

# Final Project Brainstorming

No screens



Prof. Lydia Chilton  
COMS 4170  
25 March 2019

Say your name



# Homework 8

Building a search application

# You came up with very diverse domains

**NBA All-Stars**



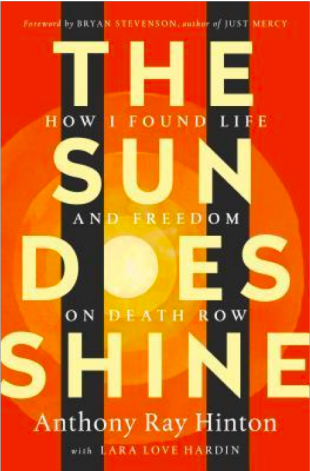
**Affordable make-up**



**Academy Award Winning Films**



**Book I want to read**



**Independent Coffee Shops in NYC**



**Fauvist Paintings**



# And compelling use cases

## Family-owned Ice cream parlors in the US



A college student is graduating and wants to road trip from NYC to Florida. Along the way, they want to find top-rated family-owned ice cream parlors so they can write about it for their travel blog.

# More specific use cases

## Yoga poses



A person who has soreness or is looking to make a part of their body more flexible.

## Top players for the 2019 baseball season



Someone who wants to prepare for his or her fantasy baseball draft

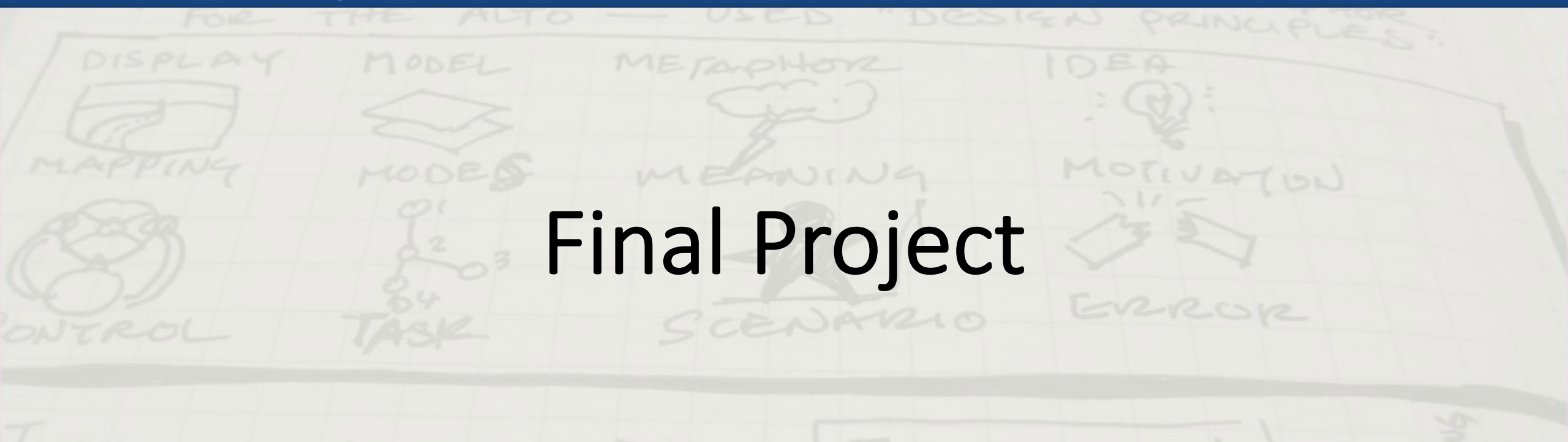
## US Elections in 2018



1. Any civically minded citizen or citizen who wants to be more well-read about our politics

2. A political candidate who wants to see how safe the incumbent in their district based on the results in the 2018 election.

**More specific about the benefit – the reason to use it.**



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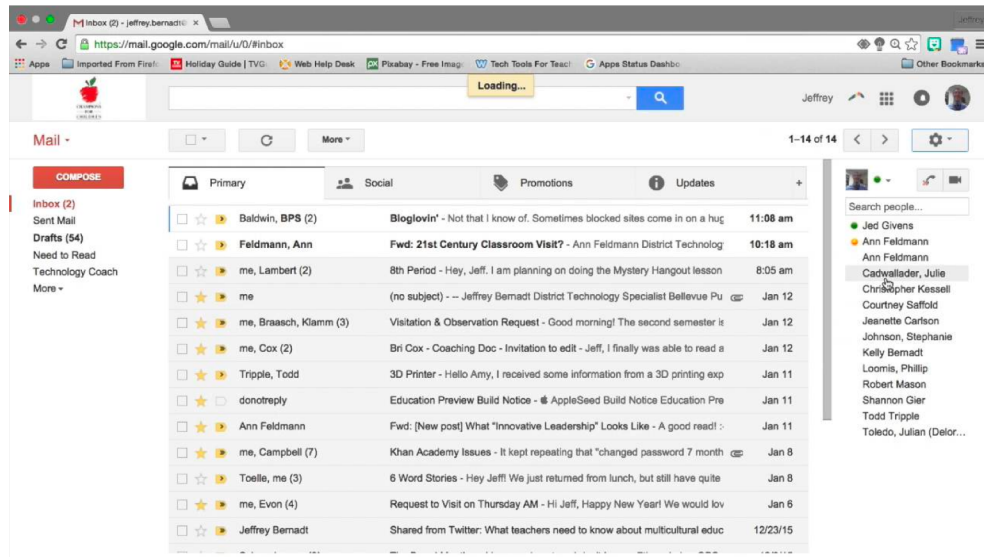
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## Goal 1

# Build websites that suit the needs and abilities of users



1. Display information

2. Design interactions

...that allow users to accomplish a goal

## Goal 2

When the needs and abilities of users are unclear, design systems by **learning from iteration** and experimentation.


**Part 3: Editing the Party Planning Committee**

The interface to edit the party planning committee (PPC) is a drag and drop direct manipulation interface as described below.

- The PPC UI needs to display two lists:
  - a list of all the [employees seen here](#), and
  - a list of people on the party planning committee.In its default state, the party planning committee list serves as a drop target.
- Each list must have a div at the top of the list to serve as a drop target.
- Using JQuery Draggable and Droppable events, implement a list to the head of the of the PPC list, and when names from the PPC list are dragged, they must also be true: names from the PPC list can be added to the list. This must be implemented in the Model + View + Controller pattern.
- To cue that an element is draggable, implement a background turns light yellow, and the cursor turns to a hand.
- While the item is being dragged, the background turns light yellow, and the cursor turns to a hand.
- While the item is being dragged, it should look like it is being dragged.
- While the item is being dragged, the drop target should be highlighted.
- When the item is dragged over the drop target, the drop target should be highlighted.
- If an item is "dropped" anywhere other than the drop target, the item should be removed from the list where the user started dragging it.

