

VIRTUAL CAMPUS DESIGN CHALLENGE

COVID-19

When: April 4, 2020 - April 6, 2020

Where: Online

RSVP at <https://bit.ly/design-challenge-rsvp>



Design Project

No other screens



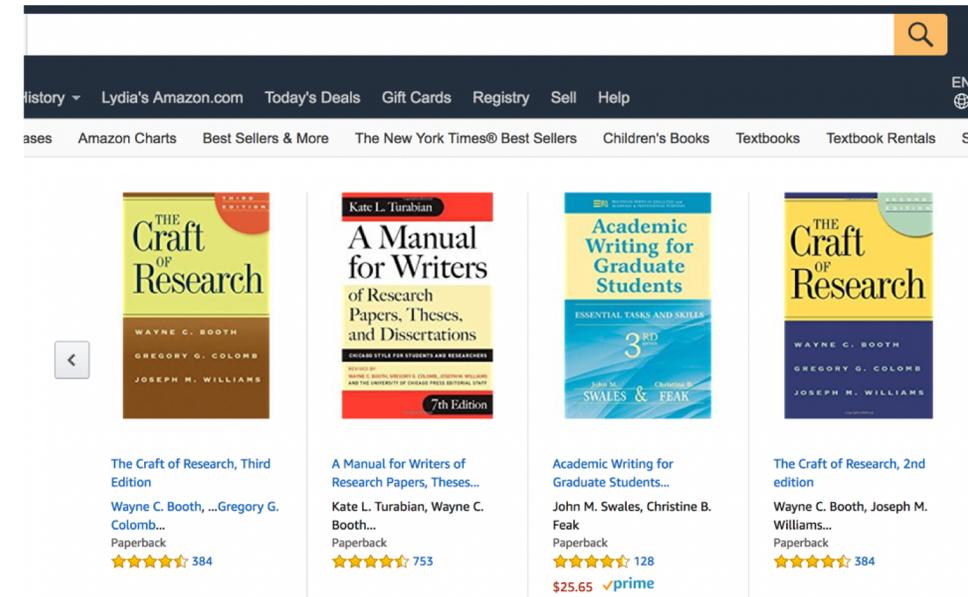
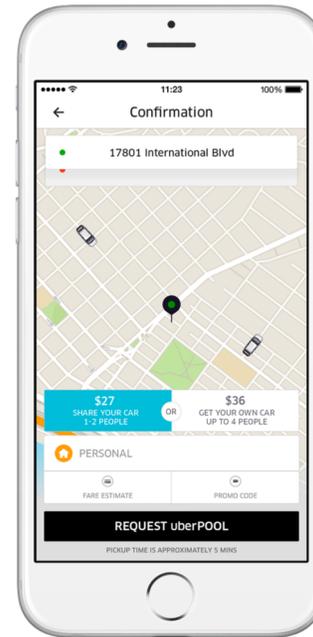
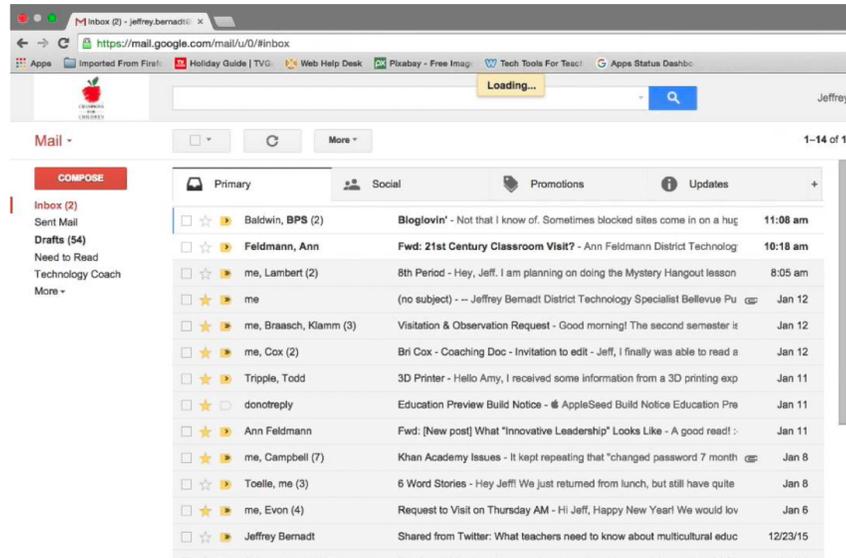
Prof. Lydia Chilton
COMS 4170
27 March 2020

Say your name



Homework 7 is a big
achievement!

The main goal of many websites is to interact with data.



CRUD: Operations for interacting with a database

Create

New Message

To

From Lydia Chilton <chilton@cs.columbia.edu> ▾

Subject

Hey dude!

 What's on your mind, Lydia?

Add title

(No title)
7 - 8pm

Event Reminder Appointment slots

Feb 28, 2018 7:00pm - 8:00pm Feb 28, 2018

MORE OPTIONS

Read

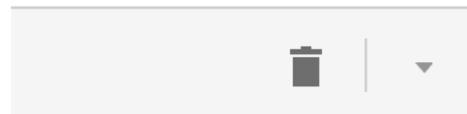
| | |
|------------------|--|
| Baldwin, BPS (2) | Bioglovin' - Not that I know of. Sometimes bi |
| Feldmann, Ann | Fwd: 21st Century Classroom Visit? - Ann |
| me, Lambert (2) | 8th Period - Hey, Jeff. I am planning on doing |
| me | (no subject) - -- Jeffrey Bernadt District Techr |



Update

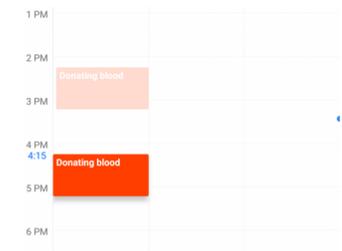


Delete



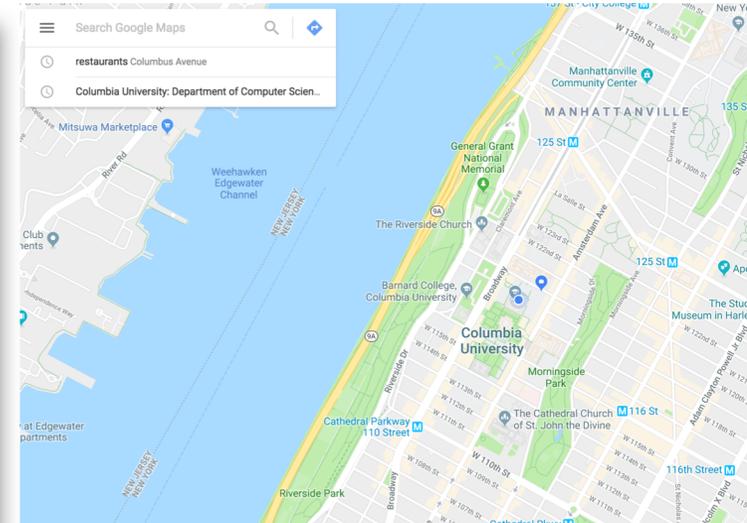
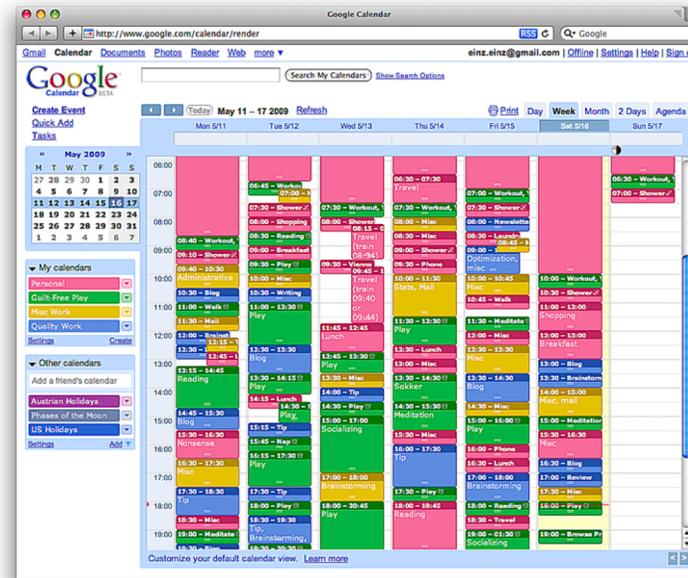
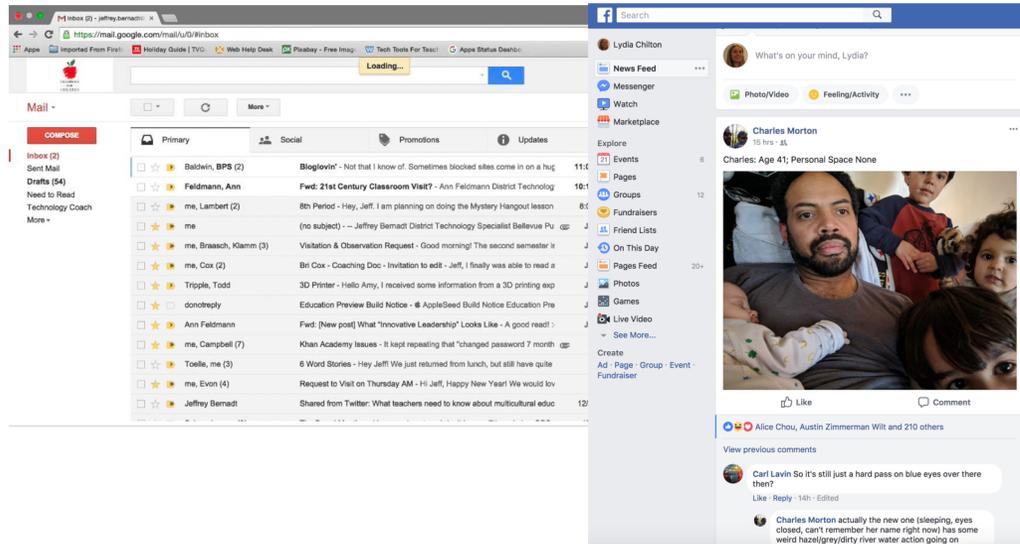
Delete Post?

Are you sure you want to delete it?



4170

From a back-end perspective Database-backed websites are very similar.



But they serve different data and different information needs

Homework 7 examples:

Our Mission:
Allow castle enthusiasts and prospective travelers to find and learn more about exciting castles around the world!



The Alcázar of Seville
Spain



Alcázar of Segovia
Spain



Moszna Castle
Poland



Bon Appétit! Time to Dine

Home Create

Enter your restaurant search here

Welcome! Feeling homesick? Hungry? Bored?
Peruse our selection of NYC-based French restaurants for pure deliciousness - satisfaction guaranteed!

