Outline

- **Processing.py**
  - **Flowers**
  - **OOP**
- **Design Thinking**

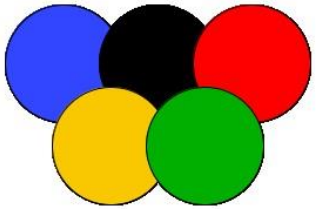
Group project collaboration required elements

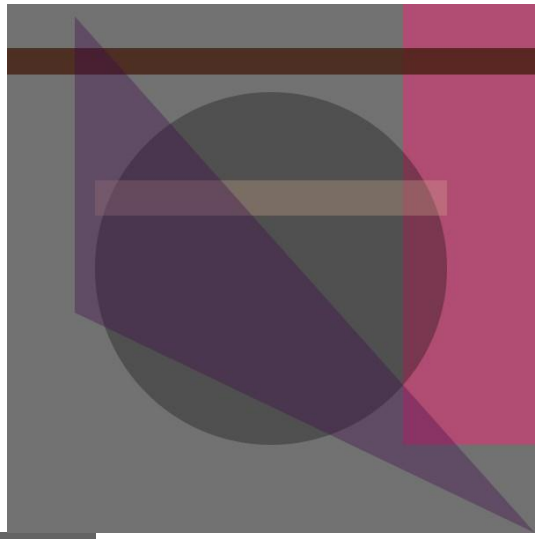
Prof. Angela Chang

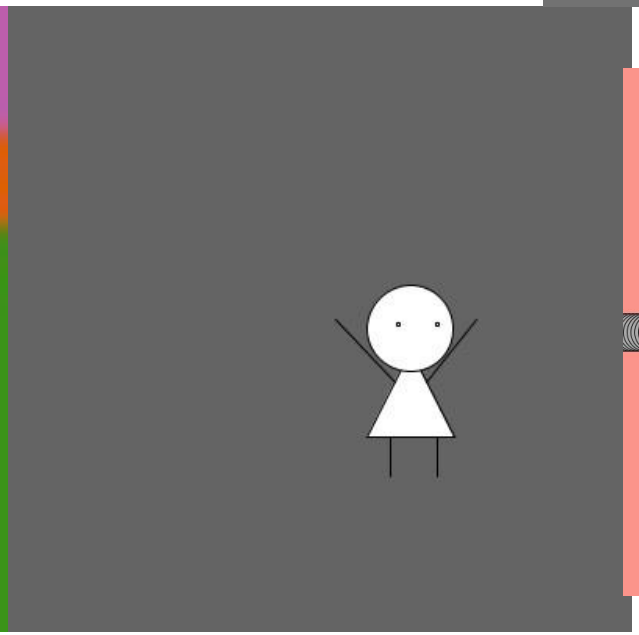
Lecture 19: HCI+ User Experience Sketching & Prototyping

