

Menus and Navigation

No screens

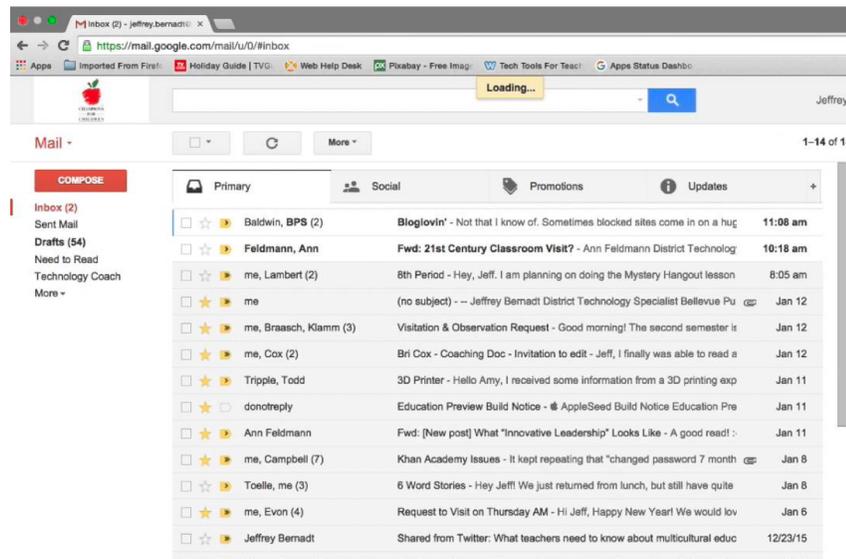


Prof. Lydia Chilton
COMS 4170
17 February 2020

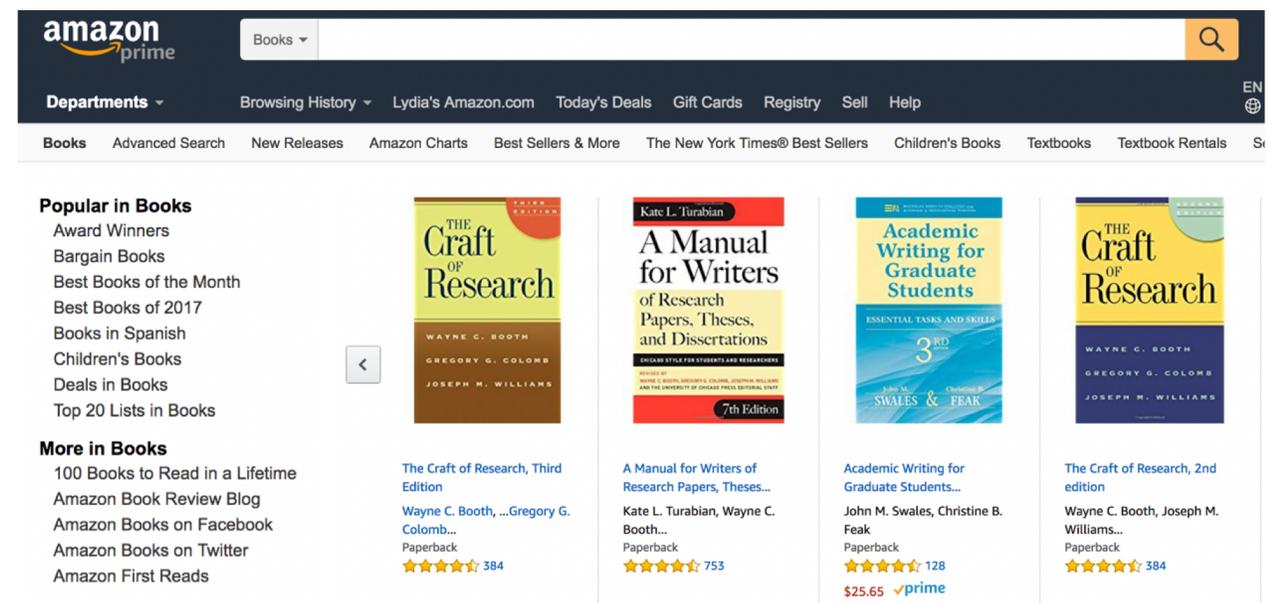
Say your name



Users interact with a system to accomplish a goal



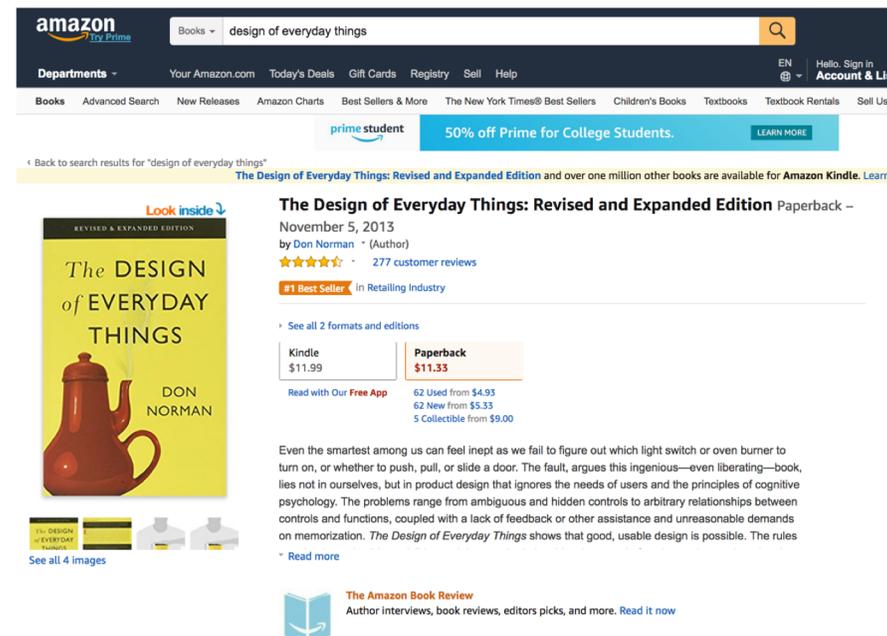
To read and respond to all email.



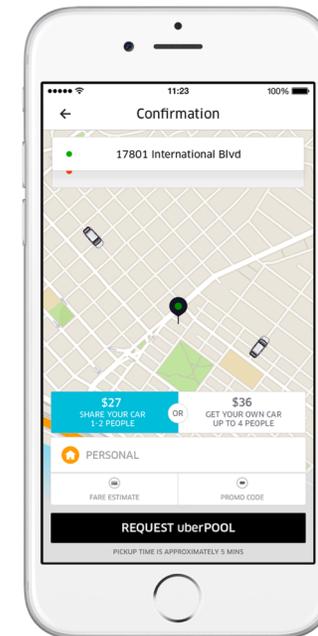
To buy a book

We are designing applications that help people achieve fairly complex goals.

Buy a book



Hail a cab to JFK



Can we put it all the information on one big page?

But for complex tasks, there is too much information to fit in one screen.

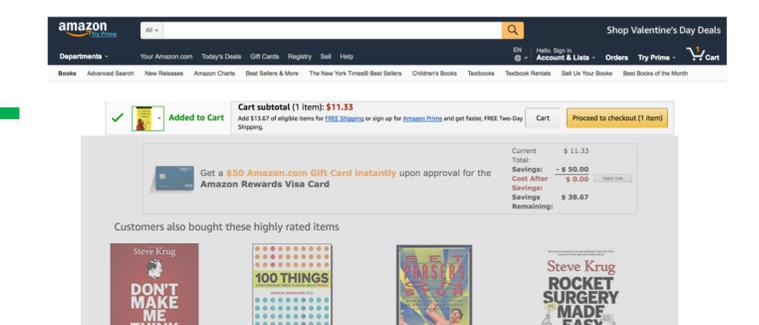
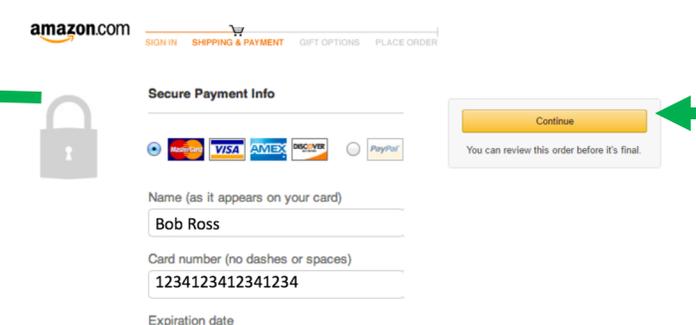
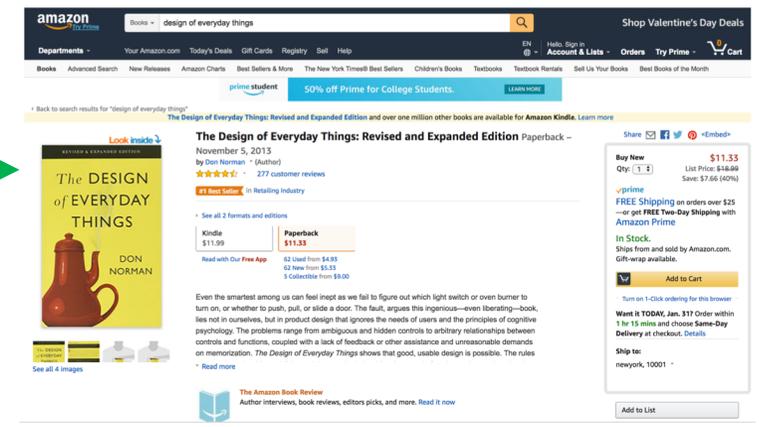
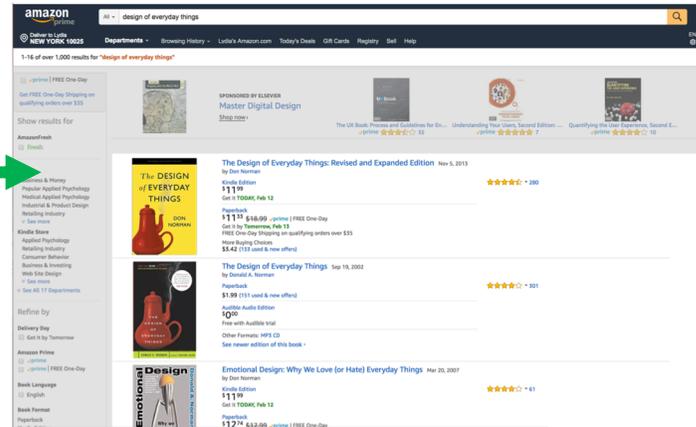
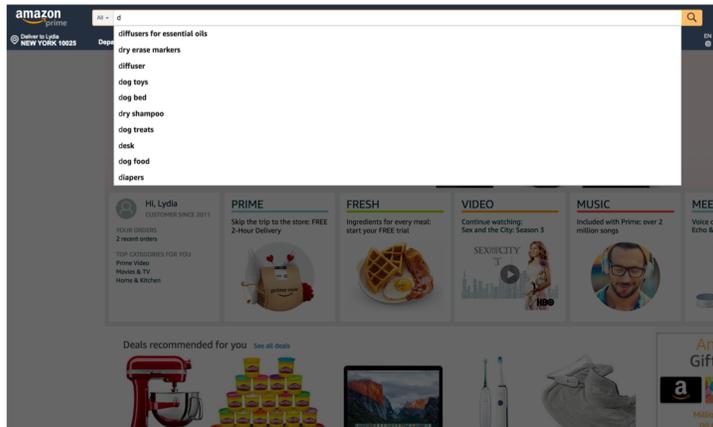
Buying a book on Amazon:

- Search for the book
- Select the edition
- See the reviews
- Look at the index
- How many pages does it have?
- Put it in your cart
- Shop around for other things
- Select a payment method

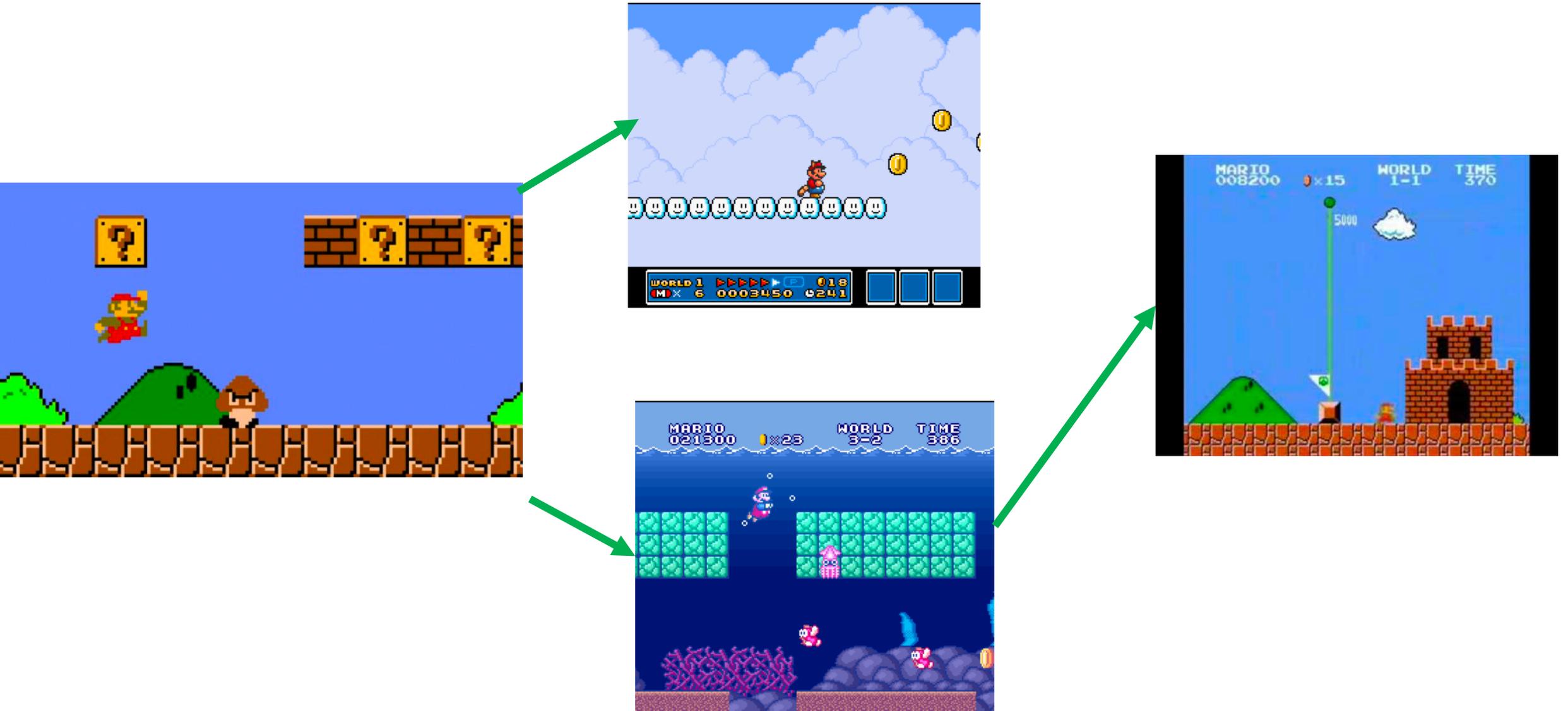
How should we break it up?

- Enter payment method information
- Enter shipping information
- Go back and put something else in the cart
- Change to rush delivery
- Remove something from the cart

For complex goals, break the task into states, options, and transitions to new states.



Think of it like a video game and
You are designing the experience of your user



Examples of

States, Options and Transitions

Goal: Find “The Design of Everyday Things”

What **state** am I in?

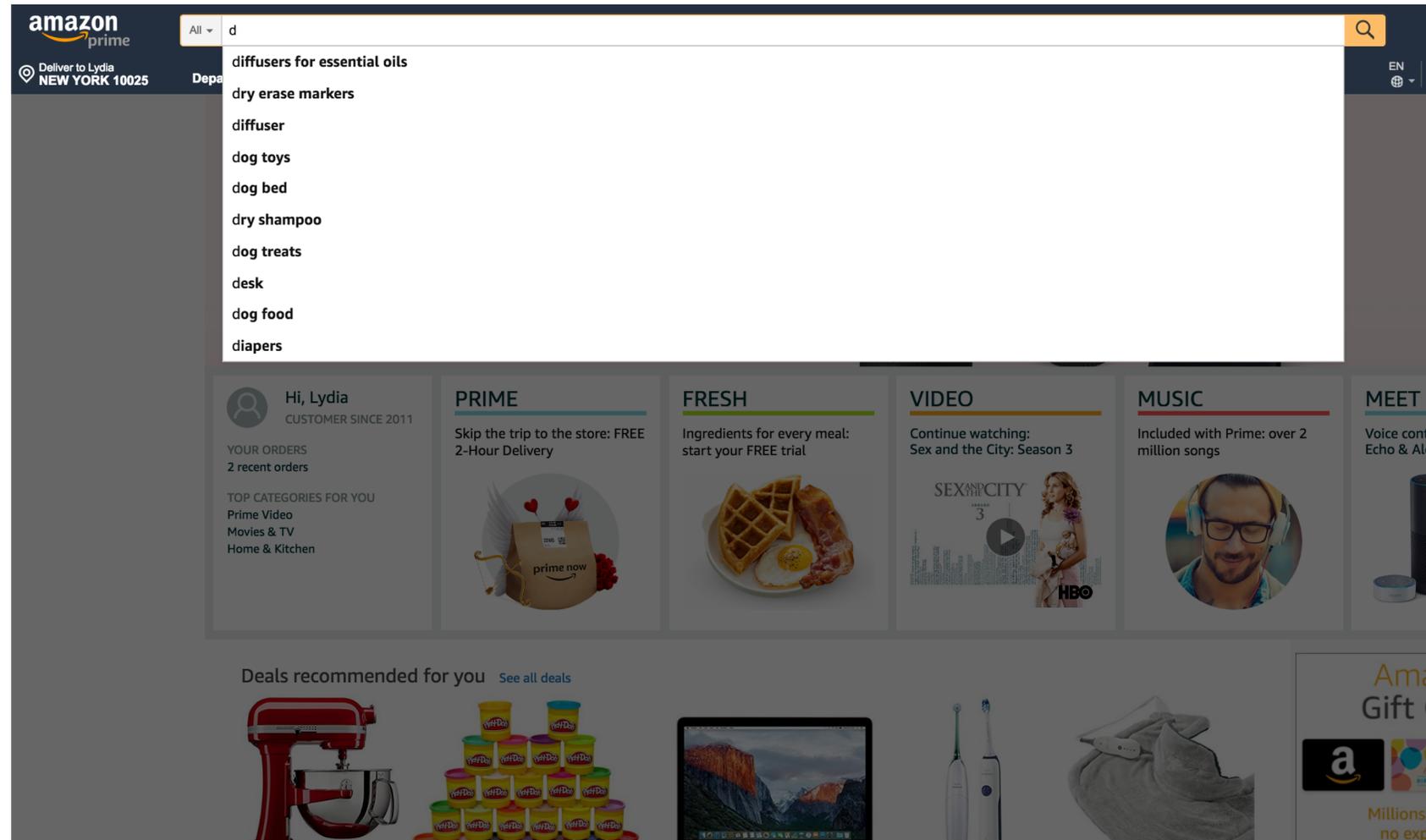
Product Search

What **options** do I have?

All the products

How do I **transition**?

Select an product name



Goal: find “The Design of Everyday Things”

What **state** am I in?

Product search results

What **options** do I have?

All the products –
different editions

How do I **transition**?

Select an product name

The screenshot shows the Amazon website interface for a search query "design of everyday things". The top navigation bar includes the Amazon Prime logo, a search bar with the query, and various utility links like "Deliver to Lydia NEW YORK 10025", "Departments", "Browsing History", "Lydia's Amazon.com", "Today's Deals", "Gift Cards", "Registry", "Sell", and "Help". Below the search bar, it indicates "1-16 of over 1,000 results for 'design of everyday things'".

On the left side, there are filters for "prime | FREE One-Day" shipping, "AmazonFresh", and "Books" categories. The "Books" filter is expanded to show sub-categories like "Business & Money", "Popular Applied Psychology", "Medical Applied Psychology", "Industrial & Product Design", "Retailing Industry", and "Kindle Store".

The main content area displays three search results:

- Top result:** "The Design of Everyday Things: Revised and Expanded Edition" by Don Norman, published Nov 5, 2013. It is available in Kindle Edition for \$11.99 and Paperback for \$11.33 (originally \$19.99). It has a 5-star rating and 280 reviews.
- Second result:** "The Design of Everyday Things" by Donald A. Norman, published Sep 19, 2002. It is available in Paperback for \$1.99 (151 used & new offers) and Audible Audio Edition for \$0.00 (free with Audible trial). It has a 5-star rating and 301 reviews.
- Third result:** "Emotional Design: Why We Love (or Hate) Everyday Things" by Don Norman, published Mar 20, 2007. It is available in Kindle Edition for \$11.99 and Paperback for \$12.74 (originally \$17.99). It has a 5-star rating and 61 reviews.

Goal: Decide if I'll buy "The Design of Everyday Things"

What **state** am I in?

Product info page

What **options** do I have?

Kindle/paper back,

Look in book, reviews

Add to cart

How do I **transition**?

Add to cart OR

Go back

The screenshot shows the Amazon product page for "The Design of Everyday Things: Revised and Expanded Edition" by Don Norman. The page includes the Amazon logo, search bar, navigation menu, and product details. The product is a paperback book priced at \$11.33, with a list price of \$18.99. It is a #1 Best Seller in the Retailing Industry. The page also features a "Look inside" button, a "Read with Our Free App" button, and a "Share" button. The product description highlights the book's focus on product design and usability. The page also includes a "Buy New" section with a quantity selector, a "FREE Shipping" offer, and an "Add to Cart" button. The shipping address is listed as New York, 10001.

amazon Try Prime Books design of everyday things Search Shop Valentine's Day Deals

Departments Your Amazon.com Today's Deals Gift Cards Registry Sell Help EN Hello, Sign in Account & Lists Orders Try Prime Cart

Books Advanced Search New Releases Amazon Charts Best Sellers & More The New York Times® Best Sellers Children's Books Textbooks Textbook Rentals Sell Us Your Books Best Books of the Month

prime student 50% off Prime for College Students. LEARN MORE

Back to search results for "design of everyday things" The Design of Everyday Things: Revised and Expanded Edition and over one million other books are available for Amazon Kindle. Learn more

Look inside

REVISED & EXPANDED EDITION

The DESIGN of EVERYDAY THINGS

DON NORMAN

The Design of Everyday Things: Revised and Expanded Edition Paperback – November 5, 2013 by Don Norman (Author) ★★★★★ 277 customer reviews #1 Best Seller in Retailing Industry

See all 2 formats and editions

Kindle \$11.99	Paperback \$11.33
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Read with Our Free App 62 Used from \$4.93 62 New from \$5.33 5 Collectible from \$9.00

Even the smartest among us can feel inept as we fail to figure out which light switch or oven burner to turn on, or whether to push, pull, or slide a door. The fault, argues this ingenious—even liberating—book, lies not in ourselves, but in product design that ignores the needs of users and the principles of cognitive psychology. The problems range from ambiguous and hidden controls to arbitrary relationships between controls and functions, coupled with a lack of feedback or other assistance and unreasonable demands on memorization. *The Design of Everyday Things* shows that good, usable design is possible. The rules

Read more

The Amazon Book Review Author interviews, book reviews, editors picks, and more. Read it now

Buy New \$11.33 Qty: 1 List Price: \$18.99 Save: \$7.66 (40%)

prime FREE Shipping on orders over \$25 —or get FREE Two-Day Shipping with Amazon Prime

In Stock. Ships from and sold by Amazon.com. Gift-wrap available.