Note:  
When the user toggles between the Logging Sales UI and the Party Planning Committee UI, the current UI should be stored in a javascript variable that if the user toggles back to the Logging Sales UI, the user should be able to see the current UI. However, for this implementation, if the user toggles back to the Logging Sales UI, the user should see the Logging Sales UI.

Please submit your HTML, CSS, and JS files, along with a screenshot of the interface.



Keep a list of the party planning committee

Clear needs, abilities, goal

Unclear needs, abilities, goal



# Final Project

- Build a **web** application
- That allows a user to **interact** with media
- Within a **domain**
- To achieve a **specific user goal**
- Where the output of the goal must be **visible** within the app.
  
- The goal and interaction must be more complex than simply searching the data.

# Project Logistics

- **Weekly homeworks** will build up to the final project (5% of grade)
- Final submission is worth **15% of your grade**.
- This project is to be completed **individually**.
  - Although you will have a “group” to get feedback from.
- This task is purposely **ill-defined**.
  - It is up to you to define what problem you are going to solve.
  - When need a clarification, please attempt an answer first, so that we can steer you in the right direction.

# Good Example: Learning Bird Calls

<b>Domain:</b>	Bird watching
<b>Specific need:</b>	Help bird watchers learn the calls of the 50 official state birds
<b>Media:</b>	Bird images, Bird calls (audio), US state map
<b>Interaction:</b>	Interactive map for users to click on states and see/hear
<b>Visual of Solution:</b>	Users take a quiz on states/birds and see which ones they got right and wrong.

# Bad Example: Watching Music Videos

<b>Domain:</b>	Watching music videos
<b>Specific need:</b>	People need to hang out and listen to cool music
<b>Media:</b>	YouTube music videos
<b>Interaction:</b>	Users search of videos and then watch/listen to them
<b>Visual of Solution:</b>	Users feel happy.

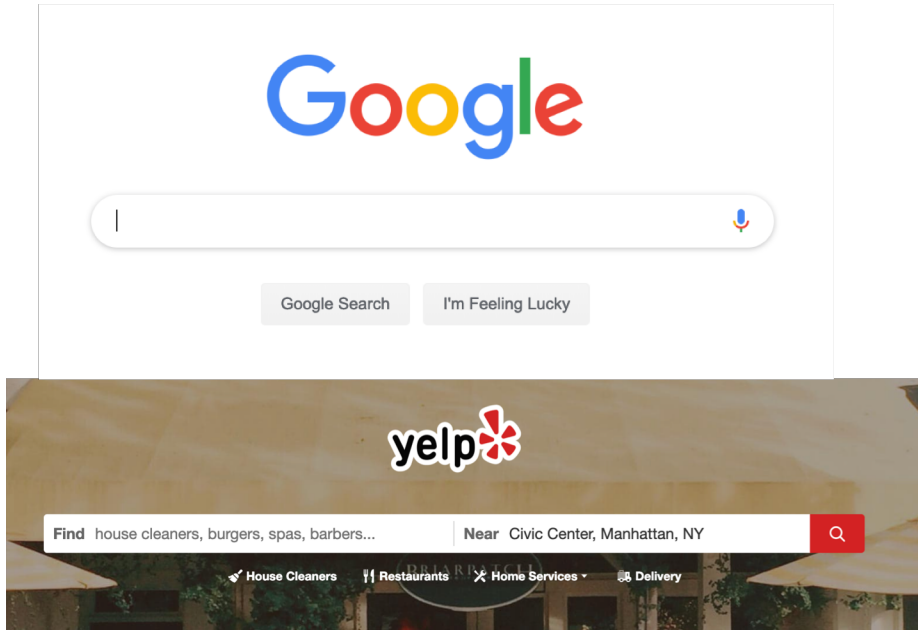
# Good Example: Making a work out mix

<b>Domain:</b>	Workout mixes
<b>Specific need:</b>	Workout instructors need to plan a 40-minute workout to up-beat songs
<b>Media:</b>	YouTube videos
<b>Interaction:</b>	Search for various songs, trim out the boring bits at the beginning, drag them into a playlist
<b>Visual of Solution:</b>	Users can see how many minutes the playlist has. If it's 40 minutes, it's done!

# Final Project

- Build a **web** application
- That allows a user to **interact** with media
- Within a **domain**
- To achieve a **specific user goal**
- Where the output of the goal must be **visible** within the app.
  
- The goal and interaction must be **more complex than simply searching the data.**
- Full specifications will be released later.

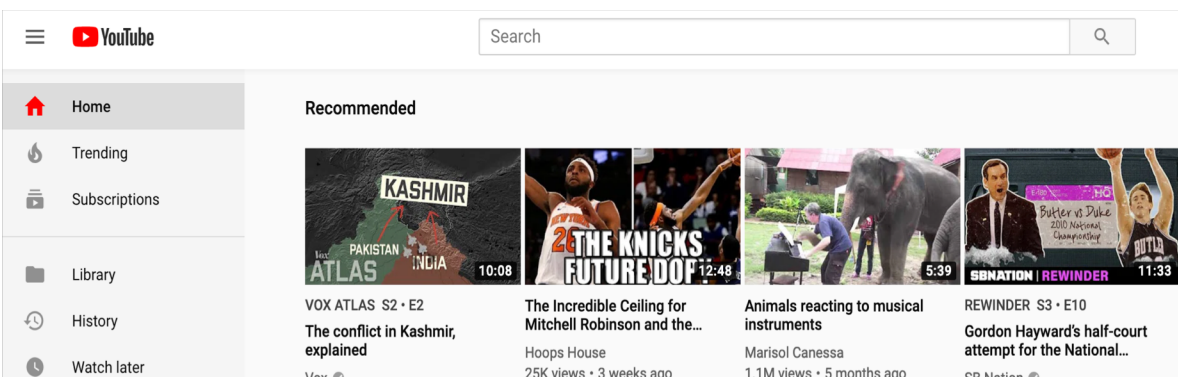
# Why can't I just make a search app? Aren't they useful?



Search applications are very useful.  
But you already built one.

We want you to focus on meeting user goals,  
and interaction, not just displaying data.

If it were 2005, search and browsing would be  
an unexplored area about how to meet user  
needs. It's 2019... Search can be a part of a  
larger user goal.



# Final Project

- Build a **web** application
- That allows a user to **interact** with media
- Within a **domain**
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Why can't I help people achieve in tangible goals like knowledge, happiness or inner peace?

**Bad example**

**Good example**

**Specific need:** Listen to cool music

Plan a 40-minute workout mix

**Goal:** Feel happy

A playlist with total time.