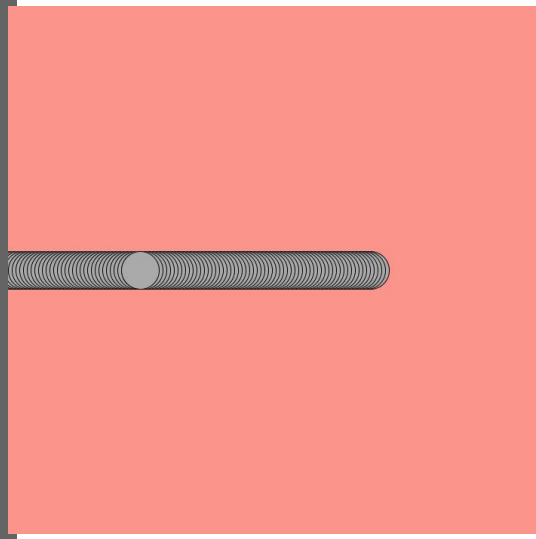
Fall 2017. Nov 12

CODE, CULTURE, AND PRACTICE





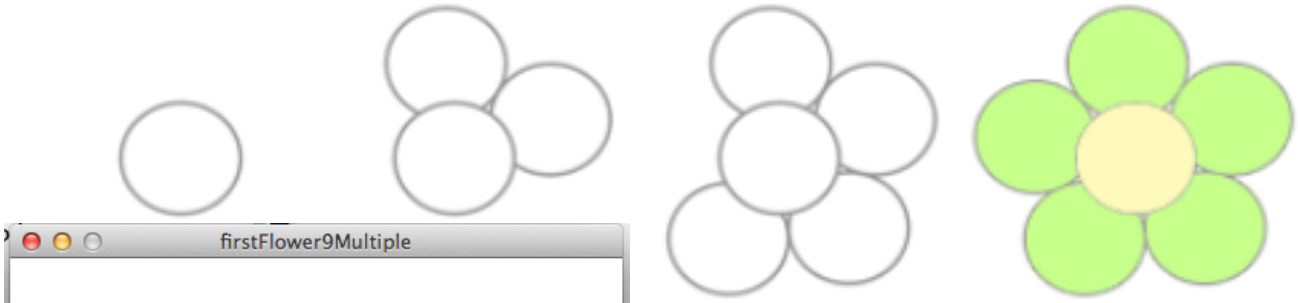


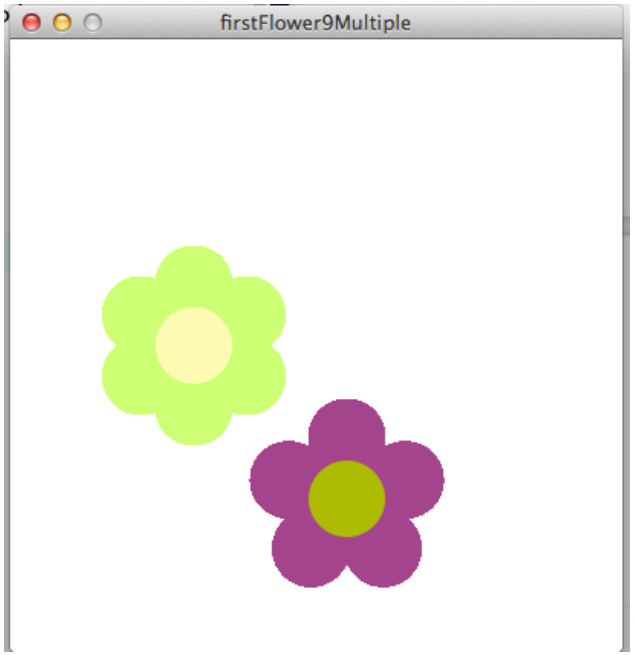


Today's challenge: Flowers & Sketches

objectoriented programming in processing

http://bit.ly/2iTemS7





Submit it here:
http://bit.ly/groupgarden

Human Computer Interaction

research concerning design and use of computer technology
focused on interfaces between people and computers

"A System to Augment Human Intellect was Doug Englebart's Dec. 9, 1968
live demonstration featured the introduction of the computer mouse, video conferencing, teleconferencing, hypertext, word processing, hypermedia, object addressing and dynamic file linking, bootstrapping, and a collaborative real-time editor."

" computer science community thought Englebart was a **crackpot**"

"When he was finished, (he was) **dealing lightning** with both hands"

Van Dam (a contemporary) was **stunned** to see how mature NLS was

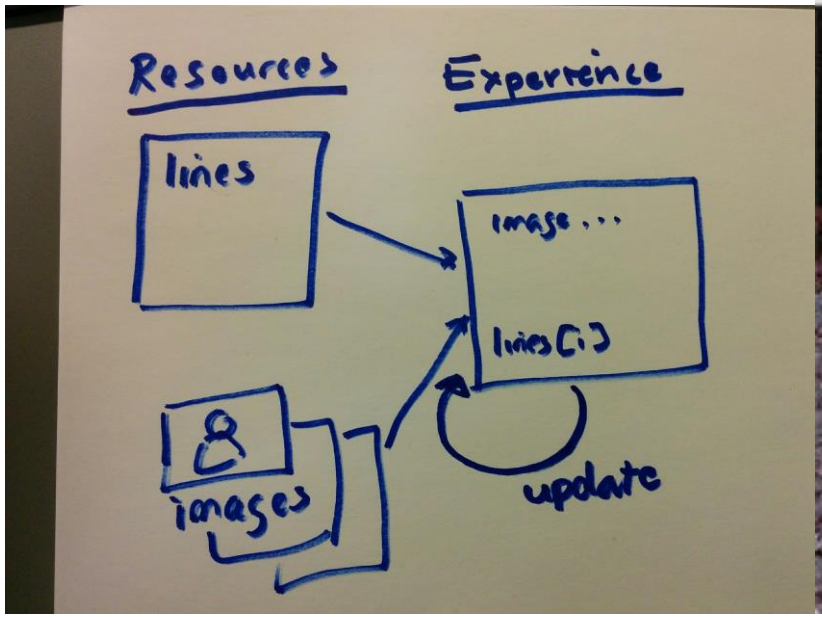
"afterwards… agreed it was the **greatest thing…ever witnessed**

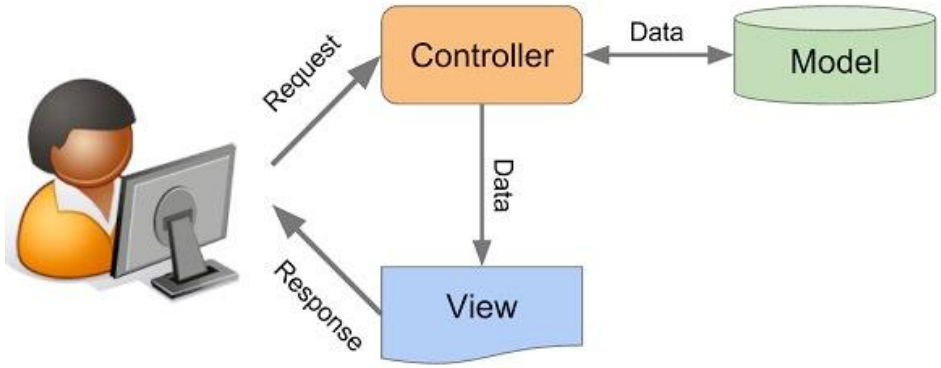
https://en.wikipedia.org/wiki/Human%E2%80%93computer_interaction

"The Mother of all Demos
https://www.youtube.com/watch?v=yJDv-zdhzMY
https://en.wikipedia.org/wiki/The_Mother_of_All_Demos

Sketches and Mockups

What are the possibilities?



