"ISO. 9241" → standard for HCI

Date: / /

(#) Interaction Design (Ch - 5 from books)

Goals (defined outcome, intended audience, etc)
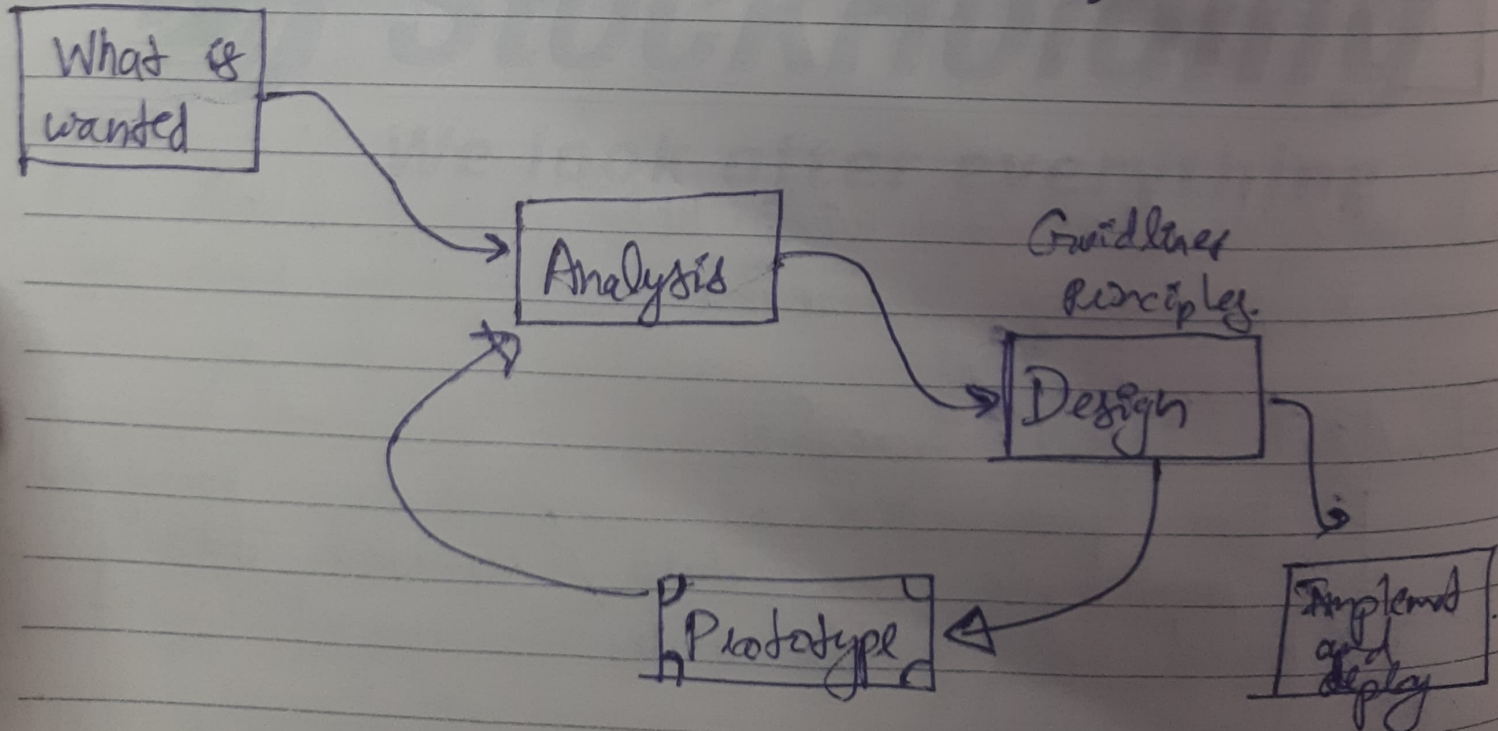Constraints (resource constraints, labour constraints, etc)
Trade off &

(*) Golden Rule of Design

"understand your materials"
↳ understand computers and people.

(#) Process of Design (see Sec: 5.3)

What is wanted → Analysis → Design
Analysis → Prototype
Design → Prototype
Prototype → Analysis
Guidlines Principles.
Design → Implement and deploy

*) **Points for good interaction design**

① **Discoverability :**
↳ user should be able to figure out what can be done and how can it be done.

② **Simplicity :**
↳ Only relevant info should be displayed.

③ **Affordance :**
↳ figure out the use of a object/button from its properties.