10 Most Recent Entries:



Les Enfants de Boheme

Cozy, urban cafe with wall murals & locally sourced French bites, plus weekend brunch & happy hours.



LĒNA

Wine & Cocktail Bar - a cozy modern spot in LES. Dramatic décor, candlelit French music and a calm atmosphere take you from the hub of NYC to the hearth of nostalgic Basque region of France.



La Sirène-Soho

Casual bistro serving traditional Southern French cuisine made with seasonal ingredients.



The Playlist

The Playlist is a collection of rappers and their best songs; songs that are not just worthy of *our own* playlist, but worthy of *the* Playlist.

Kendrick Lamar



Cardi B



Ty Dolla Sign



XXXTentacion



J. Cole



This website serves the purpose for basketball fans to search for their favorite NBA stars and check/modify their stats.



Alex Poythress



Wayne Selden



Ashton Hagans



Nicolas Claxton



Jake Layman



Amar Sylla



Dorian Finney-Smith



Ky Bowman



Paul Reed

Top Pound-for-Pound UFC Fighters

This platform allows UFC fans around the world to create a common source of information about their favourite fighters.



Conor McGregor **Men's #9**
Conor Anthony McGregor (born 14 July 1988) is an I...



Jon Jones **Men's #1**
At age 23, with his victory over Maurício Rua in 2...



Welcome to Runner's Quest! Become a member of our online community by picking a couple of trails you want to explore, and inviting your Runner's Quest teammates to experience them with you. We are your global team that is there to cheer you on.



Shut-In Trail



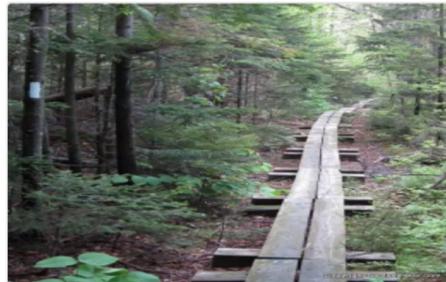
Dale Ball Trails



Colorado Trail



Palo Duro Canyon State Park



El Moro Canyon Loop



The Long Trail



Alta Via 1



Teton Crest Trail



Prenj Massif to Vran Mountain on the Via Dinarica

Welcome to Rich's Recipes!

A site full of delicious recipes for those who want to cook more at home.

Spicy Garlic Eggplant



[See Recipe](#)

Spicy Orange Beef



[See Recipe](#)

Hot and Sour Soup



[See Recipe](#)

Egg Drop Soup



[See Recipe](#)

Dry Fried Green Beans



Beef Chow Fun



Black Pepper Chicken Stir Fry



Sichuan Boiled Beef

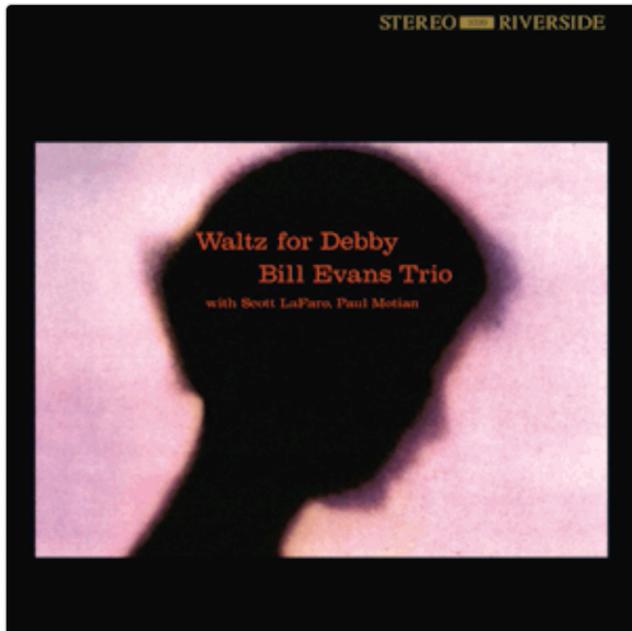


Welcome to the Jazz Archives database

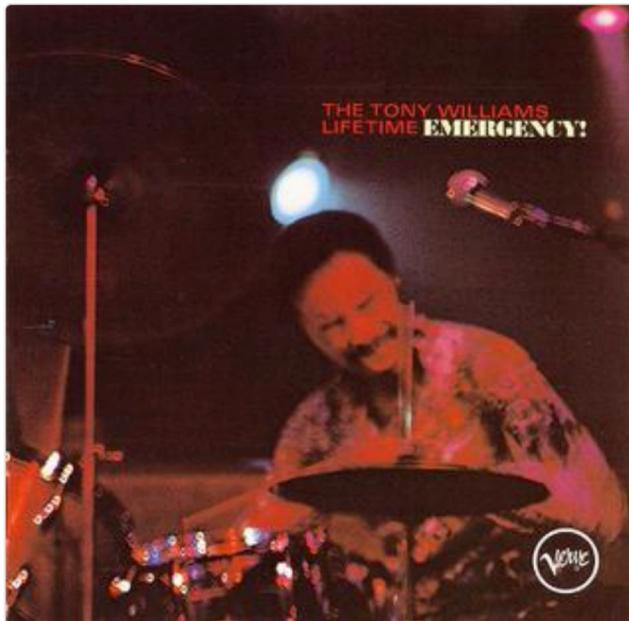
Here you can explore classical jazz albums using our friendly search bar or just diving into our most recent additions.

- Did you hear a **jazz record** and want to know more?
- Do you like a **musician** and want to know other records where they play?
- Do you want to start listening to jazz and **don't know where to start**?

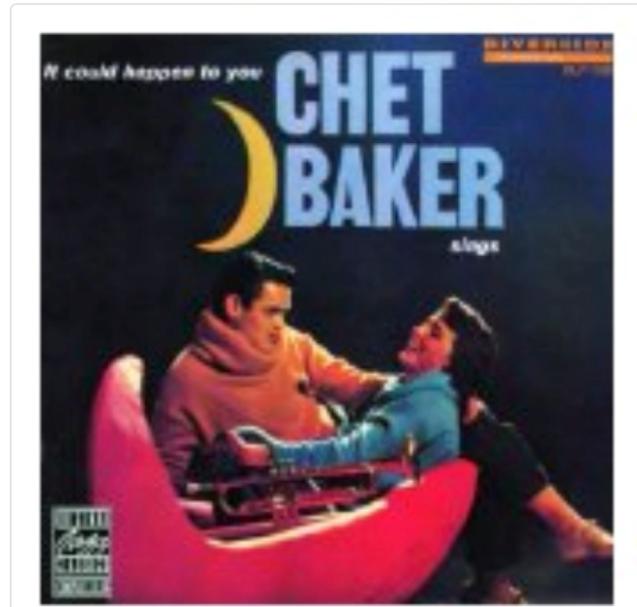
You've come to the right place!



Waltz For Debby (1962)
Bill Evans Trio



Emergency! (1969)
The Tony Williams Lifetime



It Could Happen To You (1958)
Chet Baker

You are now a user interface programmer!



Given specifications, you can create interactions

Part 1 – Usable Functionality:

1. Menu/Navigation.

- For consistency, all the templates should be rendered with a shared template that contains a navbar.
- The navbar should contain:
 - A home link (at the "/" route)
 - A text box to enter a search query and a "go" button (at the "/search" route). When the user presses enter on the search bar it should also "go".
 - A create link (at the "/create" route)

2. Home. The home link should render at the "/".

- It should contain a one sentence summary of the mission of the site. This mission should make it clear who the intended user is and what specific goal it helps them achieve.
- It should show the latest 10 entries added to the database to entice the viewer to click on something and start exploring.
- Each of the 10 entries should be formatted as a Bootstrap Card that contains an image and the title of the item. If there is some other essential field, it can show that too, but it should not show all the data fields – it's meant to be a summary.
- When you click the image, it should take you to the page for viewing the item.

3. Search. When the user presses "go" on the search link (or presses enter), it should search for the items and return a list of all matching results.

- Flexibility.** The query must do substring matching that is not case sensitive on the title and one other text field.
- Feedback.** In addition to returning the results, the page must say how many results there are. If there are zero results, you don't need to do anything other than say there are zero results.
- Feedback.** When you present the results to the user, the bit that matches the substring must be easy to scan for, according to gestalt principles.

4. State/Options/Transitions. On the template for creating a new database item, you will still have input boxes for all the fields the user must input. In addition:

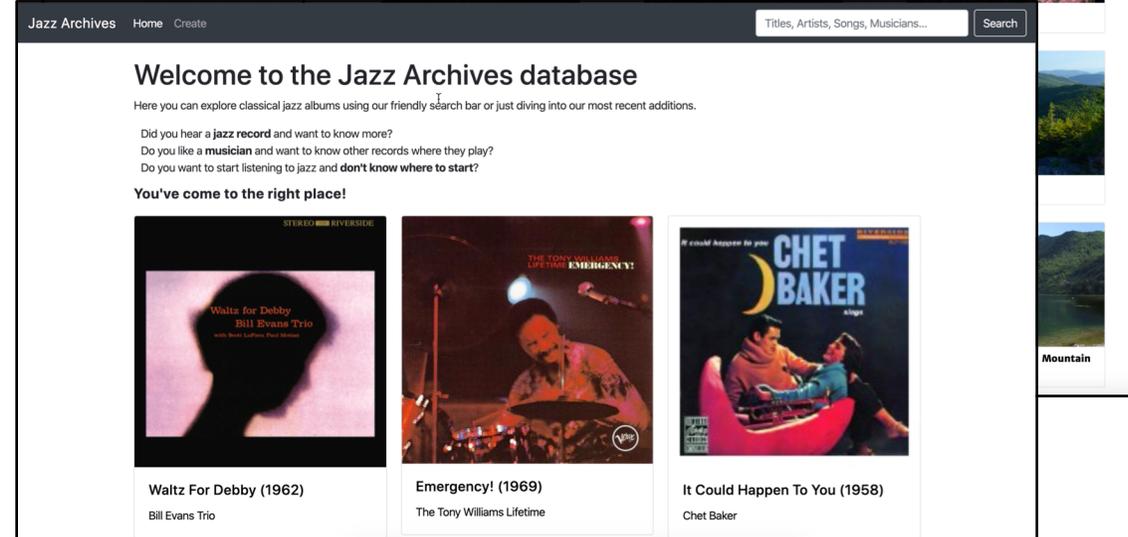
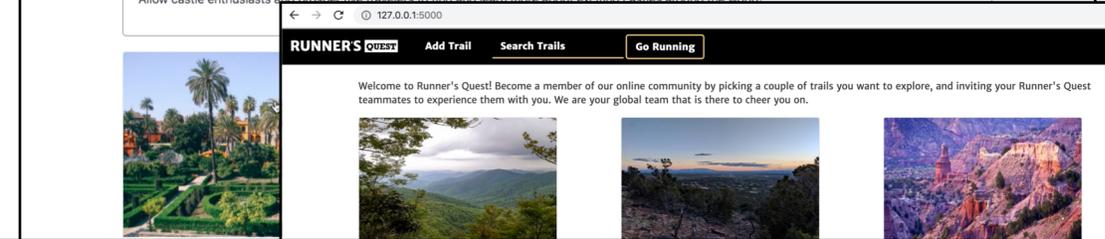
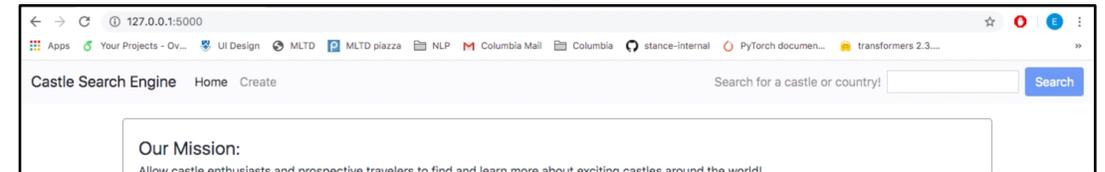
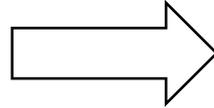
- Error Detection.** When creating a new database entry, there must be error handling on all the fields. If the field must be a number, then ensure it is a number. At the very least, you can check that the field is not blank (remember to trim the text to test if it's blank). Design the error feedback so that it directs the user's attention to the right place to correct the error.
- Transitions.** After the user presses "submit" and the data successfully submits, allow the user to either view the item or enter a new item.
 - At the top of the page it should say, "New item successfully created." With a button or link that says "see it here" (or words to that effect). This links to a page for viewing the item.
 - Additionally, the input boxes should clear and the focus should be placed on the first text box so the user is ready to submit another item.

