution for the users.
- The chosen model must be accomplished correctly in all aspects, from layout to its function and making it accessible to the users.

Making up User Experience (UX)

- **The Design Processes of User Experience**
- **Testing**
- Testing the product first with real users to see how well it functions and meets the given criteria.
- Helps to identify any issues with the product and allows for improvements to be made immediately to ensure the final product work flawlessly before releasing it to the public.



Making up User Experience (UX)

- **The Design Processes of User Experience**
- **Launching**
- Launch and let the public know about it.
- The time for a company to see the public's verdict on whether it will succeed.
- The user's feedback is going to be a crucial factor if the product has satisfied them or if it needs to have further improvement.
- Essential to deliberately complete the process of making a UX and listen to the customers' feedback, if there's any.



Design Principles

UX design principles

1. Focus on the user
2. Consistency
3. Hierarchy
4. Context is key
5. Put the user in control
6. Accessibility
7. Usability testing

Design Principles

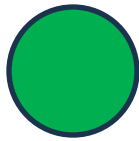
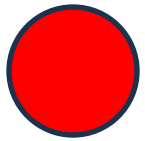
- **Focus on the user**
 - Study background of the end users
 - Gender, Age, Physical parameters- Height-weight, handedness, Educational background, cultural background, previous experience of using same/ similar systems
 - user-centric design

Design Principles

- **Consistency**
 - External Consistency
 - Appearance of the screens, components
 - Internal Consistency
 - Storage, data structure, format

Design Principles

- **Context is key**



- Understand the background of context, user's previous knowledge

Design Principles

- **Put the user in control**
 - System controlling the users' actions or user is controlling the system ?
 - System designed few times (iterative process) but used millions of times

Design Principles

- **Accessibility**
 - Easy to use for ALL types, age of users, multilingual
 - Effective usage for people with special need
 - Compatibility with other system

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Design Principles

- **Focus on the user**
 1. Emphasis
 2. Hierarchy
 3. Context is key
 4. Put the user in control
 5. Accessibility
 6. Usability testing

Design Principles

- **Emphasis**
 - **Fonts:** style, size
 - **Contrast:** color, size, shape, texture, or typography can help highlight specific elements.
 - **Empty space / White space.** Effective use of negative space can provide emphasis by isolating and highlighting specific elements.
 - **Motion.** Animation around areas to focus their attention is an unfailing strategy for ensuring emphasis
 - **Choose colors strategically:** to attract attention

Emphasis

Font



Contrast



White spaces



Motion



AM

Color Meanings	
©LouiseM.com	
Red	Passion, confidence, energy, rage, danger
Purple	Royalty, wisdom, bravery, spirituality, uniqueness
Blue	Conservative, stable, calm, reliable, sad, aloof
©LouiseM.com	
Green	Fresh, natural, fertile, abundant, peaceful
Yellow	Happy, optimistic, friendly, energy, caution
Orange	Creativity, confidence, excitement, happiness
Brown	Warm, earthy, reliable, stable, approachable
©LouiseM.com	
Black	Power, sophistication, mystery, evil, death
Gray	Neutrality, balance, calm, sadness, boredom
White	Purity, cleanliness, simplicity, neutrality
©LouiseM.com	
Pink	Romance, femininity, compassion, sweetness
Louise Myers Visual Social Media	
Read it all on the blog! bit.ly/lmcolor	

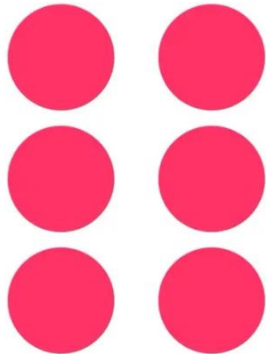
Design Principles

- **Balance**

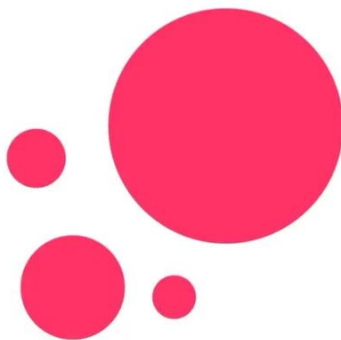
- Both visual and conceptual balance
- Achieving balance creates a sense of harmony, stability, and equilibrium
 - Balance of content weight
 - Balance of visual to copy
 - Balance of colour usage
 - Balance of elements