④ **Mapping :** ↳ Should have user oriented terms and not system oriented terms

⑤ **Perceptability :** ↳ should be able to perceive that something/work is going on.
Ex: splash screen on click of word processor.

⑥ **Consistency :** (Ex: Blue color of hyperlinks)

⑦ **Structure :** ↳ organisation of controls on screen
↳ grouping similar items together.

⑧ **Flexibility :** ↳ Multiple ways of doing one thing.
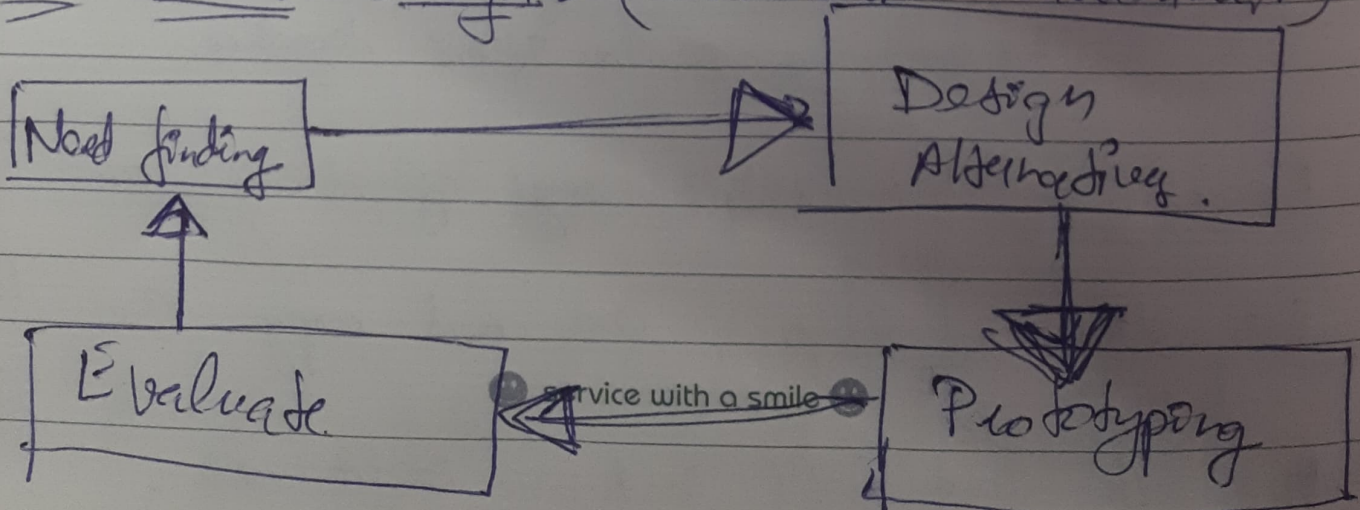Ex: drag and drop, cut and copy the file etc.
↳ We talk about all inclusive software.

9) <u>Ease:</u> → Minimal fatigue, minimum mouse click & keystrokes.
      → Minimal cognitision.
      → Recognition is better than recall.

10) <u>Error Prevention</u>: (Ex: Confirm password)

11) <u>Tolerance</u>: → do not penalize the user.
          → reduce the cost of mistakes.

12) <u>User specific / Audience Specific</u>

13) <u>Customizable</u>: (Resize window, theme, brightness, font-size)

14) <u>Feedback</u>: → Need to have user in the loop.
          → Should be informative and immediate

15) <u>Troubleshooting</u>: → User manuals are a part of troubleshooting. should be have text with well labelled diagram.

16) <u>User Centered Design</u>: (User → task → environment)

Need finding → Design Alternatives.
Evaluate ← service with a smile ← Prototyping

① __Need findings__ :→ Observe use in actual habitat
            or lab setting.
  ↳ Conduct structured interviews, surveys, etc
    ↳ invoke probes, etc.

② __Design Alternative__ : ↳ Avoid "tunnel vision"
                        generalisation.
  ↳ Analyse from user's point of view

③ __Prototypes__ : ① low fidelity.   ② High fidelity.
   wireframe and mockups.
                            Aim to get
   ↳ Can have horizontal prototype → feedback on functionality
        (shallow representation of system)
   ↳ Vertical prototype
       (detailed representation of a particular
     module of system)   ⬇ Aim to get
                        feedback on
                          performance.

④ __Evaluation__ :

   ↳ Qualitative : based on live demonstration of
          a prototype.
   ↳ Quantitative : metric to be measured
        ↳ accuracy, precision, throughput,
         learnability, response time, etc.