5. State/Options/Transitions. There will no longer be a separate /edit/<id> route. Editing will now be done in /view/<id>

- For each field that can be edited, create a small edit icon next to it. (at least two fields must be editable – including one that involves changes the text)
- State Change.** When the user presses the "edit" icon the field to be edited, it must immediately turn editable with a "submit" and "discard changes" option.
- Options.** The chosen text must disappear, and in its place, there should be a textbox or text input with the text they way to edit, with the focus in the input field.
- Transitions.** After the users presses "submit" or "discard changes" the page should go back to how it looked when they were viewing it (and not editing it).
- Note: If your "update" was to add a review to a list, you don't need to populate the textbox with any text. You may call it "add review" instead of "edit" if you like.

6. User control and freedom (Undo).

- The user should no longer be able to delete entire database items from the search page.



The next step is to become a user interface designer.

Part 1 – Usable Functionality:

1. Menu/Navigation.

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- The navbar should contain:
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You identify the user

2. Home.

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- Each of the 10 entries should be formatted as a Bootstrap Card that contains an image and the title of the item. If there is some other essential field, it can show that too, but it should not show all the data fields – it's meant to be a summary.
- When you click the image, it should take you to the page for viewing the item.

You identify a problem

3. Search.

- When the user presses "go" on the search link (or presses enter), it should search for the items and return a list of all matching results.
- Feedback. When you present the results to the user, the bit that matches the substring must be easy to scan for, according to gestalt principles.

You find the solution

4. State/Options/Transitions.

- On the template for creating a new database item, you will still have input boxes for all the fields the user must input. In addition:
 - Error Detection.** When creating a new database entry, there must be error handling on all the fields. If the field must be a number, then ensure it is a number. At the very least, you can check that the field is not blank. Remember to provide a message to the user if there is an error. If possible, place the error message directly next to the input field. When the user presses "submit" and the data successfully submits, allow the user to either view the item or enter a new item.
 - At the top of the page it should say, "New item successfully created." With a button or link that says "see it here" (or words to that effect). This links to a page for viewing the item.
 - Additionally, the input boxes should clear and the focus should be placed on the first text box so the user is ready to submit another item.

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- There will no longer be a separate /edit/<id> route. Editing will now be done in /view/<id>
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- Note:** If your "update" was to add a review to a list, you don't need to populate the textbox with any text. You may call it "add review" instead of "edit" if you like.

What is design?

*“Design is a plan for arranging elements
to accomplish a particular purpose.”*

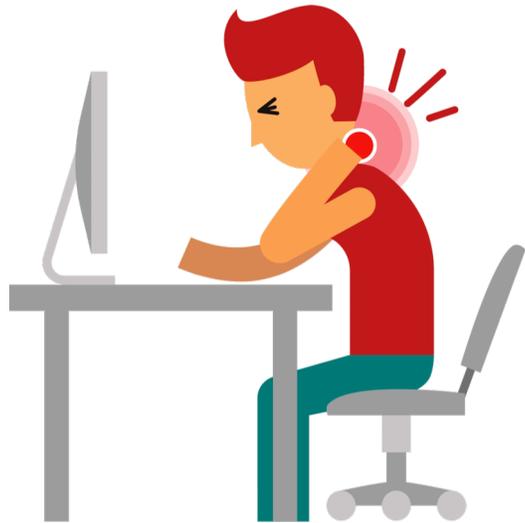
– Charles Eames



Design is **not** a magical leap where a brilliant idea comes from no where.



Design is a iterative progress where you work with users to identify and solve their problems.



Sitting all day hurts!

❌ Leaning forwards

No support for curve of lumbar spine

Excessive strain on lumbar discs

Don't perch on front of seat



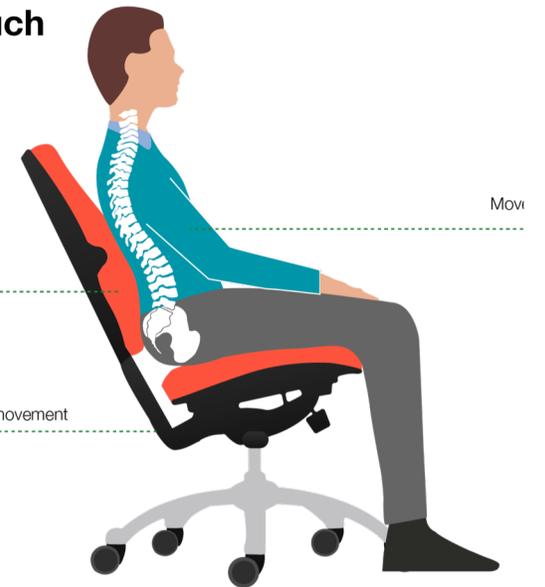
Why does it hurt?
How do people sit?

✅ Good slouch

for ergonomic chairs with floating tilt

Back remains supported

Floating seat tilt gives freedom of movement



What does good sitting look like?

Identify

Users needs:

For people who sit all day in an office, alleviate back pain by designing a chair that supports the lower back.

Test solutions on users:



Let me tell you a story

This is Nadia. She's 11. She lives in Houston.



Nadia is struggling with fractions at school

 Name: _____
Date: _____

Fraction Test: Review of Fraction Concepts

Compare the fractions (> or < or =)

1 $6\frac{2}{3}$ $\frac{3}{8}$ 2 $9\frac{3}{4}$ $\frac{4}{8}$ 3 $\frac{8}{8}$ $\frac{11}{4}$

4 $\frac{3}{8}$ $4\frac{1}{3}$ 5 $\frac{12}{8}$ $\frac{5}{8}$ 6 $8\frac{5}{8}$ $8\frac{5}{8}$

Calculate (write in smallest terms)

7 $1\frac{2}{3} \times 2\frac{2}{3} =$ 8 $8\frac{5}{3} - 5\frac{2}{3} =$ 9 $4\frac{1}{4} - 2\frac{3}{4} =$

10 $7\frac{2}{3} - 4\frac{4}{3} =$ 11 $9\frac{2}{3} + 3\frac{2}{3} =$ 12 $7\frac{1}{3} + 3\frac{1}{3} =$

13 $2\frac{5}{8} \times 1\frac{2}{8} =$ 14 $2\frac{1}{8} \times 7\frac{6}{8} =$ 15 $4\frac{2}{3} \times 3\frac{1}{3} =$

16 $4\frac{3}{3} \times 2\frac{4}{3} =$ 17 $9\frac{5}{3} - 7\frac{2}{3} =$ 18 $6\frac{1}{3} + 9\frac{1}{3} =$

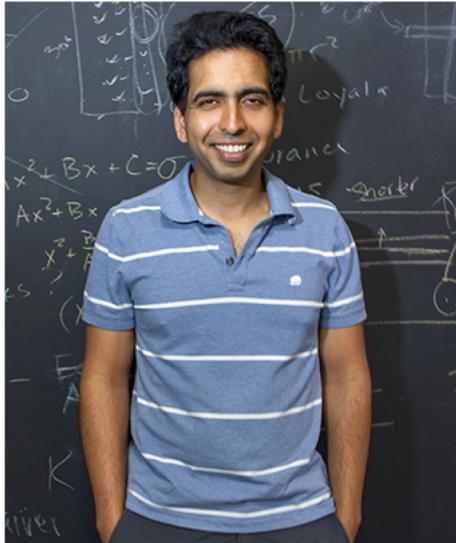
Simplify the fractions

19 $\frac{9}{12} =$ 20 $\frac{13}{8} =$ 21 $\frac{12}{48} =$ 22 $\frac{11}{4} =$

23 $\frac{1}{12} =$ 24 $\frac{22}{8} =$ 25 $\frac{18}{24} =$

www.math.about.com Book 65

Her uncle wants to help, but he lives in NYC



Multiply $1\frac{3}{4} \cdot 7\frac{1}{5}$. Simplify your answer and write it as a mixed fraction.

$$1\frac{3}{4} = \frac{4 \cdot 1 + 3}{4} = \frac{7}{4}$$
$$7\frac{1}{5} = \frac{5 \cdot 7 + 1}{5} = \frac{36}{5}$$
$$\frac{7}{4} \cdot \frac{36}{5}$$

khanacademy.org

He uploads them to YouTube

This videos help Nadia. She aces the test!