Add to Cart

Turn on 1-Click ordering for this browser

Want it TODAY, Jan. 31? Order within 1 hr 15 mins and choose Same-Day Delivery at checkout. Details

Ship to: newyork, 10001

Add to List

Goal: Decide if I'm done.

What **state** am I in?

“Add to cart” feedback

What **options** do I have?

Check out

See cart

Keep shopping

How do I **transition**?

Click one of the options.

The screenshot shows the Amazon checkout interface. At the top, the Amazon logo and navigation links are visible. The cart subtotal is \$11.33. A promotional banner for the Amazon Rewards Visa Card offers a \$50 gift card. Below this, a table shows the current total of \$11.33, a savings of \$50.00, and a cost after savings of \$0.00. A remaining amount of \$38.67 is also shown. The bottom section features a grid of recommended items, including books like 'Don't Make Me Think' and 'Rocket Surgery Made Easy'.

amazon **Try Prime** All Shop Vale

Departments Your Amazon.com Today's Deals Gift Cards Registry Sell Help EN Hello. Sign in **Account & Lists** **Orders**

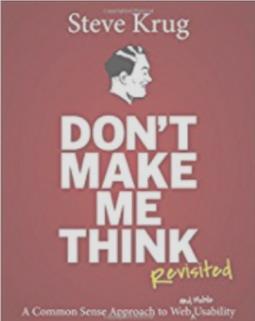
Books Advanced Search New Releases Amazon Charts Best Sellers & More The New York Times® Best Sellers Children's Books Textbooks Textbook Rentals Sell Us Your Books Best Book

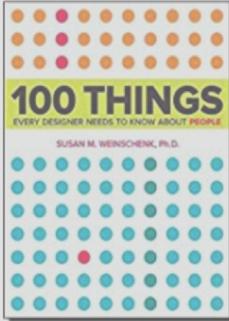
 **Added to Cart** **Cart subtotal (1 item): \$11.33** Add \$13.67 of eligible items for [FREE Shipping](#) or sign up for [Amazon Prime](#) and get faster, FREE Two-Day Shipping.

 Get a **\$50 Amazon.com Gift Card instantly** upon approval for the **Amazon Rewards Visa Card**

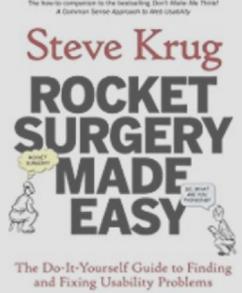
Current	\$ 11.33
Total:	
Savings:	- \$ 50.00
Cost After	\$ 0.00 <input type="button" value="Apply now"/>
Savings:	
Savings	\$ 38.67
Remaining:	

Customers also bought these highly rated items

 Steve Krug **DON'T MAKE ME THINK** *perisited* and usable
A Common Sense Approach to Web Usability

 **100 THINGS**
EVERY DESIGNER NEEDS TO KNOW ABOUT PEOPLE
SUSAN M. WEINSHENK, Ph.D.

 **SET PHASERS TO STUN**
AND OTHER TALK TALES OF DESIGN TECHNOLOGY AND USER RESEARCH

 The best-to-compare to the best-selling 'Don't Make Me Think' A Common Sense Approach to Web Usability
Steve Krug **ROCKET SURGERY MADE EASY**
The Do-It-Yourself Guide to Finding and Fixing Usability Problems

Goal: Pay for it.

What **state** am I in?

Enter payment

What **options** do I have?

Which payment methods

How do I **transition**?

Press Continue

amazon.com

SIGN IN SHIPPING & PAYMENT GIFT OPTIONS PLACE ORDER



Secure Payment Info



Name (as it appears on your card)

Bob Ross

Card number (no dashes or spaces)

1234123412341234

Expiration date

01 - January

2013

Security code (3 on back, Amex: 4 on front)

1234

123

1234

Continue

You can review this order before it's final.

Goal: Buy it.

What **state** am I in?

Review and place order

What **options** do I have?

Shipping options,

Change payment options

How do I **transition**?

Press “Place your order”

The screenshot displays the Amazon.com checkout process. At the top, the Amazon logo is followed by navigation links: SIGN IN, SHIPPING & PAYMENT, GIFT-WRAP, and PLACE ORDER. Below this is the 'Review Your Order' section, which includes a disclaimer about Amazon's privacy policy and terms of use.

The main content area is divided into several sections:

- Shipping Address:** Chris Customer, 742 EVERGREEN TERRACE, SPRINGFIELD, WV 20025, United States, Phone: 1234567890. A 'Change' link is provided.
- Billing Information:** Rewards Points ending in 1234. A 'Change' link is provided.
- Billing Address:** Same as shipping address. A 'Change' link is provided.
- Gift Cards & Promotional Codes:** A text input field and an 'Apply' button.
- Estimated delivery:** Sept. 26, 2011.
- Item:** Apple iPad Camera Connection Kit (MC531ZM/A) for \$29.95. It is marked as Prime. Quantity: 1. Sold by: -Media-Mart. Links for 'Change' and 'Add gift options' are present.
- Shipping Options:** Three options are listed: FREE Standard Shipping (3-5 business days), FREE Two-Day Shipping (checked, get it Monday, September 26), and \$3.99/item One-Day Shipping (get it Saturday, September 24).
- Order Summary:** A table showing Items (\$29.95), Shipping & Handling (\$0.00), Total Before Tax (\$29.95), Estimated Tax To Be Collected (\$0.00), and Rewards Points (-\$4.58). The final **Order Total is \$25.37**.
- Shipping Costs:** A note explaining that Amazon Prime Shipping has been applied to eligible items.

A prominent 'Place your order' button is located at the top right of the main content area.

After I buy, what state do I transition to?

amazon prime

Deliver to Lydia
NEW YORK 10025

All ▾

Departments ▾ Browsing History ▾ Lydia's Amazon.com Today's Deals Gift Cards Registry Sell Help

EN

Deals recommended for you [See all deals](#)



\$229.99
Ends in 13:41:22



\$6.14 - \$49.69
Ends in 13:41:22



\$999.99
Ends in 13:36:23



\$47.99
\$79.99
Ends in 13:41:22



\$32.00
\$49.99
Ends in 13:41:22

Amazon Gift Cards

Millions of items,
no expiration.

> Shop now

[Ad feedback](#)

Your Dash Buttons

[Manage buttons](#)

[Learn more](#)

TAP HERE for info

TAP HERE to buy



New for you [See more](#)



Budget women's apparel

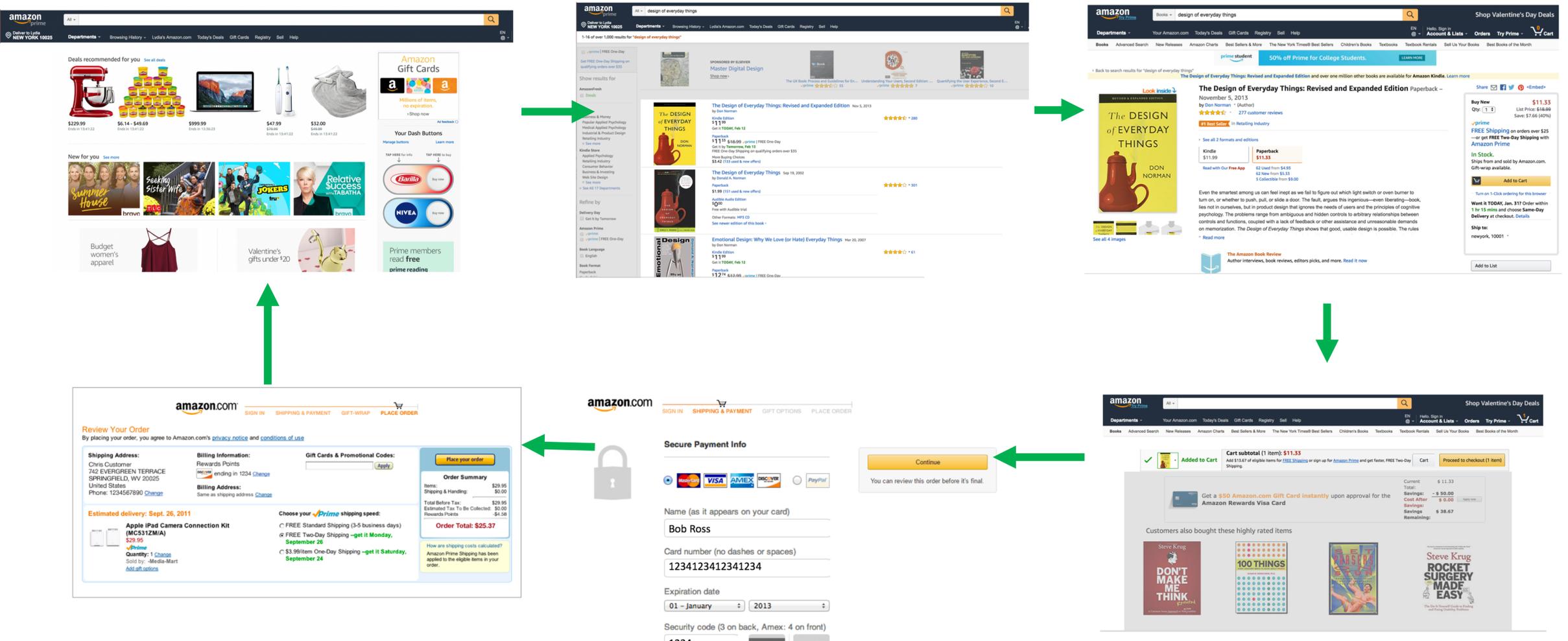


Valentine's gifts under \$20



Prime members read **free** prime reading

For complex goals, break the task into states, options, and transitions to new states.



Goal: Tell Uber where to find me.

What **state** am I in?

Set pickup location

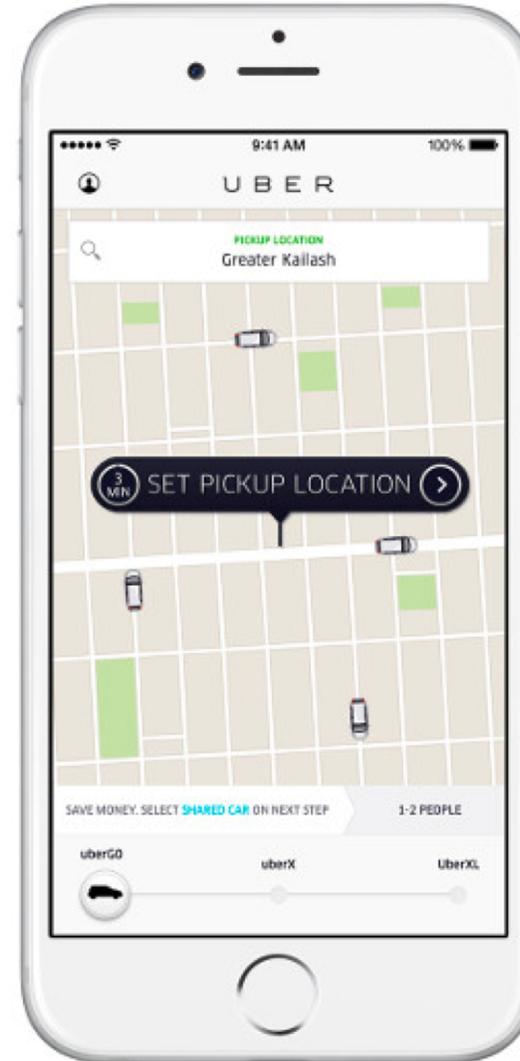
What **options** do I have?

Move pin to different location

What size car: pool/X/XL

How do I **transition**?

Press “Set Pickuplocation”



Goal: Pay for it.

What **state** am I in?

Payment/Confirmation

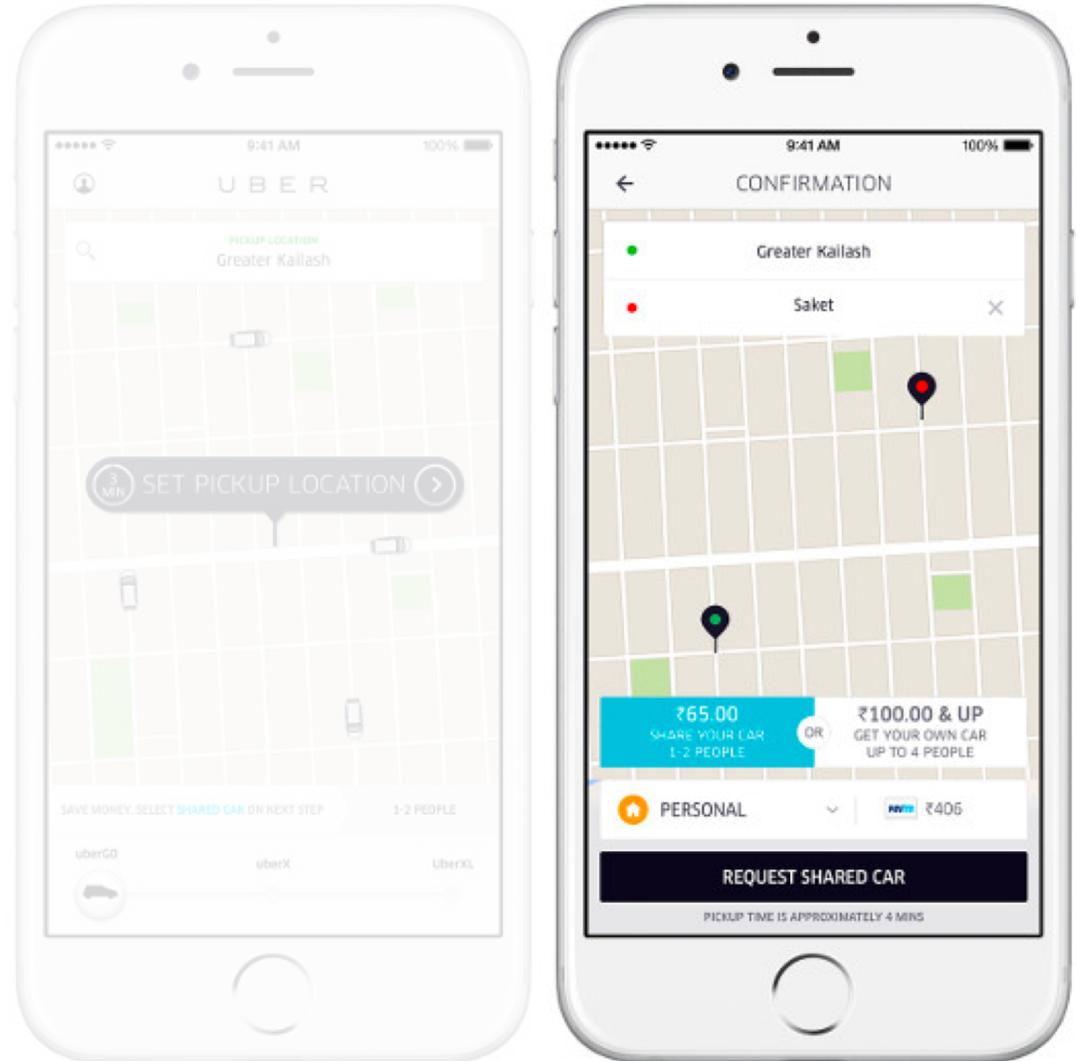
What **options** do I have?

Switch credit cards

Upgrade to your

How do I **transition**?

Press “Request shared car”



Goal: Find car

What **state** am I in?

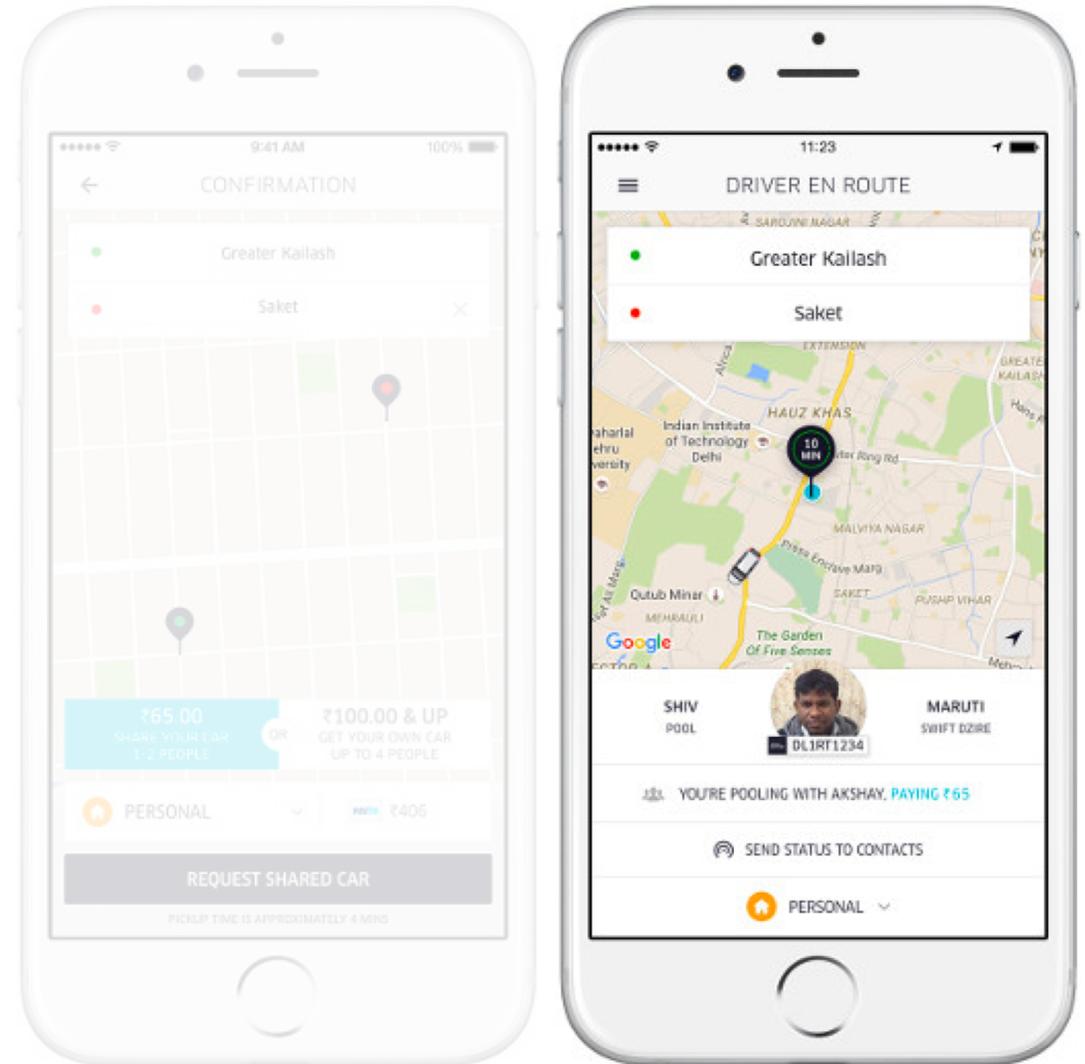
Waiting/"Driver en route"

What **options** do I have?

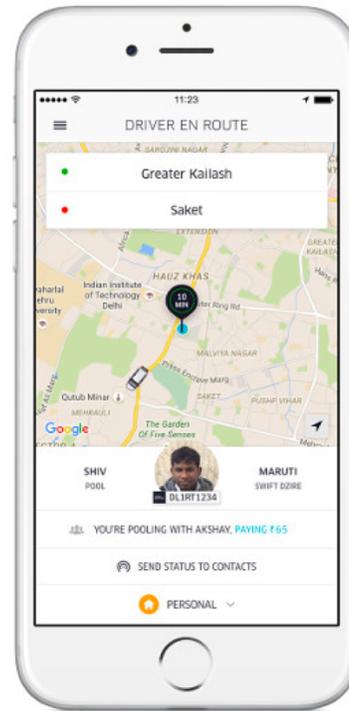
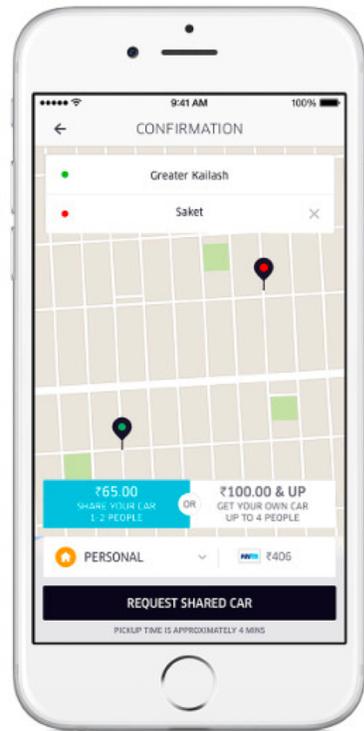
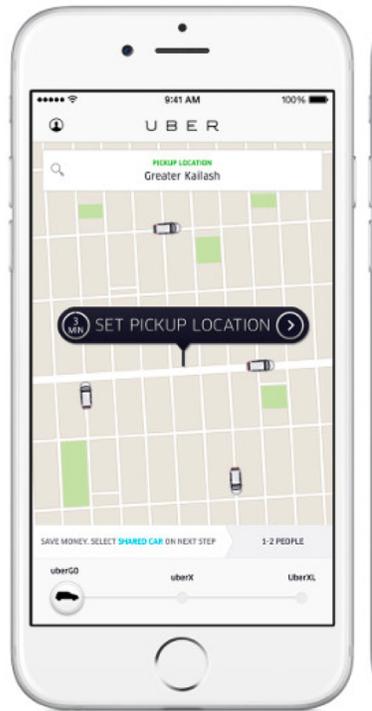
Contact driver

How do I **transition**?

Just wait



For complex goals, break the task into states, options, and transitions to new states.



Goal: Change the font

What **state** am I in?

