# **User Interaction Models**

Prof. Lydia Chilton COMS 4170 29 January 2024



# Homework 1 Review

PRINCIPLE

Prof. Lydia Chilton COMS 4170 29 January 2024



### I need a container div. I can probably use the same one for all the groups!



- <div class="container">
   <div class="logo\_container">
   </div>
  - <hr class="tinder\_hr">
  - <div class="profile\_group"> ...
    </div>
  - <div class="like\_me\_container"> ...
    </div>

#### </div>





Sean Rad, 29 💿

Verified

Like me on Tinder

# Finally! (1 hour later)



Sean Rad, 29 💿

Verified

# tinder



Sean Rad, 29 © Verified

Like Me On Tinder

Like me on Tinder

# **User Interaction Models**

Prof. Lydia Chilton COMS 4170 29 January 2024



# Interfaces **display information** in a way that helps users **accomplish a goal**.

i:Exit =:PrevPg <space>:NextPg v:View Attachm. d:Del r:Reply j:Next ?:Help ;</space>	
624 Aug 03 T Martinez ( 37) Loans with tiny points are here now	
625 0 Jul 01 R. Jackson ( 123) Loans with ting rates are here now	
626 Aug 05 Benjamin E. Mag ( 50) Long time no hear	
627 May 17 Krista Aaron ( 44) long time no see	
628 0 Jun 03 Josiah House ( 35) Looking for a hot date tonight, tomorrow,	or next week?
629 Jul 03 Brigitte I. Hay ( 63) Looking for a N.ew H.Ome?	
630 May 17 Joe Burns (58) Looking for you	
631    Jun 01 Save in a poor ( 145) Low Rate Consolidation Mortgage Loan	
632 + Jul 02 Igiel@virtualig ( 2) LowCost SoftWare OnCD	
Mutt: Nail/junk/spam ENsgs:950 01d:142 10N](subject/date)	(66%)
Date: Mon, 17 May 2004 03:40:09 +0100	
From: Krista Aaron <christinefeminine@highstream.com></christinefeminine@highstream.com>	
Subject: long time no see	
you put up and it's interesting. =) I just want to get to know you a little better if you don't mind, come check my profile out at: www.livejen.com/chat.html I also got a webcam so we can make it interesting, anyways hope you get back to	
me.	
bye :)	
gxsnkxxgnduvyjwyceudcjobxs zcozccrociesbehgbpow rnxlfujnqpblipdkgwwyqofracsz xmqawbxsbjrppoibvlpfhqowldtp bixhghvrxtqgfeoqcofzycb hugzffaffulsklpzhrfxbtt btrztlfotagmoaiwlosgy	
627/950: Krista Aaron Iong Lime no see	- (692)
Key is not hound. Press '2' for help	

Pine text-based email client

C Attps://mail.go	ogle.com/mail/u/0/#inbox				
ops 📄 Imported From Firefo	🔤 Holiday Guide   TVG 🛛 💆 Web	Help Desk 🔯 Pixabay - F	ree Imag: 🖤 Tech Tools For Teacl 🛛 G Aj	pps Status Dashbo	
CRU DE LA CRU			Loading	+ Q	Jeffr
/lail -	• • C	More *			1-14 of
COMPOSE	Primary	Social	Promotions	Updates	+
nbox (2) eent Mail	🗌 🚖 🕑 Baldwin, BPS (2)	Bioglov	in' - Not that I know of. Sometimes block	ked sites come in on a hug	11:08 am
rafts (54) leed to Read	🗌 🐈 这 Feldmann, Ann	Fwd: 21	st Century Classroom Visit? - Ann Fel	Idmann District Technolog	10:18 am
echnology Coach	🗌 🚖 💌 me, Lambert (2)	8th Peri	od - Hey, Jeff. I am planning on doing the	e Mystery Hangout lesson	8:05 am
fore +	🗌 🚖 💌 me	(no subj	ect) Jeffrey Bernadt District Technolo	ogy Specialist Bellevue Pu 🥃	Jan 12
	🗌 🚖 💌 me, Braasch, Kla	mm (3) Visitatio	n & Observation Request - Good mornin	g! The second semester is	Jan 12
	🗌 🛨 💌 me, Cox (2)	Bri Cox	- Coaching Doc - Invitation to edit - Jeff,	I finally was able to read a	Jan 12
	🗌 🛨 📀 Tripple, Todd	3D Print	er - Hello Amy, I received some informat	tion from a 3D printing exp	Jan 11
	🗌 🛨 📄 donotreply	Educatio	on Preview Build Notice - & AppleSeed B	Build Notice Education Pre	Jan 11
	🗌 📩 💿 🛛 Ann Feldmann	Fwd: [N	ew post] What "Innovative Leadership" L	ooks Like - A good read! :-	Jan 11
	🗌 📩 💌 me, Campbell (7)	) Khan Ad	ademy issues - It kept repeating that "ch	nanged password 7 month a	Jan 8
	🗌 📩 ≥ Toelle, me (3)	6 Word	Stories - Hey Jeff! We just returned from	lunch, but still have quite	Jan 8
	🗌 🛧 💌 me, Evon (4)	Reques	t to Visit on Thursday AM - Hi Jeff, Happ	y New Year! We would lov	Jan 6
	🗌 📩 💌 Jeffrey Bernadt	Shared	from Twitter: What teachers need to kno	w about multicultural educ	12/23/15