Multiply $1\frac{3}{4} \cdot 7\frac{1}{5}$. Simplify your answer and write it as a mixed fraction.

$$1\frac{3}{4} = \frac{4 \cdot 1 + 3}{4} = \frac{7}{4}$$

$$7\frac{1}{4} \cdot \frac{36}{5}$$

$$7\frac{1}{5} = \frac{5 \cdot 7 + 1}{5} = \frac{36}{5}$$



Math test paper titled "Fraction Test: Review of Fraction Concepts". The test includes a name and date field, a large red "A+" grade stamp, and various fraction problems. The problems are:

Compare the fractions (> or < or =):

- $6\frac{2}{3}$ vs $6\frac{1}{3}$
- $9\frac{3}{4}$ vs $4\frac{1}{4}$
- $\frac{11}{8}$ vs $\frac{11}{4}$
- $\frac{10}{8}$ vs $4\frac{1}{2}$
- $\frac{12}{8}$ vs $\frac{10}{8}$
- $8\frac{1}{8}$ vs $8\frac{5}{8}$

Calculate (reduce to smallest terms):

- $1\frac{2}{3} \times 2\frac{2}{3} =$
- $8\frac{1}{2} - 5\frac{1}{2} =$
- $4\frac{1}{4} - 2\frac{2}{4} =$
- $7\frac{2}{3} - 4\frac{4}{3} =$
- $9\frac{2}{3} + 3\frac{1}{3} =$
- $7\frac{1}{3} + 3\frac{1}{3} =$
- $2\frac{5}{8} \times 1\frac{2}{8} =$
- $2\frac{1}{8} \times 7\frac{4}{8} =$
- $4\frac{2}{3} \times 3\frac{1}{3} =$
- $4\frac{1}{3} \times 2\frac{2}{3} =$
- $9\frac{5}{8} - 7\frac{2}{8} =$
- $6\frac{1}{3} + 9\frac{1}{3} =$

Put the fractions in order:

- $\frac{1}{3}$
- $\frac{20}{8}$
- $\frac{21}{8}$
- $\frac{11}{4}$
- $\frac{10}{8}$
- $\frac{18}{4}$

eggymath.com

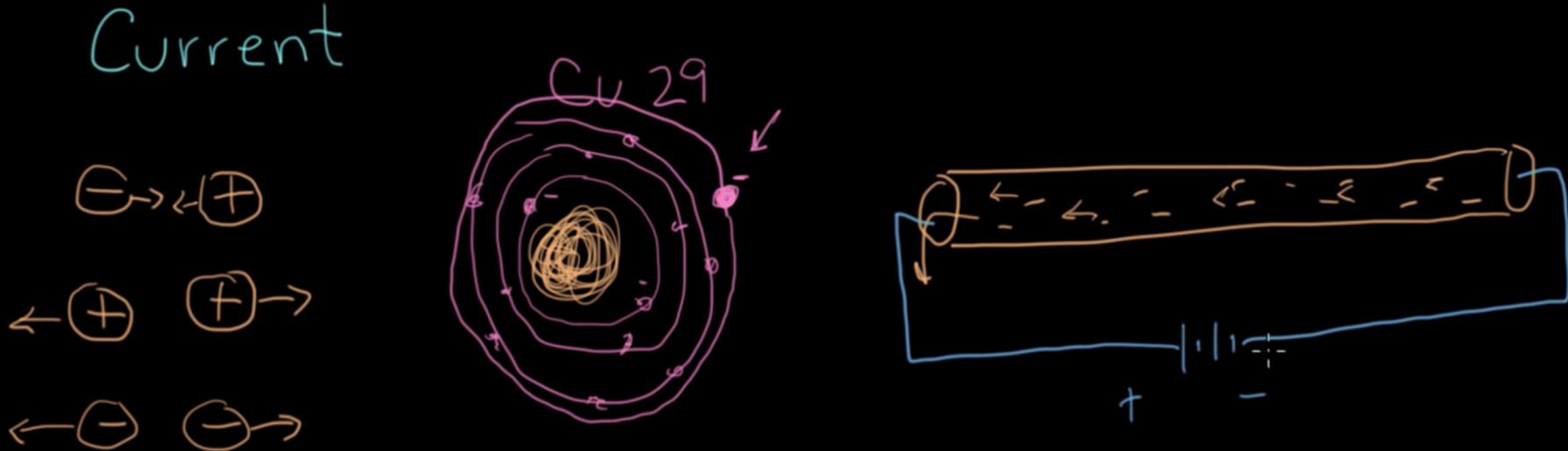
This video helps other students pass their fractions tests, too.

Multiply $1\frac{3}{4}$ $7\frac{1}{5}$. Simplify your answer and write it as a mixed fraction.

$$1\frac{3}{4} = \frac{4 \cdot 1 + 3}{4} = \frac{7}{4}$$
$$7\frac{1}{5} = \frac{5 \cdot 7 + 1}{5} = \frac{36}{5}$$
$$\frac{7}{4} \cdot \frac{36}{5}$$


Videos in this format help students learn other topics.

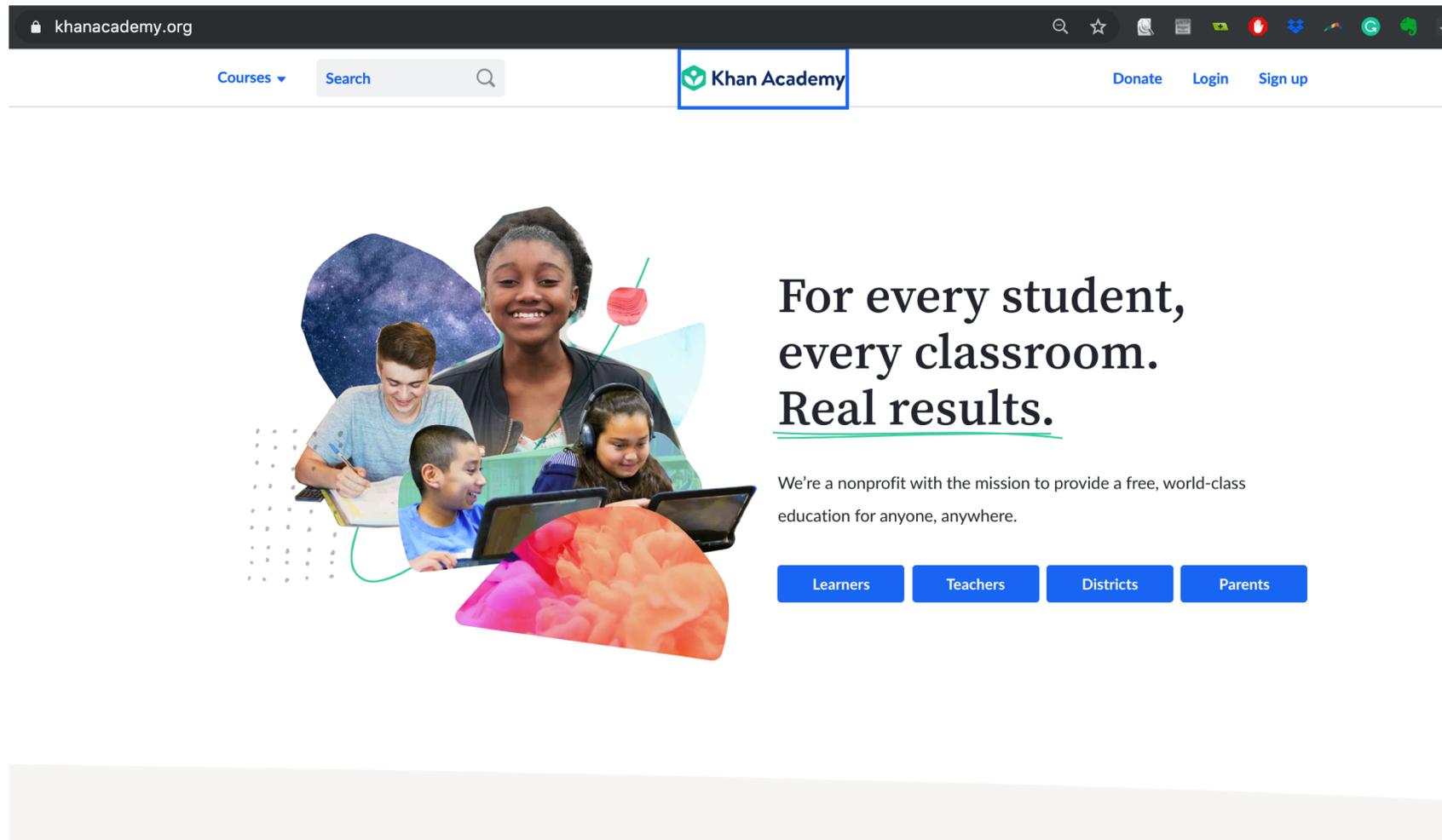
Current



The diagram consists of three main parts. On the left, there are three pairs of symbols representing current flow: a negative charge moving right and a positive charge moving left; a positive charge moving left and a positive charge moving right; and a negative charge moving left and a negative charge moving right. In the center is a hand-drawn Bohr model of a copper atom labeled 'Cu 29', showing a central nucleus with a scribbled orange interior and several concentric purple electron shells. On the right is a circuit diagram showing a battery with a '+' sign on the left and a '-' sign on the right. A blue wire connects the battery to a cylindrical resistor. Inside the resistor, dashed orange arrows point from right to left, indicating the direction of current flow.

here, an electron is gonna come out of this battery,

These videos became Khan Academy.



But it started by helping a **specific person** with a **specific need**



Nadia, age 11

Compare the fractions (or < or = or >):

1. $6\frac{2}{3}$ vs $6\frac{1}{3}$ 2. $9\frac{3}{4}$ vs $4\frac{0}{5}$ 3. $\frac{8}{8}$ vs $\frac{11}{4}$

4. $\frac{5}{8}$ vs $4\frac{1}{5}$ 5. $\frac{12}{8}$ vs $\frac{3}{5}$ 6. $8\frac{0}{8}$ vs $8\frac{0}{8}$

Calculate (reduce to smallest terms):

7. $1\frac{2}{3} \times 2\frac{2}{3} =$ 8. $8\frac{1}{3} - 5\frac{2}{3} =$ 9. $4\frac{1}{4} - 2\frac{2}{4} =$

10. $7\frac{2}{3} - 4\frac{4}{5} =$ 11. $9\frac{2}{3} + 3\frac{2}{3} =$ 12. $7\frac{1}{3} + 3\frac{1}{3} =$

13. $2\frac{5}{8} \times 1\frac{2}{8} =$ 14. $2\frac{1}{4} \times 7\frac{1}{8} =$ 15. $4\frac{2}{8} \times 3\frac{1}{3} =$

16. $4\frac{3}{8} \times 2\frac{4}{8} =$ 17. $9\frac{1}{2} - 7\frac{2}{3} =$ 18. $6\frac{1}{3} + 9\frac{1}{3} =$

Simplify the fractions:

19. $\frac{18}{24} =$ 20. $\frac{13}{8} =$ 21. $\frac{2}{45} =$ 22. $\frac{11}{4} =$