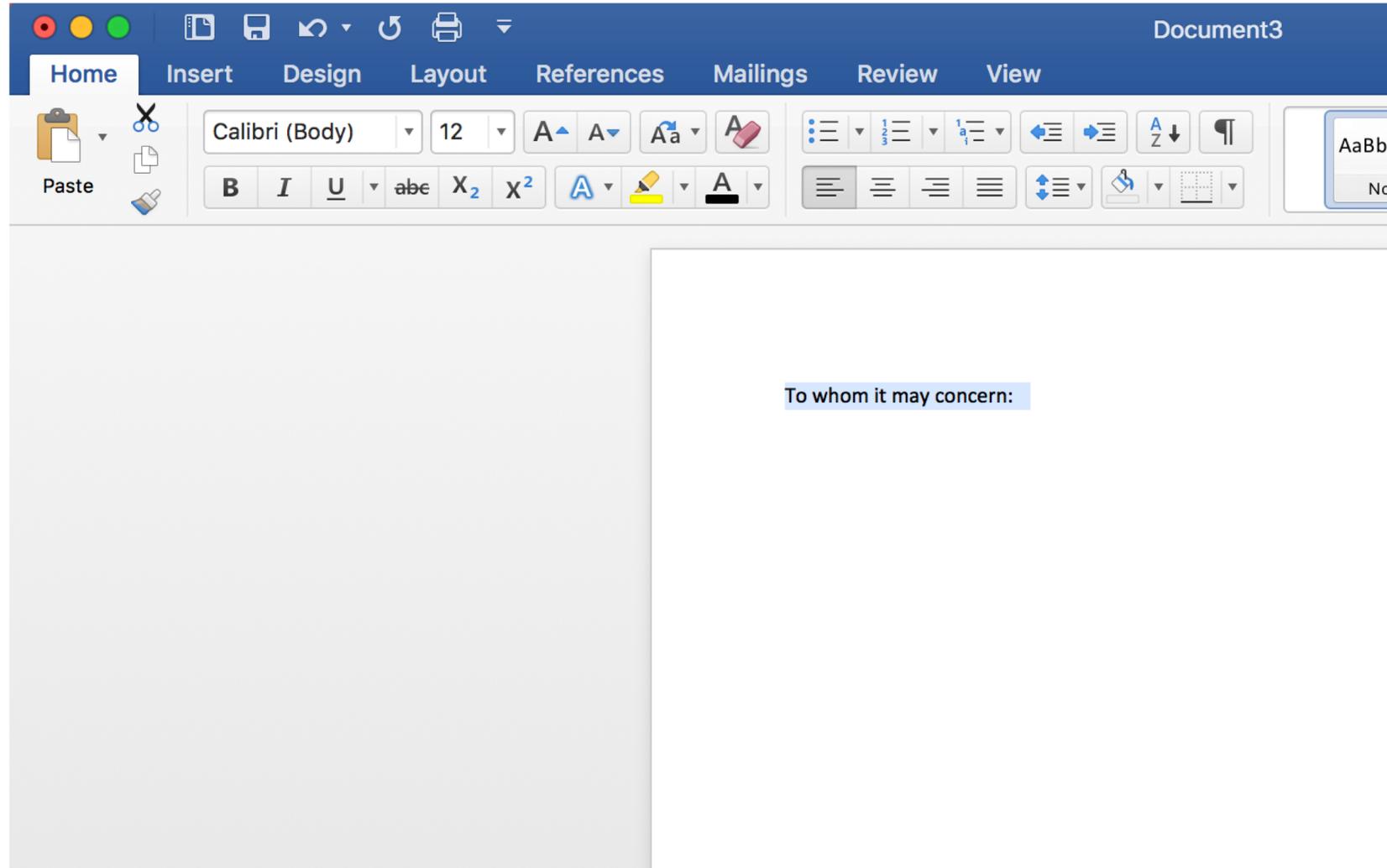
Selected Text

What **options** do I have?

All the menu options –
Font, size, color, bullet pts

How do I **transition**?

Click on the document



Goal: Find a font I like

What **state** am I in?

Font selection

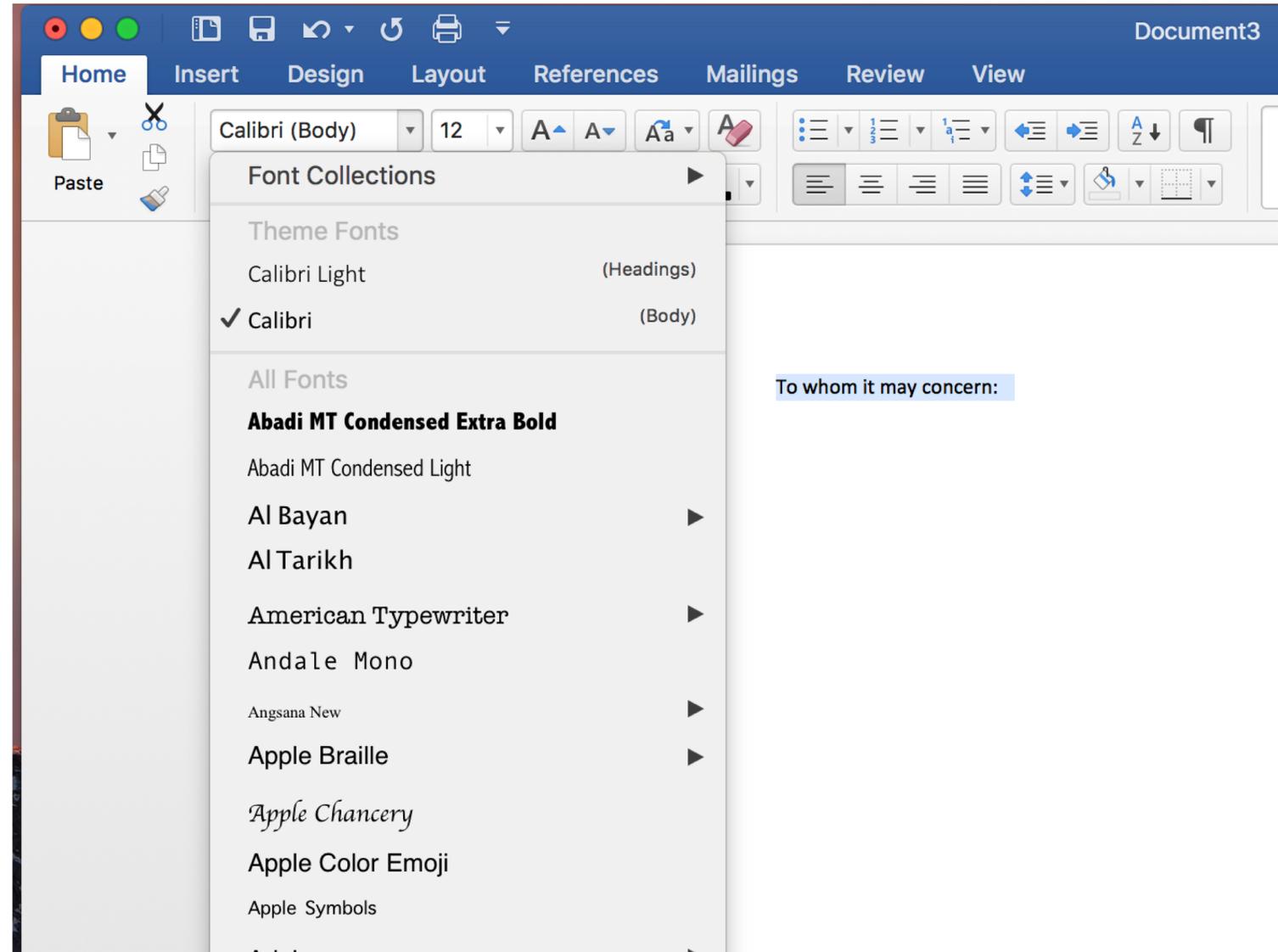
What **options** do I have?

Hundreds of fonts

How do I **transition**?

Select a font OR

Click outside the font menu.



Goal: ?

What **state** am I in?

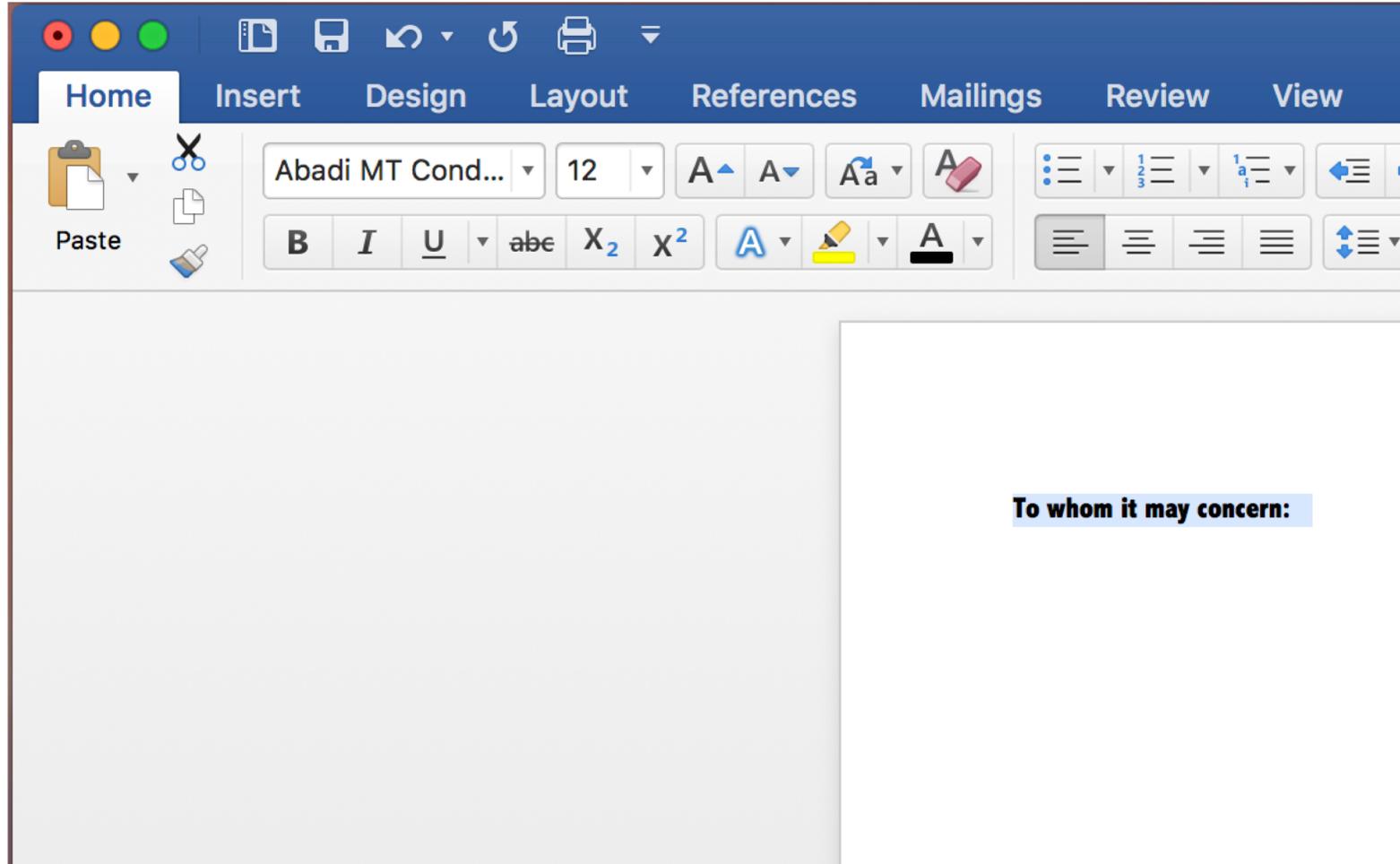
Selected Text

What **options** do I have?

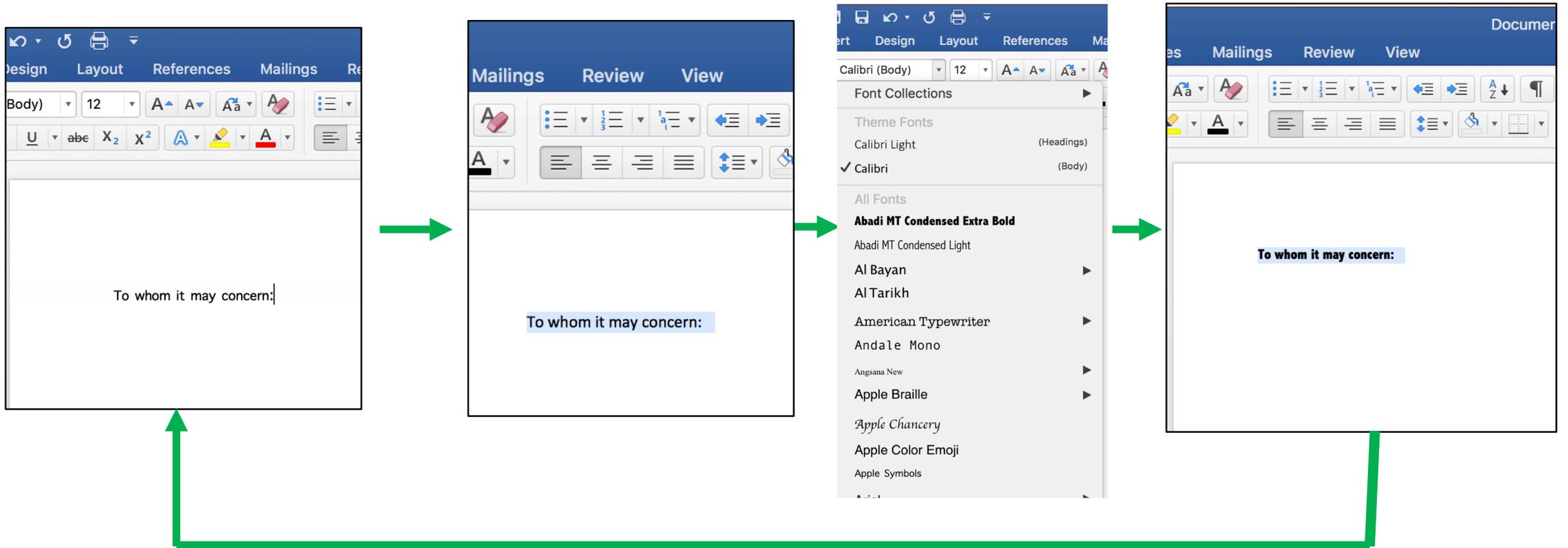
All the menu options

How do I **transition**?

Select a new menu option OR
Click outside the selection



For complex goals, break the task into states, options, and transitions to new states.



DDR: What state are we in?

What are the options in this state?



DDR: What state are we in?



DDR: What state are we in?

What state will we transition to?

The image displays three overlapping screenshots from the DDR game. The top-left screenshot shows the 'Select Music' screen for 'SPEED OVER BEETHOVEN' by FROSE, with a stage speed of 169bpm. The middle screenshot shows a dance performance with a 'MARVELOUS!!' hit and a '717' combo. The bottom-right screenshot shows the 'RESULTS EXTRA STAGE' screen for 'New Century' by Sota F., with both players achieving an AAA grade and a score of 991,650 and 995,420 respectively.

RESULTS EXTRA STAGE

PLAYER 1 VERSUS CHALLENGE 18 **AAA** score *It's a New Record!* 991,650

PLAYER 2 VERSUS CHALLENGE 18 **AAA** score *It's a New Record!* 995,420

New Century
Sota F.

PLAYER 1		PLAYER 2	
MAX COMBO	639	MAX COMBO	467
MARVELOUS	554	MARVELOUS	611
PERFECT	103	PERFECT	52
GREAT	11	GREAT	5
GOOD	0	GOOD	0
O.K.	80	O.K.	80
Miss	1	Miss	1
EX SCORE	2119	EX SCORE	2182

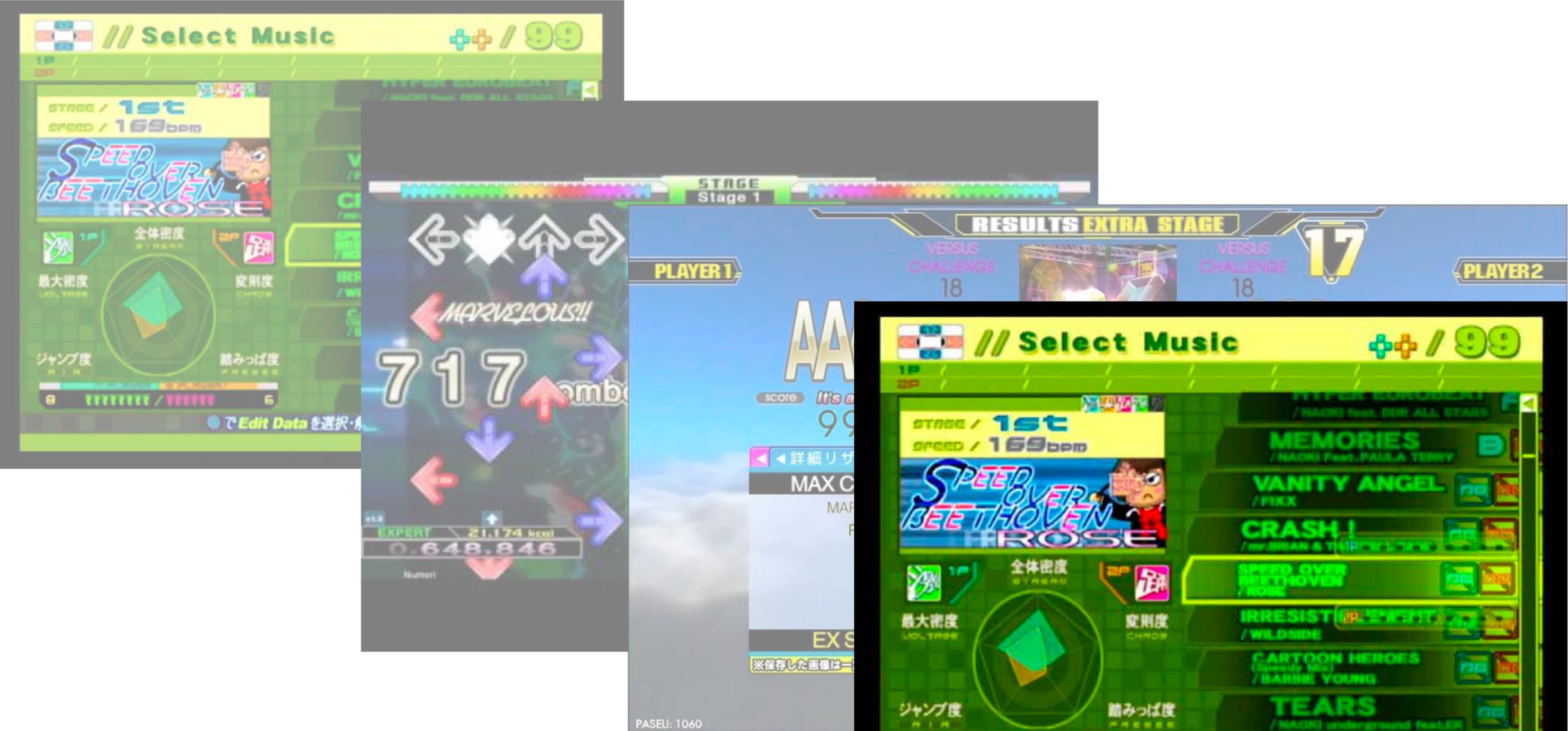
FAST 97 FAST 36
SLOW 17 SLOW 21

※保存した画像は一定期間で期限切れとなります。 テンキー 1 でeAMUSEMENTアプリに画像を送信します。

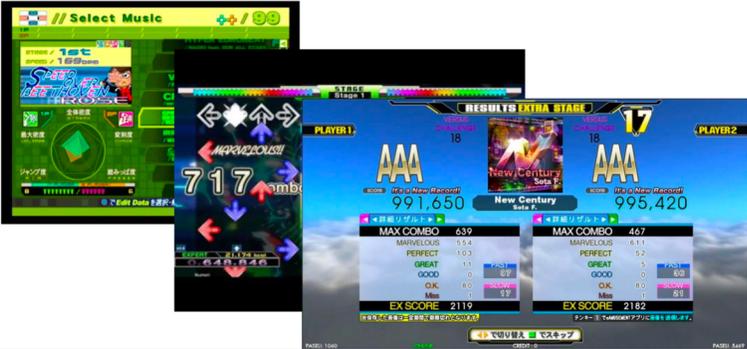
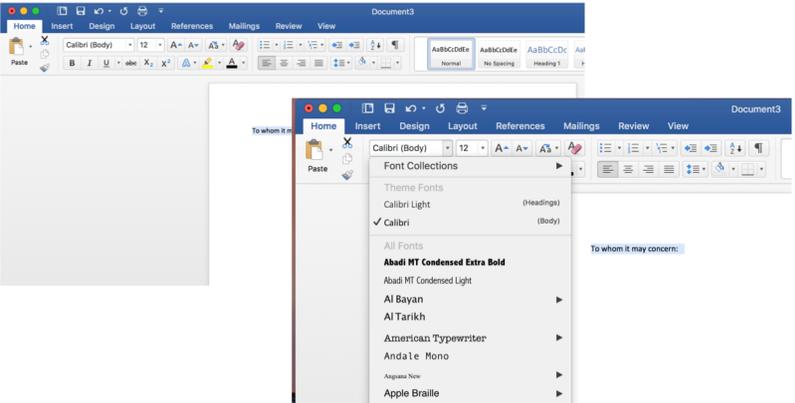
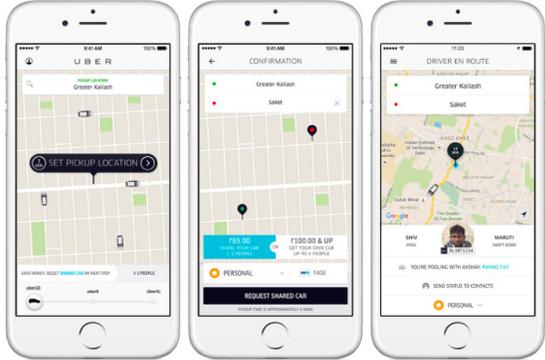
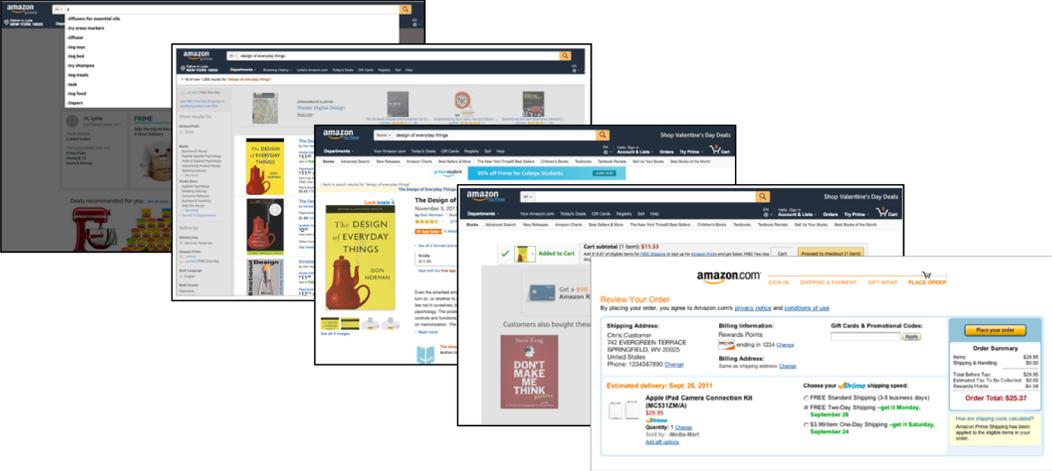
で切り替え でスキップ

PASEL: 1060 ONLINE CREDIT: 0 PASEL: 5469

DDR: Returns users to the song selection state.