GMail

# What is the primary goal of this interface?

Minbox (2) - jeffrey.be	irnadi© ×		
⊢ → C 🔒 https://mail.go	ogle.com/mail/u/0/#inbox		
Apps imported From Firefo	🔛 Holiday Guide   TVG 🛛 🏷 Web Help Desk	Pixabay - Free Imag: 100 Tech Tools For Teach G Apps Status Dashbo	
C SECONDARÍA C SECONDARÍA C SECONDARÍA		Loading	Jeffre
Mail -	· C More ·		1–14 of 1
COMPOSE	Primary	Social Promotions 🚯 Updates	+
Inbox (2) Sent Mail	🗌 🚖 🌛 Baldwin, BPS (2)	Bioglovin' - Not that I know of. Sometimes blocked sites come in on a hug	11:08 am
Drafts (54) Need to Read	📄 📩 🕑 Feldmann, Ann	Fwd: 21st Century Classroom Visit? - Ann Feldmann District Technolog	10:18 am
Technology Coach	🗌 ☆ 💌 me, Lambert (2)	8th Period - Hey, Jeff. I am planning on doing the Mystery Hangout lesson	8:05 am
More -	🗌 🛨 💌 me	(no subject) Jeffrey Bernadt District Technology Specialist Bellevue Pu	ce Jan 12
	🗌 🚖 💌 me, Braasch, Klamm (3)	Visitation & Observation Request - Good morning! The second semester is	E Jan 12
	🗌 🛨 💌 me, Cox (2)	Bri Cox - Coaching Doc - Invitation to edit - Jeff, I finally was able to read a	Jan 12
	🗌 🛨 🦻 Tripple, Todd	3D Printer - Hello Amy, I received some information from a 3D printing exp	Jan 11
	🗆 🛨 🗇 donotreply	Education Preview Build Notice - & AppleSeed Build Notice Education Pre	Jan 11
	🖂 🛨 💿 Ann Feldmann	Fwd: [New post] What "Innovative Leadership" Looks Like - A good read! :	Jan 11
	🗌 🛨 🍺 me, Campbell (7)	Khan Academy Issues - It kept repeating that "changed password 7 month	n 🥃 Jan 8
	🗌 📩 这 Toelle, me (3)	6 Word Stories - Hey Jeff! We just returned from lunch, but still have quite	Jan 8
	🗌 🚖 💌 me, Evon (4)	Request to Visit on Thursday AM - Hi Jeff, Happy New Year! We would low	Jan 6
	🗌 🚔 💌 Jeffrey Bernadt	Shared from Twitter: What teachers need to know about multicultural educ	12/23/15