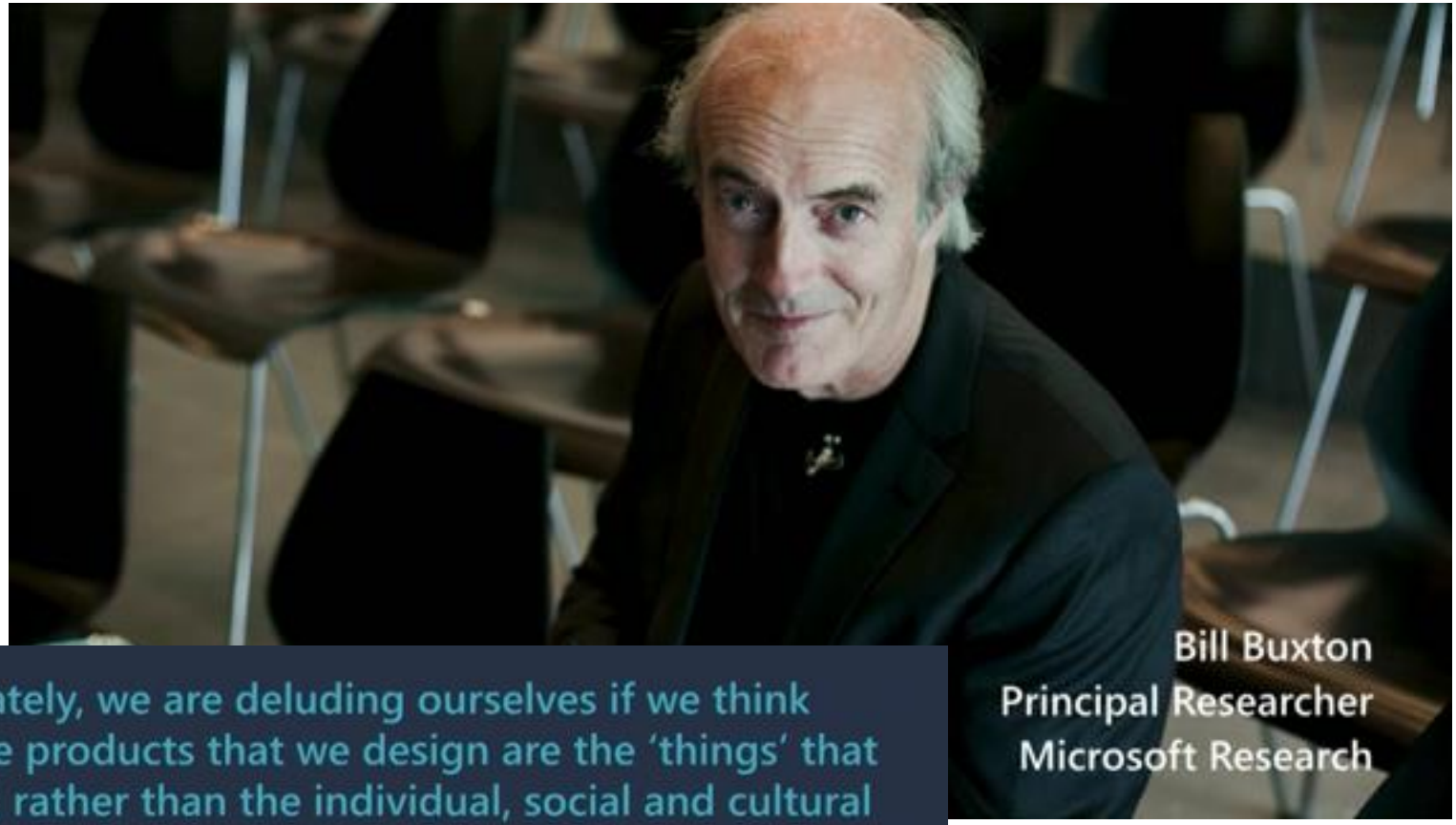


Model-View-Controller paradigm decouples the user interface from the data

What's your data?
How does it combine?