When you have too much information for one screen, design states, options and transitions for the user to navigate through to complete their goal.

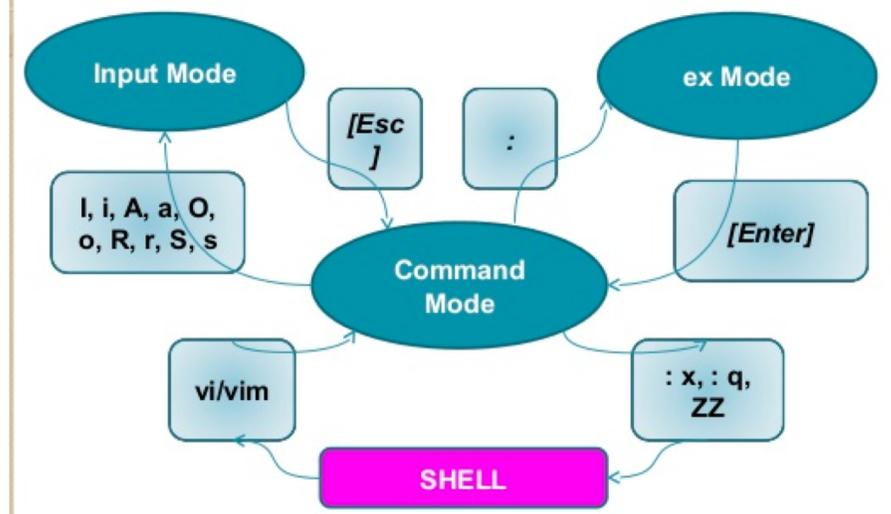


How **NOT** to structure navigation

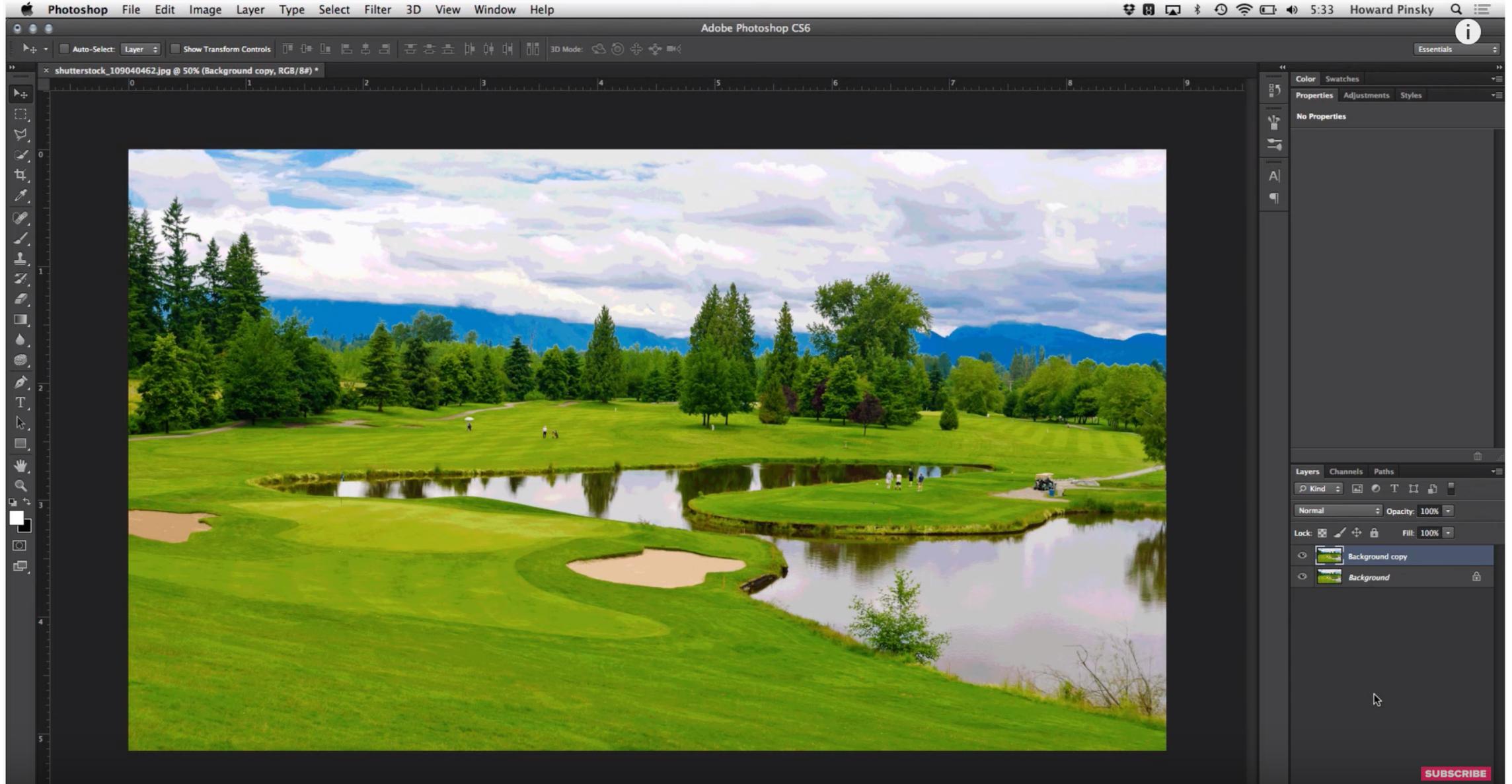
What goes wrong in this interface? Why?

```
-bash
| can insert text but can't leave the insert mode by 'ESC'
# Please enter the commit message for your changes. Lines starting
# with '#' will be ignored, and an empty message aborts the commit.
# On branch master
#
# Initial commit
#
# Changes to be committed:
#   new file:   .gitignore
#   new file:   Documents/app-debug.apk
#   new file:   Documents/debug.keystore
#   new file:   android.db.keystore.jks
#   new file:   app/.gitignore
#   new file:   app/build.gradle
#   new file:   app/libs/AndroidFramework-release-15.11.aar
#   new file:   app/libs/AirwatchSDK.jar
#   new file:   app/libs/MobileSDK-1.0.jar
#   new file:   app/libs/apptwinallib-15092015.jar
#   new file:   app/libs/awrpackagehttpclient-1.0.2.jar
#   new file:   app/libs/awrpackagehttpclient-1.0.jar
#   new file:   app/libs/codec-1.7.jar
#   new file:   app/libs/gson-2.1.jar
oddev/oss-sdk/demooctober3/.git/COMMIT_EDITMSG [unix] (11:22 20/04/2016) 1.0-1 Tool
D:/Projekte/MDG/dev/oss-sdk/demooctober3/.git/COMMIT_EDITMSG 36L, 4050C
```

Switching between modes of Vim



<https://www.youtube.com/watch?v=s28g41tSkGg>



What usability heuristics does
this violate?

3. User control and freedom (Navigation)

Users often choose system functions by mistake and will need easy ways to fix the mistakes. Support undo and redo.

The screenshot shows the Amazon website interface for the 'Dressers & Chests of Drawers' category. The top navigation bar includes the Amazon Prime logo, a search bar with the current category, and links for Departments, Browsing History, Lydia's Amazon.com, Today's Deals, Gift Cards, Registry, Sell, and Help. Below this is a secondary navigation bar with links for Amazon Home, Shop by Room, Home Décor, Furniture, and Kitchen. The main content area features a 'Dressers' heading, a 'Best sellers' section, and a sidebar for filtering results. The sidebar is highlighted with a red border and contains the following sections:

- Show results for:**
 - Home & Kitchen
 - Furniture
 - Bedroom Furniture
 - Dressers**
- Refine by:**
 - Material**
 - Wood
 - Metal
 - Manufactured Wood
 - Wicker
 - Glass
 - Leather
 - Vinyl
 - [See more](#)
 - Furniture Finish**
 - White
 - Black
 - Cherry
 - Espresso
 - Oak
 - Walnut
 - Mahogany

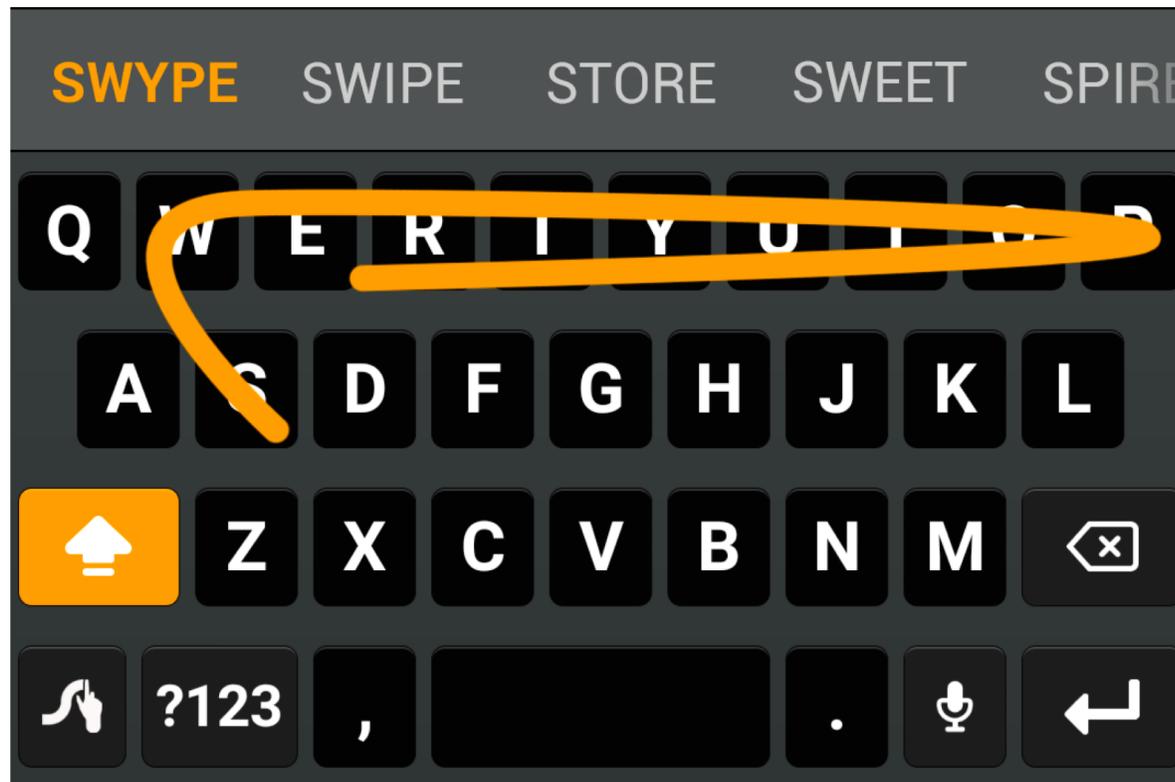
The main product listings include:

- Tvilum 70296cj Scottsdale 6 Drawer Double...:** \$163.30, Prime, 1 star rating.
- Delta Children Universal 6 Drawer Dresser...:** \$222.03, Prime, 1,258 star ratings.
- Black Sonoma 6 Drawer Dresser:** Prepac, 537 star ratings.

Below the listings is a 'Related to items you've viewed' section with a link to 'View or edit your browsing history'.

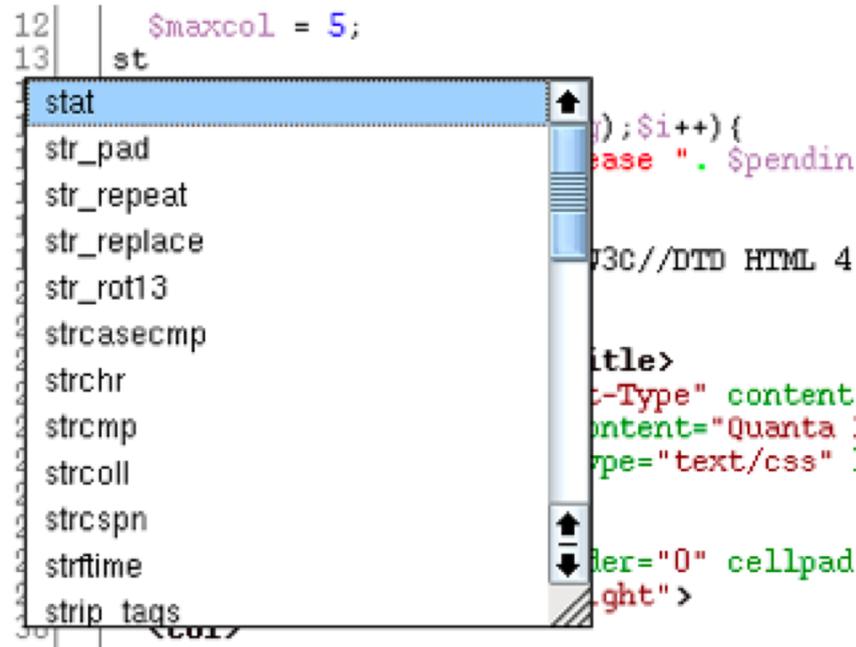
7. Flexibility and efficiency of use

Accelerators — unseen by the novice user — may often speed up the interaction for the expert. Allow users to tailor frequent actions.



6. Recognition rather than recall

Minimize the user's memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another.



2. Match between system and the real world

The system should speak the users' language, using concepts familiar to the user, rather than



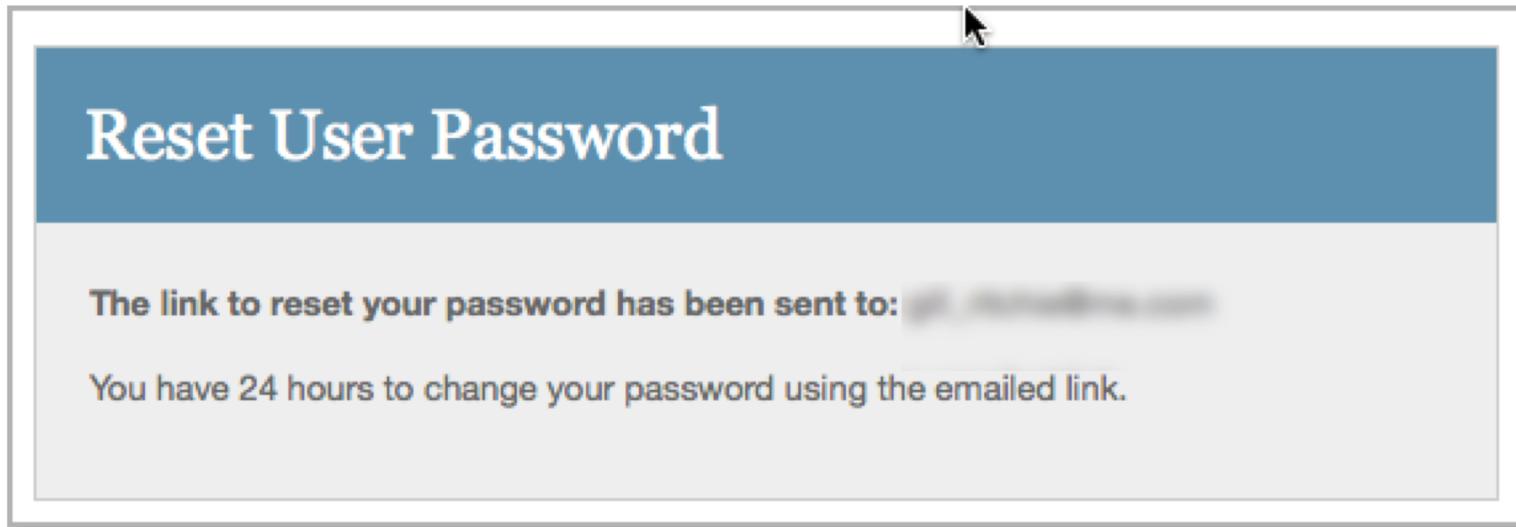
SCREEN

		A13	A12	A11	A10	A9	A8	A7	A6	A5	A4	A3								
B17	B16	B15	B14	B13	B12	B11	B10	B9	B8	B7	B6	B5	B4	B3	B2	B1				
C19	C18	C17	C16	C15	C14	C13	C12	C11	C10	C9	C8	C7	C6	C5	C4	C3	C2	C1		
D20	D19	D18	D17	D16	D15	D14	D13	D12	D11	D10	D9	D8	D7	D6	D5	D4	D3	D2	D1	
E21	E20	E19	E18	E17	E16	E15	E14	E13	E12	E11	E10	E9	E8	E7	E6	E5	E4	E3	E2	E1
F21	F20	F19	F18	F17	F16	F15	F14	F13	F12	F11	F10	F9	F8	F7	F6	F5	F4	F3	F2	F1
G21	G20	G19	G18	G17	G16	G15	G14	G13	G12	G11	G10	G9	G8	G7	G6	G5	G4	G3	G2	G1
H21	H20	H19	H18	H17	H16	H15	H14	H13	H12	H11	H10	H9	H8	H7	H6	H5	H4	H3	H2	H1
J19	J18			J17	J16	J15	J14	J13	J12	J11	J10	J9	J8	J7	J6	J5			J2	J1
K21	K20	K19	K18	K17	K16	K15	K14	K13	K12	K11	K10	K9	K8	K7	K6	K5	K4	K3	K2	K1
L19	L18	L17	L16	L15	L14	L13	L12	L11	L10	L9	L8	L7	L6	L5	L4	L3	L2	L1	L0	L-1
M19	M18	M17	M16	M15	M14	M13	M12	M11	M10	M9	M8	M7	M6	M5	M4	M3	M2	M1	M0	M-1
N21	N20	N19	N18	N17	N16	N15	N14	N13	N12	N11	N10	N9	N8	N7	N6	N5	N4	N3	N2	N1
P21	P20	P19	P18	P17	P16	P15	P14	P13	P12	P11	P10	P9	P8	P7	P6	P5	P4	P3	P2	P1
Q19	Q18	Q17	Q16	Q15	Q14	Q13	Q12	Q11	Q10	Q9	Q8	Q7	Q6	Q5	Q4	Q3	Q2	Q1	Q0	Q-1
R21	R20	R19	R18	R17	R16	R15	R14	R13	R12	R11	R10	R9	R8	R7	R6	R5	R4	R3	R2	R1
S16	S15	S14	S13	S12	S11	S10	S9	S8	S7	S6	S5	S4	S3	S2	S1	S0	S-1	S-2	S-3	S-4
T16	T15	T14	T13	T12	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1	T0	T-1	T-2	T-3	T-4
U15	U14	U13	U12	U11	U10	U9	U8	U7	U6	U5	U4	U3	U2	U1	U0	U-1	U-2	U-3	U-4	U-5
		V10	V9	V8	V7			V4	V3	V2	V1			W1						

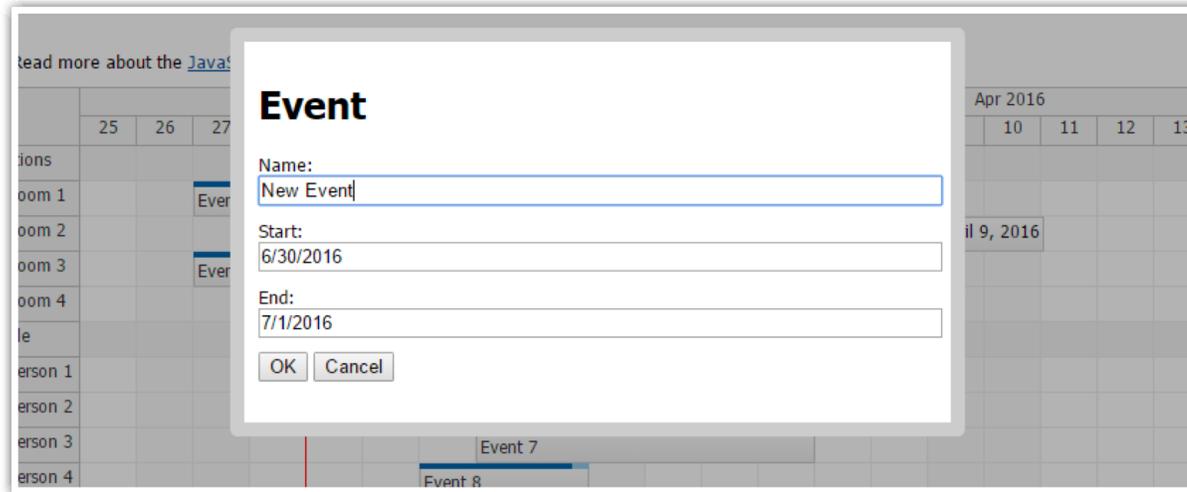
Legend: Available Unavailable Selected Wheelchair Companion

1. Visibility of system status

The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.