23. $\frac{1}{10} =$ 24. $\frac{22}{9} =$ 25. $\frac{18}{4} =$

www.math.about.com Score: 25

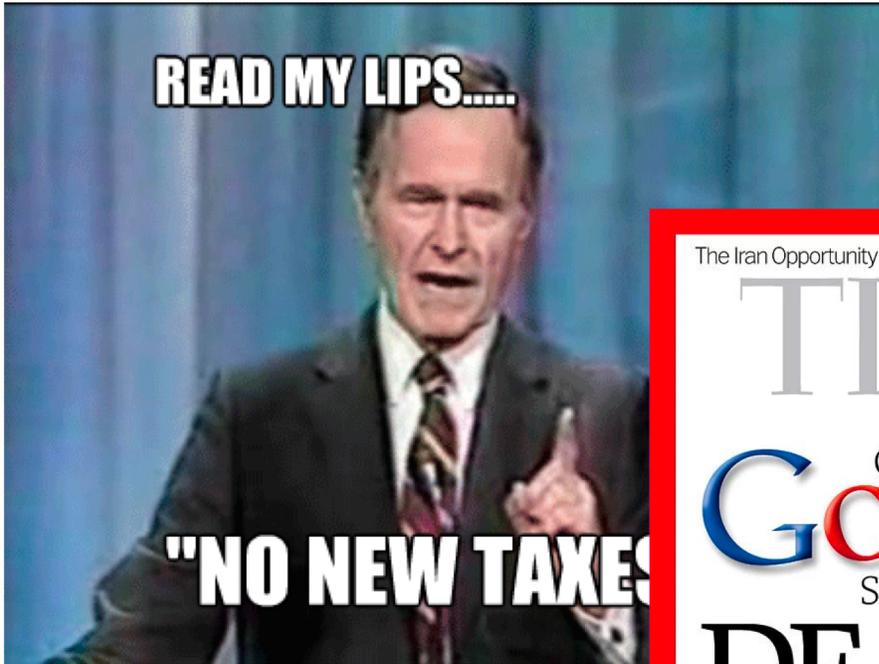
Ace this fractions test

Specific vs. General Needs

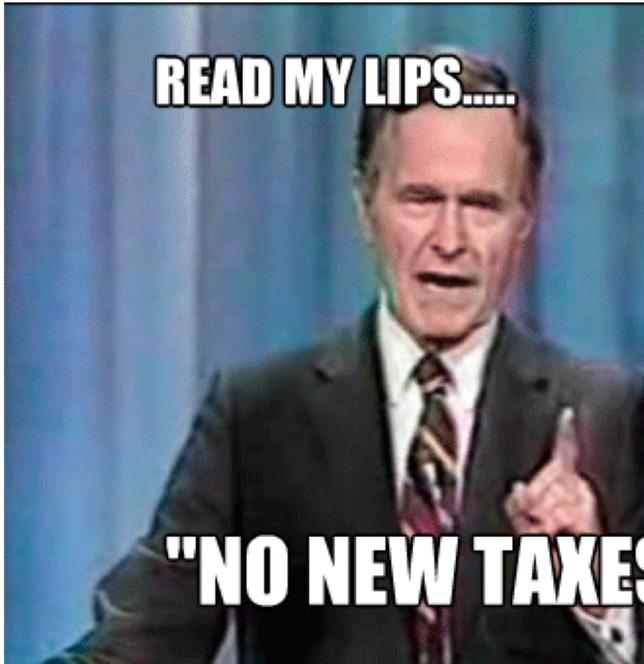
What are the kinds of things
Politicians, Beauty Queens, and Silicon Valley
say they will solve?



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.

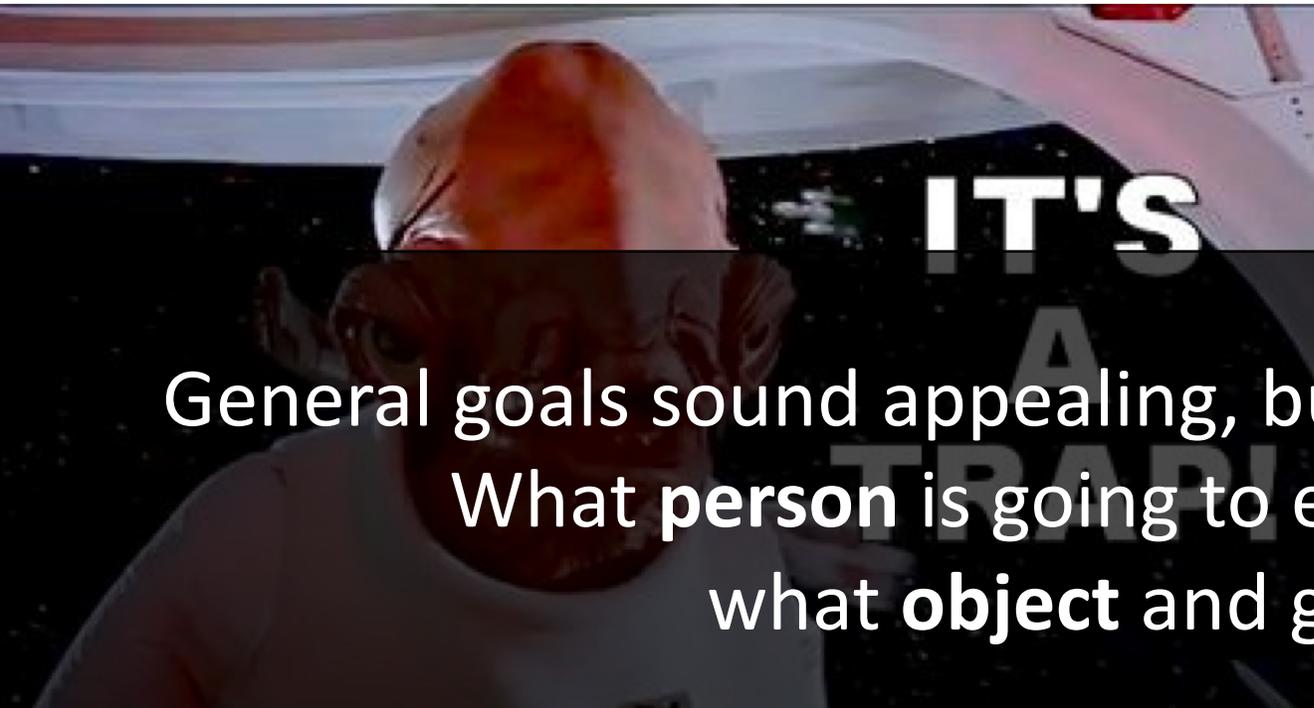
General Vs. Specific Goals

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



facebook

Social Networking

Harvard students looking
up dorm, classes,
relationship status

Ivy League
US Colleges
Everybody



If you start specific, you can usually generalize.

Read/send Email

No page reload
Never Delete

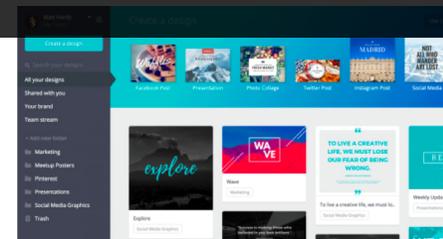
Chat
GDrive



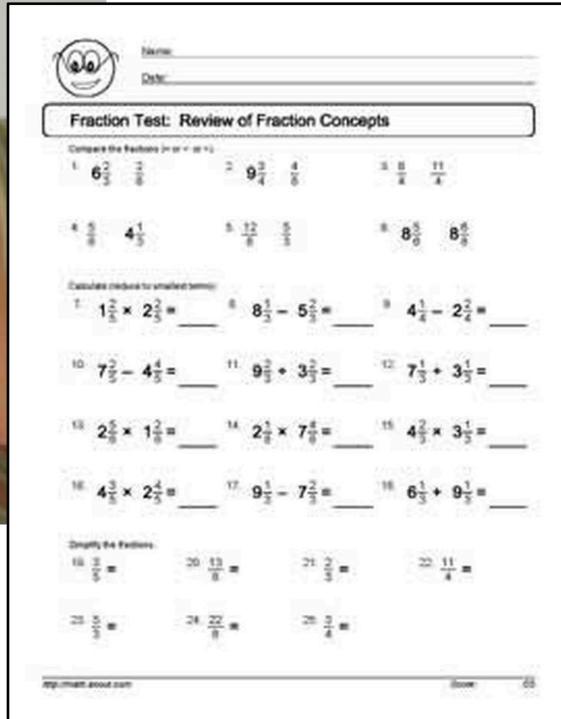
Graphic Design
For novices

High School
Yearbooks

Posters,
facebook flyers,



Teaching Nadia to ace her fractions test generalized to teaching everything to everyone.



For every student,
every classroom.
Real results.

We're a nonprofit with the mission to provide a free, world-class education for anyone, anywhere.

- Learners
- Teachers
- Districts
- Parents

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

A promotional advertisement for Dunder Mifflin Inc. featuring the cast of 'The Office' and stacks of paper. The ad includes the following text:

DUNDER MIFFLIN, INC.
PAPER COMPANY

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

NEW!

Exclusively from Quill.com!

Sale
34⁹⁹ per carton
#901-DMPC18501
Limit total: 3 cartons per customer.
Add'l total quantities \$39.99/carton
Reg. \$47.99

Buy Now

the office
THURSDAYS 9/8c

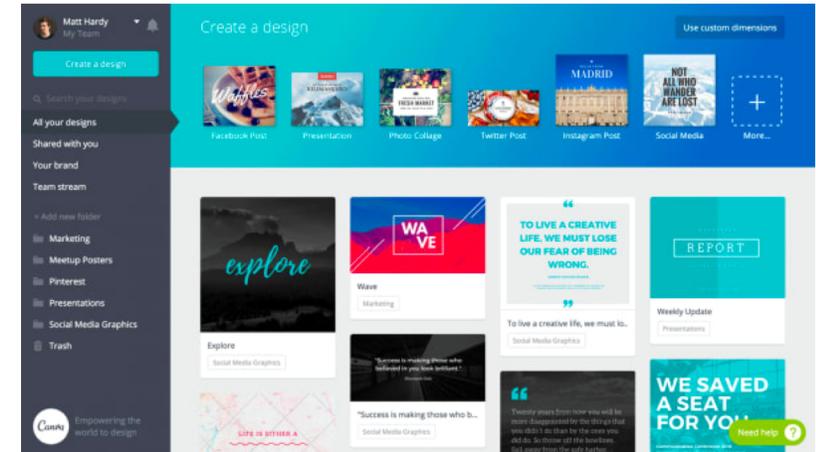
Offer good through 1/31/12

* 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.

Design Project

Challenge:

- Build a **web** application
- That allows a user to **interact** with media
- Within a **domain of your choosing**
- To help a user learn an introductory topic **interactively**
- And help them assess themselves with a **quiz**.
- And keep learning through **feedback** from the quiz.
- In under **10 minutes** total

Click around the classroom to learn the signs!



Hover your mouse
over the classroom
to see where to click.