Design Principles

- **Balance**



Balance: Symmetrical



Balance Asymmetrical

Balance of content weight:

pair a strong, bold font with a narrow, thin one and still make it readable as a sentence

Balance of visual to copy:

text-heavy and laborious to read, images to make a simple point

Balance of color usage:

Pick the best color combinations that fit the mood of a design

Balance of elements:

Elements balanced instead of everything concentrated on one corner of the design, leaving the other end vacant with ample negative space

Balance can be achieved through careful distribution of visual weight, strategic arrangement of elements, and a sense of harmony in your overall composition

Design Principles

- **Contrast**



Source: OutCrowd

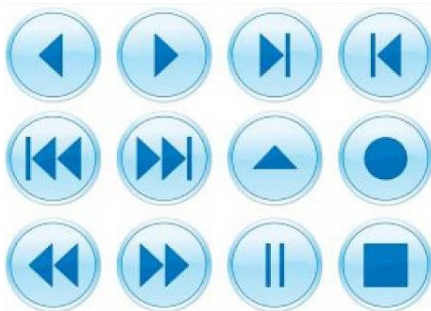


Statsmethods.wordpress.com

- Dynamic look, it is essential to have well-contrasted elements.
- Helps achieve emphasis and balance while making content look good and vibrant.
- Good contrast can positively affect patterns, colors, shapes, typography, and imagery.

Design Principles

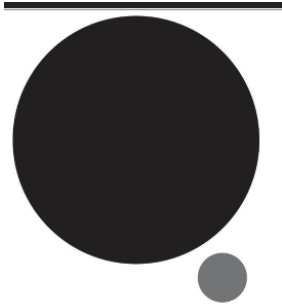
- **Repetition**



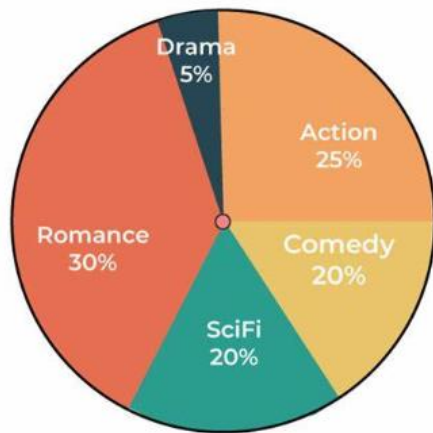
- Consistent
- Human brain recognizes consistencies and patterns easily
- Different avenues to create some form of repetition: a pattern, colors, fonts, headline writing style, image usage, or any other aspect that creates synergy between different forms of content can amount to repetition.

Design Principles

- **Proportion**

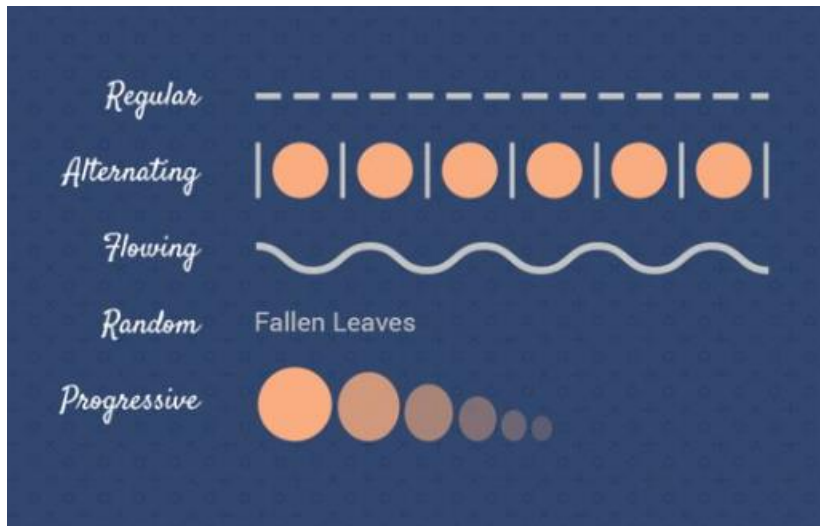


Proportions are realistic estimates and weights applied to content.