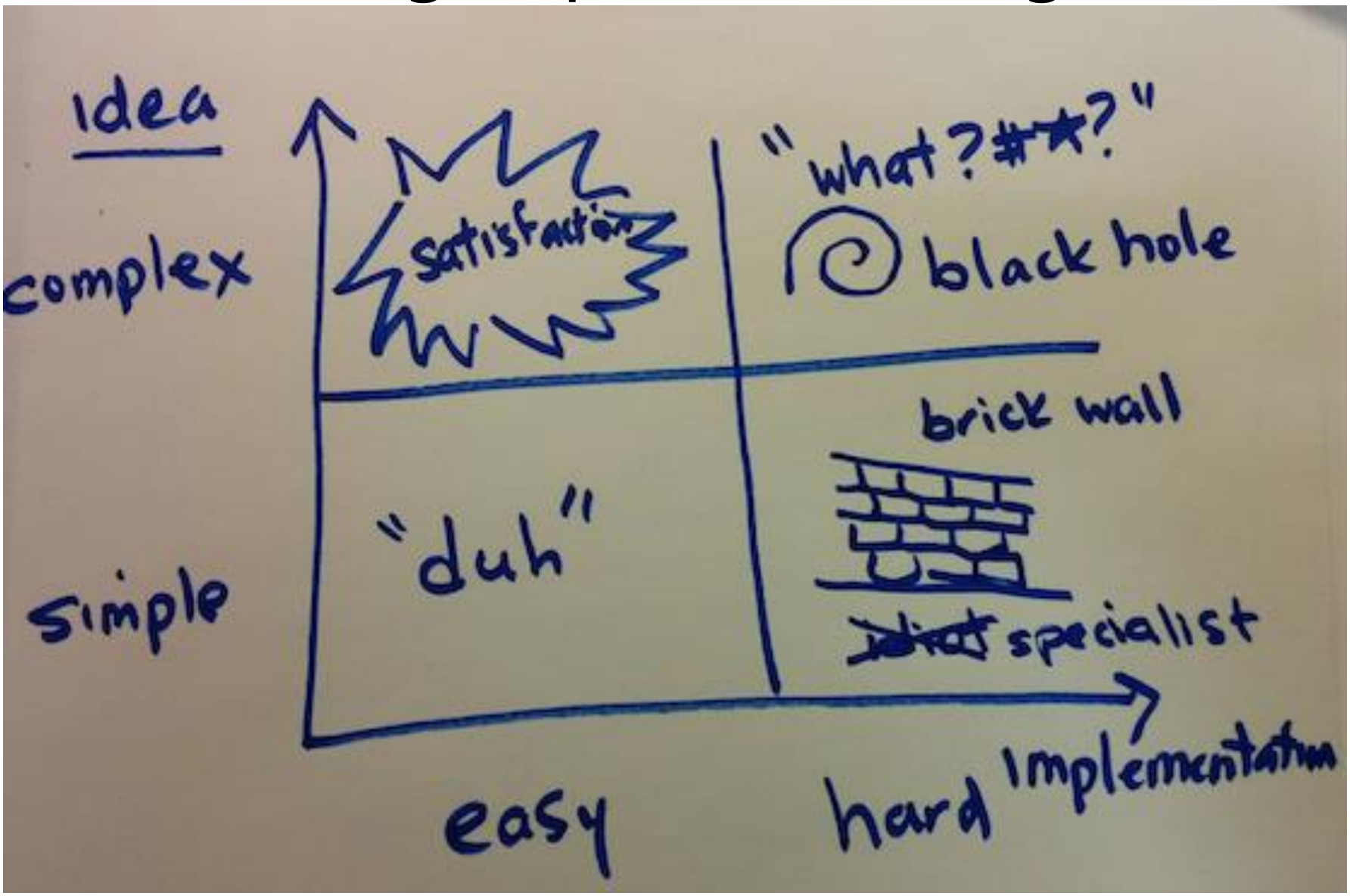
https://en.wikipedia.org/wiki/Model%E2%80%93view%E2%80%93controller

Design Thinking

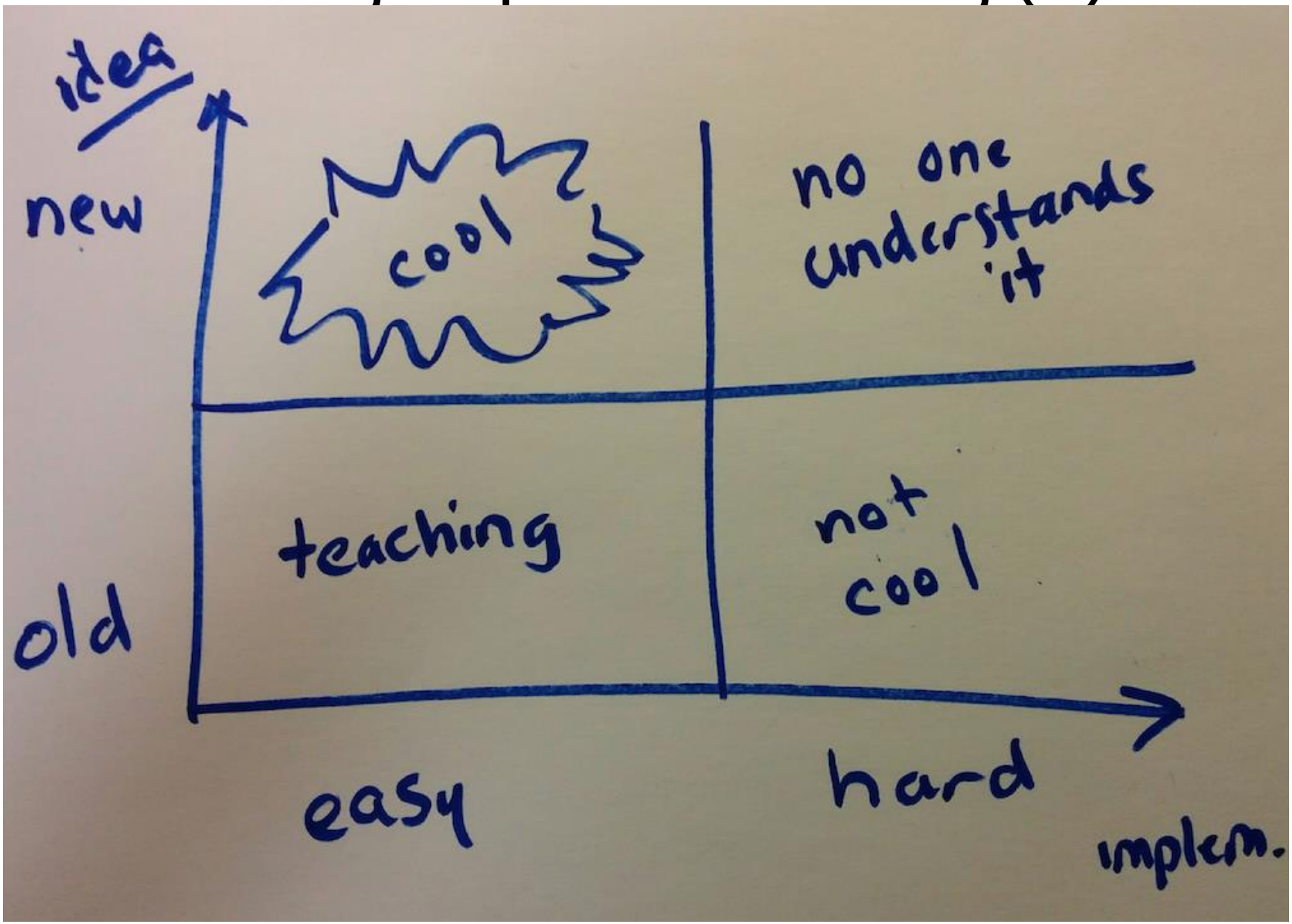


"Ultimately, we are deluding ourselves if we think that the products that we design are the 'things' that we sell, rather than the individual, social and cultural experience that they engender, and the value and impact that they have. Design that ignores this is not worthy of the name."