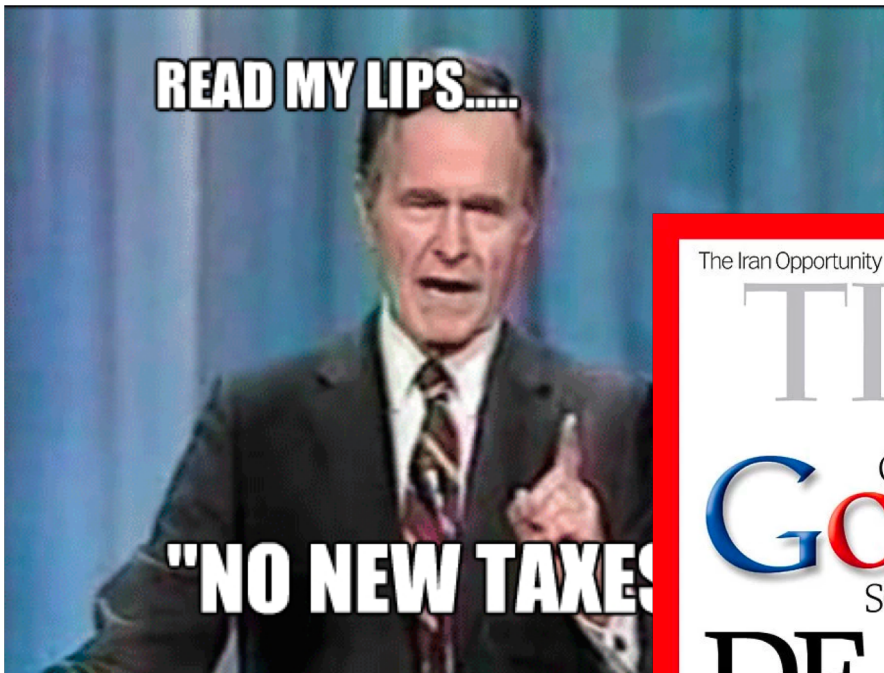
It's too hard to design for these internal goals;  
We want to pick goals that we can see achieved within the app  
to help direct our designs.

Specific vs. General Needs

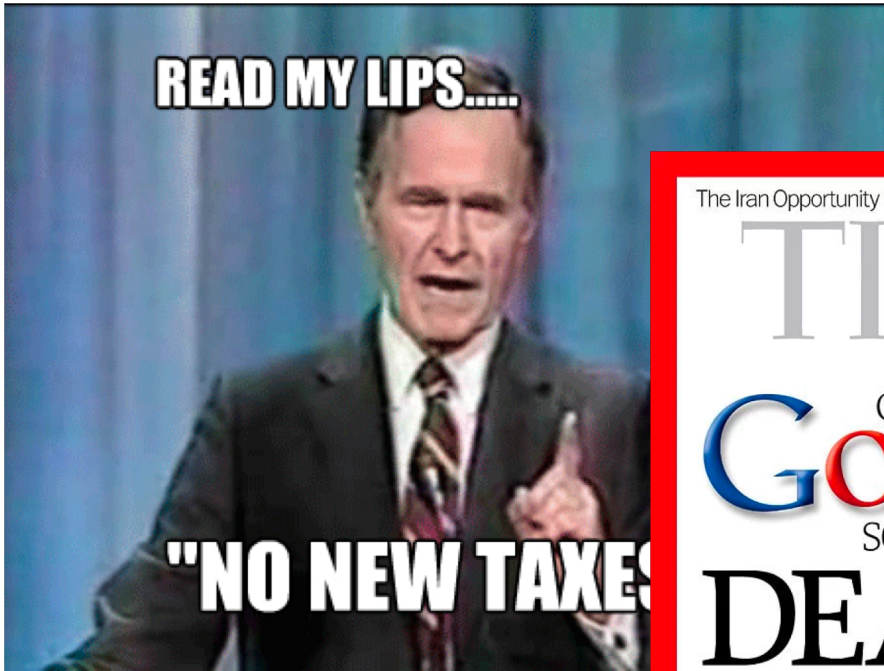
What are the kinds of things  
Politicians, Beauty Queens, and Silicon Valley  
*say* they will solve?



What are the kinds of things  
Politicians, Beauty Queens, and Silicon Valley  
*say* they will solve?



# What's appealing about general goals?



What's the problem with general goals?



They aren't actionable.

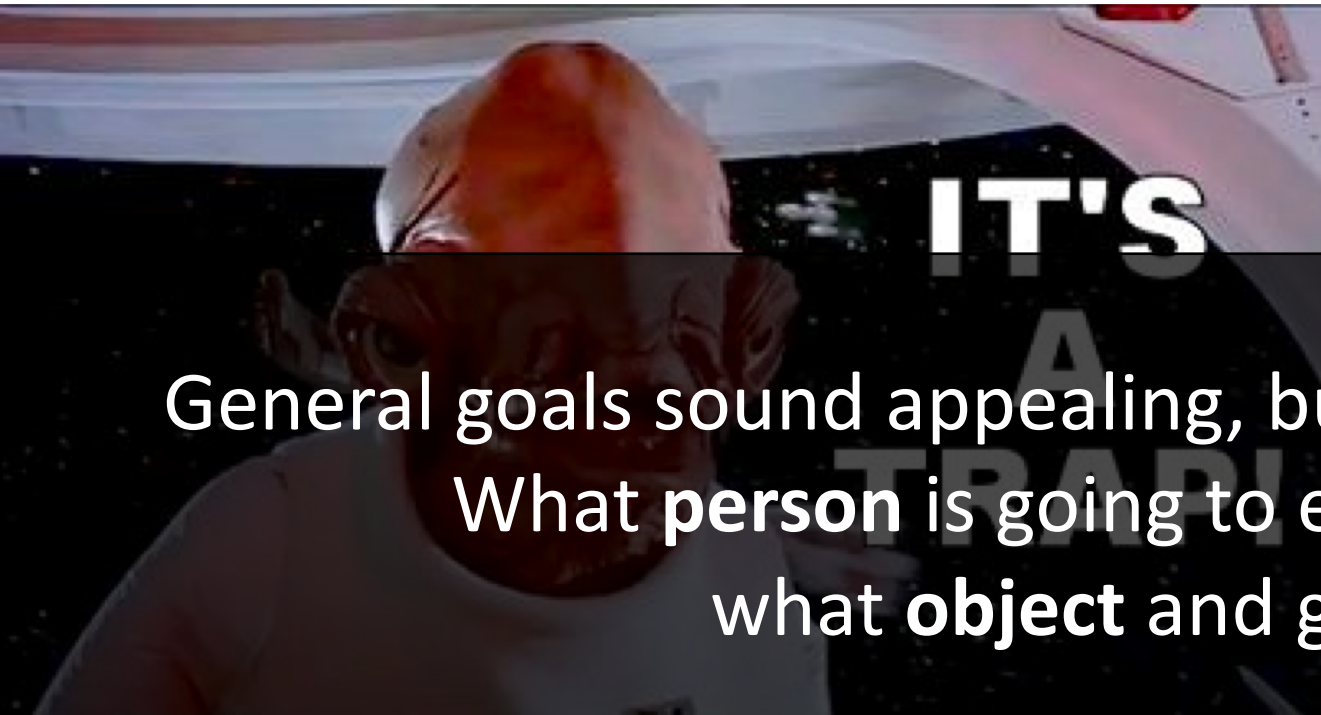
# General Vs. Specific Goals

Goal 1:

“Clean the house.”