1

#### To read and respond to all email.

# What is the primary goal of this interface?



#### To buy a book.

# Users interact with a system to accomplish a goal

● • ● ← → C	MInbox (2) - jeffrey.t	pernadt© ×						amazon	Books 🔻					Q
::: Apps		Ponday Guide   14G 💦 🥠 Web P	eep Deek 🔝 Pocabi	Loading		Jeffrey	,	Departments -	Browsing History	y → Lydia's Amazon.com Today'	s Deals Gift Cards Registry	Sell Help		EN ⊕
Mail -		• • C	More *			1-14 of 14	4	Books Advanced Search	New Releases	Amazon Charts Best Sellers & Me	ore The New York Times® Best	Sellers Children's Books	Textbooks Textbook	k Rentals S
Inbox (2 Sent Ma	MPOSE	Primary	Social Blo	Promotions	Updates	+ 11:08 am		Popular in Books Award Winners		Creft	Kate L. Turabian		CTHE CL	******
More +	94) Road ogy Coach	Peldmann, Ann             me, Lambert (2)             me, Braach, Klait            me, Drack, Klait            me, Drack, Klait            me, Drack, Klait             me, Drack, Klait             me, Drack, Klait             me, Drack, Klait             me, Drack, Klait	Fwn 8th (no mm (3) Visi Bri 3D Edu	E: 21st Century Classroom Visit? - Ann F Period - Hey, Jeff: I am planning on doing I subject) Jeffrey Bernard District Trachin tation & Observation Request - Good morn Cox - Coaching Doc - Invitation to dit - Jef Printer - Hello Amy, I received acris Inform cation Preview Build Notice - & AppleSeco	Idmann District Technolog Ise Mystery Hangout lesson ogy Specialist Bellevue Pu Ing! The second semester it I finally was able to read a stion from a 3D printing exp Build Notice Education Pre less Is. An accessful	10:18 am 8:05 am Jan 12 Jan 12 Jan 12 Jan 11 Jan 11		Bargain Books Best Books of the Month Best Books of 2017 Books in Spanish Children's Books Deals in Books Top 20 Lists in Books	ו [		A IVARIUAR for Writers of Research sand Dissertations DESERT 2015 The Market States Charles Stat	Writing for Graduate Students 3 <sup>PD</sup> 3 <sup>PD</sup> 3 <sup>PD</sup> 5 <sup>WALES &amp; FRAK</sup>		<u>rch</u> 2010и 1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.
		me, Campbell (7)	The	Academy Issues - I for repeating the The the the comparison of the		Jan 8 Ear 12/23/15	must	More in Books 100 Books to Read in a Anazon Books on Twitte Amazon Books on Twitte Amazon First Read	the	The Craft of Research, Third USAN Control of Research, Third Coloring, Paperback	A Manual for Writers of Solution Paperback ************************************	Academic Writing for Graduate Students John M. Swales, Christine B. Feak Paperback	The Craft of Resear edition Wayne C. Booth, Jo Williams Paperback	rch, 2nd oseph M.
		an		creat	e in	ter	actio	ns to h	elp	them	meet	\$2 as √prime		
Tc	r	ead	ar	nd re	spc	nc	k		-	To buy	/ a bo	ok		
		to a		ema										

# Large goals must be broken into smaller goals

Goal: Buy a book

#### Subgoals:

#### 1. Find it

	All - design d	f everyday thing	gs			
Departments -	Your Amazon.com	Today's Deals	Gift Cards	Registry	Sell	Help
1-16 of over 6,000 result	s for <mark>"design of everyd</mark>	ay things"				
FREE Shipping						
All customers get FREE Ship	ping on	,				
orders over \$25 shipped by	Best Seller					
Amazon		THED & EXPANDED EDITION	Th	ne Desigr	of Ev	eryday Thin
		DECICN	by	Don Norman	1	
Show results for	1	ie DESIGN	Pa	perback		
	of	EVERYDAY	\$1	1 33 ¢10	00	rime
Books		THINGS	Ge	t it by TODA	Y. Jan 3	1
Popular Applied Psycholog	y 🥑	2	FR	EE Shipping	on eligil	ole orders
Medical Applied Psycholog	y 🗧		Ma	re Buying Ch	noices	
Business & Money		NORMAN	\$4	.93 (129 use	ed & nev	v offers)
Industrial & Product Design	1 <b>/</b>		Kir	dle Edition		
Retailing Industry			\$1	199		
See more			Ge	t it TODAY, J	an 31	
Cindle Store						
Applied Psychology	and the	NAME TANK AND	Th	ne Desiar	of Ev	ervdav Thin
Retailing Industry		Perign and the article competition	by	Donald A. N	orman	
Consumer Behavior		star. Bits Book on a 100 - See and all the attenuet magnetises in	Day	oorback		
Business & Investing			Pa			~ .
Web Site Design	(		\$3	.22 (147 use	ed & nev	v offers)
See more			Au	dible Audio I	Edition	
See All 15 Departments			\$	00		