Design Principles

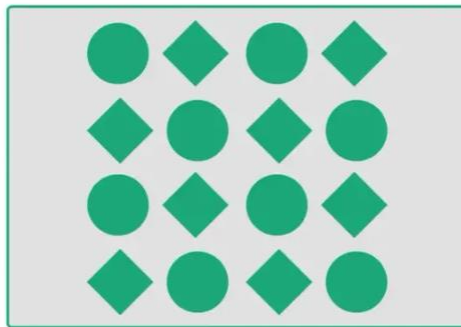
- **Rhythm**



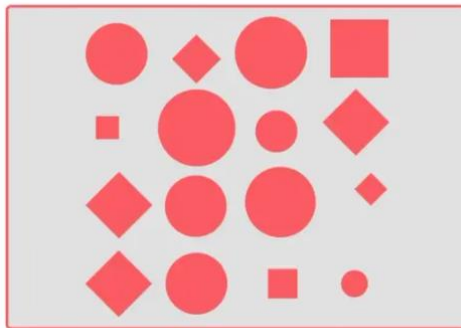
- Rhythm is style
- The structure and discipline of repetitions to create desirable movements
- A consistent flow of information

Design Principles

- **Pattern**



GOOD



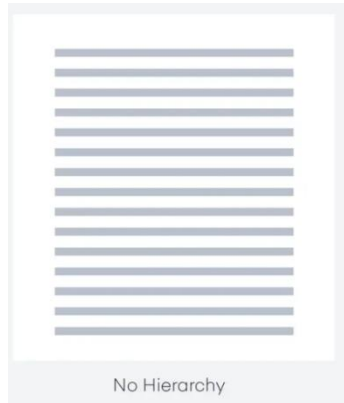
BAD

Source: Zeka Design

- Patterns exist everywhere
- Helps to keep the consistency of movement, repetition, and rhythm to create a lasting impact
- Creates impression and allows to intuition
- Establish presence without displaying design
- Use this powerful principle of design to bring consistency and a holistic feel to the content.

Design Principles

- **Hierarchy**



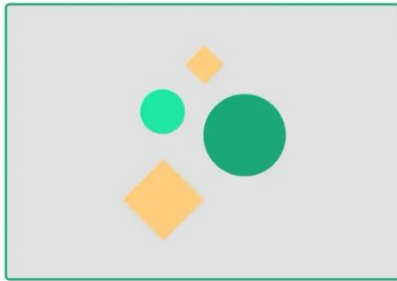
Source: InVision

A principle of design that establishes the most important and least important aspects of any design.

- **The objective:** identify the hierarchy
- **The aesthetic:** most good-looking feature or most significant aspect to be visible right in front to arrest the attention span of people
- **The functionality:** Creating a lead-generation landing page give more prominence to forms and headlines, to have someone perform a desired function unfailingly.