Goal 2:

“Fold that basket of laundry.”



General goals sound appealing, but specific goals are actionable:  
What **person** is going to execute what **action** on  
what **object** and get what **value**?

# General goals are actually Domains

Domain:

“Clean the house”

Specific goal:

“Fold that basket of laundry.”





What's the risk with a specific goal?



“Fold that basket of laundry.”

Specific goals can be trivial.

But, if you start specific,  
you can usually generalize

## Domain

## Specific Need

## Generalized to



Online shopping

Uncommon books

Clothes,  
Food,  
Amazon Fresh  
Other sellers



Social Networking

Harvard students  
looking up major,  
dorm, relationship  
status

Ivy League  
US Colleges  
Everybody



Read/send Email

Web-based  
No page reload  
Never Delete

Chat  
GDrive



# Domain

# Specific Need

# Generalized to



Online shopping

Uncommon books

Clothes,  
Food,  
Amazon Fresh  
Other sellers



Social Network

Harvard students to  
look each other up

Ivy League  
US Colleges  
Everybody



If you start specific, you can usually generalize.

Email client

Web-based

Chat

No page reload

GDrive

Never Delete



# Why did Sabre (a printer company) buy Dunder Mifflin (a failing paper company)?



**DUNDER MIFFLIN, INC.**  
PAPER COMPANY

**Copy Paper**  
20-lb. 92 bright.  
**100% fun!**

**NEW!**

**Exclusively from Quill.com!**

**Sale 34.99** per carton  
#901-DMPC18501  
Limit total: 3 cartons per customer.  
Additional quantities \$39.99/carton  
Reg. \$47.99

**Buy Now**

**the office**  
THURSDAYS 9/8c

Offer good through 1/31/12

\* No celebrity endorsement implied  
™ & © 2011 Universal Network Television LLC

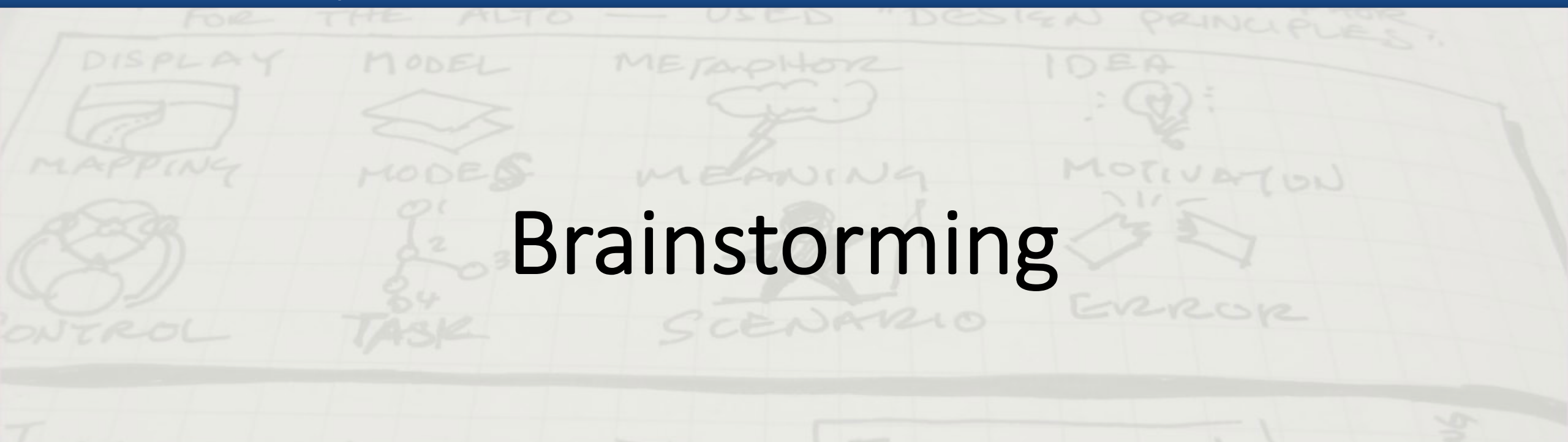
# Supply Chain Distribution: Generalize from Paper Sales to Printer Sales



If you start general, you may never start.



If you start specific, you can usually generalize later.



# Brainstorming

No screens



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# Homework 9

- Brainstorm **domains**
- Brainstrom **media** used in those domains
- Brainstorm **specific needs**



The best way to have a good idea  
is to have lots of ideas.