#### 2. Add to cart

Buy New	\$11.33
Qty: 1 🗘	List Price: \$18.99
	Save: \$7.66 (40%)
√prime	
FREE Ship	ping on orders over \$25
-or get FRE	E Two-Day Shipping with
Amazon F	Prime
n Stock.	
ships from a	nd sold by Amazon.com.
Gift-wrap av	ailable.
	Add to Cart
	Add to cart
Turn on 1-C	lick ordering for this browser
Want it TOD	AY, Jan. 31? Order within
1 hr 15 mins Dellasens et s	and choose Same-Day
Delivery at o	neckout. Details
Ship to:	
<b>Ship to:</b> newyork, 10	001 -
<b>Ship to:</b> newyork, 10	001 -
i <b>hip to:</b> iewyork, 10	001 ·

Add to List

#### 3. Enter payment info

#### 4. Place order

•	MasterCard	VISA	AMEX	DISCOVER	$\bigcirc$	PayPal	
---	------------	------	------	----------	------------	--------	--

Name (as it appears on your card)

Card number (no dashes or spaces)

#### Expiration date

01 - January ‡ 2013 ‡

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

1234



#### Goal: Buy a book Subgoal: Search for book Interaction: Type its name, click on it

amazon Try Prime	All - design of everyday thi		Q	Shop Valentine's Day Deals
Departments - Y	/our Amazon.com Today's Deals (	Sift Cards Registry Sell Help	EN Hello. Sign in ⊕ ❤ Account & Lists	- Orders Try Prime - VCart
1-16 of over 6,000 results for "	'design of everyday things"			Sort by Relevance \$
FREE Shipping All customers get FREE Shipping of orders over \$25 shipped by Amazon	on Best Seller			Ad feedback 🗔
Show results for	The DESIGN of EVERYDAY	The Design of Everyday Things: Rev by Don Norman Paperback \$11 <sup>33</sup> <del>\$18.99</del> √prime	ised and Expanded Edition Nov !	<b>☆☆</b> ≈ 277
Popular Applied Psychology Medical Applied Psychology Business & Money Industrial & Product Design Retailing Industry See more	THINGS DON NORMAN	Get it by <b>TODAY, Jan 31</b> FREE Shipping on eligible orders More Buying Choices \$4.93 (129 used & new offers) Kindle Edition \$ <b>11</b> <sup>99</sup> Get it <b>TODAY, Jan 31</b>		
Kindle Store Applied Psychology Retailing Industry Consumer Behavior Business & Investing Web Site Design See more	The first and an array of the second se	The Design of Everyday Things Sep 1 by Donald A. Norman Paperback \$3.22 (147 used & new offers) Audible Audio Edition	9, 2002	★☆ - 301
<ul> <li>See All 15 Departments</li> <li>Refine by</li> <li>AmazonFresh</li> </ul>	THE DESIGN OF EVERYDAY THINGS	\$000 Free with Audible trial Other Formats: MP3 CD See newer edition of this book +		
🗆 fresh				