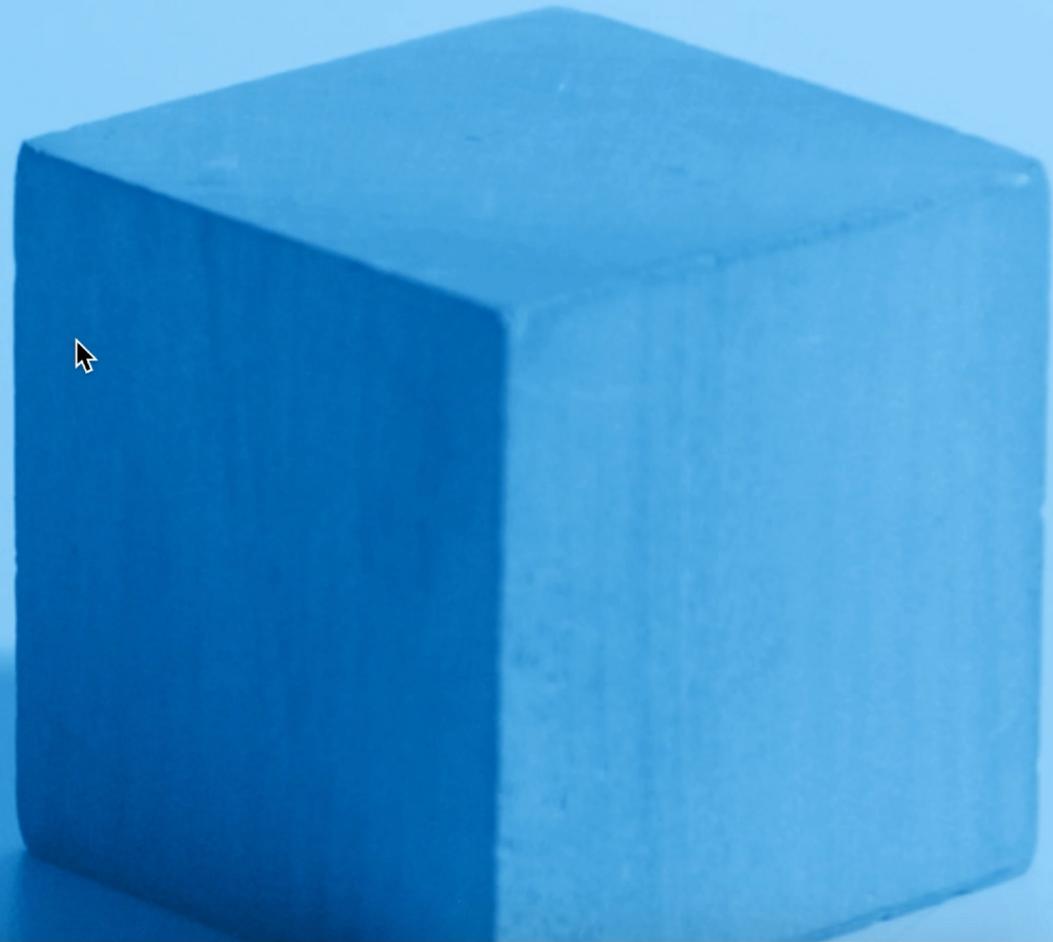


Click to see the sign!

You have 11 items left to learn!

Learning Lighting

Learn how light interacts with a geometric cube model to produce different light and dark values and cast shadows with this interactive tool.

[Learn](#)[Quiz Yourself](#)

Welcome to **Lipreading**, your site for learning to read lips! Use the navbar above or click the button below to learn the how to lipread different sounds. When you're ready, try a test!

[Start With B](#)

(Post) Impressionism

[Home](#) [Art Movements](#) [Comparison](#) [Quiz](#)

Welcome to [\(Post\) Impressionism](#).

The goal of this site is to help you **distinguish between two major art movements**, Impressionism and Post-Impressionism. Start by exploring each movement's defining features and artwork. After that, take our short quiz to test your knowledge!

Explore the Art
Movements



Project Logistics

- **Weekly homework** will build up to the final project (5% of grade)
- Final submission is worth **20% of your grade**.
- This project is to be completed **individually**.
 - You will meet with a TA to receive feedback
 - You will meet with you TA in a group to get feedback and support each other.

Brainstorming

Domains and Specific Topics for your project



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

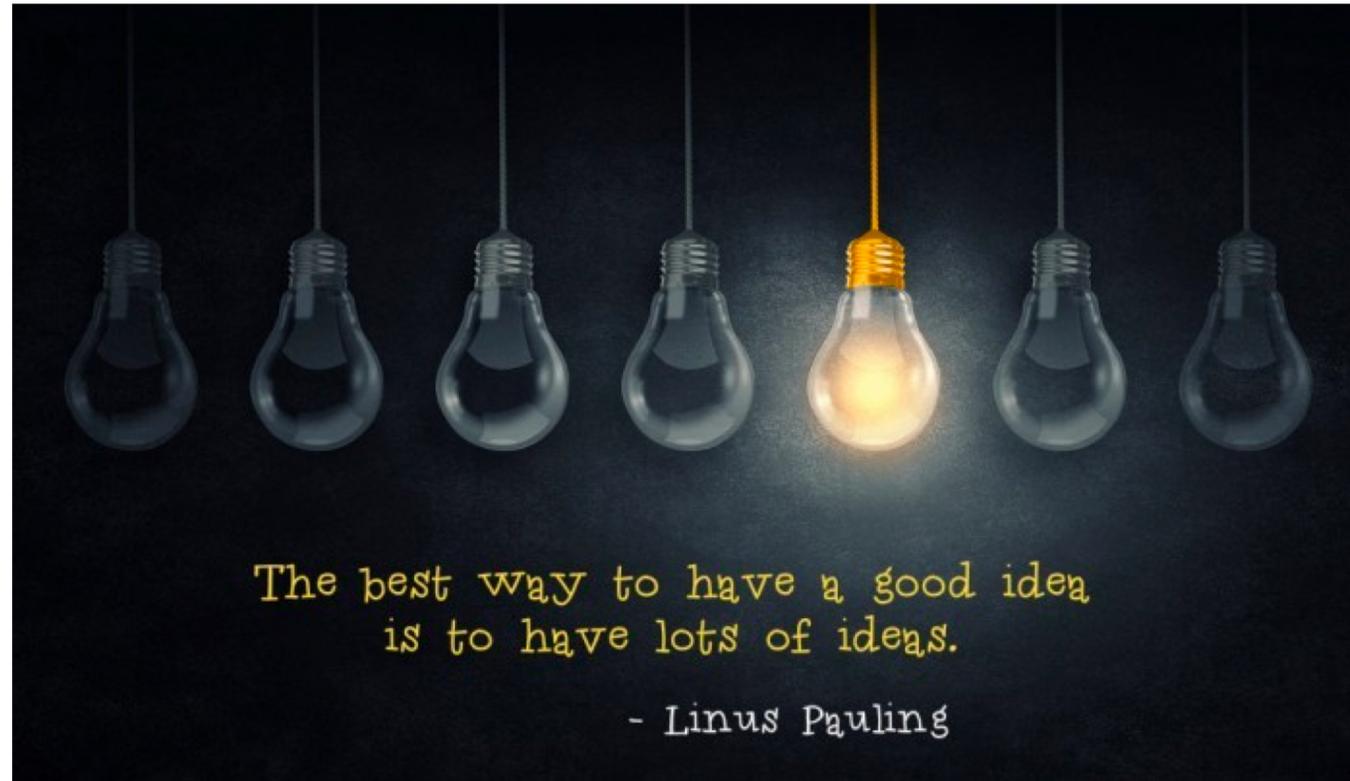


Group 2 was told to only make one

Vs.



Coming up with the perfect idea can be intimidating

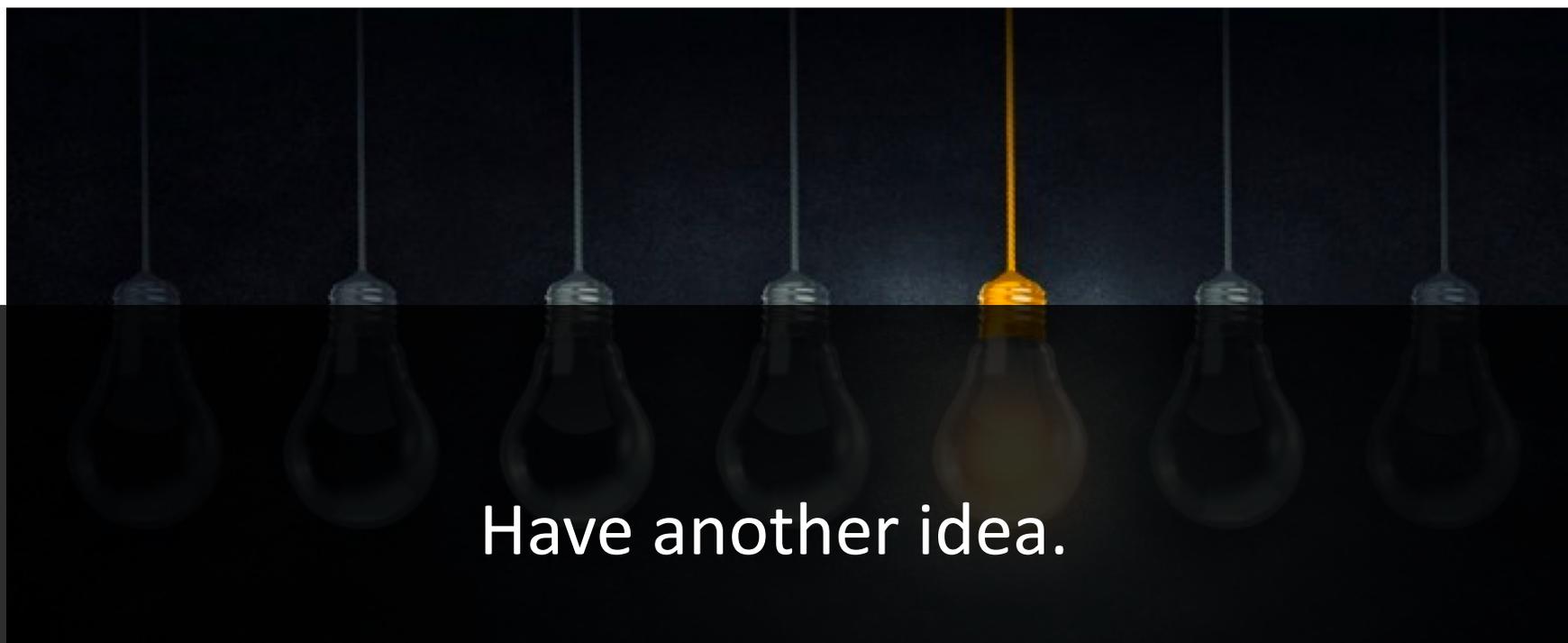


Many of those ideas will be absolute crap!

Only rule of brainstorming: **No criticism**



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



Brainstorm:

Domains you could teach in

- Cooking
- Programming
- Languages
- How to dance to tik tok
- Yoga
- Fitness
- Music
- Identify poison ivy from other plants.
- GAMES
- Health
- Music theory
- Fashion
- Basketball rules – “what is a pick and roll”
- Dance
- Flowers
- Wine

Brainstorm:

Specific topics to teach Cooking

- Is meat cooked?
- Learn different shapes
- How prepare sashimi
- How to fold dumplings!
- Vegan meat subs
- Mooncakes
- How to pick fresh fruit
- Prep time for basic foods
 - Food /water ratios –
- EGGs!