- Linus Pauling

# Goal: Make the best piece of pottery.

**Group 1** was told to make as many as they could

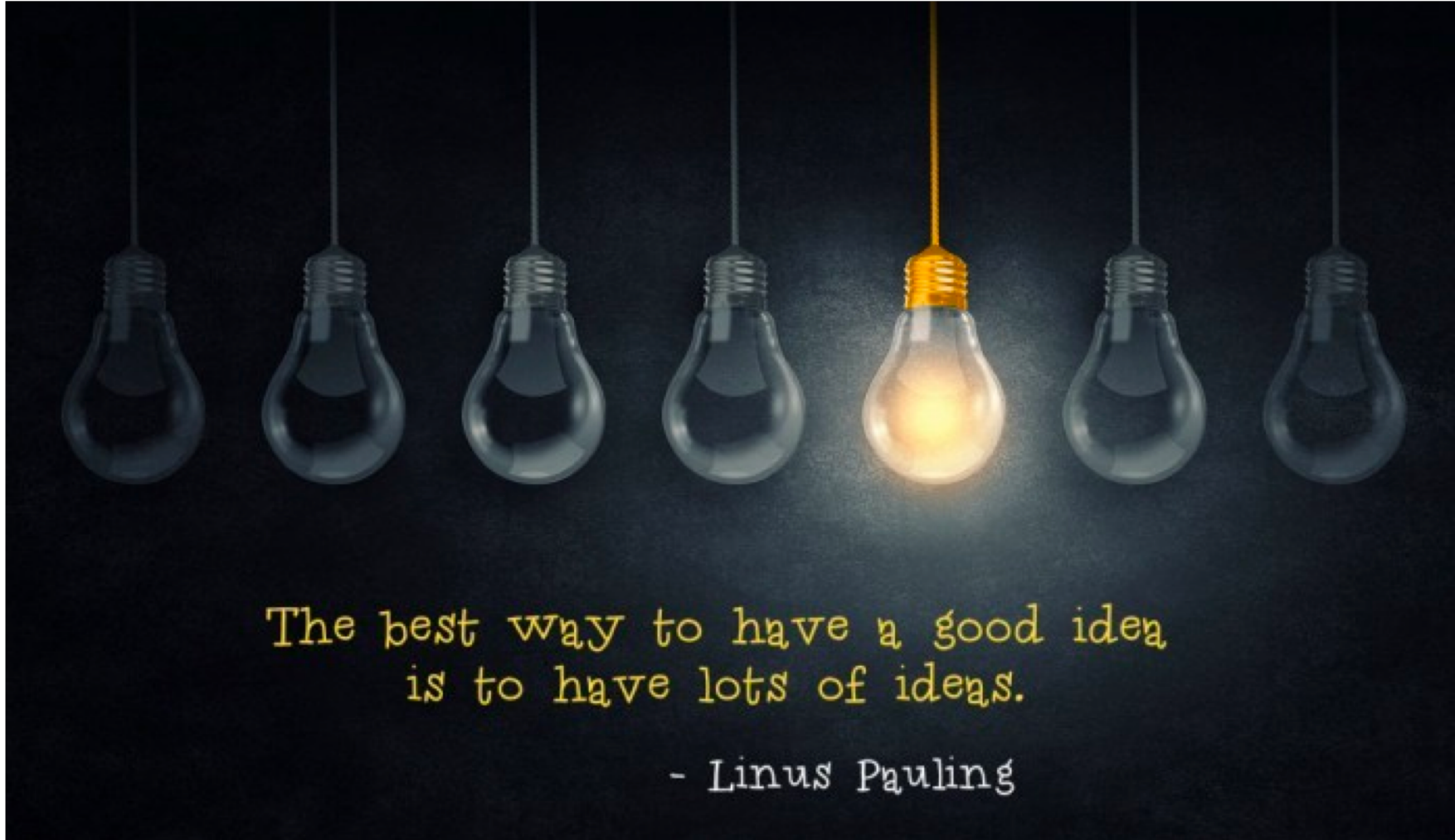


**Group 2** was told to only make one

Vs.



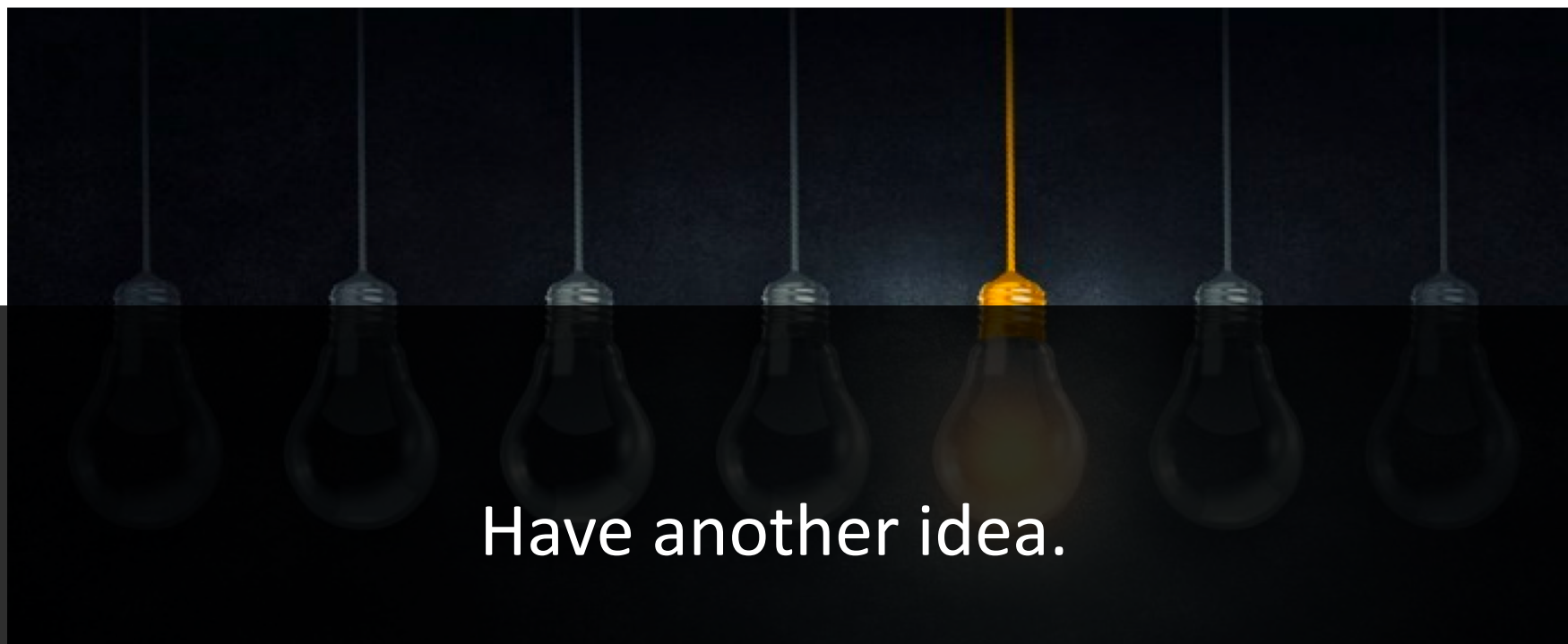
Coming up with the perfect idea can be intimidating



Only rule of brainstorming: **No criticism**



If you HATE someone's idea, what should you do?