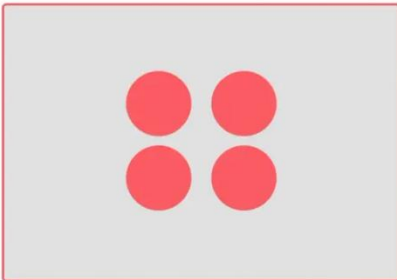
Design Principles

- **Variety**



GOOD

- Create a visual break

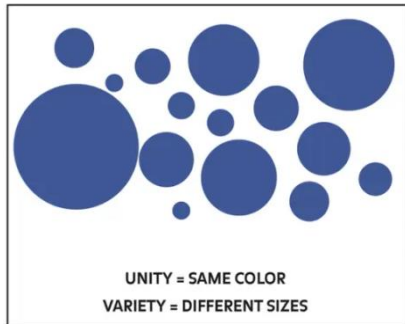


BAD

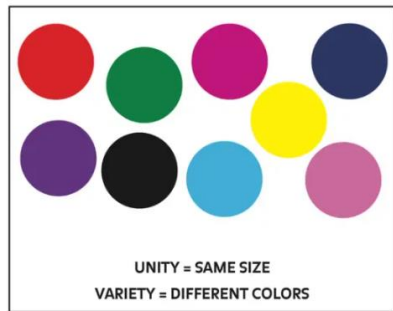
Source: Zeka Design

Design Principles

- **Unity**



Consistent patterns, radical movements, and disruptive variations



Using similar colors, shapes, textures, and elements that appear consistently

Source: [Purchase.edu](https://purchase.edu)

Principles of Design



BALANCE



CONTRAST



PROPORTION



MOVEMENT



VARIETY



UNITY



HARMONY



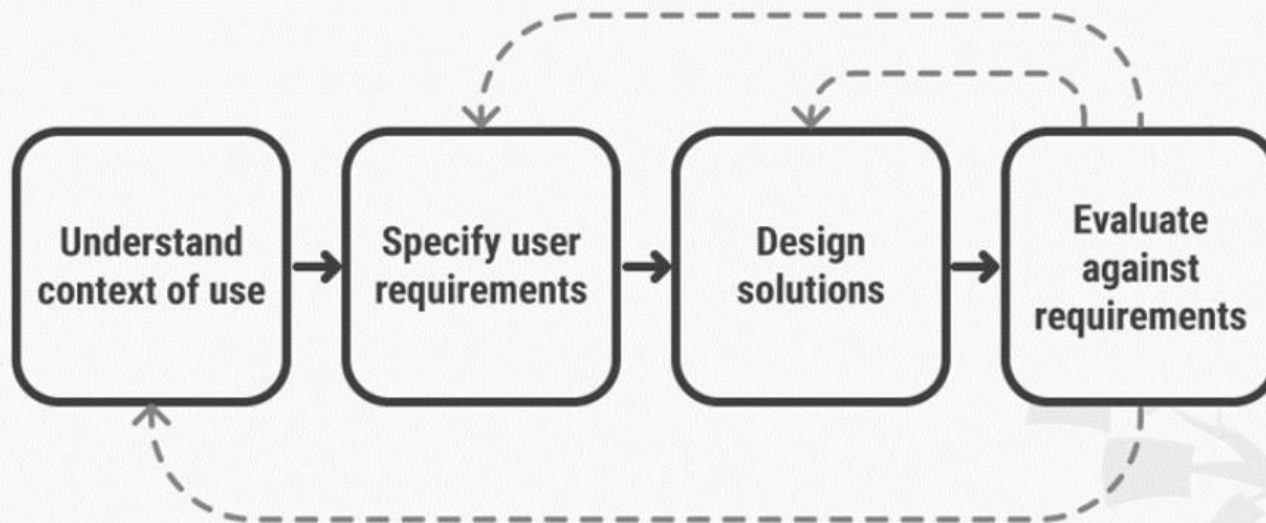
RHYTHM

User Centric Design

- User-centered design (UCD) is an **iterative design process** in which designers focus on the users and their needs in each phase of the design process.
- Involve users throughout the design process via a variety of research and design techniques, to create highly usable and accessible products for them

User Centric Design

- Phases in User-centred Design



User Centric Design

- Phases in User-centred Design
 - Understand context of use
 - Mental state of user, psychology of the user, application of use
 - Specify user requirements
 - Research to find what difficulties/ lacunas users are facing in existing system
 - Design solution
 - Implement ideas in multiple styles/ ways to resolve issues
 - Evaluate against requirements
 - Usability and User Experience testing of the solutions
- Iterative process

References

- <https://logo.com/blog/principles-of-design>
accessed on July 2, 2024
- <https://www.interaction-design.org/literature/topics/user-centered-design#:~:text=User-centered design%28UCD%29%20is%20an%20iterative%20design%20process,create%20highly%20usable%20and%20accessible%20products%20for%20them.>