Today:

Base your design concept on:
- your user profile, grounded in your interviews
- ‘Animate’ your personas to
  - walk through the use scenario
  - push the limits with your extreme characters

Create a design scenario:
- choose your favorite video brainstorm ideas
- illustrate what happens at each interaction point
- create a sequence of events in the storyboard
- shoot a video prototype to illustrate the concept in context

Generative Design … is REDESIGN!

Discovery
Who is the user?

Invention
What is possible?

Design
What should it be?

Evaluation
Does it work?

Redesign
How to improve it?

Design
What should it be?
Design requires **choices**

Prototypes help express specific concepts at different levels of representation

Goal: **quality**, not quantity of ideas

*Careful* Each choice limits options
But also poses new questions
and may suggest new possibilities

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**Exercise: Design space**

- Identify the key ideas
- Extract different design dimensions that characterize the ideas
- Place the ideas along the design dimensions
  - at least three ideas per dimension
  - generate new ideas if you find gaps
  - explore the intersections of different dimensions
- Select a **subset** of dimensions and ideas to create the design space
How do you find the design concept?

Based on your studies of users, choose a problem to solve specific to your audience.

Generate a variety of ideas that offer potential solutions.

Create a design space to embody the set of alternatives.

Choose a design concept to explore not just functionality, but also interaction.

Analysis Paralysis

*CHOOSE SOMETHING !!!*

The first idea is NEVER complete or right or “good”

You must ALWAYS reevaluate, redesign, and refine

*DO NOT AGONIZE !!!*
Next … Video Prototyping

Video Prototypes

Find an empty room
- Bring a portable whiteboard
- Think about how you will shoot
- Better special effects:
  - pause button!
  - shoot in order!
  - zoom in, then out, then in while recording
  - stabilize the shot – tripod, against your body
- Bring all the materials

Next … Video Prototyping
Video Prototypes

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- Bring a portable whiteboard
- Think about how you will shoot
  - Better special effects:
    pause button!
    shoot in order!
    zoom in, then out, then in while recording
    stabilize the shot – tripod, against your body
- Bring all the materials

This afternoon

Analyze your design from various perspectives
Design walkthrough
Design a quick experiment

Flesh out the technical aspect of your design
Function – interaction table
How-to diagram

Evaluation

Does it work?

Design Walkthrough
Design Walkthrough

Step-by-step evaluation of sequential material
   to identify as many problems as possible at each step

Similar to brainstorming:
   Goal is to identify maximum quantity of problems
Contrast with brainstorming:
   Do not defer judgement

Types of comments:
   Focus on material, not author
   Constructive not destructive
   Specific, not general
   Problems then questions then suggestions

Examples:
   “The text is too small to read”
   “The user can’t see where to change the setting”
   “That task takes four steps”

Authors: Accept the problems, but do not discuss solutions!
   Try to find as many issues as possible – don’t solve them.

Group characteristics:
   peers: bosses should do other types of evaluations
   small: 4-8 works well
   diverse: include diverse perspectives

In addition to your personal opinion adopt specific roles:
   technical: Is there an error or problem?
   user: Is it hard to do?
   manager: Is this function necessary?

or apply a set of design rules, principles or perspectives:
   Norman’s rules
   Shneiderman’s rules
   others…

Appropriate for many types of material

Originally for programmers and their code

However it works well for:
   Text documents:
     articles, manuals, specifications, reports
   Design resources:
     design scenarios, storyboards,
     paper prototypes, video prototypes
Function-Interaction Table

**Goal**
- Top-down description of the key functions
- Exploration of the interaction details

**Procedure**
- List the conceptual objects in the system
- List the functions available for manipulating those objects
- Describe how each object is represented in the interface
- Describe how to access each function via interaction techniques
- Describe which interaction techniques affect which functions

- Ensure completeness
- Ensure coherence

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**Exercise: Function-Interaction table**

**Table 1: Table of functions**

<table>
<thead>
<tr>
<th>Function</th>
<th>Object</th>
<th>Interaction</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>scroll</td>
<td>webpage</td>
<td>click on the scrollbar</td>
<td>scroll the page</td>
</tr>
<tr>
<td>jump to a link</td>
<td>link</td>
<td>click on the link</td>
<td>go to the destination page</td>
</tr>
</tbody>
</table>

**Table 2: Table of Objects**

<table>
<thead>
<tr>
<th>Object</th>
<th>Properties</th>
<th>Representations</th>
<th>Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>web page</td>
<td>HTML text</td>
<td>window with page</td>
<td>scroll</td>
</tr>
<tr>
<td>link</td>
<td>image</td>
<td>content</td>
<td>jump</td>
</tr>
<tr>
<td>link</td>
<td>page destination</td>
<td>underlined text</td>
<td>jump</td>
</tr>
</tbody>
</table>

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Functional Table

<table>
<thead>
<tr>
<th>User goal</th>
<th>Action/Feedback</th>
<th>Instrument</th>
<th>Command Response</th>
<th>Object of Interest</th>
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<tbody>
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</table>
Exercise: Function-Interaction Table

- What does it do?
- How does the user interact with it?