# Brainstorm 10 Domains you care or know about.

NBA



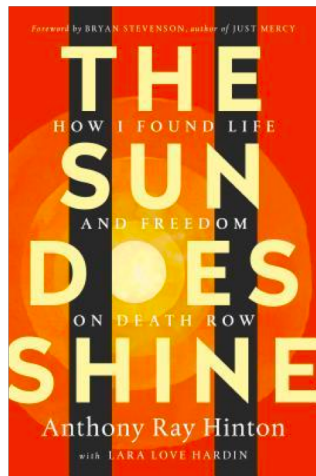
Make-up



Films



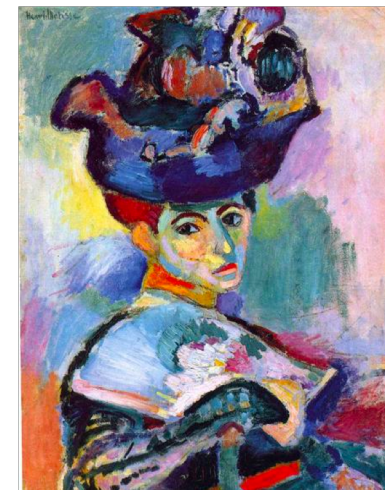
Books



Coffee Shops in NYC



Paintings



# Brainstorm types of media

images



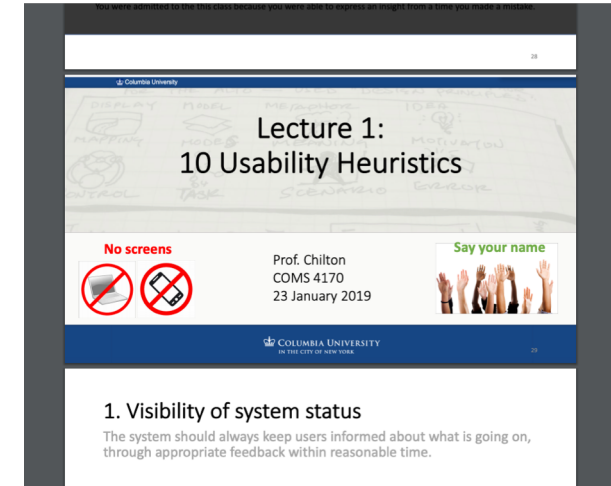
videos



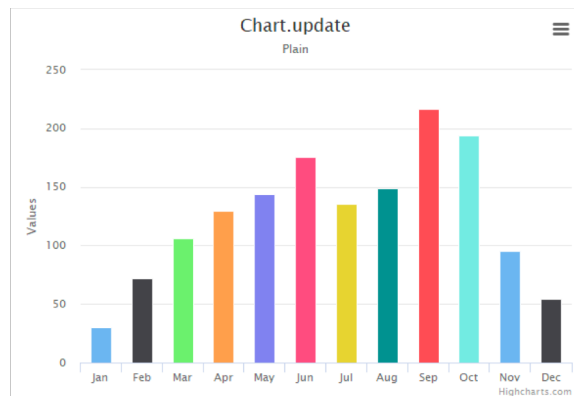
gifs



pdfs



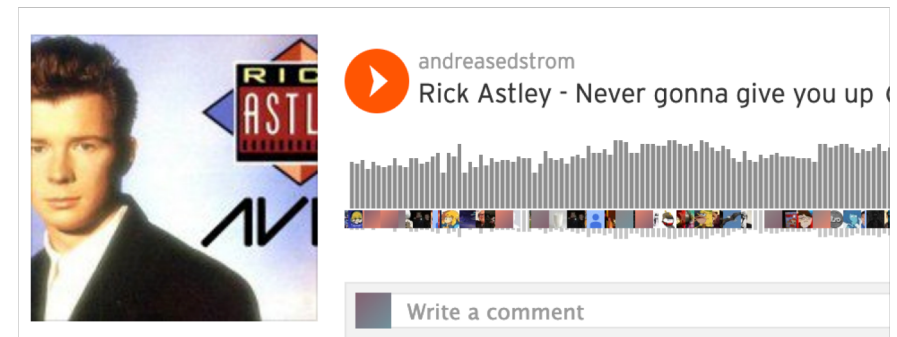
charts



maps



audio





# Brainstorm More Specific Goals

Domain:

World peace

Domain:

Save the planet

Domain:

Improve  
Education

# Brainstorm Specific goals for **education**

What **person**

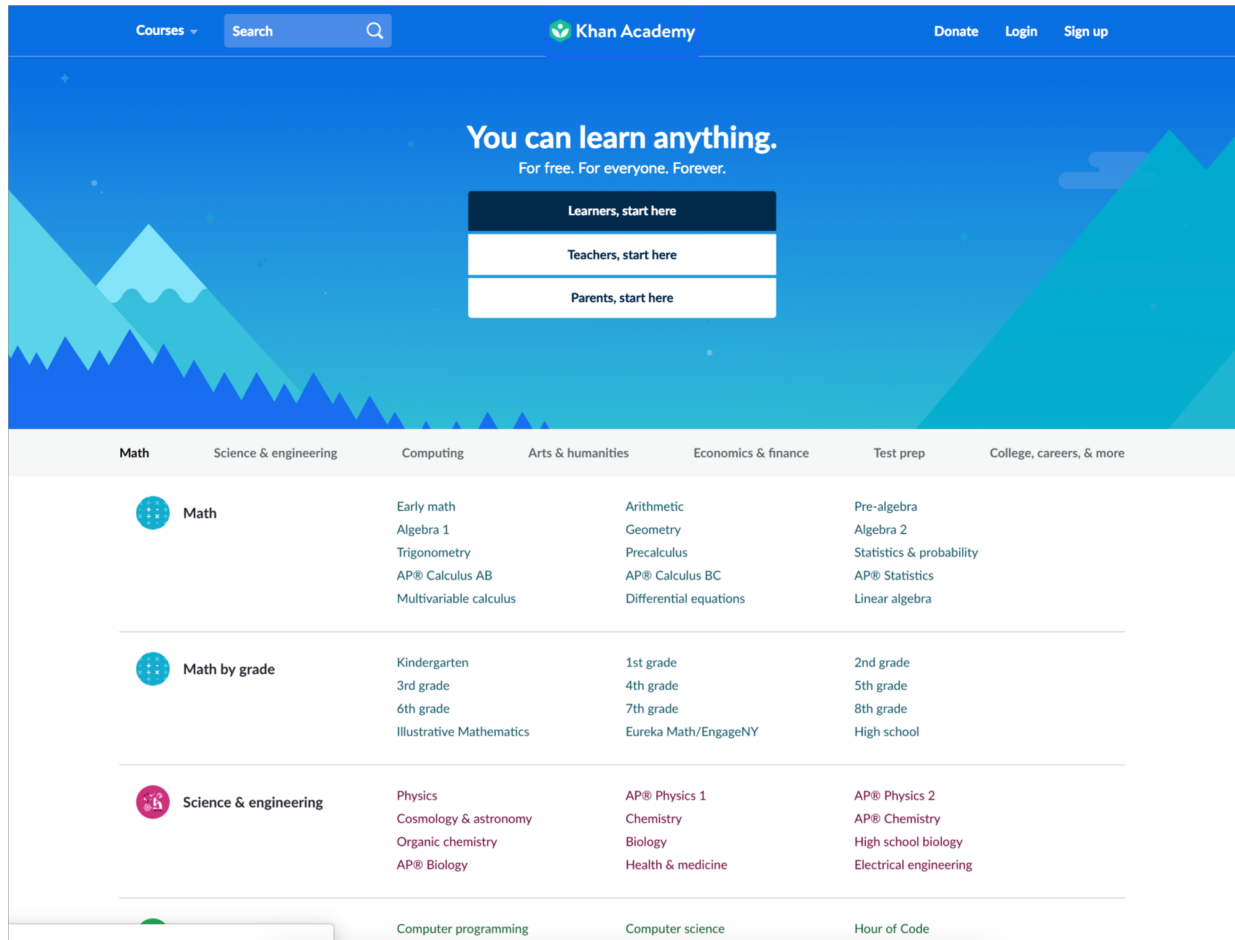
Uses what **media**

And has what **interaction** with it

To achieve what **goal**?