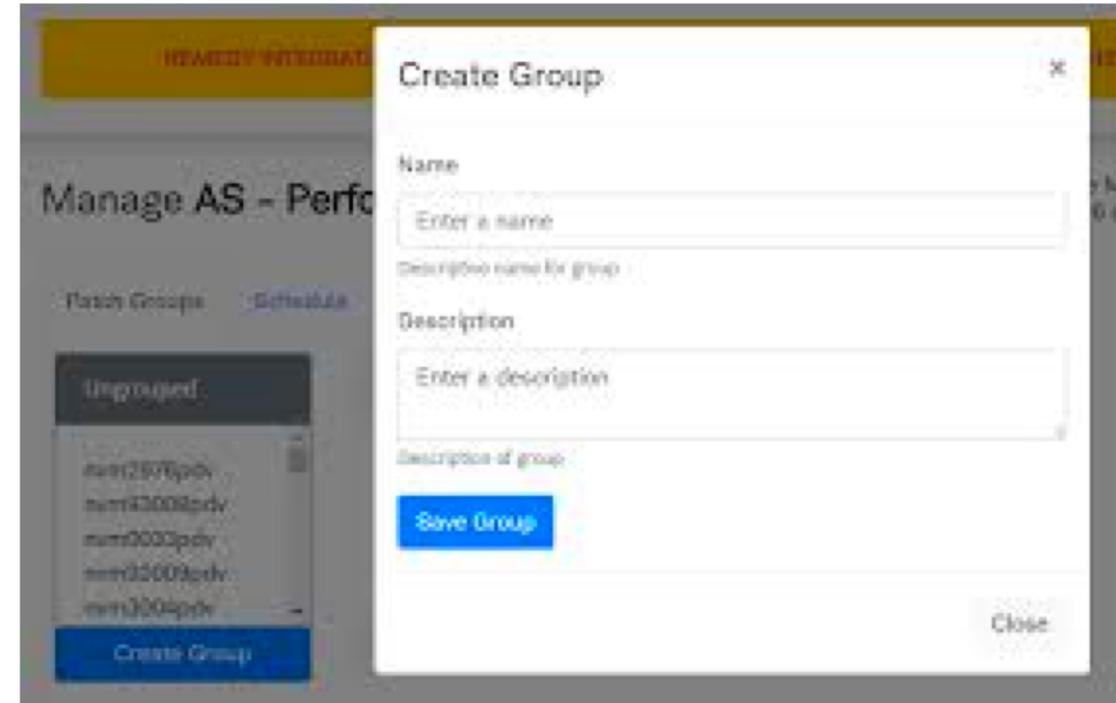
Here is where I see students make the mistake of using modes:



The screenshot shows a calendar interface with a modal dialog box titled "Event". The dialog box contains the following fields and controls:

- Name:** A text input field containing "New Event".
- Start:** A date input field containing "6/30/2016".
- End:** A date input field containing "7/1/2016".
- Buttons:** "OK" and "Cancel" buttons at the bottom.

The background shows a calendar grid for April 2016, with a sidebar on the left listing "Room 1", "Room 2", "Room 3", "Room 4", "Person 1", "Person 2", "Person 3", and "Person 4".

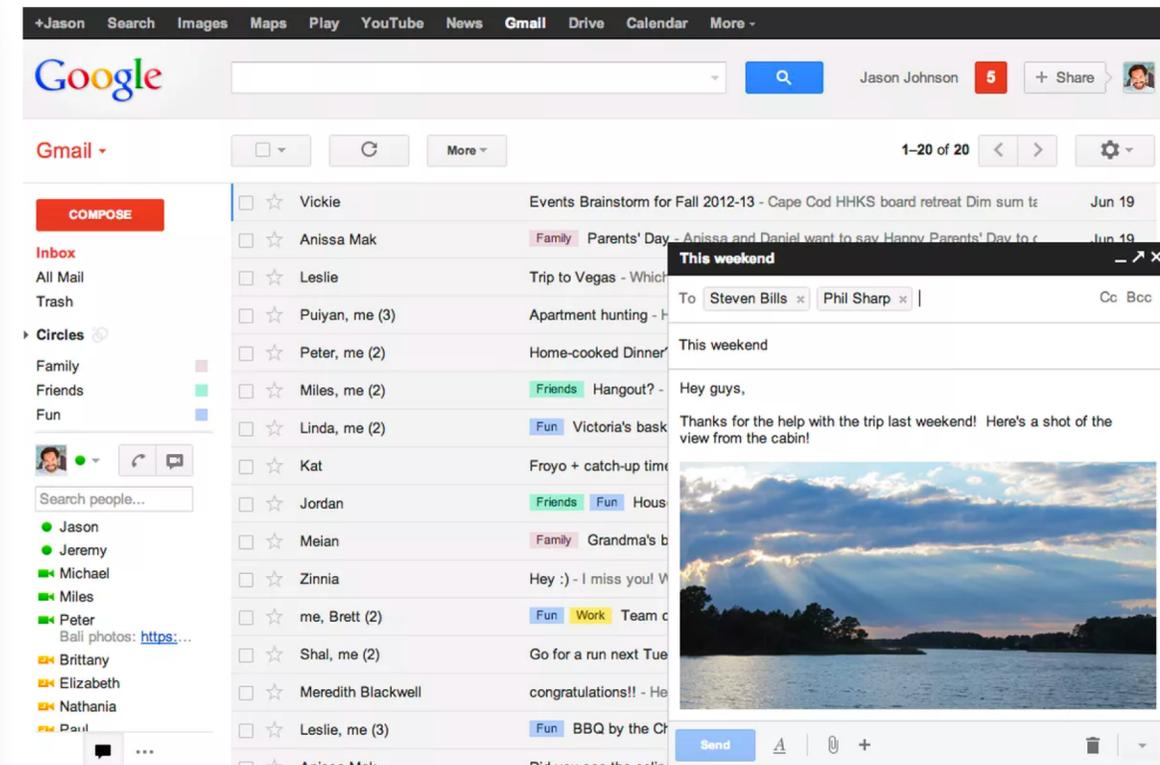
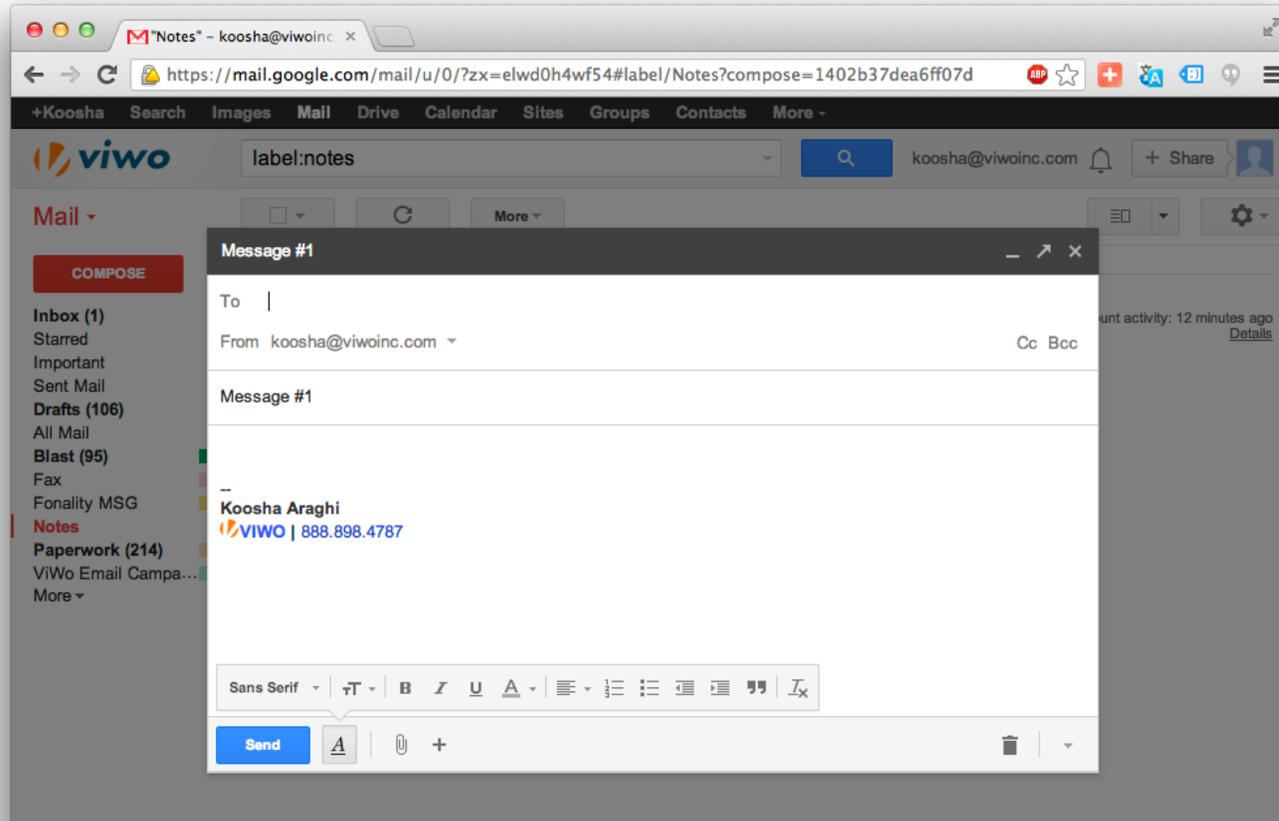


The screenshot shows a "Manage AS - Performance" interface with a modal dialog box titled "Create Group". The dialog box contains the following fields and controls:

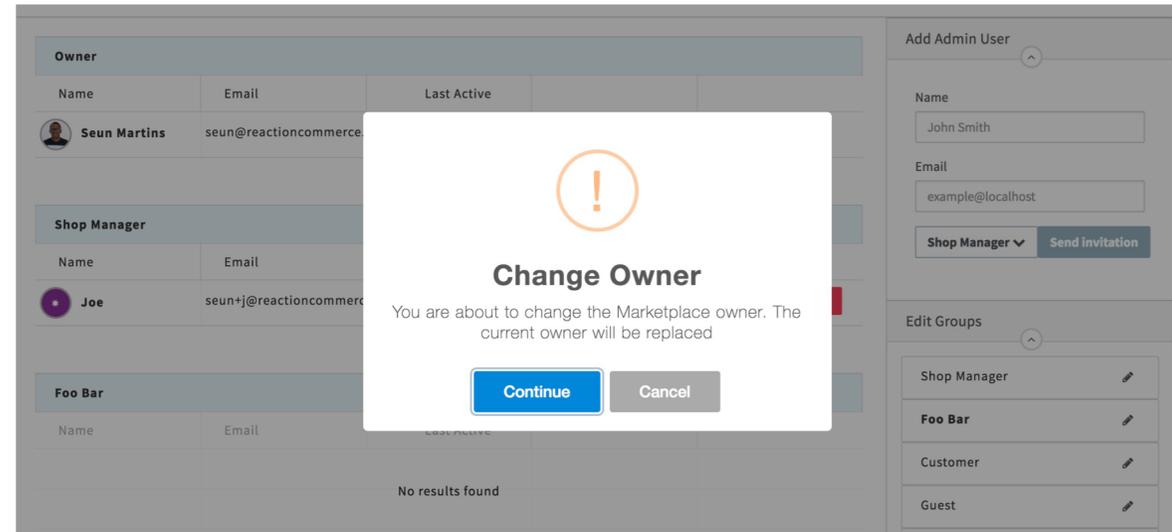
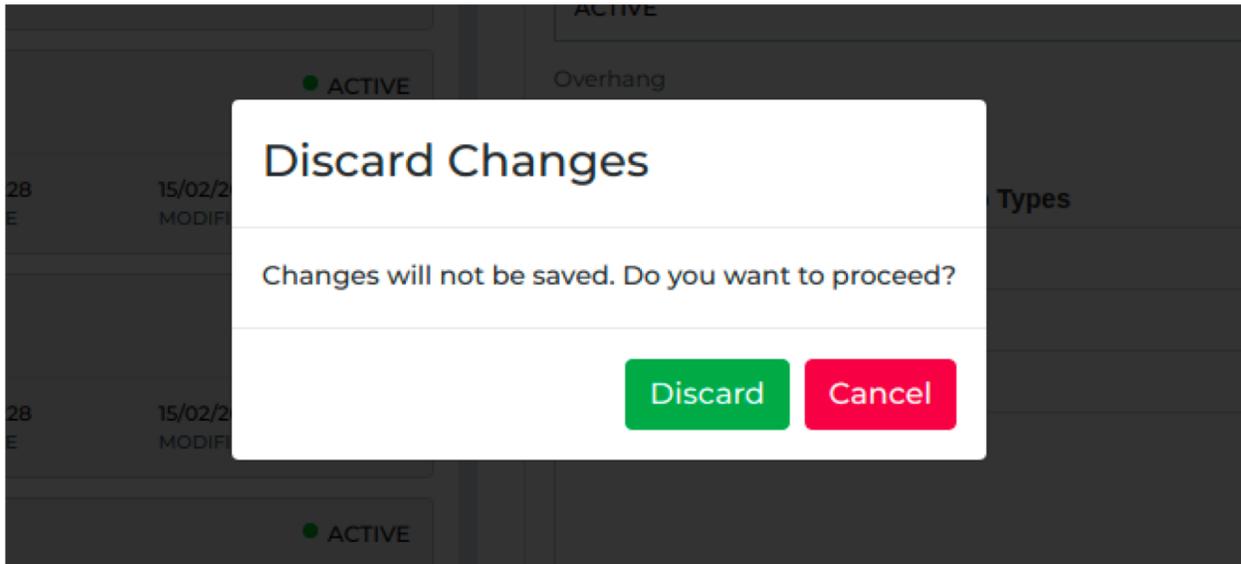
- Name:** A text input field with the placeholder "Enter a name".
- Description name for group:** A text input field.
- Description:** A text input field with the placeholder "Enter a description".
- Buttons:** "Save Group" (blue) and "Close" (grey) buttons at the bottom.

The background interface includes a "Flash Groups" section with a list of items and a "Create Group" button.

Why did Gmail compose get rid of "compose mode" as it's default for compose?

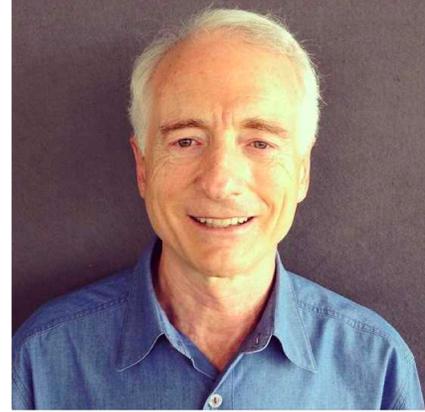
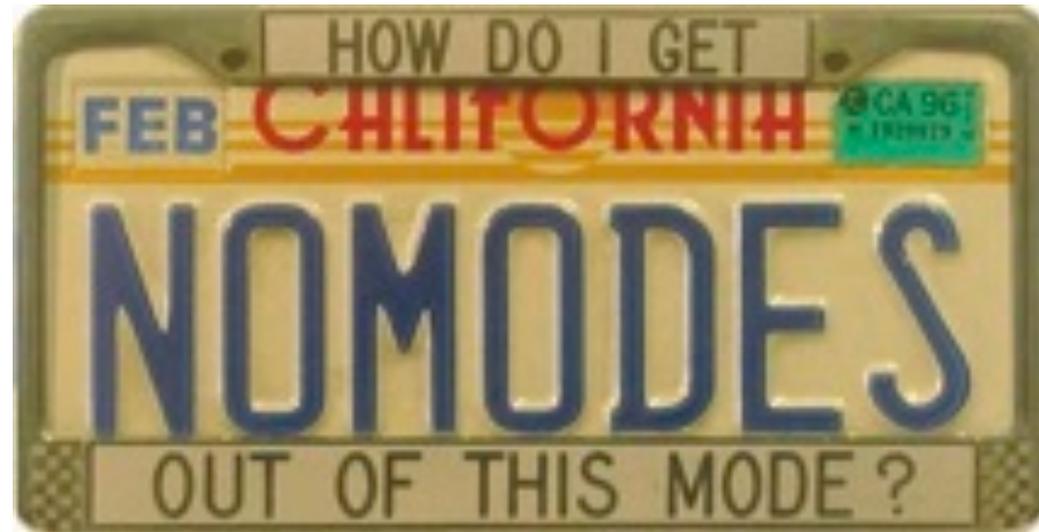


The only acceptable use of modes:



When the user absolutely must make this decision to proceed and needs no other information

In general:

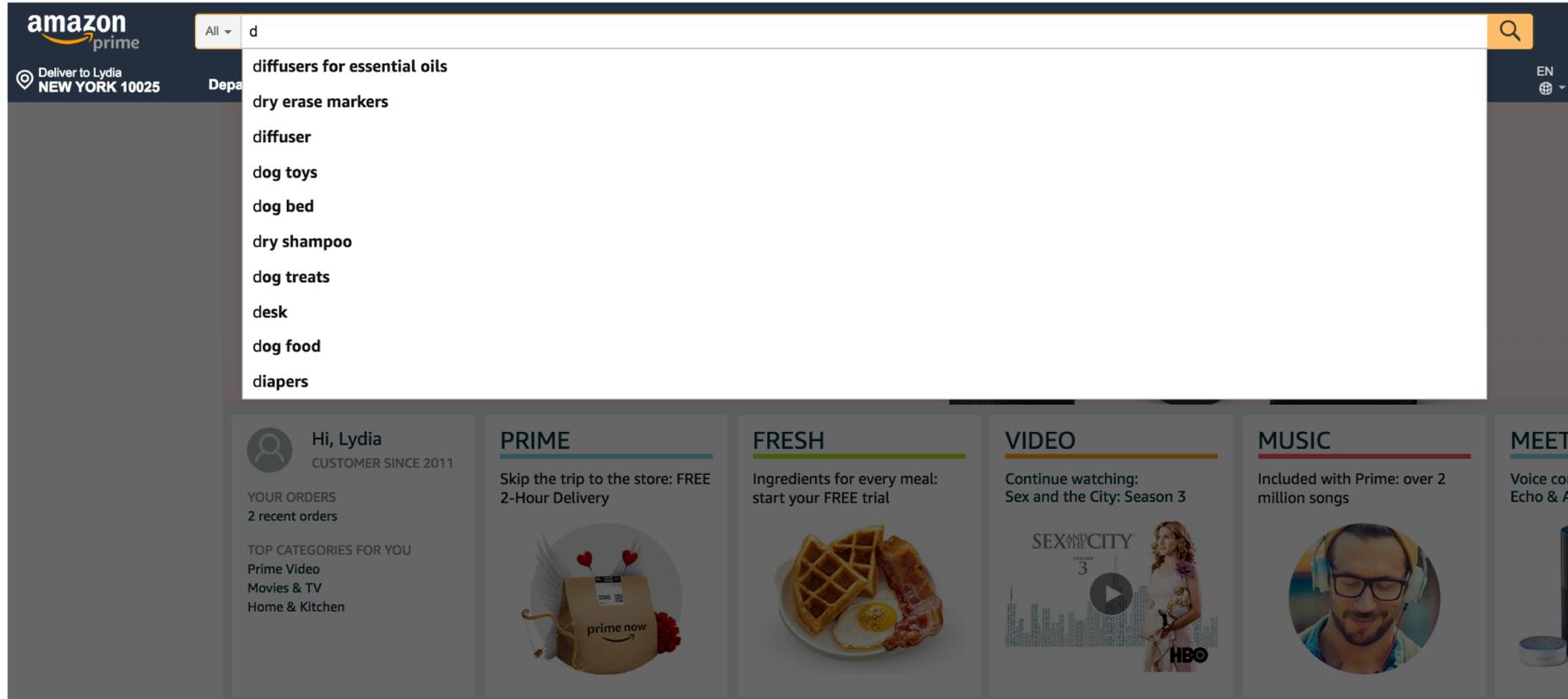


Larry Tesler,
Apple UI pioneer

They violate user control and freedom

Presenting users with options

Product search: How many options are there?



Billions

Search Results: How many (relevant) options are there?

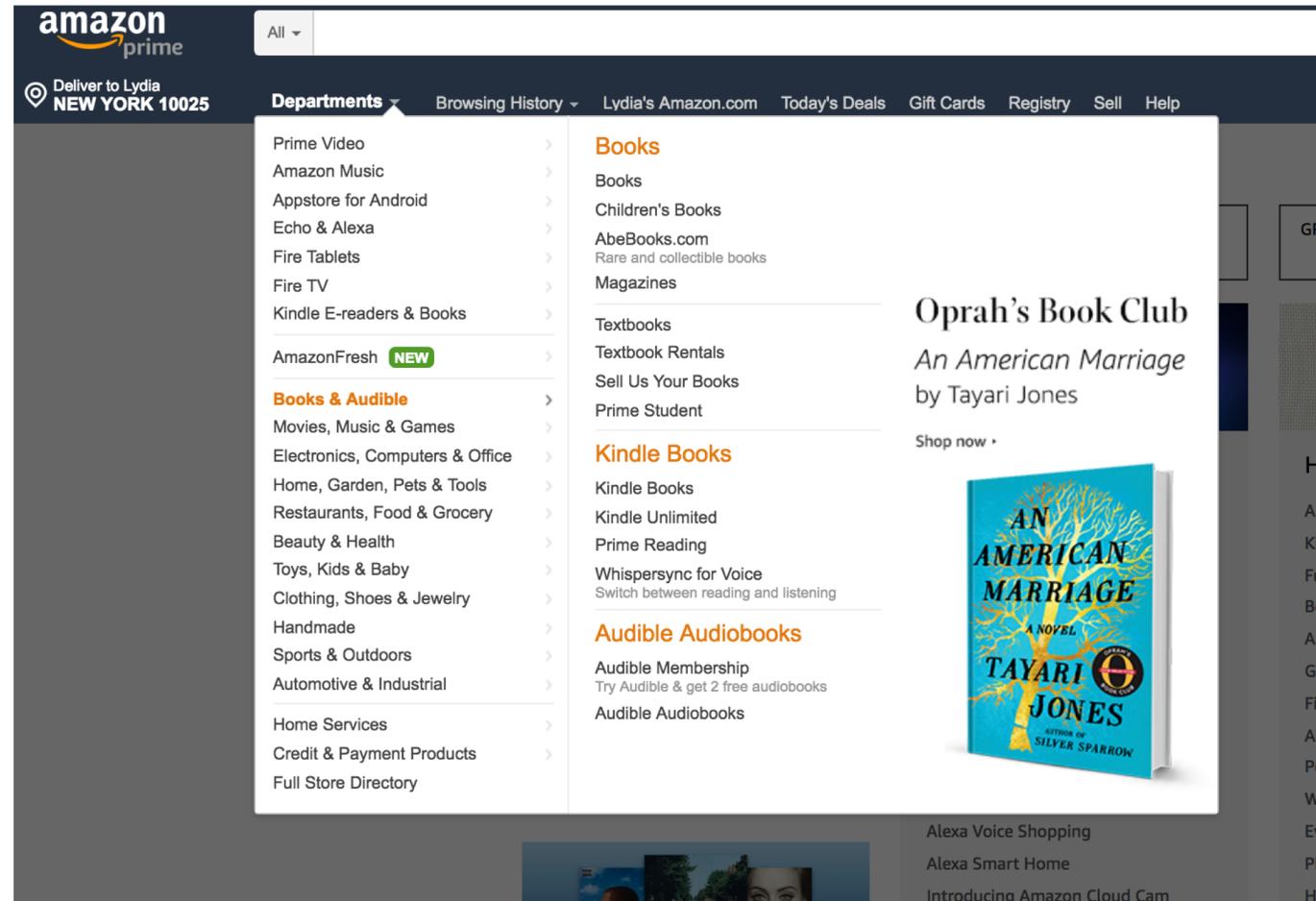
The screenshot shows the Amazon search results page for the query "design of everyday things". The page displays a list of 16 results, with the first six visible. Each result includes a book cover, title, author, publication date, and pricing information for various formats (Kindle, Paperback, Hardcover, Audible). The results are:

- The Design of Everyday Things: Revised and Expanded Edition** by Don Norman (Nov 5, 2013). Kindle Edition: \$11.99. Paperback: \$11.35 (was \$18.00). Hardcover: \$34.22 (was \$42.00).
- The Design of Everyday Things** by Donald A. Norman (Sep 19, 2002). Paperback: \$1.99. Audible Audio Edition: \$0.00.
- Emotional Design: Why We Love (or Hate) Everyday Things** by Don Norman (Mar 20, 2007). Kindle Edition: \$11.99. Paperback: \$12.24 (was \$12.99). Hardcover: \$40.01 (was \$45.00).
- 100 Things Every Designer Needs to Know About People (Voices That Matter)** by Susan Weinschenk (Apr 14, 2011). Kindle Edition: \$9.60. Paperback: \$25.24 (was \$24.99). Hardcover: \$15.90 (was \$18.00).
- The Psychology Of Everyday Things** by Don Norman (Jun 15, 1988). Hardcover: \$30.00 (was \$35.00). Paperback: \$2.49 (was \$2.99).
- Hooked: How to Build Habit-Forming Products** by Nir Eyal and Ryan Hoover (Nov 4, 2014). Kindle Edition: \$11.99. Hardcover: \$17.12 (was \$25.95). Paperback: \$10.23 (was \$11.99).

