HMI

MODULE 4 - Screen Designing

- Design Goals
  1. How much information is present on the screen
  2. How a screen is organized
  3. The language used on the screen
  4. Consistency with other screen.

- Designing Process
  1. What is wanted - User Requirement
  2. Analysis - Interview & Observation
  3. Design - Focus on how system will work rather than what user wants
  4. Prototype - Iterative process as improvements are done
  5. Implementation & Deployment

Organizing Screen Elements

- Visual clarity is achieved when the display elements are organized and presented in meaningful and understandable way
- clarity is influenced by a multitude of factors:
  1. Consistency in Design
  2. Ordering of screen elements.
     a) Sequence of use
     b) Frequency of use
     c) Importance
     d) conventional
  3. Screen Navigation & flow
  4. Visually pleasing Composition
  5. Grouping & Alignment of screen items.
- Graphic design experts have designed number of principles for what constitutes a visually pleasing appearance: These includes balance, symmetry, regularity, predictability, etc.
- It doesn't focus on words on the screen but on the perception of structure created by such quantities as spacing, shapes, intensities, colours and relationship of screen elements to one another.
- 3 major goals of alignment
  1. Ease in horizontal scanning
  2. Ease in vertical scanning
  3. Minimal visual complexity

Statistical Graphics

- Graphical representation of data gives clear picture, presents numbers into small space
- It helps us to avoid data distortion and gives clear purpose of description, exploration, tabulation and decoration
- It is used to minimize redundant data
- It shows variations in data at one place
- Help in comparing actual & projected data
- Types of statistical graphics
  1. Line graph
     - It displays continuous data change over time.
     - Each line in graph shows points that connects with data
     - Line graphs are used when we want to predict data or show some trends over the data
  2. Bar Graphs
     - Bar graphs are used in economics, statistics & Marketing
     - They are commonly used to compare several categories of data
     - It is used to compare data among various categories
  3. Pie Charts
     - It displays data and statistics in an 'easy-to-understand' pie slice format.
     - It illustrates numerical proportion
     - Each pie slice is relative to the size of a particular category in a given group as a whole.