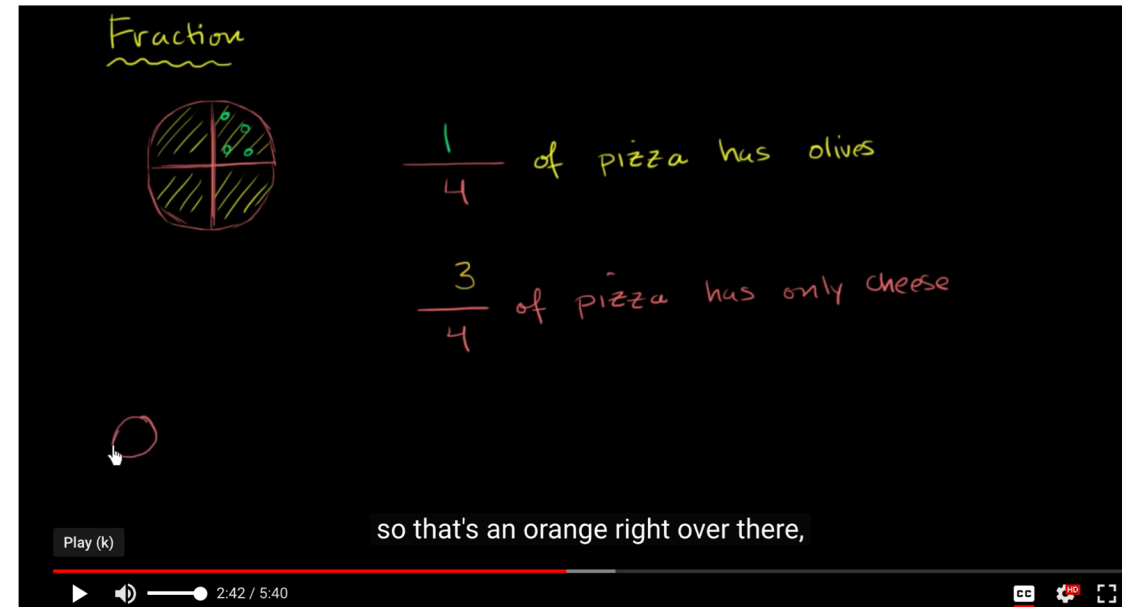
What's one thing somebody else said  
that you didn't think of?

# Khan Academy



The screenshot shows the Khan Academy homepage. At the top, there is a navigation bar with 'Courses', a search bar, the Khan Academy logo, and links for 'Donate', 'Login', and 'Sign up'. The main content area features the slogan 'You can learn anything. For free. For everyone. Forever.' and three buttons: 'Learners, start here', 'Teachers, start here', and 'Parents, start here'. Below this is a horizontal menu with categories: Math, Science & engineering, Computing, Arts & humanities, Economics & finance, Test prep, and College, careers, & more. The 'Math' category is expanded, showing a grid of subjects: Early math, Algebra 1, Trigonometry, AP® Calculus AB, and Multivariable calculus; Arithmetic, Geometry, Precalculus, AP® Calculus BC, and Differential equations; Pre-algebra, Algebra 2, Statistics & probability, AP® Statistics, and Linear algebra. Below the grid are sections for 'Math by grade' (Kindergarten to High school) and 'Science & engineering' (Physics, Chemistry, Biology, Health & medicine, and AP® courses). At the bottom, there are links for 'Computer programming', 'Computer science', and 'Hour of Code'.

Started as:



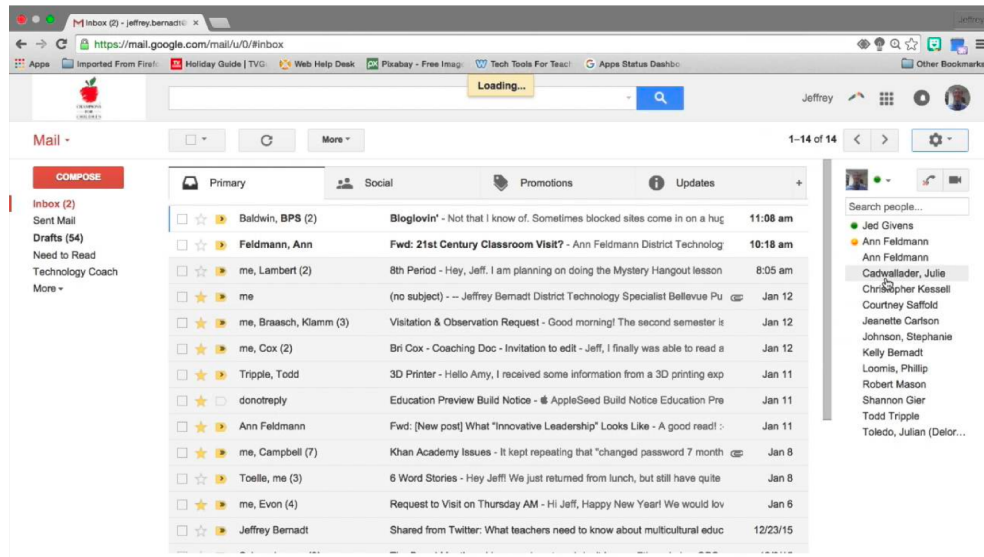
The screenshot shows a video player with a black background. At the top, the word 'Fraction' is written in yellow cursive. Below it is a hand-drawn diagram of a pizza divided into four equal quadrants. The top-right quadrant is shaded green and contains two small green circles representing olives. The bottom-left quadrant is shaded red and contains two small red circles representing cheese. To the right of the pizza, the text ' $\frac{1}{4}$  of pizza has olives' is written in yellow, and ' $\frac{3}{4}$  of pizza has only cheese' is written in red. At the bottom of the video frame, there is a play button, a progress bar showing 2:42 / 5:40, and a 'Play (k)' button. Below the video frame, the text 'so that's an orange right over there,' is visible.

Videos to teach his niece fractions

Summary

## Goal 1

# Build websites that suit the needs and abilities of users



## 1. Display information

## 2. Design interactions

# ...that allow users to accomplish a goal

## Goal 2

When the needs and abilities of users are unclear, design systems by **learning from iteration** and experimentation.


**Part 3: Editing the Party Planning Committee**

The interface to edit the party planning committee (PPC) is a drag and drop direct manipulation interface as described below.

- The PPC UI needs to display two lists:
  - a list of all the [employees seen here](#), and
  - a list of people on the party planning committee
- In its default state, the party planning committee list must have a div at the top of the list to serve as a drop target.
- Using JQuery Draggable and Droppable, the PPC list to the head of the of the PPC list, and must also be true: names from the PPC list. This must be implemented in the Module 3 assignment.
- To cue that an element is draggable, its background turns light yellow, and the background turns light blue when it is being dragged.
- While the item is being dragged, the background turns light blue, and the background turns light yellow when it is being dropped.
- While the item is being dragged, it should have a shadow.
- While the item is being dragged, the background turns light blue.
- When the item is dragged over the drop target, the background turns light yellow.
- If an item is "dropped" anywhere other than the drop target, the background turns light blue.

Note:  
When the user toggles between the Logging Sales and Party Planning Committee, the PPC list should be stored in a javascript variable that is shared between the two pages. However, for this implementation, it is not necessary to do this.