Eventional Decision Miles Mail and (an Ulate) Even of a Things

#### Goal: Buy a book Subgoal: Add to cart Interaction: Click "Add to Cart" button

amazon	All 👻					Q		Shop V	'alentine's	Day Deals
Departments -	Your Amazon.com	Today's Deals Gift Can	ds Registry Sell	Help		EN ⊕ ▼	Hello. Sign in Account & Lists -	Orders	Try Prime -	↓ ↓ Cart
< Back to search results for "designed by the search results" for "designed by the search results for	ign of everyday things" <b>The Des</b>	ign of Everyday Things: I	Revised and Expande	d Edition and	over one million other books are a	available for <b>Amaz</b>	on Kindle. Learn more	2		
EVISED & EXPANDED E         The DESI         of EVERYE         THING         WILLIAM         INCOMENT         Statistic         Statistic         Statistic         Statistic         Statistic         Statistic         This         Interview         Interview         Statistic         Statistic         Statistic         Statistic         This	K INSIDE V GN DAY S	The Design of November 5, 2013 by Don Norman ~ (Auth > 277 #1 Best Seller (in Retail > See all 2 formats and ed Kindle \$11.99 Read with Our Free App Even the smartest amo turn on, or whether to p lies not in ourselves, bu psychology. The proble controls and functions, on memorization. The D	Everyday Thi Ior) customer reviews ng Industry itions Paperback \$11.33 62 Used from \$4.93 62 New from \$4.93 62 New from \$5.33 5 Collectible from \$ ng us can feel inept ush, pull, or slide a c it in product design t ms range from ambi coupled with a lack of <i>Design of Everyday</i> T	9.00 as we fail to fi door. The fault hat ignores th guous and hic of feedback or <i>Things</i> shows	igure out which light switch or ov t, argues this ingenious—even li te needs of users and the princip dden controls to arbitrary relation r other assistance and unreason that good, usable design is poss	Ven burner to berating—book, oles of cognitive ships between able demands sible. The rules	rback –	Share Vew Qty: 1 * Verime FREE Ship —or get FRE Amazon F In Stock. Ships from a Gift-wrap av Verime Turn on 1-C Want it TOD 1 hr 15 mins Delivery at of Ship to: newyork, 10	List I Save: Dping on orde E Two-Day Sh Prime Ind sold by Am railable. Add to Carl Lick ordering for t VAY, Jan. 31? Of and choose Sa :heckout. Detail	<embed/> \$11.33 Price: \$18.99 \$7.66 (40%) rrs over \$25 ipping with azon.com. this browser rder within ame-Day ls
		The Amaz Author int	on Book Review	s, editors picks	;, and more. Read it now					

Add to List

#### Goal: Buy a book Subgoal: If they are done with cart, checkout Interaction: Click "Proceed to checkout" button

All -							Q			Shop	Valentine's	Day Deals	
Departme	ents -	Your Amazon.com	n Today's Deals	Gift Cards Regis	try Sell Help			EN ⊕ ▼	Hello. S Accou	ign in I <b>nt &amp; Lists ⊸</b>	Orders	Try Prime -	↓. Cart
Books A	Advanced Search	New Releases	Amazon Charts	Best Sellers & More	The New York Times® Best Sellers	Children's Books	Textbooks	Textbook	Rentals	Sell Us Your B	ooks B	est Books of the Mor	hth

/	Added	to Cart	<b>Cart subtotal (1 item): \$11.33</b> Add \$13.67 of eligible items for <u>FREE Shipping</u> or sign up for <u>Amazon Prime</u> and get faster, FREE T Shipping.	wo-Day Cart	Procee	d to checkout (	(1 item)
	amaton Resource Visa	Get a \$ Amazo	50 Amazon.com Gift Card instantly upon approval for the n Rewards Visa Card	Current Total: Savings: Cost After Savings: Savings	\$ 11.33 <u>- \$ 50.00</u> <b>\$ 0.00</b> <b>\$ 38.67</b>	Apply now	

Customers also bought these highly rated items





Steve Krug

Remaining:



The Do-It-Yourself Guide to Finding and Fixing Usability Problems

#### Goal: Buy a book Subgoal: Enter payment information Interaction: Click, type, move cursor, click "Continue"

amazon.com	SIGN IN	SHIPPING & PAYMENT	GIFT OPTIONS	PLACE ORDI	ER		
			Secure Pa	ayment Info			Continue
		2	MasserCard	VISA AME	DISCOVER	РауРаг	You can review this order before it's final.
			Name (as	it appears o	n your card	)	
			Card num	per (no dash	es or space	es)	
			Expiration	date ary ‡	2013	\$	
			Security o	ode (3 on ba	ack, Amex:	4 on front)	

#### Goal: Buy a book Subgoal: If the information is correct, place order Interaction: Click "place your order"

mazon.com	SHIPPING & PAYMENT GIFT-WRAP PLACE OR	DER
Billing Information:	ditions of use Gift Cards & Promotional Codes:	Place your order
Bewards Points ending in 1234 <u>Change</u> Billing Address: Same as shipping address <u>Chang</u>	(Apply)	Order Summary Items: \$29.95 Shipping & Handling: \$20.00 Total Before Tax: \$29.95
11	Choose your <i><i>prime</i> shipping speed:</i>	Estimated Tax To Be Collected: \$0.00 Rewards Points -\$4.56
Connection Kit	C FREE Standard Shipping (3-5 business days)	Order Total: \$25.37
	FREE Two-Day Shippingget it Monday, September 26	
	C \$3.99/item One-Day Shippingget it Saturday, September 24	How are shipping costs calculated? Amazon Prime Shipping has been applied to the eligible items in your order.
	SIGN IN Azon.com's privacy notice and com Billing Information: Rewards Points ending in 1234 Change Billing Address: Same as shipping address Change 11 Connection Kit	Image: Series of the series of th

The designer must know the users' goals create the subgoals and interactions to meet it.