The page also shows the Amazon Prime logo, delivery location (Lydia, NEW YORK 10025), and navigation links like Departments, Browsing History, and Today's Deals.

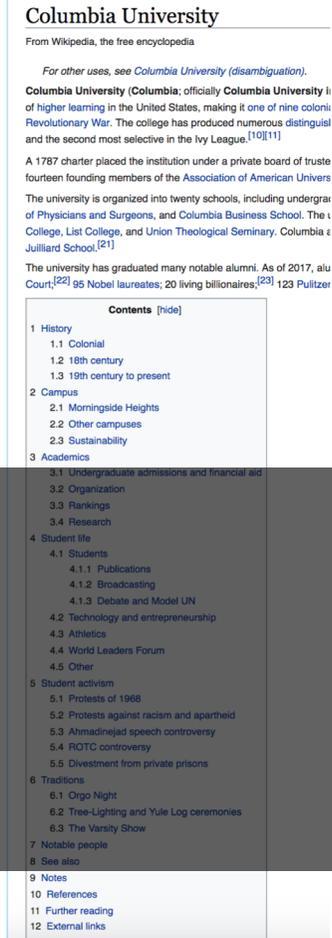
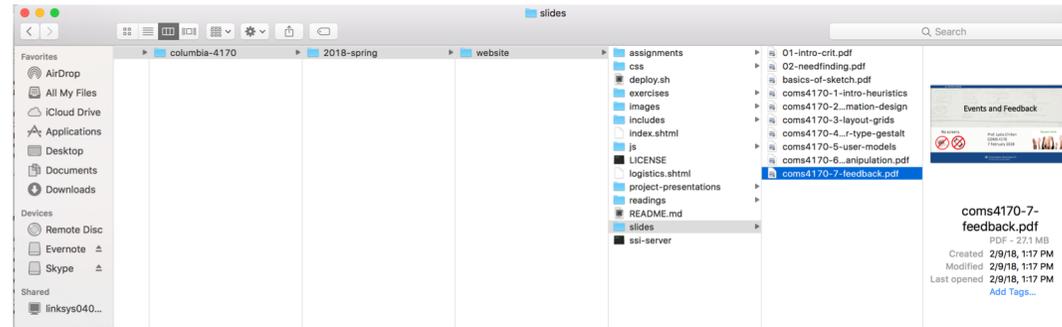
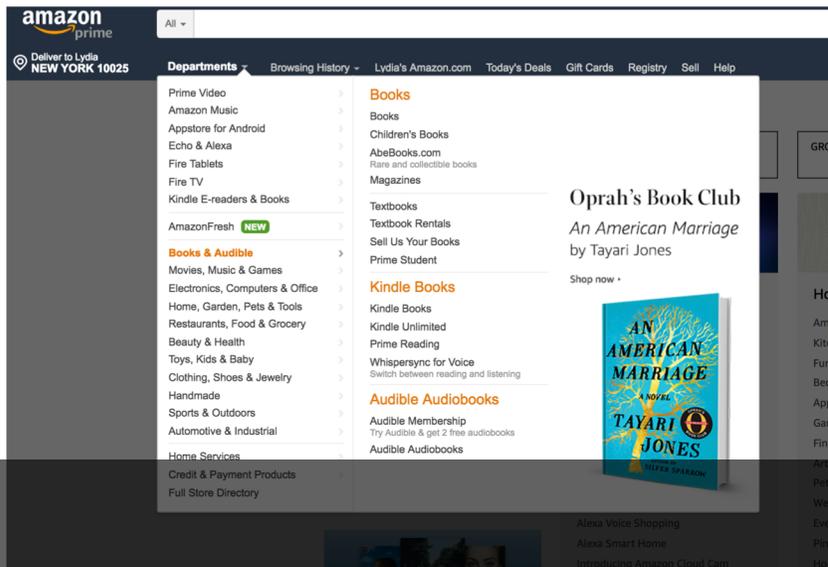
About 10

Amazon Departments: How many options are there?



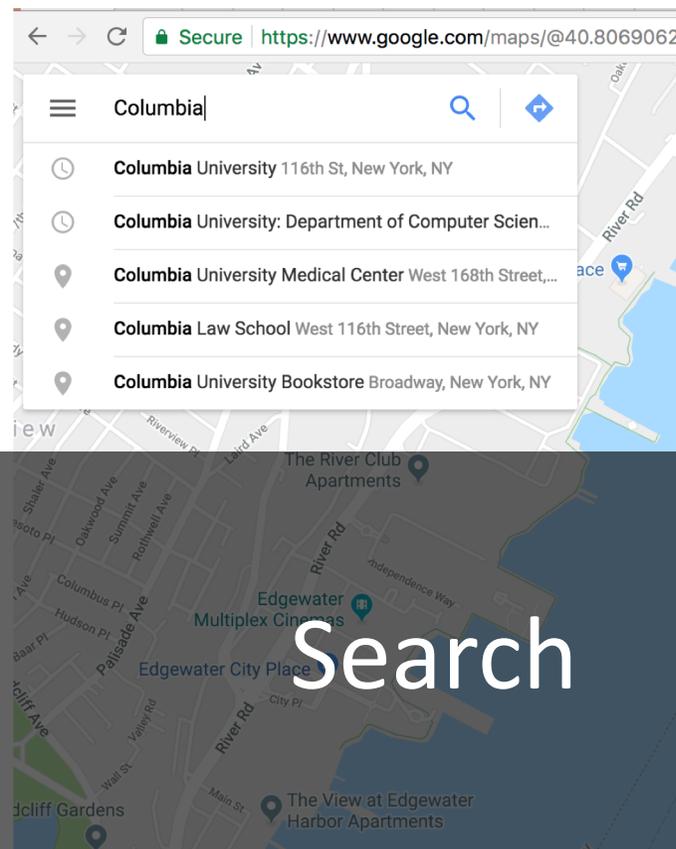
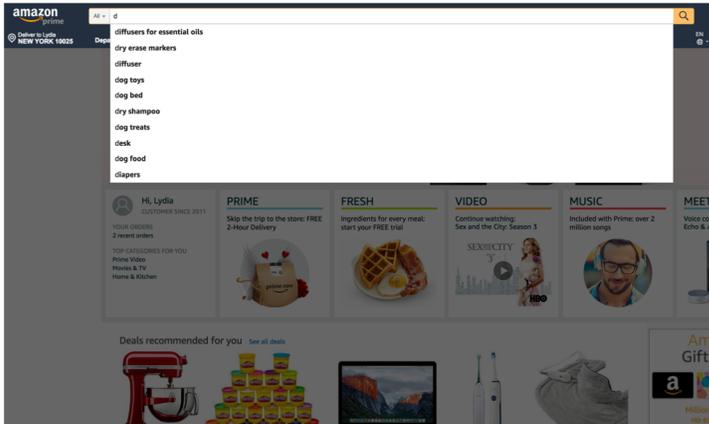
About 100

When displaying ~100 options, how do you display them to suit the needs and abilities of people?