Brainstorm:

Specific topics to teach Dance

Tik tok dances

* every growing, memorize and do them

Moonwalk

Different grooves in hiphop

Fortnite dance

Stanky leg

- Specific song

Ballet positions

- 5 basic ones: explain what they are or how to add on to them.

Stretching for dance

Steps for ballroom dancing

What kind of dancing should I do in what setting.

Brainstorm:

Specific topics to teach Programming

In heritage

- Client side: HTML JS, CSS
 - Stuff not taught in class
- How to debug
- GIT GITHUB
 - How to rebase
- ~~10 design principles~~
- MVC
- ~~Human centered design~~
- ~~Information hierarchy~~
- ~~Affordances~~
- Latex / overleaf
 - How do I get started?
 - Symbols and equations
 - How to place and image
 - TABLES

* What are types of list: make them look nice

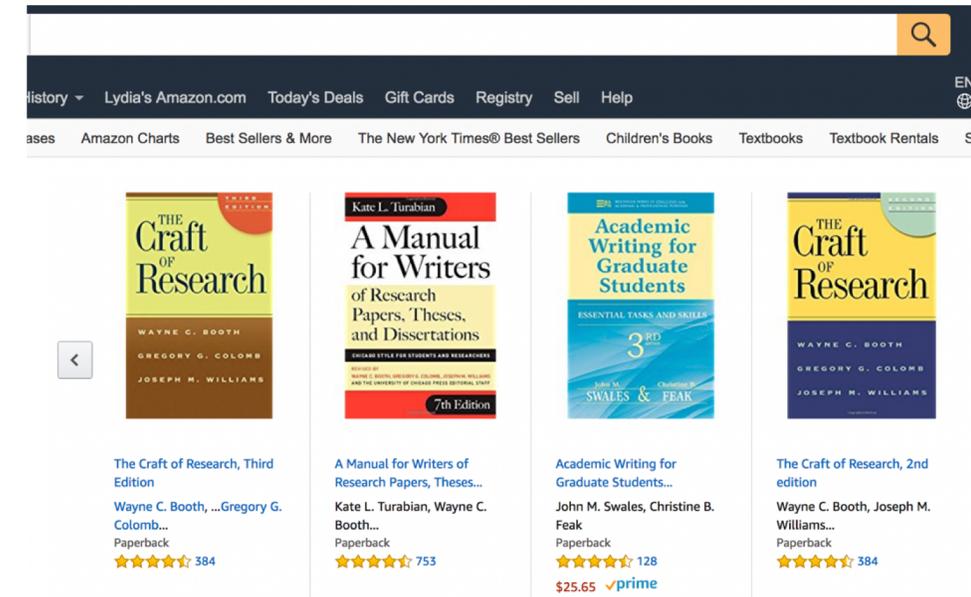
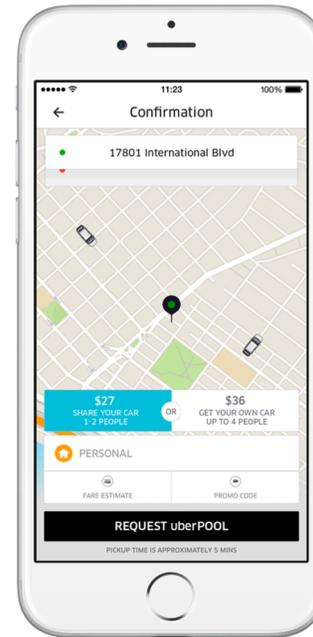
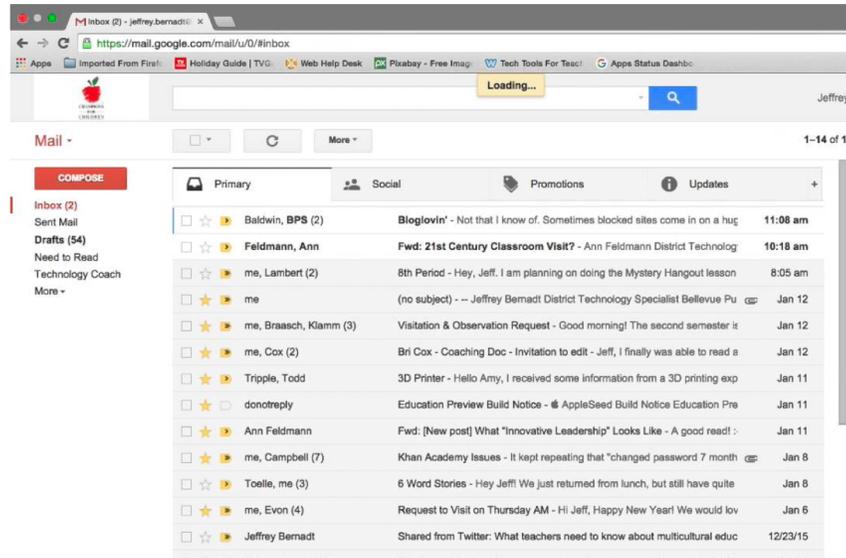
- How to do code
 - Software Engineering (Junfeng)

HTML basic elements

The difference between GET and POST ajax reuests

Summary

The main goal of many websites is to interact with data.



Given specifications, you can create interactions

Part 1 – Usable Functionality:

1. Menu/Navigation.

- For consistency, all the templates should be rendered with a shared template that contains a navbar.
- The navbar should contain:
 - A home link (at the "/" route)
 - A text box to enter a search query and a "go" button (at the "/search" route). When the user presses enter on the search bar it should also "go".
 - A create link (at the "/create" route)

2. Home. The home link should render at the "/" route.

- It should contain a one sentence summary of the mission of the site. This mission should make it clear who the intended user is and what specific goal it helps them achieve.
- It should show the latest 10 entries added to the database to entice the viewer to click on something and start exploring.
- Each of the 10 entries should be formatted as a Bootstrap Card that contains an image and the title of the item. If there is some other essential field, it can show that too, but it should not show all the data fields – it's meant to be a summary.
- When you click the image, it should take you to the page for viewing the item.

3. Search. When the user presses "go" on the search link (or presses enter), it should search for the items and return a list of all matching results.

- Flexibility.** The query must do substring matching that is not case sensitive on the title and one other text field.
- Feedback.** In addition to returning the results, the page must say how many results there are. If there are zero results, you don't need to do anything other than say there are zero results.
- Feedback.** When you present the results to the user, the bit that matches the substring must be easy to scan for, according to gestalt principles.

4. State/Options/Transitions. On the template for creating a new database item, you will still have input boxes for all the fields the user must input. In addition:

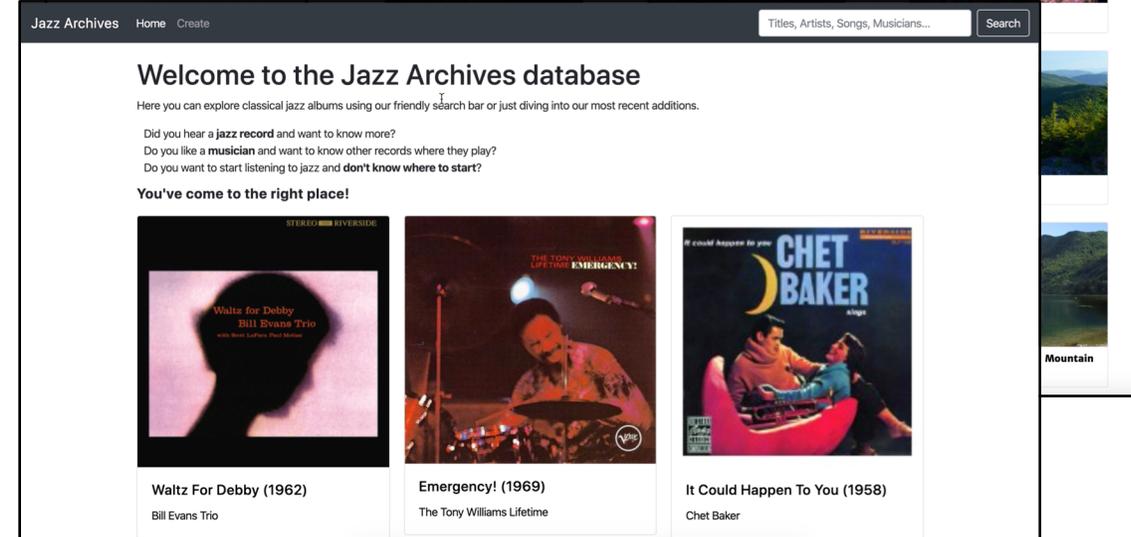
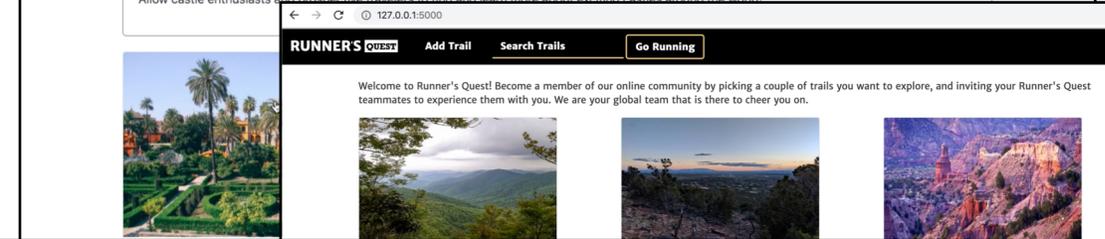
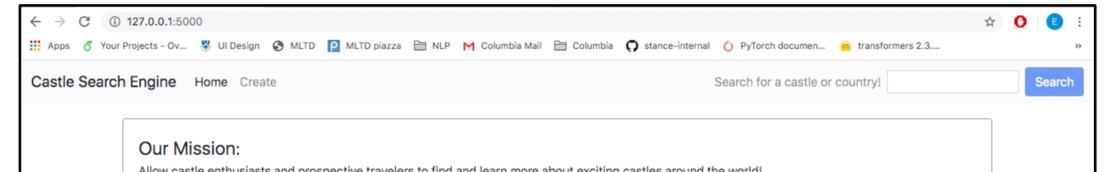
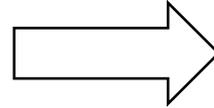
- Error Detection.** When creating a new database entry, there must be error handling on all the fields. If the field must be a number, then ensure it is a number. At the very least, you can check that the field is not blank (remember to trim the text to test if it's blank). Design the error feedback so that it directs the user's attention to the right place to correct the error.
- Transitions.** After the user presses "submit" and the data successfully submits, allow the user to either view the item or enter a new item.
 - At the top of the page it should say, "New item successfully created." With a button or link that says "see it here" (or words to that effect). This links to a page for viewing the item.
 - Additionally, the input boxes should clear and the focus should be placed on the first text box so the user is ready to submit another item.