Please submit your HTML, CSS, and JS files, a



Keep a list of the  
party planning committee

Clear needs, abilities, goal

Unclear needs, abilities, goal

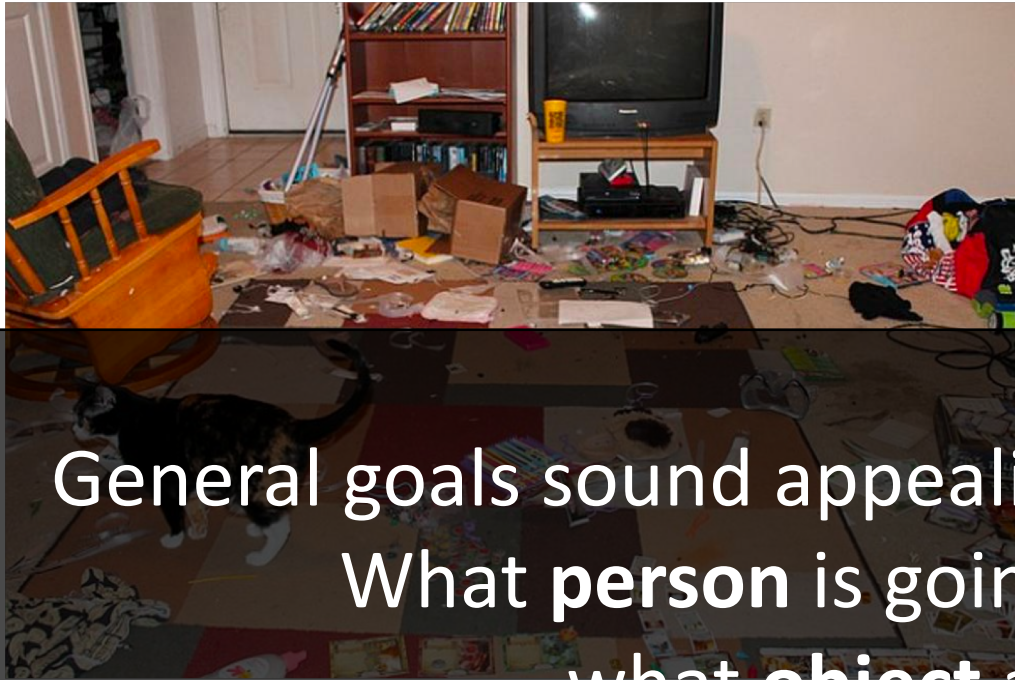
# Final Project (50% of your grade)

- Build a **web** application
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# General vs. Specific Goals

General Goal:  
“Clean the house.”



Specific Goal:  
“Fold that basket of laundry.”

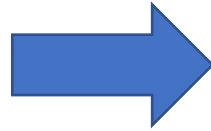


General goals sound appealing, but specific goals are actionable:  
What **person** is going to execute what **action** on  
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If you start general, you may never start.

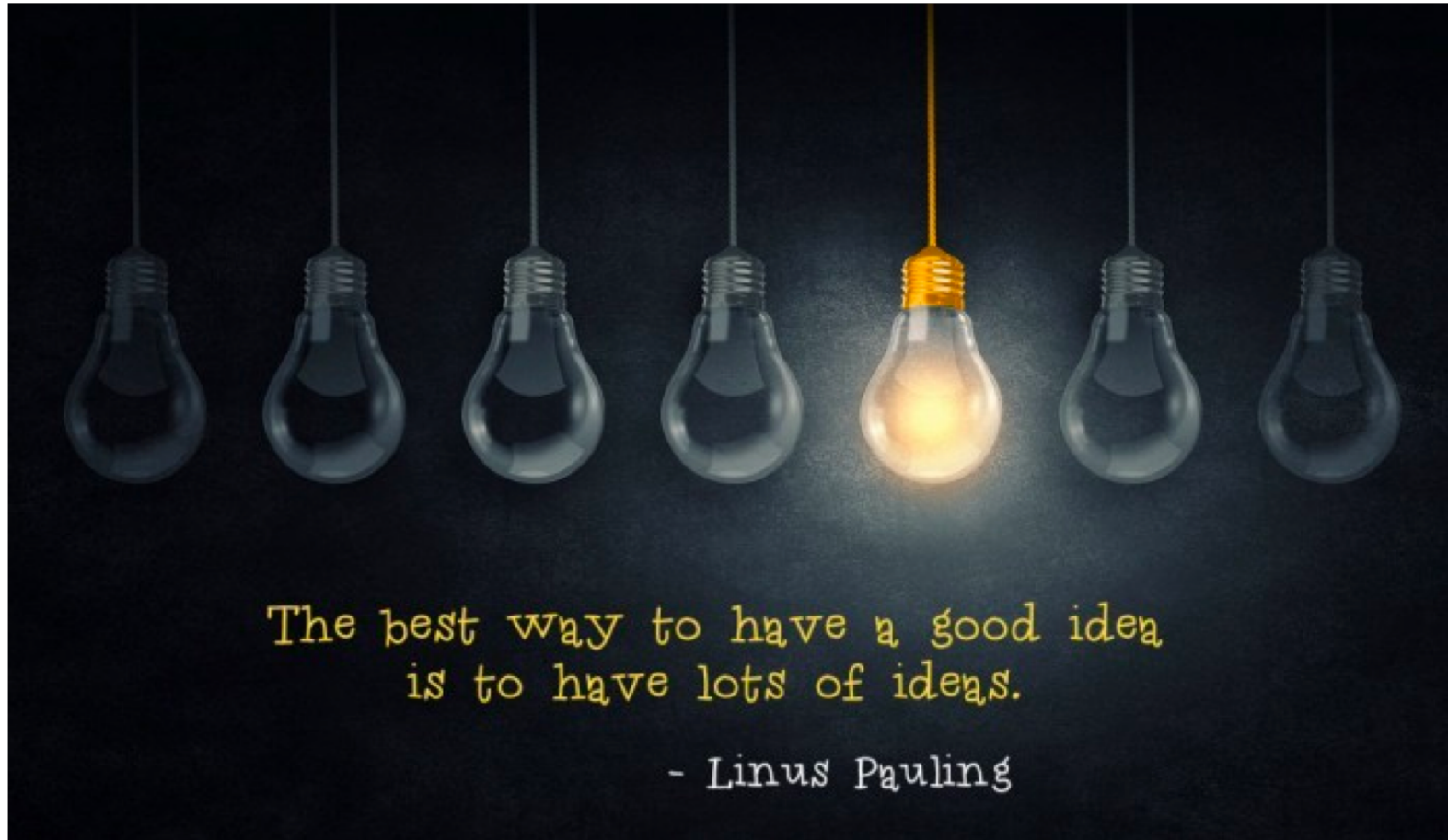


Harvard students  
looking each other's dorm,  
major and relationship status



If you start specific, you can usually generalize later.

# Brainstorm many ideas before picking one



Save criticism for later.  
It impedes the process of having  
more ideas

# Homework 9 due Friday

Brainstorming:

- Domains
- Media usage in those domains
- Specific applications

Feel free to ask friends, staff, work together

Don't forget the participation form!