A tree

When displaying ~1000 options, how do you display them to suit the needs and abilities of people?



```
135
136
137   $(document).ready(function(){
138     window.website = new Website();
139     window.website.loadCodeEditor();
140     website.setCurrentPageElement($("#home"));
141     add
142   });
143   });
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Search

Yahoo 1995: What interaction style is this?

YAHOO!

New Cool Today's News More Yahoos

[NBA Draft](#)
[Wimbledon](#)

ONSALE **FIVE \$1,000**
Winners Click Now!

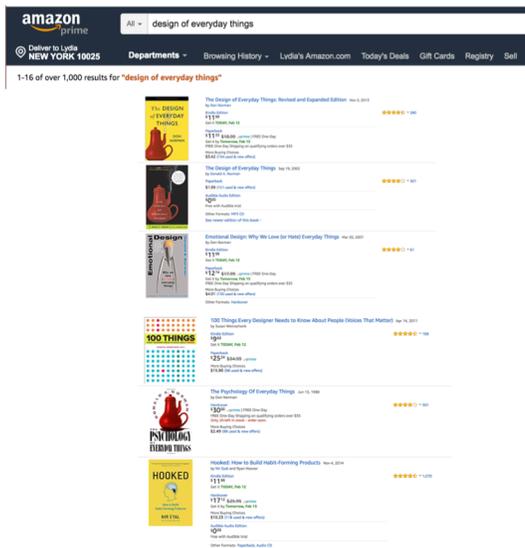
[Holyfield vs. Tyson](#)

[options](#)

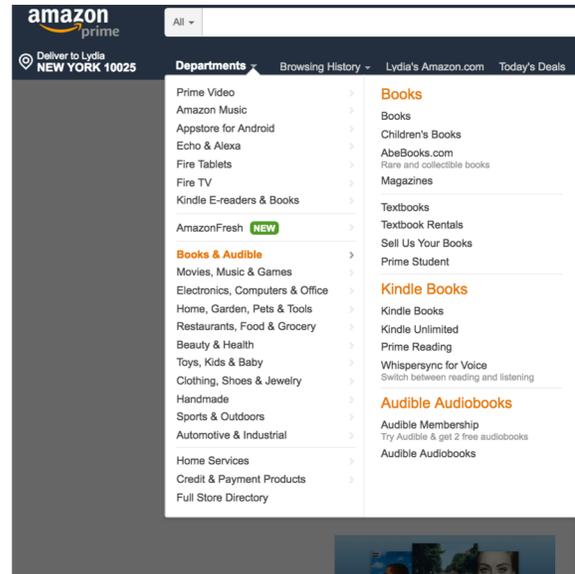
[Yellow Pages](#) - [People Search](#) - [Maps](#) - [Classifieds](#) - [News](#) - [Stock Quotes](#) - [Sports Scores](#)

- ♦ [Arts and Humanities](#)
[Architecture](#), [Photography](#), [Literature](#)...
- ♦ [Business and Economy](#) [Xtra!]
[Companies](#), [Investing](#), [Employment](#)...
- ♦ [Computers and Internet](#) [Xtra!]
[Internet](#), [WWW](#), [Software](#), [Multimedia](#)...
- ♦ [Education](#)
[Universities](#), [K-12](#), [College Entrance](#)...
- ♦ [Entertainment](#) [Xtra!]
[Cool Links](#), [Movies](#), [Music](#), [Humor](#)...
- ♦ [Government](#)
[Military](#), [Politics](#) [Xtra!], [Law](#), [Taxes](#)...
- ♦ [Health](#) [Xtra!]
[Medicine](#), [Drugs](#), [Diseases](#), [Fitness](#)...
- ♦ [News and Media](#) [Xtra!]
[Current Events](#), [Magazines](#), [TV](#), [Newspapers](#)...
- ♦ [Recreation and Sports](#) [Xtra!]
[Sports](#), [Games](#), [Travel](#), [Autos](#), [Outdoors](#)...
- ♦ [Reference](#)
[Libraries](#), [Dictionaries](#), [Phone Numbers](#)...
- ♦ [Regional](#)
[Countries](#), [Regions](#), [U.S. States](#)...
- ♦ [Science](#)
[CS](#), [Biology](#), [Astronomy](#), [Engineering](#)...
- ♦ [Social Science](#)
[Anthropology](#), [Sociology](#), [Economics](#)...
- ♦ [Society and Culture](#)
[People](#), [Environment](#), [Religion](#)...

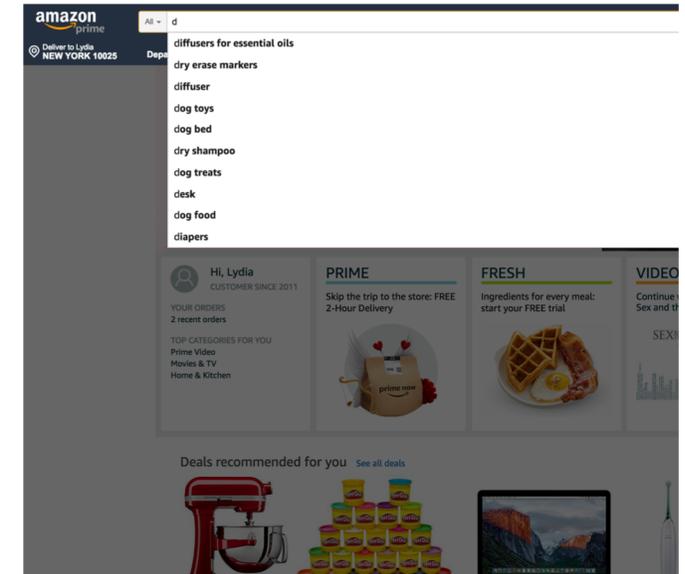
When displaying options, the number of options determines the interaction style.



~10 items = list



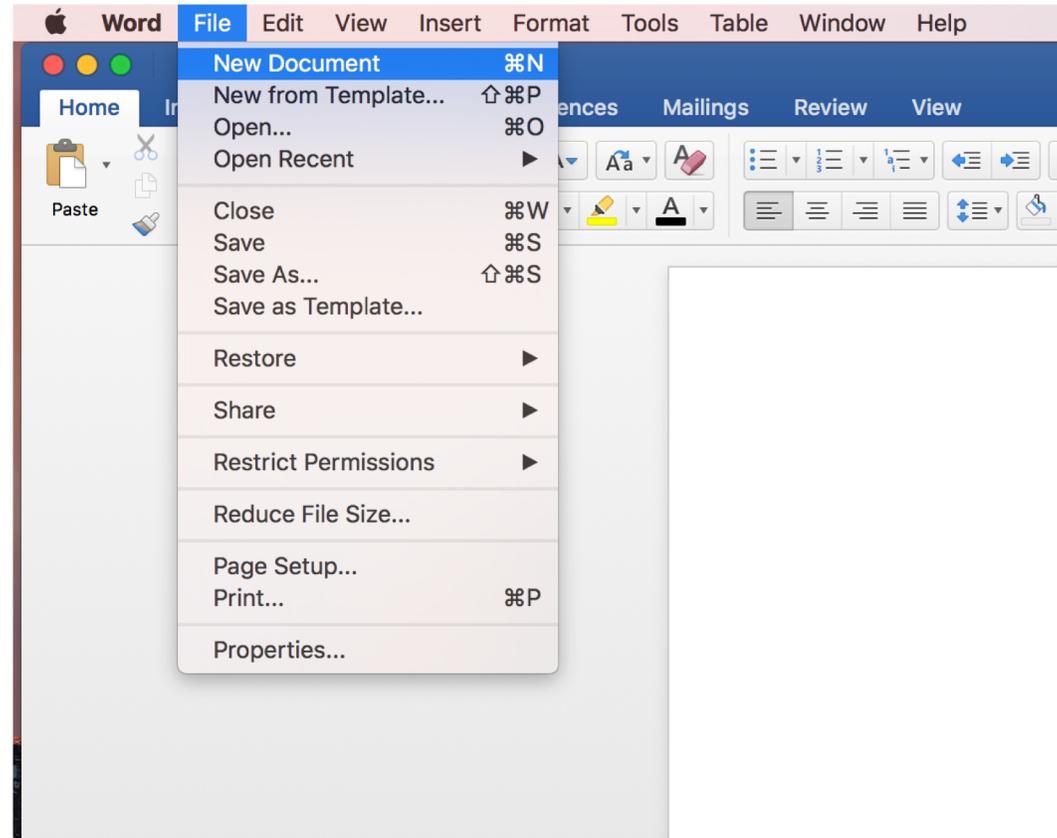
~100 items = tree



~1000 items = search

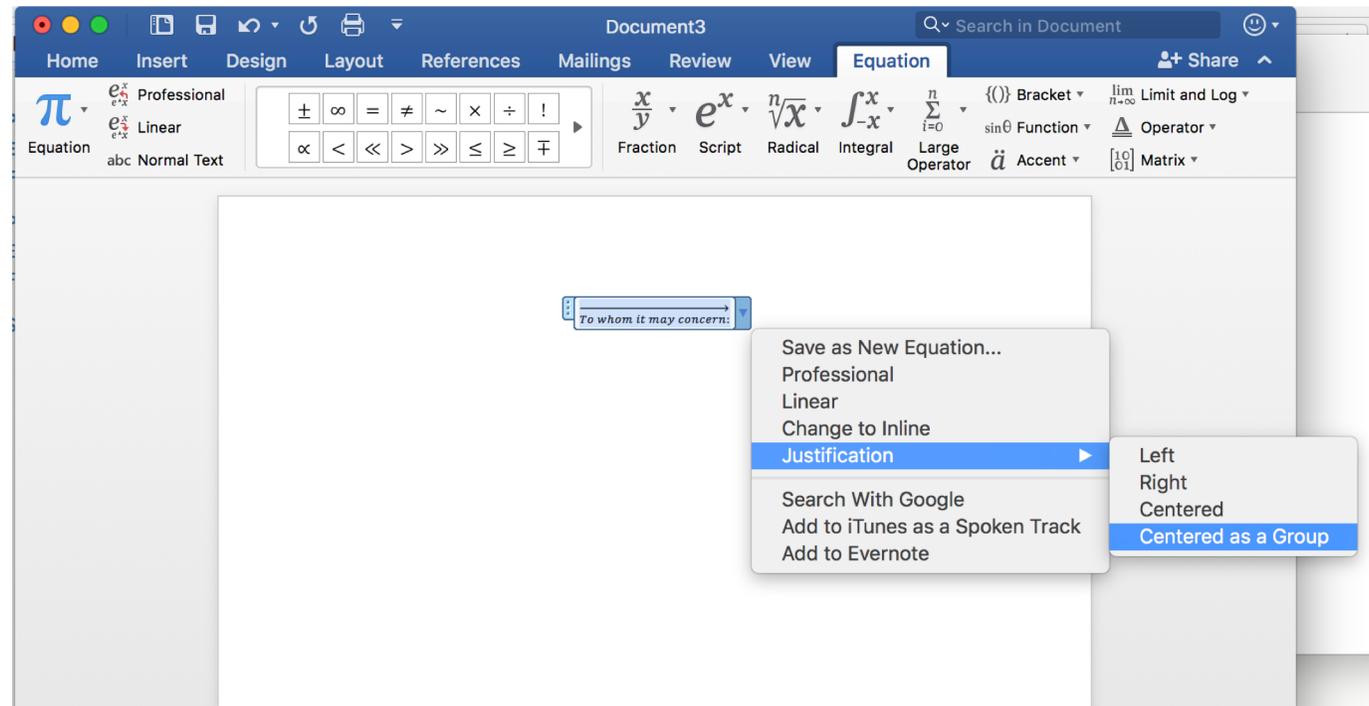
Designing Menu Options

Why is “New Document” the first menu item?



Items that are **frequently** used should be **easy** to access

Why is the function “*Word Equation -> Fraction -> Denominator -> Justification -> Centered as a Group*” buried 4 levels deep in the menu?

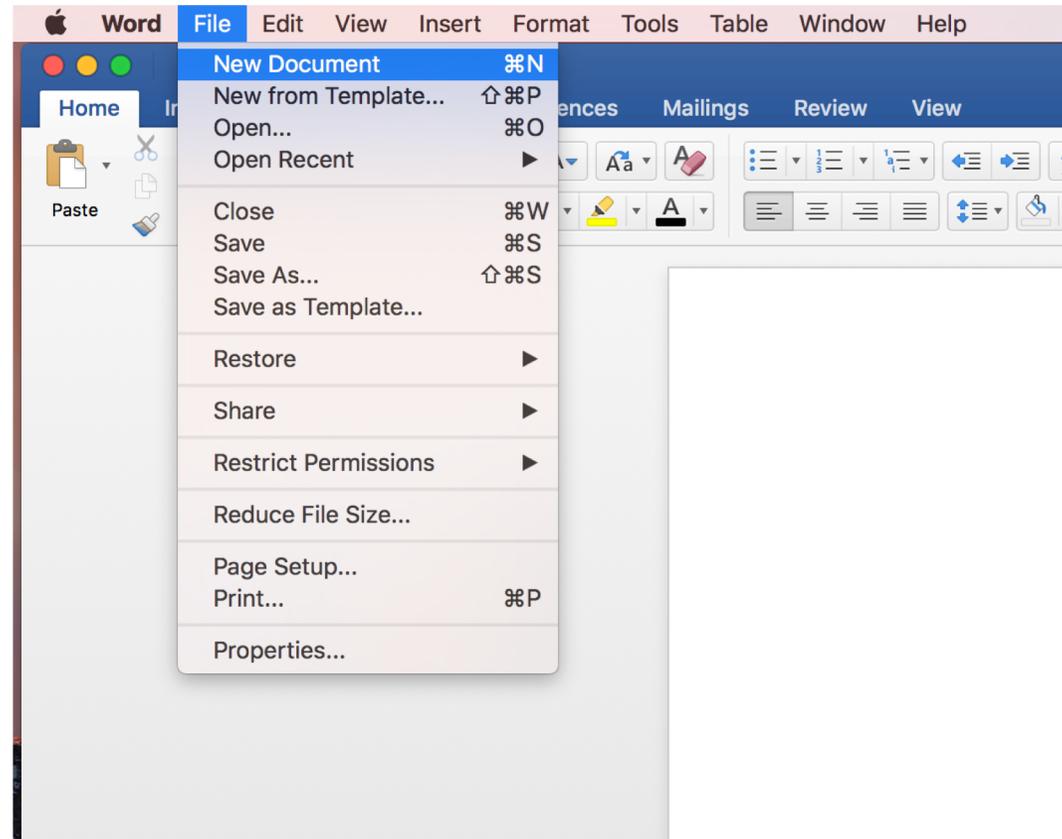


Items that are **infrequently** used can be more **difficult** to access

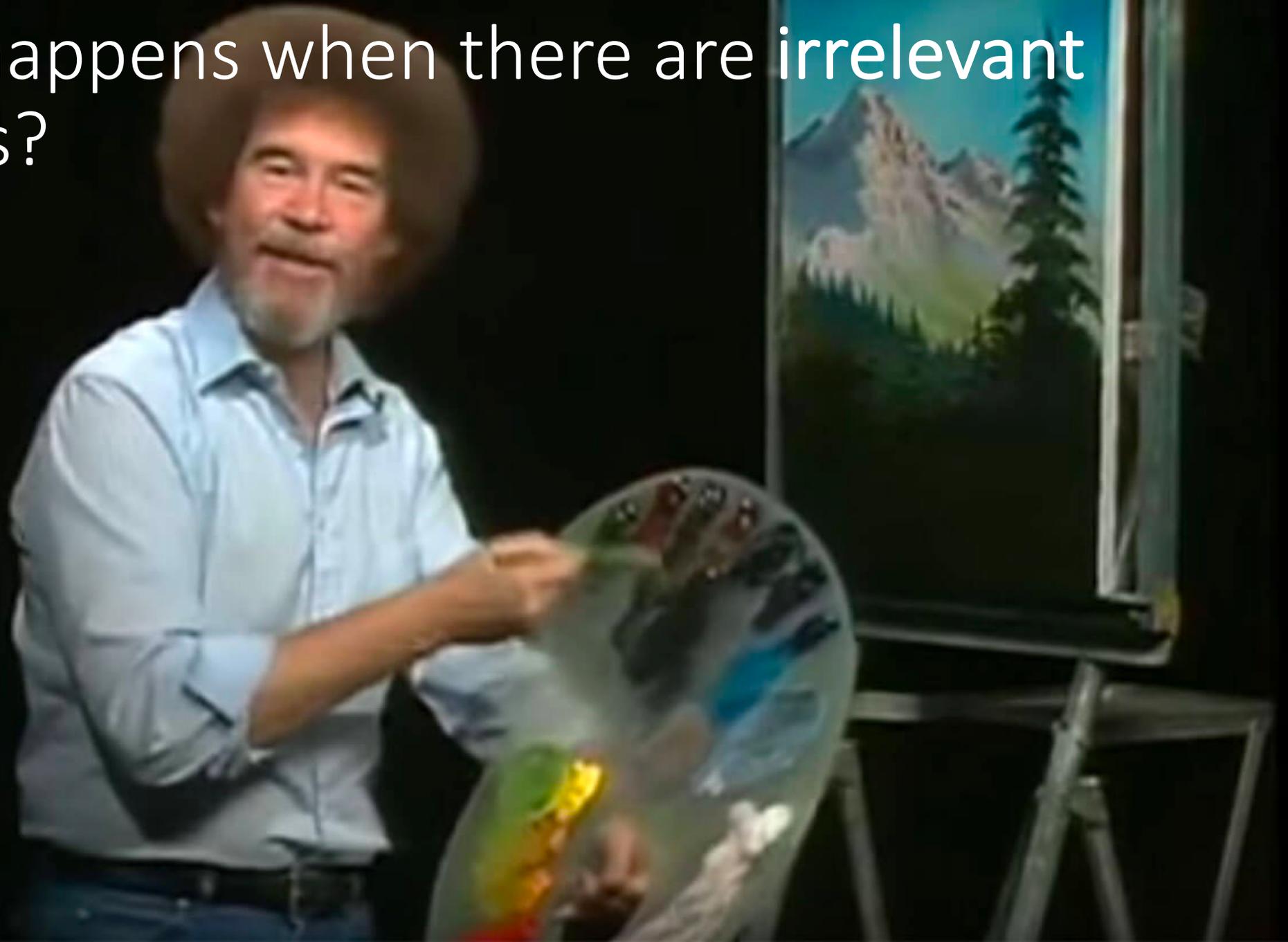
People have limited time.

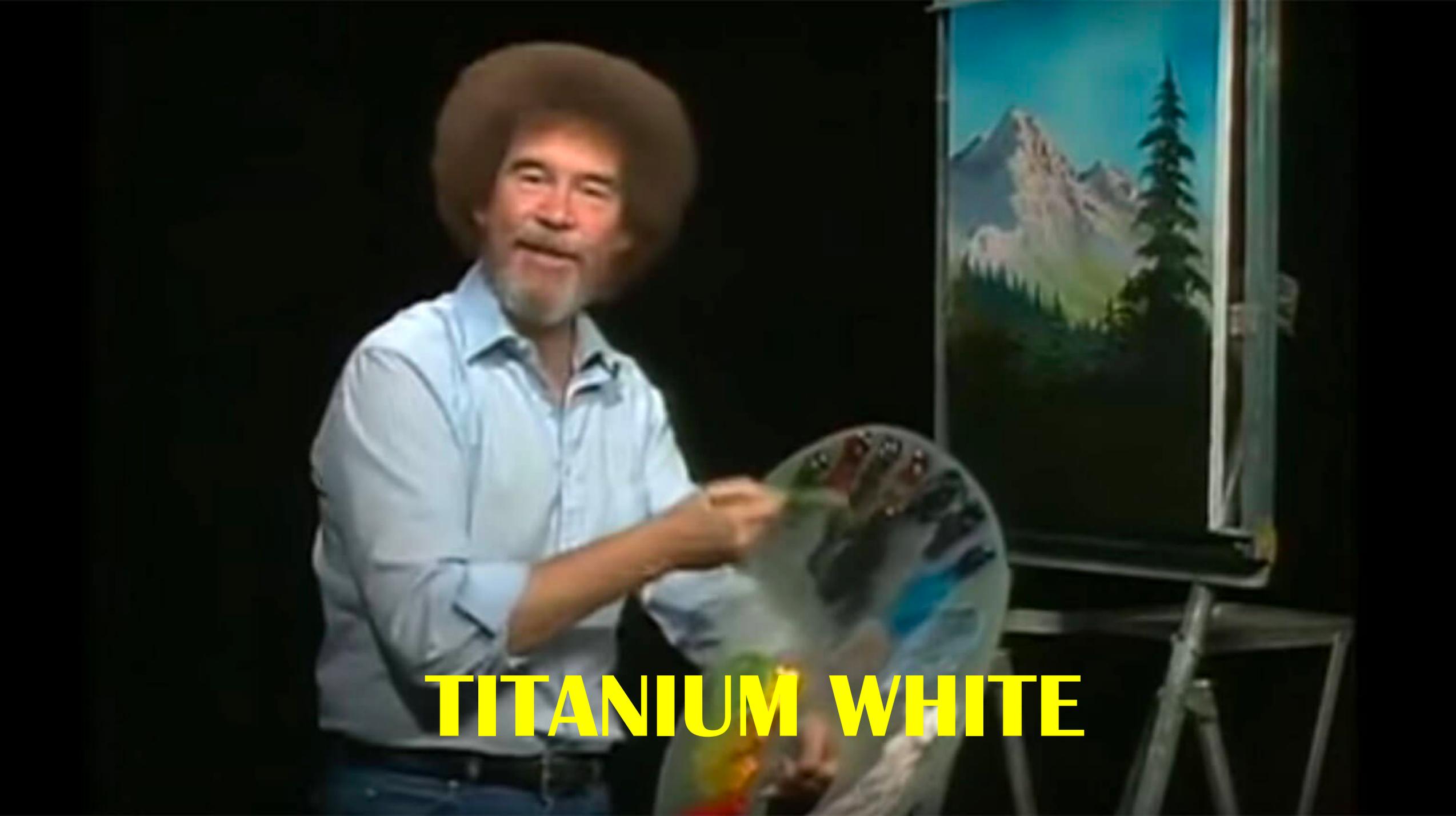
Make frequently used options easier to access

Make rarely used options harder to access



What happens when there are irrelevant options?

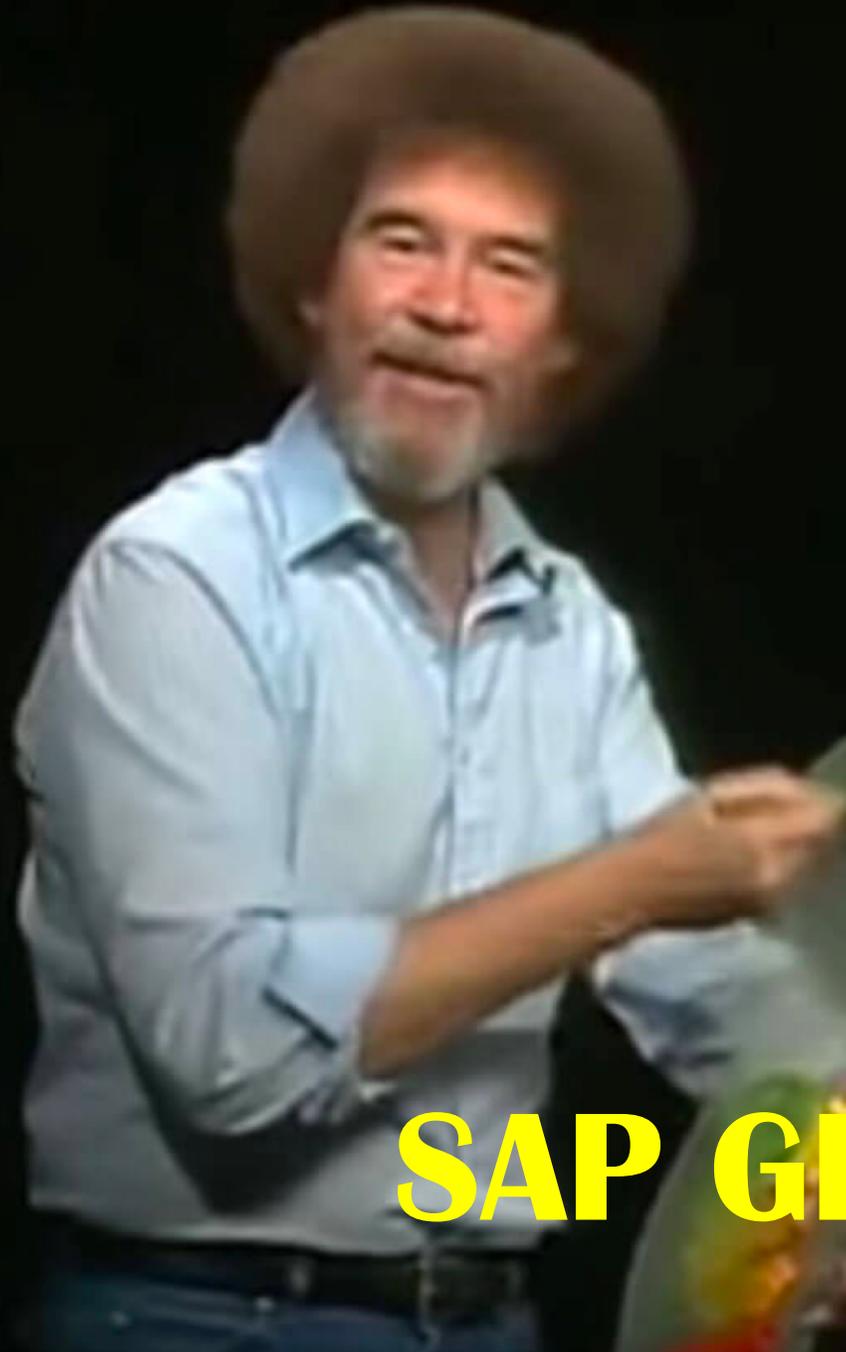


A man with a large afro hairstyle, wearing a light blue button-down shirt and jeans, is painting a landscape on a canvas. He is holding a palette with various colors of paint. The painting on the canvas depicts a mountain range with a large evergreen tree in the foreground. The background is dark, making the painting stand out.

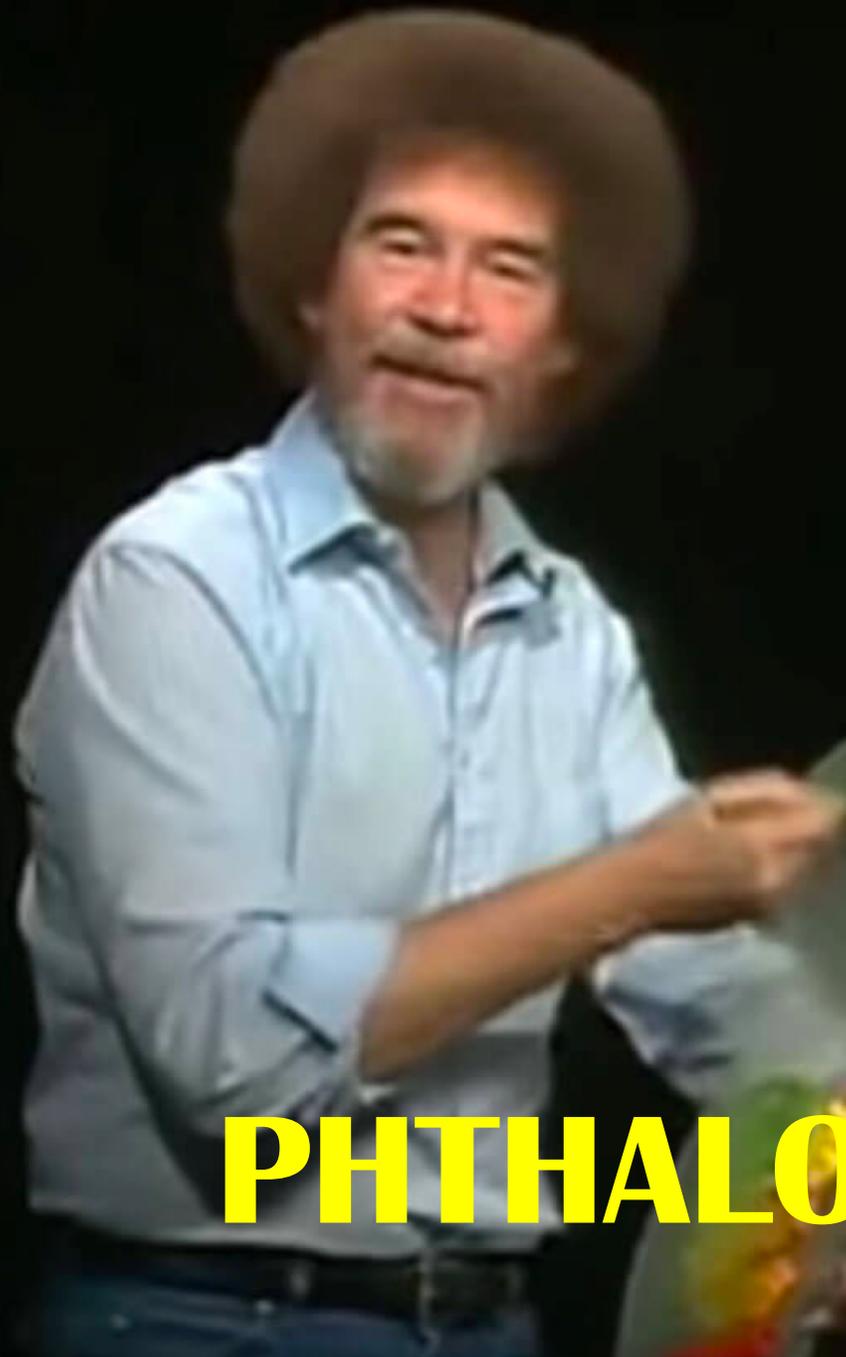
TITANIUM WHITE

A man with a large afro hairstyle, wearing a light blue button-down shirt and jeans, is painting a landscape on a canvas. He is holding a palette with various colors of paint. The painting on the canvas depicts a mountain range with a large evergreen tree in the foreground. The background is dark, making the painting stand out.

CADMIUM YELLOW



SAP GREEN



PHTHALO BLUE

Why not do this?



7

ELECTRIC PINK

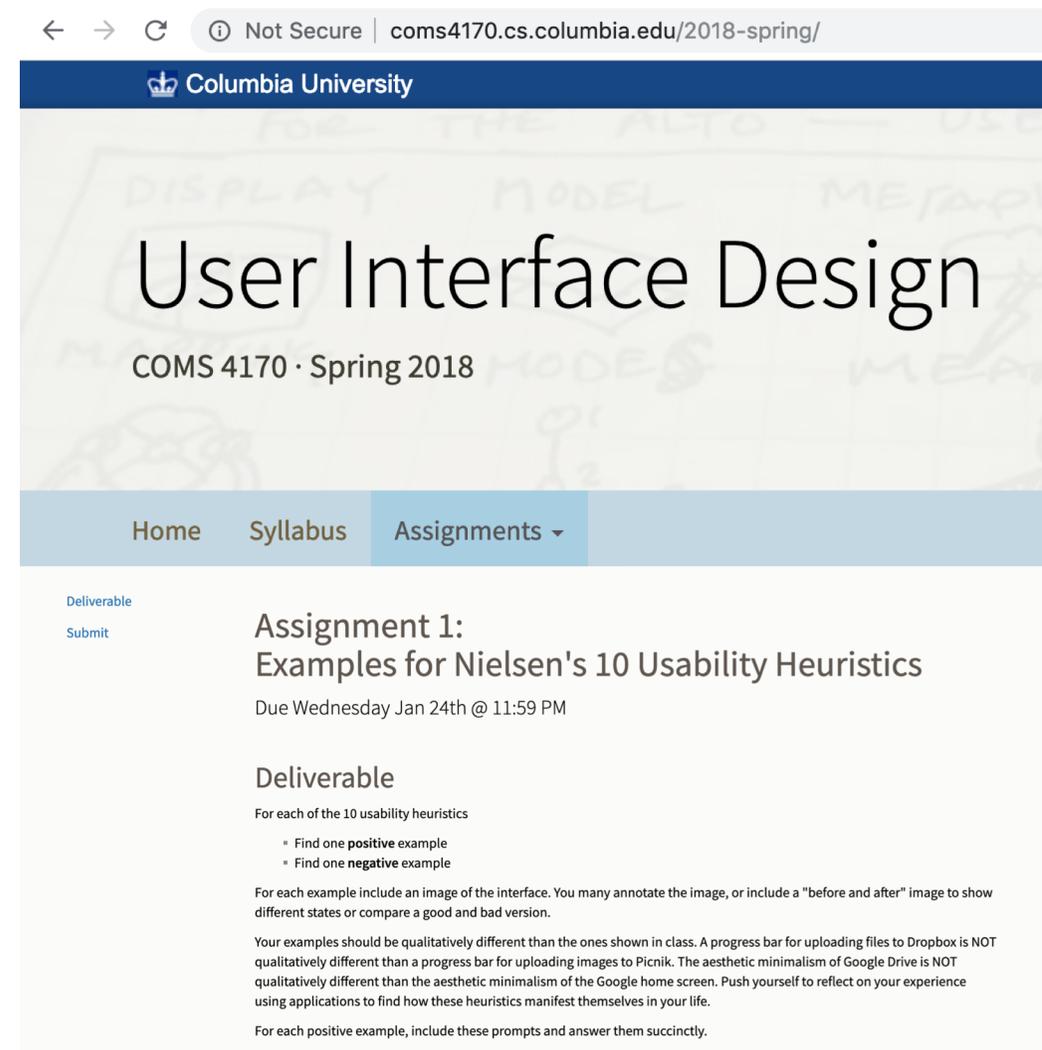
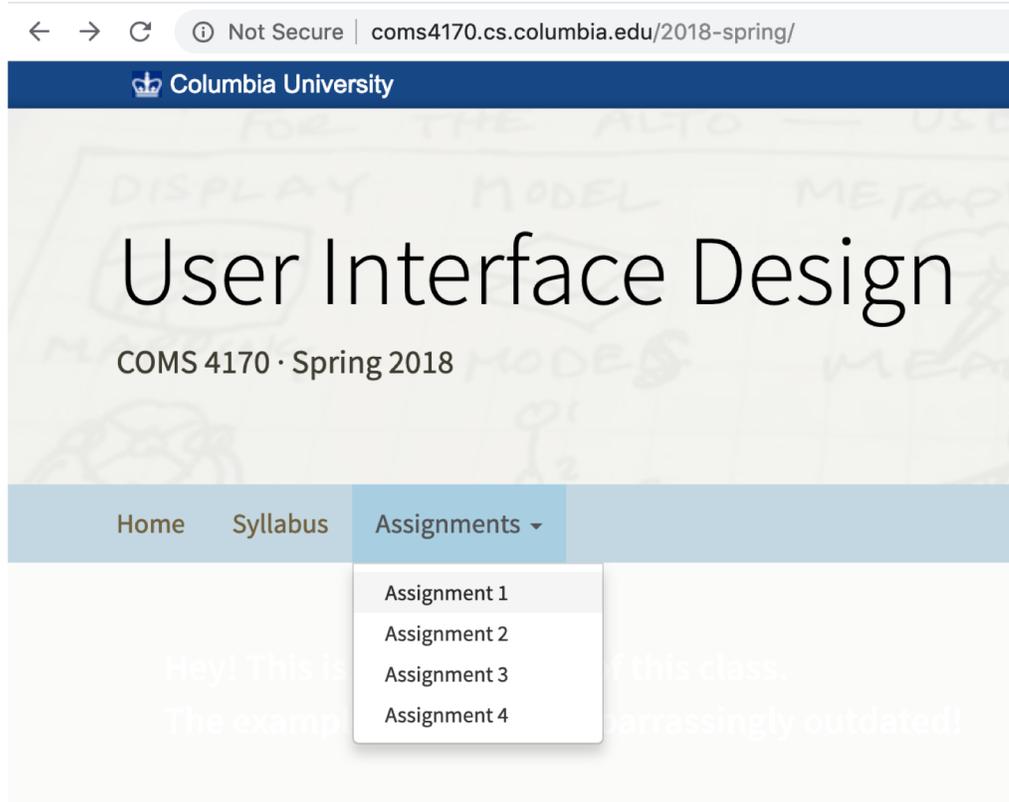
Irrelevant options create distractions



Users will expend energy to focus.
OR make mistakes

Menus on the Web

NavBars are the same across all your pages.



4. Consistency and standards

Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.

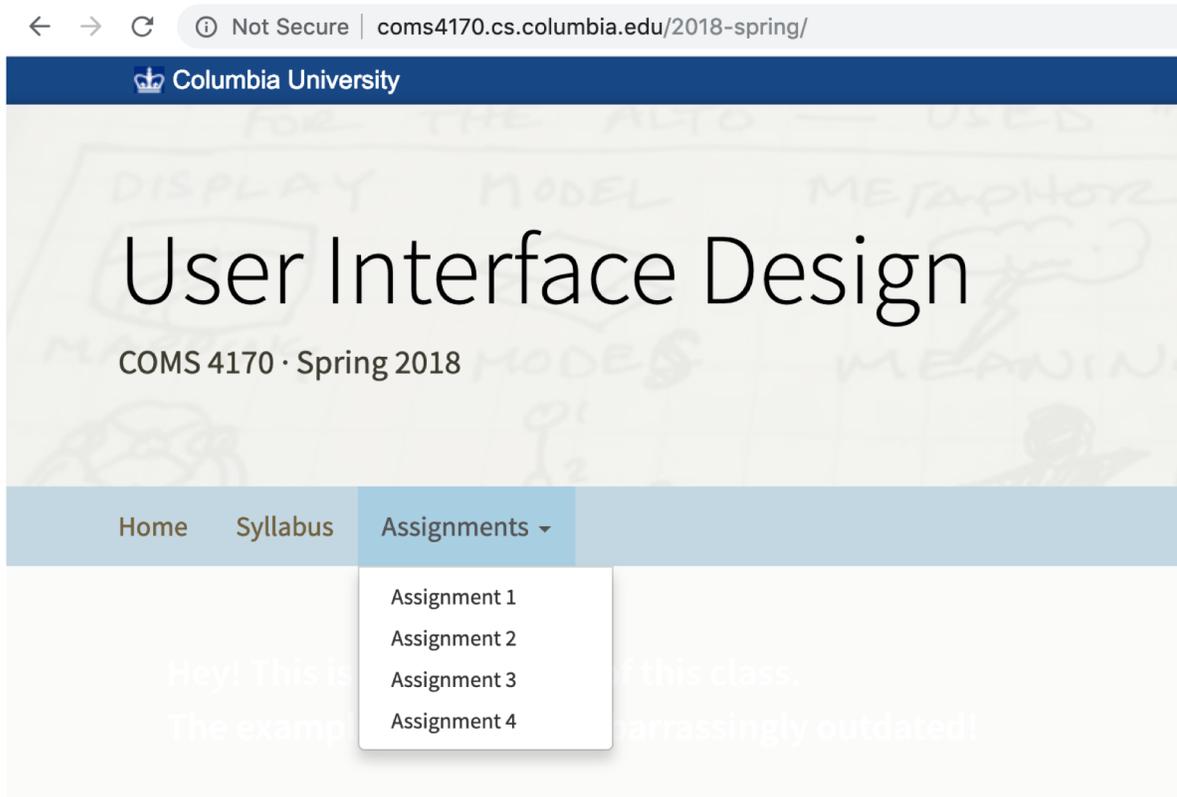


4. Consistency and standards

Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.



Navbars are a bootstrap widget!

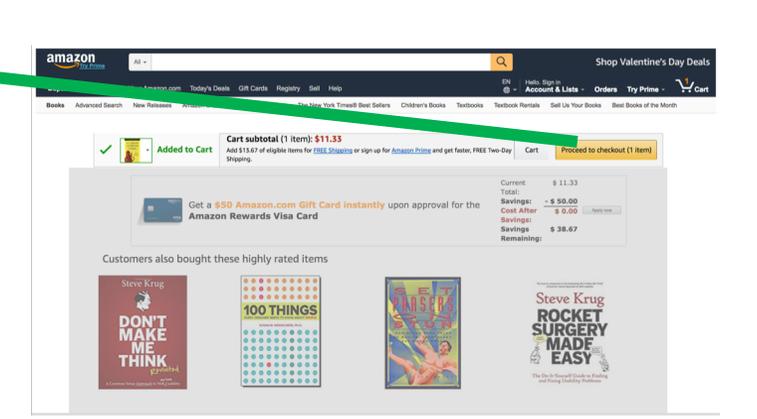
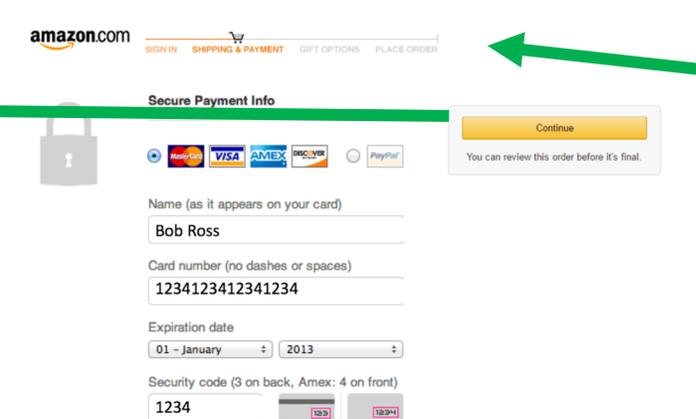
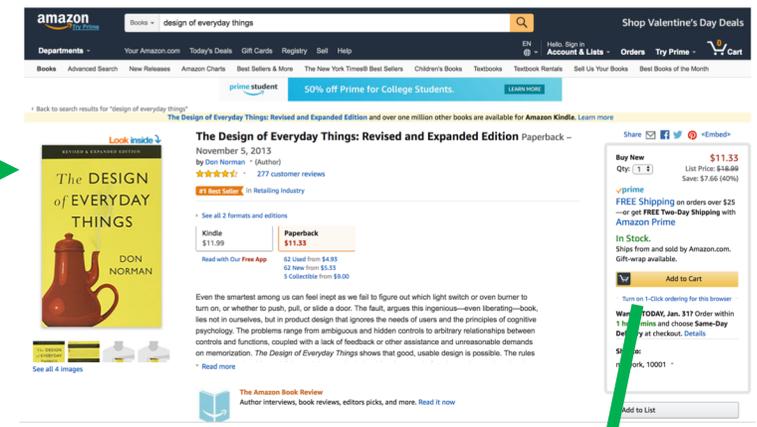
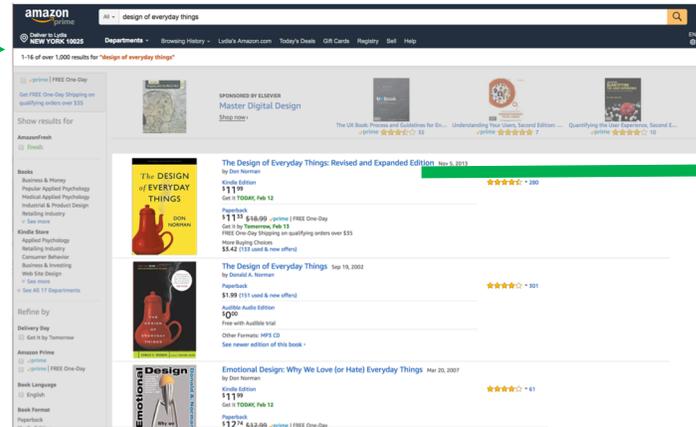
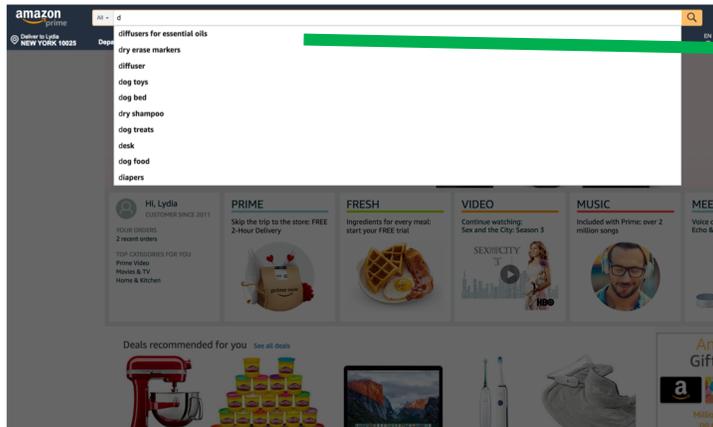