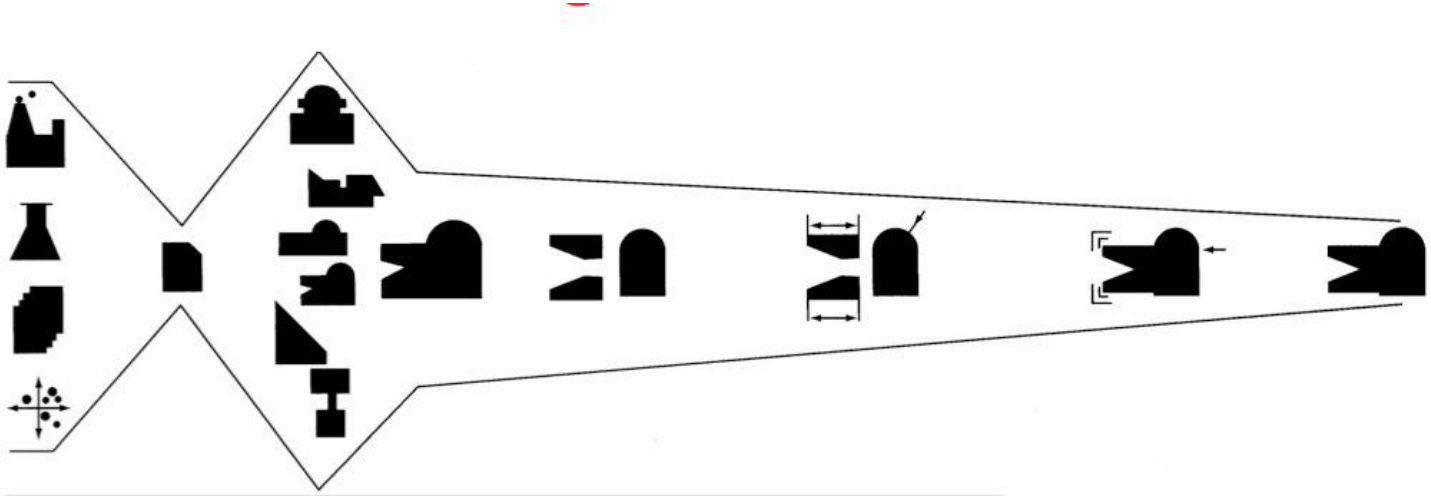
Design Space Thinking



Design Space Thinking (2)



First Media Project Expectations



values, dreams
stories about users

some working code to illustrate technical feasibility

stories about users
possible solutions

First Media Project Discussion

5 minute presentation Wednesday;s class

- What's your group's story?
- Peer review – 50% (you all fill out a review form for each project)
  - does your story make sense?
  - do people like it?
- Technical exploration– 25%
  - Can you implement something that shows how it could work?
  - Or at least try to implement something?
- Research effort–25%
  - What kind of background research was done to see that its something worth pursuing, novel, unique/useful?

Peer critique for next class

After 5 minute presentations of each project's findings, each of you will rate each other on:

The vision (idea) was inspirational:	1 2 3 4 5
The research findings were interesting:	1 2 3 4 5
The effort to implement the idea:	1 2 3 4 5
Does their message resonate with you?	1 2 3 4 5
The presentation story was sensable?	1 2 3 4 5
The teamwork was coordinated	1 2 3 4 5
One sentence thought about the project:	

"If you want to get the most out of a sketch, you need to leave big enough holes for the imagination to fit in."

Tips For Useful Sketching

- Don't sweat the implementation. Dream a little.
- Go through the exercise of multiple variations to see surprises appear.
- At the end of the sketching process, expect to have a number of questions that need answering and assumptions that need validating.

"The fundamental thing about sketching is that it is about asking not telling."

Bill Buxton

Carpendale, S., & Greenberg, S. (2012). Sketching user experiences. Amsterdam: Elsevier/Morgan Kaufmann.