**Goal**: Buy a book

Subgoal: Find it Add to cart Place order Enter payment info Interaction: Type, click click Type, click, point Click amazon Buy New \$11.33 All - design of everyday things Mastercard VISA AMEX DISCOVER List Price: \$18.99 PayPar Qty: 1 🗘 Place your order Save: \$7.66 (40%) Your Amazon.com Today's Deals Gift Cards Registry Sell Hel Departments √prime 1-16 of over 6,000 results for "design of everyday things" FREE Shipping on orders over \$25 Order Summary -or get FREE Two-Day Shipping with Name (as it appears on your card) \$29.95 Items: FREE Shipping **Amazon Prime** Shipping & Handling: \$0.00 All customers get FREE Shipping on In Stock. orders over \$25 shipped by \$29.95 Total Before Tax: Ships from and sold by Amazon.com. Amazon The Design of Everyday Thin Estimated Tax To Be Collected: \$0.00 Gift-wrap available. by Don Norman Card number (no dashes or spaces) The **DESIGN** Rewards Points -\$4.58 Show results for of EVERYDAY بېر \$11<sup>33</sup> \$18.99 vprime Add to Cart Books Order Total: \$25.37 THINGS Get it by TODAY, Jan 31 FREE Shipping on eligible orders Popular Applied Psychology Turn on 1-Click ordering for this browser Medical Applied Psychology More Buving Choices \$4.93 (129 used & new offers) Business & Money Want it TODAY, Jan. 31? Order within Expiration date Industrial & Product Design Kindle Edition 1 hr 15 mins and choose Same-Day How are shipping costs calculated? Retailing Industry \$1199 **Deliverv** at checkout. Details 01 - January \$ 2013 See more Get it TODAY, Jan 31 ÷ Amazon Prime Shipping has been Kindle Store applied to the eligible items in your Ship to: Applied Psychology The Design of Everyday Thin order. Retailing Industry by Donald A. Norman Security code (3 on back, Amex; 4 on front) newyork, 10001 Consumer Behavior Paperback **Business & Investing** \$3.22 (147 used & new offers) Web Site Design 1234 123 Audible Audio Edition See more \$000 See All 15 Departm

Add to List

#### The designer must know the users' goals

But sometimes on Amazon, I don't have a goal.

I'm just browsing.

# Are these sites "just for browsing"?

columbia	<ul><li>craigslist</li></ul>	new york o	city mnh brk que	facebook
All       Maps       News       Images       Shopping       More       Settings         About 1,450,000,000 results (1.21 seconds)         Columbia.com   Official Columbia® Site   Outdoor Apparel & Products         Advertised of the official Columbia (Stell)       Outdoor Apparel & Products         Advertised of the official Columbia.com / ▼         ★★★★ Rating for columbia.com / ▼         ★★★★ Rating for columbia.com / ↓         Largest Selection. Types: Jackets, Vests, Shirts, Pants, Shorts, Footwear, Accessories, Backpacks, Winter Sale: 50% off Select Gear - Valid Jan 23 - Feb 24         Moren's Gear for the Months Ahead.         So% off Select Gear for the Months Ahead.         So% off Select Gear Save 50% on Select Gear.         So% off Select Gear.         Sow 50% on Select Gear.         Sow 50% on Select Gear.	Tools	communityactivitieslost+foundartistsmissedchildcareconnectionsclassesmusicianseventspetsgeneraipoliticsgroupsrants & raveslocal newsridesharevolunteers	hou apts / housing housing swap housing wanted office / commercia parking / storage real estate for sale rooms / shared rooms wanted sublets / temporal vacation rentals	PictureCorrect Photography Tips         What is your Photography-Related New Year's Resolution??         15 minutes ago · Like · Comment         In Adel Gomaa and Richard Schneider like this.         Sadi Molloy get my business looking more professional: car signed: tick, makeing up portrait folders: tick, stickers & cd covers: still to do its getting there though.         11 minutes ago · Flag
Shop the Winter Sale Today!     Stay Dry with Earth-Smart Rainwear!       Columbia Sportswear: Outdoor Clothing, Outerwear & Accessories       https://www.columbia.com/ →       Shop direct form Oolumbia Sportswear. Our Outerwear is Tested Tough in the Pacific Northwest. Stor Jackets, Pants, Shirts, Shoes & more.       Women       Buy Columbia Sportswear® women's apparel and       Men       Shop online for rugged & durable Columbia Sportswear outdoor       Sale	help, faq, abuse, legal avoid scams & fraud personal safety tips terms of use new Although	services automotive labor/move beauty legal cell/mobile lessons computer marine creative pet cycle real estate ev pet far trade mod fas fin trade mod fas fur trade write/ed/tran	for antiques appliances arts+crafts atv/utv/sno auto parts viatir aby + O bartor bartor	PictureCorrect Photography Tips My resolution for 2011 is to capture more landscape photos outside the U.S. and add more countries on y portfolo! What is yours?     -Richard 11 minutes ago · Flag     James Donnelly Larger concerts to cover and improve my portrait DOCOONSE: Flag     Jose Antonio (ubido To push my photpography foward full throttle
Saite Great deals on Columbia jackets, shirts, pants and more. Take More results from columbia com > The results from columbia com > Columbia School The results from columbia com > The re	about craigslist relist is hirings in sf is y pen crayslist t craigslist TV "craigslist joe" craig connects 19 Geogle t by -	arts garden photo atheist haiku politics autos help psych beauty history recover bikes housing religion celebs jobs rofo comp jokes science cosmos legal spirit diet linux sports divorce manners super	beauty-him trice parts books books business cars+trucks cds/dvd/vhs cell phones clothes+acc collectibles computer parts computers	9 minutes ago · Flag         Someting of the state o
A Columbia University		dying marriage tax eco money travel	electronics	