```
<nav class="navbar navbar-default navbar-static-top" role="navigation">
  <div class="container">
    <div class="navbar-header">
      <button type="button" class="navbar-toggle" data-toggle="collapse" data-target=".navbar-collapse">
        <span class="sr-only">Toggle navigation</span>
        <span class="icon-bar"></span>
        <span class="icon-bar"></span>
        <span class="icon-bar"></span>
      </button>
      <a class="navbar-brand" href="/2018-spring/index.shtml">Home</a>
    </div>
    <div class="navbar-collapse collapse">
      <ul class="nav navbar-nav">
        <li><a href="/2018-spring/index.shtml#calendar">Syllabus</a></li>

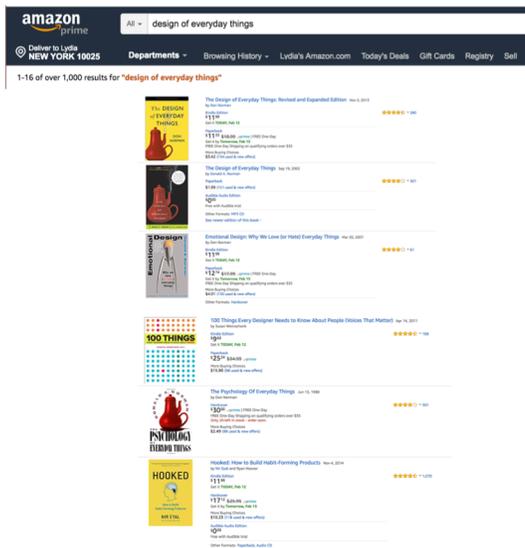
        <li class="dropdown">
          <a href="#" class="dropdown-toggle" data-toggle="dropdown" role="button" aria-haspopup="true"
            aria-expanded="false">Assignments <span class="caret"></span></a>
          <ul id="assignments" class="dropdown-menu">
            <!--<li class="disabled"><a href="">coming soon!</a></li-->
            <li><a href="/2018-spring/assignments/a1.shtml">Assignment 1</a></li>
            <li><a href="/2018-spring/assignments/a2.shtml">Assignment 2</a></li>
            <li><a href="/2018-spring/assignments/a3.shtml">Assignment 3</a></li>
            <li><a href="/2018-spring/assignments/a4.shtml">Assignment 4</a></li>
          </ul>
        </li>
        <!--
        <li><a href="/2018-spring/project-presentations/index.shtml">Project Presentations</a></li>
        -->
      </ul>
      <ul class="nav navbar-nav navbar-right">
        <a class="navbar-link" href="http://piazza.com/columbia/spring2018/coms4170_001_2018_userinterfacedesign/home"><button type="button" class="btn btn-default btn-su navbar-btn">Piazza</button></a>
      </ul>
    </div>
  </div>
</nav>
```

Summary

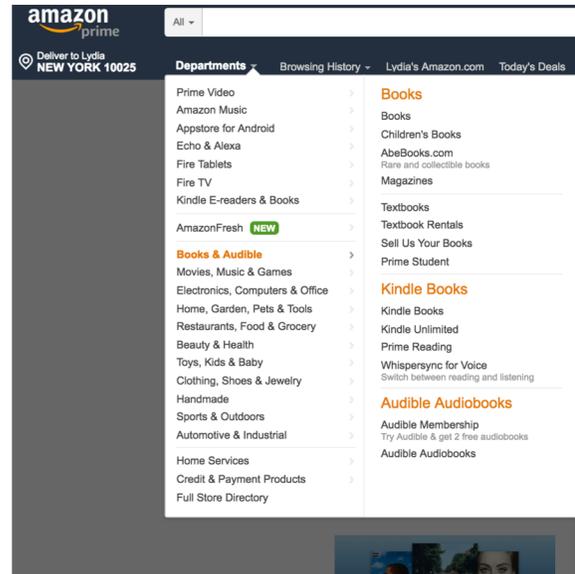
For complex tasks, guide users attention by breaking the task into: states, options, and transitions to new states.



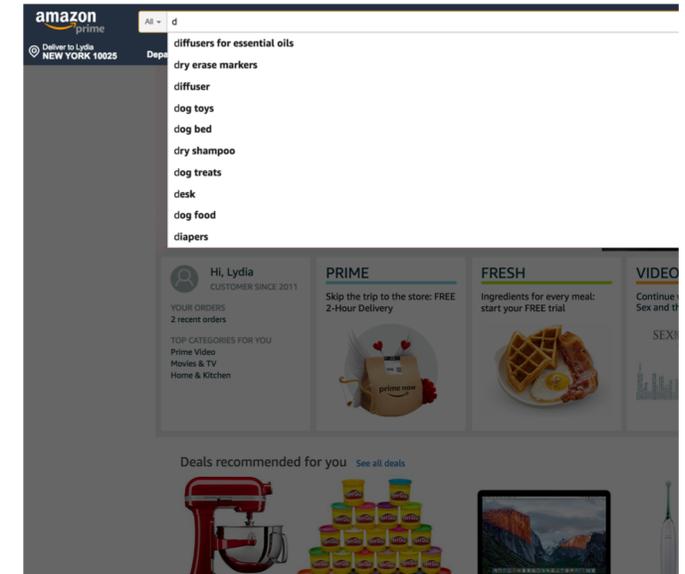
When displaying options, the number of options determines the interaction style.



~10 items = **list**



~100 items = **tree**

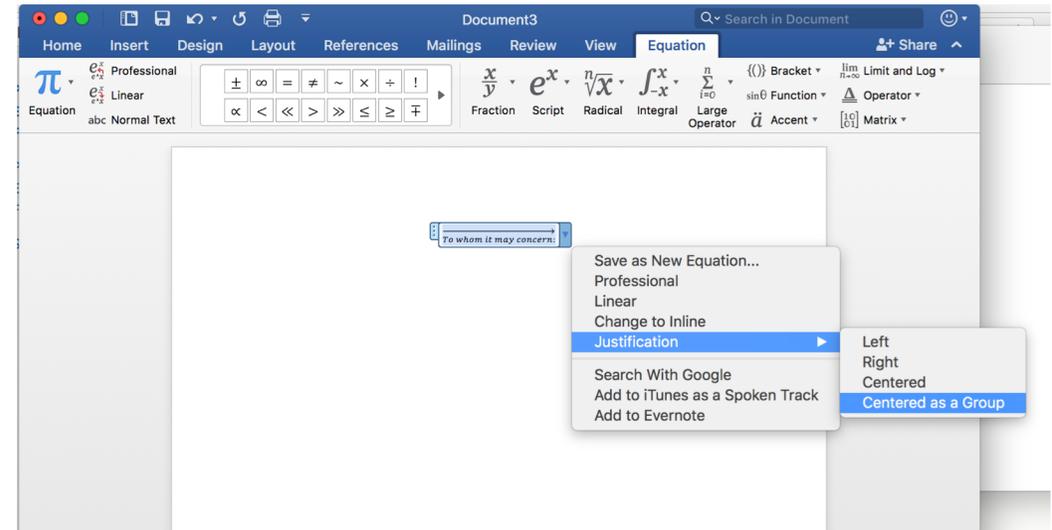
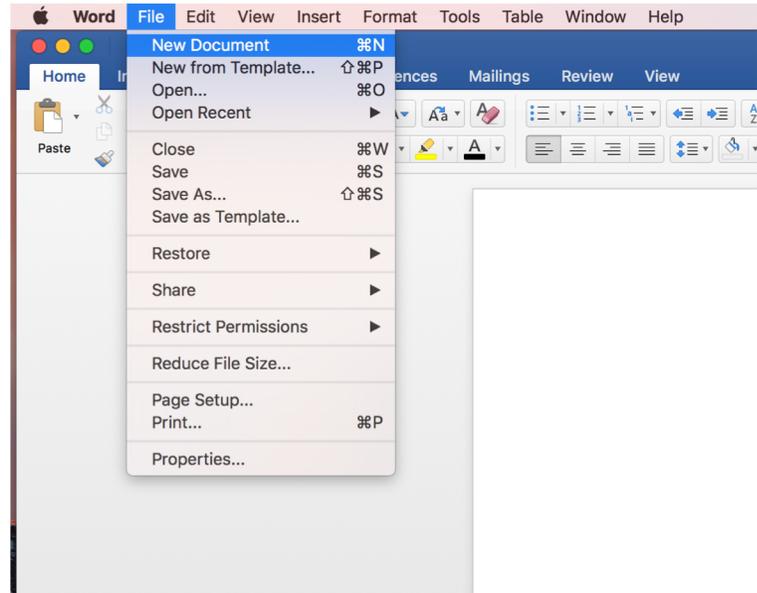


~1000 items = **search**

People have limited time.

Make frequently used options easier to access

Make rarely used options harder to access



People have limited focus.

Within a state, provide options that are relevant to the user completing their goal.

YES



NO



NavBars are the same across all your pages.

Columbia University

User Interface Design

COMS 4170 · Spring 2018

Home Syllabus Assignments ▾

WEEK	MONDAY	WEDNESDAY
1	JANUARY 15 <i>No class</i>	JANUARY 17 Introduction Nielsen's 10 Usability Heuristics slides Assignment 1 out
2	JANUARY 22 Information Design slides	JANUARY 24 DUE DATE Layout and Grids slides Assignment 1 due Assignment 2 out

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Deliverable
Submit

Assignment 1: Examples for Nielsen's 10 Usability Heuristics

Due Wednesday Jan 24th @ 11:59 PM

Deliverable

For each of the 10 usability heuristics

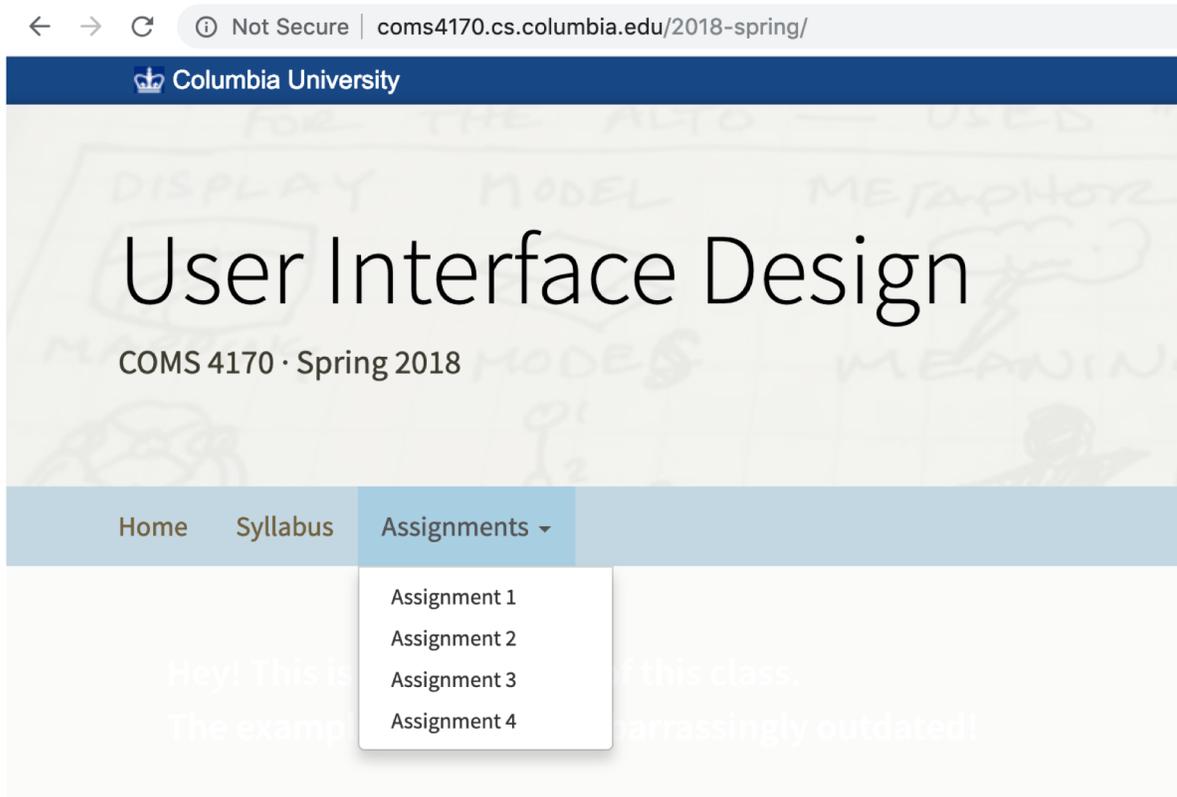
- Find one **positive** example
- Find one **negative** example

For each example include an image of the interface. You may annotate the image, or include a "before and after" image to show different states or compare a good and bad version.

Your examples should be qualitatively different than the ones shown in class. A progress bar for uploading files to Dropbox is NOT qualitatively different than a progress bar for uploading images to Picnik. The aesthetic minimalism of Google Drive is NOT qualitatively different than the aesthetic minimalism of the Google home screen. Push yourself to reflect on your experience using applications to find how these heuristics manifest themselves in your life.

For each positive example, include these prompts and answer them succinctly.

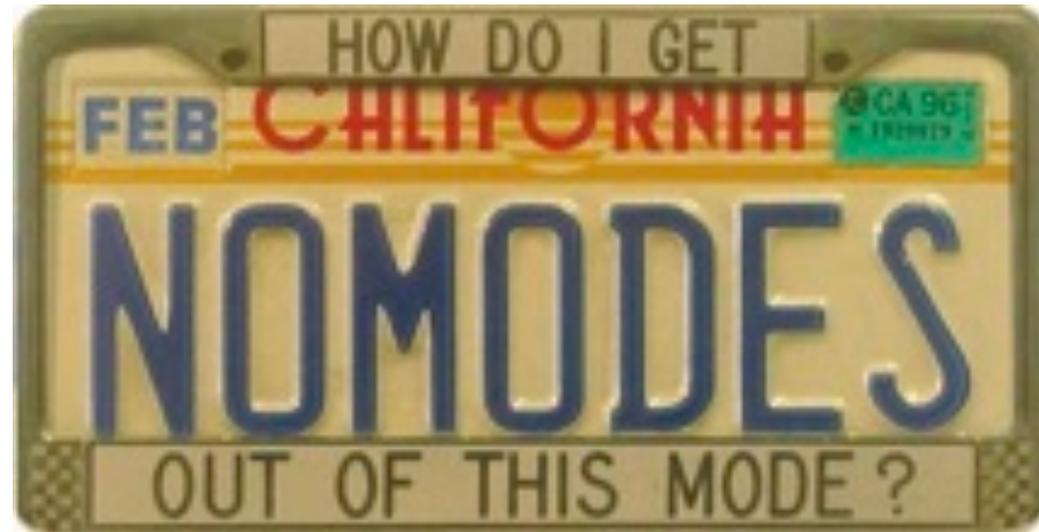
Navbars are a bootstrap widget!



```
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    <div class="navbar-header">
      <button type="button" class="navbar-toggle" data-toggle="collapse" data-target=".navbar-collapse">
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      </button>
      <a class="navbar-brand" href="/2018-spring/index.shtml">Home</a>
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        </li>
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          btn-su navbar-btn">Piazza</button></a>
      </ul>
    </div>
  </div>
</nav>
```

When designing user navigation:



Modes violate user control and freedom

Fill out participation now!
HW 4 due Wednesday.

Columbia University

User Interface Design

COMS 4170 · Spring 2020

Home Grading Syllabus **Piazza**

5	FEBRUARY 17 Participation Form Menus and Navigation	FEBRUARY 19 Homework 4 due @ 4pm
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