Awesome Sketching Techniques Tutorial
https://www.medien.ifi.lmu.de/lehre/ss14/id/Day%202%20Sketching%20IxD.pdf

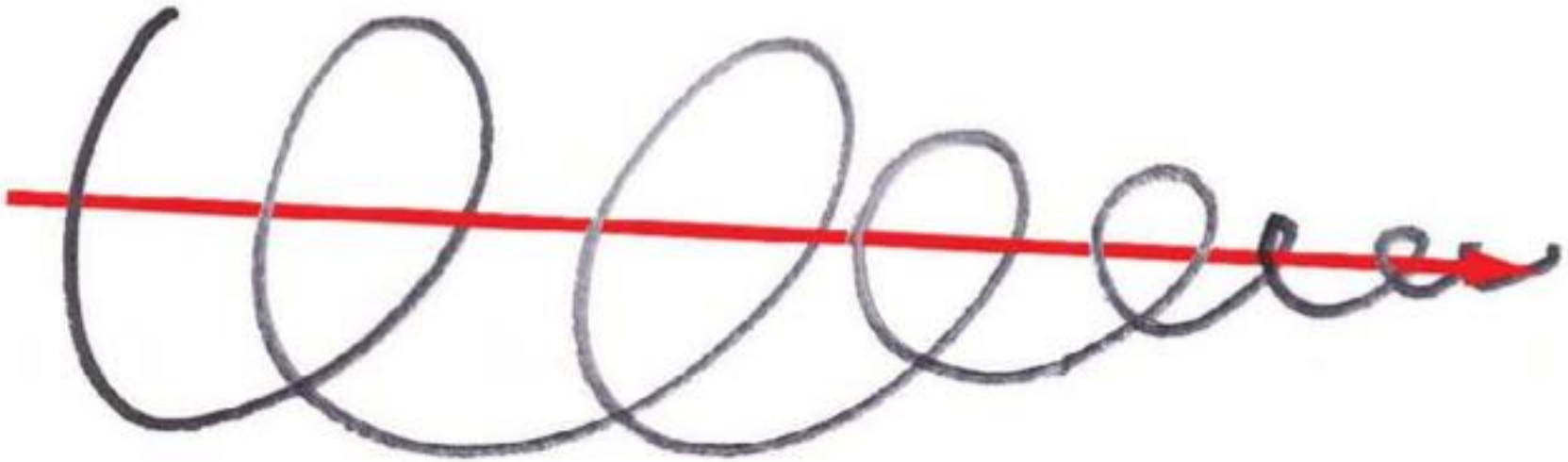


Figure 149: Prototyping as Iterative Incremental Refinement

In engineering, prototyping is like a spiral closing in along a single trajectory. Each prototype is a refinement of the previous one, and takes you one step closer to the final product. Iterative prototyping is a form of incremental refinement and validation, rather than a technique of exploration.

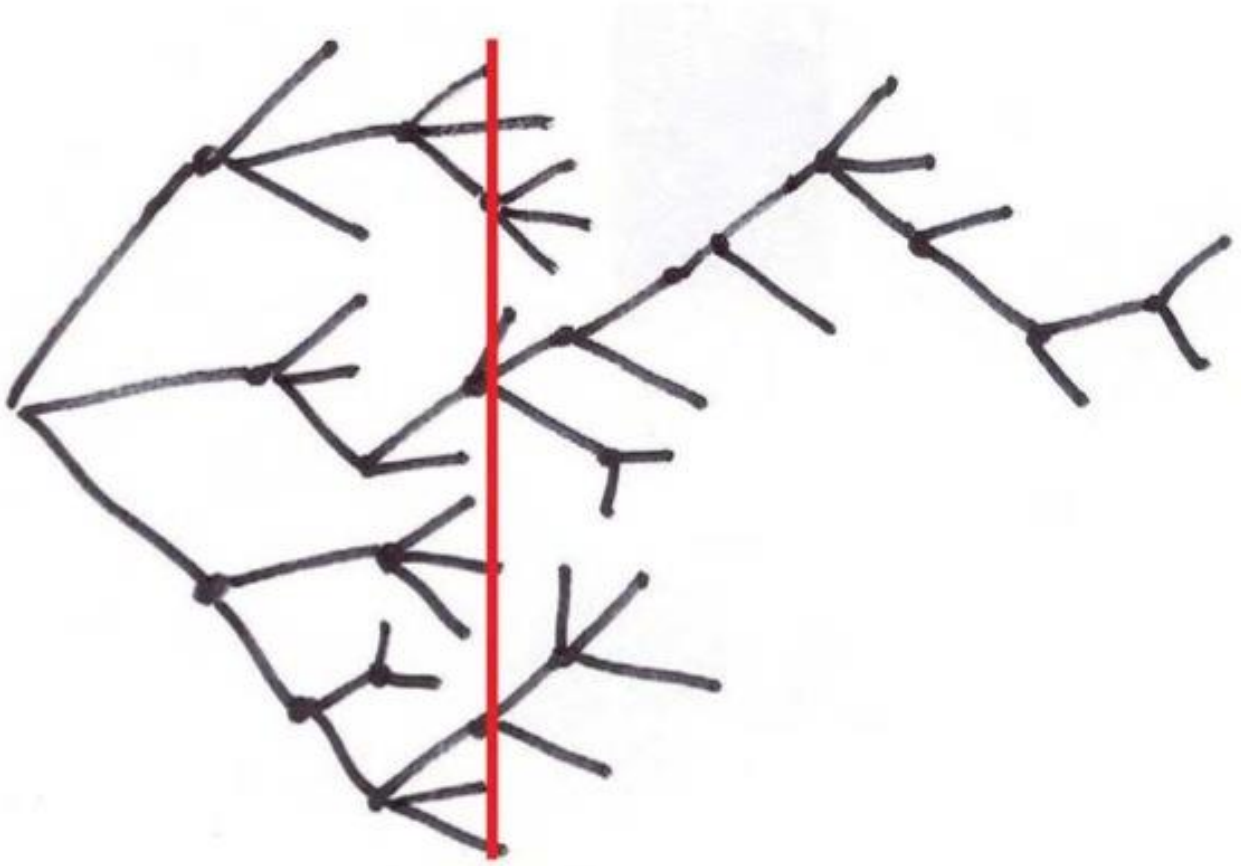


Figure 150: Design as Branching Exploration and Comparison

Design is about exploring and comparing the relative merits of alternatives. There is not just one path, and at any given time and for any given question, there may be numerous different alternatives being considered, only one of which will eventually find itself in the product.