5. State/Options/Transitions. There will no longer be a separate /edit/<id> route. Editing will now be done in /view/<id>

- For each field that can be edited, create a small edit icon next to it. (at least two fields must be editable – including one that is involves changes the text)
- State Change.** When the user presses the "edit" icon the field to be edited, it must immediately turn editable with a "submit" and "discard changes" option.
- Options.** The chosen text must disappear, and in its place, there should be a textbox or text input with the text they way to edit, with the focus in the input field.
- Transitions.** After the users presses "submit" or "discard changes" the page should go back to how it looked when they were viewing it (and not editing it).
- Note: If your "update" was to add a review to a list, you don't need to populate the textbox with any text. You may call it "add review" instead of "edit" if you like.

6. User control and freedom (Undo).

- The user should no longer be able to delete entire database items from the search page.



The next step is to become a user interface designer.

Part 1 – Usable Functionality:

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- The navbar should contain:
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 - A create link (at the "/create" route)

You identify the user

2. Home.

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- Each of the 10 entries should be formatted as a Bootstrap Card that contains an image and the title of the item. If there is some other essential field, it can show that too, but it should not show all the data fields – it's meant to be a summary.
- When you click the image, it should take you to the page for viewing the item.

You identify a problem

3. Search.

- When the user presses "go" on the search link (or presses enter), it should search for the items and return a list of all matching results.
- Feedback. When you present the results to the user, the bit that matches the substring must be easy to scan for, according to gestalt principles.

You find the solution

4. State/Options/Transitions.

- On the template for creating a new database item, you will still have input boxes for all the fields the user must input. In addition:
 - Error Detection.** When creating a new database entry, there must be error handling on all the fields. If the field must be a number, then ensure it is a number. At the very least, you can check that the field is not blank. Remember to provide the user with a clear plan to correct the error. If the user presses "submit" and the data successfully submits, allow the user to either view the item or enter a new item.
 - At the top of the page it should say, "New item successfully created." With a button or link that says "see it here" (or words to that effect). This links to a page for viewing the item.
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*“Design is a plan for arranging elements
to accomplish a particular purpose.”*

– Charles Eames



**Identify
users needs:**

For people who sit all day in an office,
alleviate back pain by designing a chair
that supports the lower back.

**Test solutions
on users:**



Started by helping a **specific person** with a **specific need**



Nadia, age 11

www.math.about.com

Score: 25

Ace this fractions test

Domain

Specific Need

Generalized to



Online shopping

Uncommon books

Clothes, Food,
Amazon Fresh
Other sellers



facebook

Social Networking

Harvard students looking
up dorm, classes,
relationship status

Ivy League
US Colleges
Everybody



If you start specific, you can usually generalize.

Read/send Email

No page reload
Never Delete

Chat
GDrive

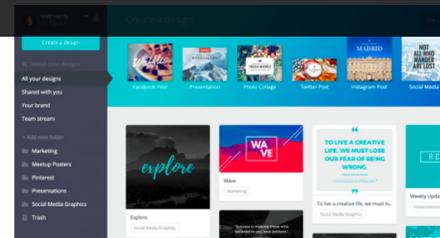


Canva

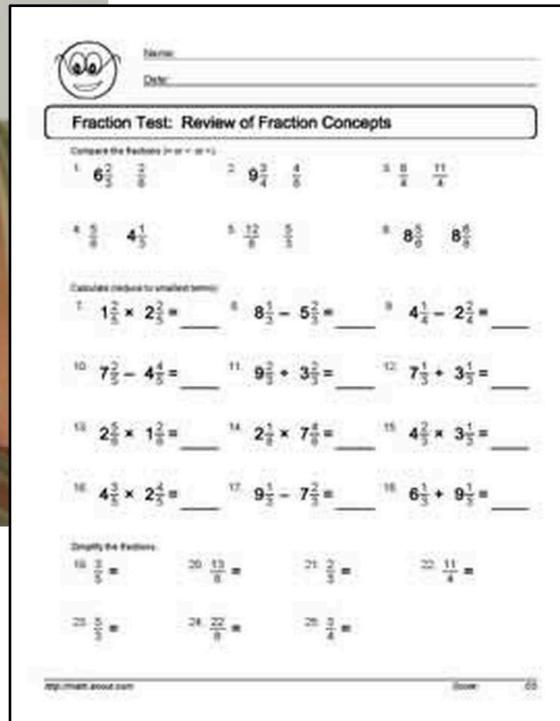
Graphic Design
For novices

High School
Yearbooks

Posters,
facebook flyers,



Teaching Nadia to ace her fractions test generalized to teaching everything to everyone.



For every student,
every classroom.
Real results.

We're a nonprofit with the mission to provide a free, world-class education for anyone, anywhere.

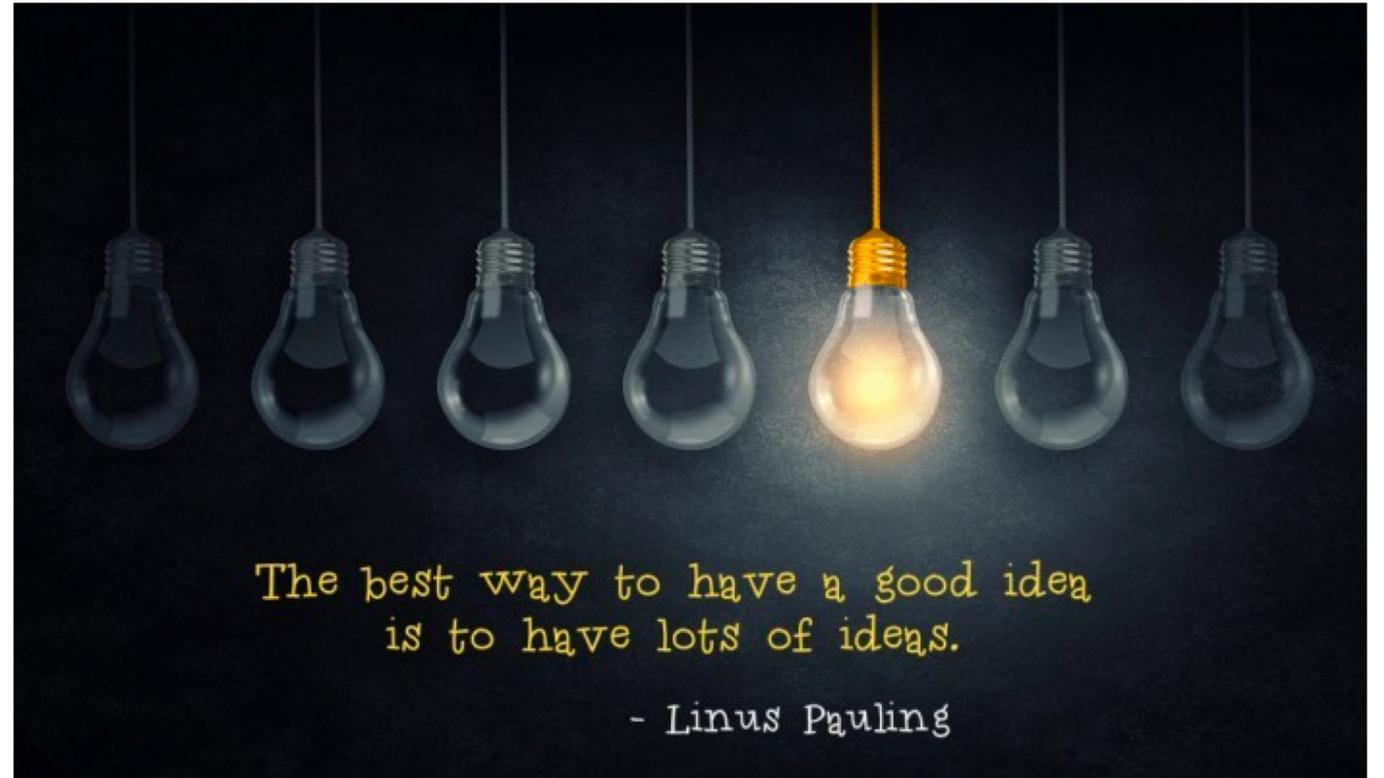
- Learners
- Teachers
- Districts
- Parents



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

- Linus Pauling

Many of those ideas will be absolute crap!



No criticism, keep ideating!

Challenge:

- Build a **web** application
- That allows a user to **interact** with media
- Within a **domain of your choosing**
- To help a user learn an introductory topic **interactively**
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- And keep learning through **feedback** from the quiz.
- In under **10 minutes** total

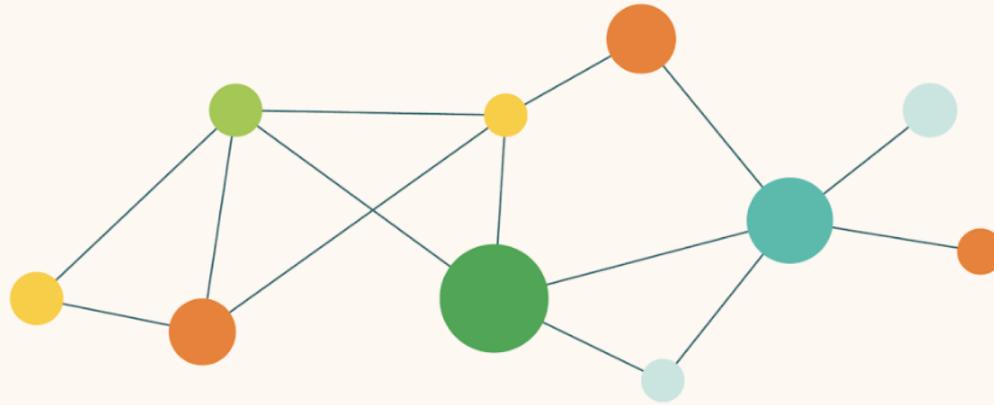
Homework 8: Brainstorm

Brainstorming:

- 5 Domains
 - 5 Specific topic in each
- For 5 of your favorite topics:
 - What media would you use?
 - How would you quiz people on what they learned?

Wednesday April 1st 4pm

Feel free to ask friends, staff, work together



VIRTUAL CAMPUS DESIGN CHALLENGE

COVID-19

When: April 4, 2020 - April 6, 2020

Where: Online

RSVP at <https://bit.ly/design-challenge-rsvp>

Everyone fill out participation when they see the video!

Columbia University

User Interface Design

COMS 4170 · Spring 2020

[Home](#)

[Grading](#)

[Syllabus](#)

[Piazza](#)

9

MARCH 23

No Class

MARCH 25

No Class

MARCH 27

[Participation Form](#)