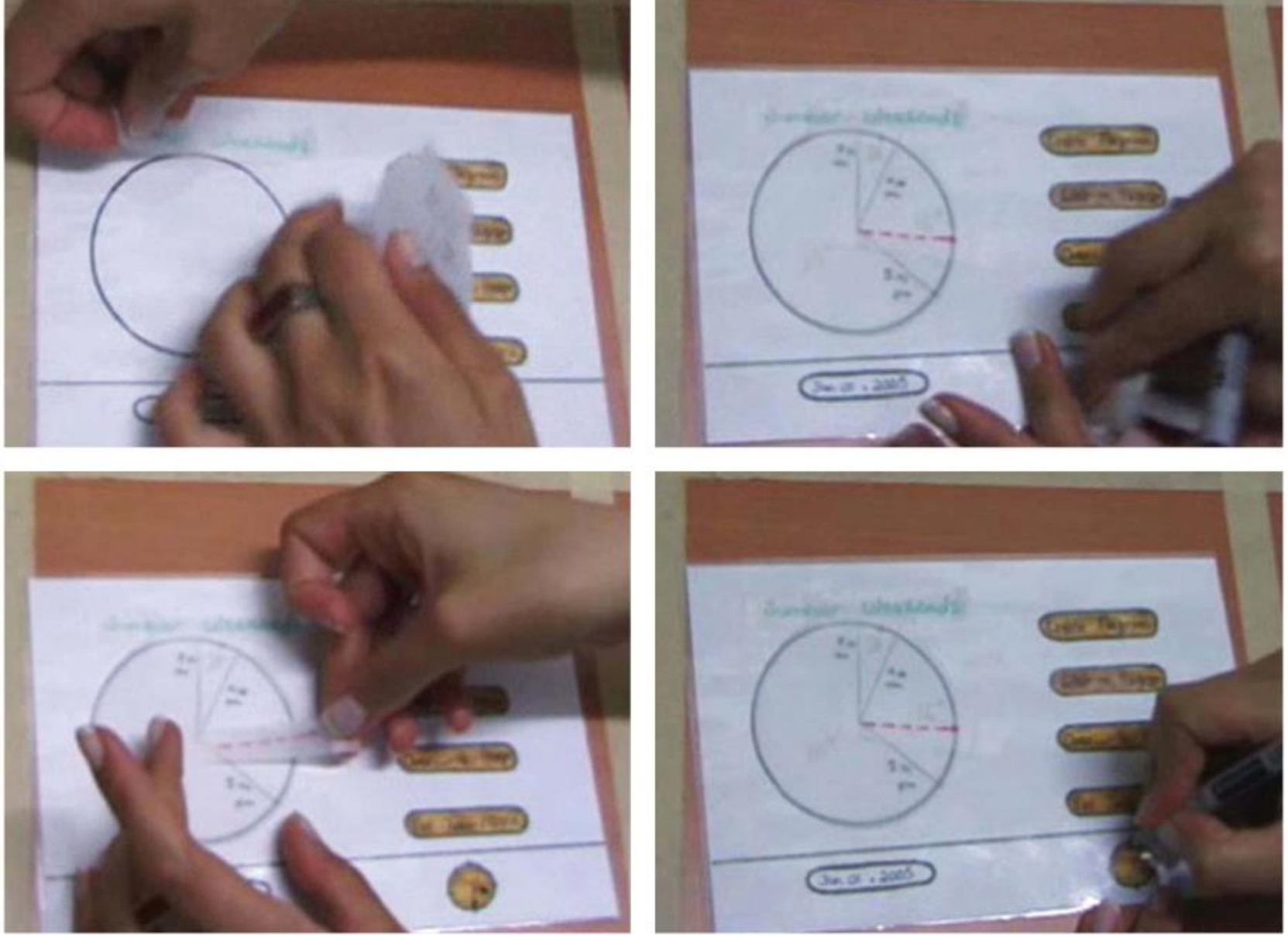
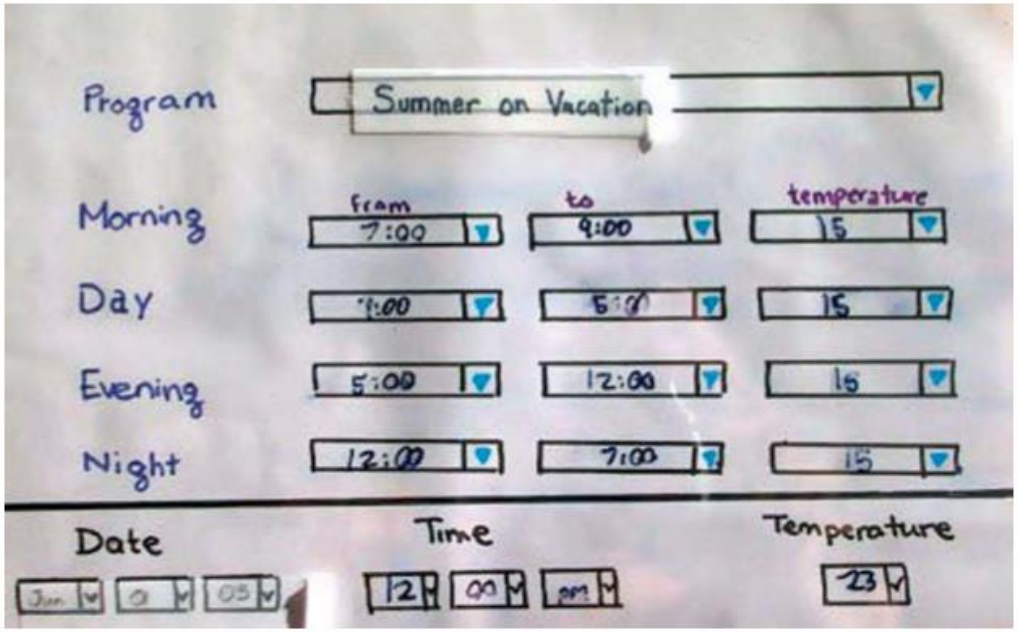
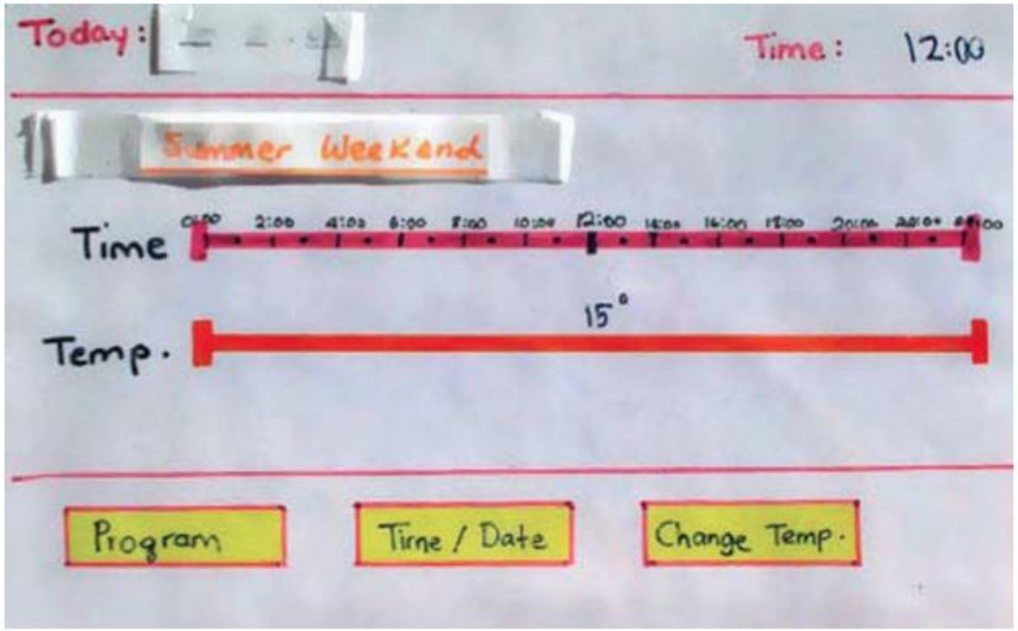


Figure 147: Changing the Display by Erasure and Writing

By covering the paper with plastic, one can write on it with a dry marker, and have what is written easily erased with a cloth when the information needs to be changed. Sometimes this is easier than having a stack of premade objects to stick down.



Explore in paper
alternatives are fast and easy



Project work: Sketching & data

Each project: Create a some sketches relating to (self organize yourself into groups):

- how your project will function
- find a sample of your raw data and upload it.
- Include details relating what the data looks like
- how a user will interact with it

Helpful Resources

- Bill Buxton on design sketching https://www.youtube.com/watch?v=Ma3wNji6pfo
- Bill Buxton design ecosystem https://www.youtube.com/watch?v=JTfNMJ9ONpg

Upload your picture to canvas, in addition
to putting them in your presentation at the end of Wednesday's class

Groups roles

decide on roles, repositories, and communication strategy

Each person should pick at least one role.
Everyone should perform the role of information giver today.

Leader/Information Seeker

- Leads the research
- Asks questions
- Identify "Knowns" and "Unknowns"
- Collects problem views and potential solutions

Documentter /Data Lead

- Manages Data Repository
- Reports on how solutions were achieved
- Documents what was attempted and what didn't work

Orienter/Summarizer

- Presents the findings
- Keeps the ball moving toward results
- Develops insights regarding data, with the documenter
- Pursues visualization of end result

Opinon seeker/Clarifier

- Reports on group flow and dynamics
- Discusses group role and roles
- Aims for democratic participation from all parties

Information Giver:

provides facts, examples and statistics for consideration

Homework

1

a) Create design sketches on what your project could be
b) also fill out the peer reviews that were due Saturday, along with a questionnaire about your role.
(you'll an email for peer review results # 2

https://canvas.emerson.edu/courses/1514833/assignments/9120957

2

First Project Participation Assignment

Work through the tutorial http://bit.ly/2iTemS7 to first create your own flower. Then package it into a class and make a garden together as a group and upload the final combined folder.

Class Participation Due Monday
Submit it here:
http://bit.ly/groupgarden
or here:
https://canvas.emerson.edu/courses/1514833/assignments/9120753

Also check out the FirstProjectProposals Directory in canvas– I'll put helpful code repos thre.

Summary of today

- Technical stuff- OOP in Processing and Python
  - HW for Monday– processing gardens by groups
- First media arts collaboration
  - Design Thinking- asking questions by expressing your imagination in imagery
- First Project presentation due Wednesday–
  - Groups will show off their media repository and any decisions you've made