# The designer must know the users goals and Create interactions that help them meet it.

amazon	All - design of everyday things	3	Q		Shop \	/alentine's I	Day Deals
Departments -	Your Amazon.com Today's Deals	Gift Cards Registry Sell Help	EN Hello ⊕ → Acco	Sign in <b>unt &amp; Lists ⊸</b>	Orders	Try Prime -	Cart
1-16 of over 6,000 results for	"design of everyday things"				So	rt by Relevance	e 🔶
FREE Shipping All customers get FREE Shipping orders over \$25 shipped by Amazon Show results for Books Popular Applied Psychology Medical Applied Psychology Business & Money Industrial & Product Design Retailing Industry See more Kindle Sizer	ON Best Seller The DESIGN of EVERYDAY THINGS DON NORMAN	The Design of Everyday Things: F by Don Norman Paperback \$ 11 <sup>33</sup> \$18.99 vprime Get it by TODAY, Jan 31 FREE Shipping on eligible orders More Buying Choices \$4.93 (129 used & new offers) Kindle Edition \$ 11 <sup>99</sup> Get it TODAY, Jan 31	Revised and Expanded E	dition Nov 5, 20 <sup>°</sup>	13		Ad feedback 🕻
Applied Psychology Retailing Industry Consumer Behavior Business & Investing Web Site Design * See more * See All 15 Departments Refine by AmazonFresh fresh	THE REAL OF A DECISION OF A DE	The Design of Everyday Things s by Donald A. Norman Paperback \$3.22 (147 used & new offers) Audible Audio Edition \$000 Free with Audible trial Other Formats: MP3 CD See newer edition of this book >	Sep 19, 2002	****	<b>∀ 301</b>		

Low-level Interactions

# Interaction: Moving + Clicking

### Which button is faster to click?







### Which button is faster to click?





### Which button is faster to click?



#### Fitts's Law



Time to move your pointer to a target =  $a + b * \log(\frac{2D}{S})$ 

Using Fitts' law, why is A faster to click?





Using Fitts' law, why is A faster to click?









Using Fitts' law, why is B faster to click?







A

# This is why did iOS designs the menu to touch the edge of the screen

					<b>É Finder</b> File Edit	View Go Wind	dow Help		
<u>inini</u> Mu Comput				•					
my compa	Eile Edit View	 N Help							
39			· 🗳 🛛					Documents	
Network Neighborho	3½ Floppy (A:)	(C:)	(D:)			< >			Q Search
Reignborno	00					Favorites	s coms4170-1ro-heuristics		
		<b>6</b>			Contraction of the second second	MirDrop	coms4170-1-intro.pdf		
Inbox	Control Ranol	Printere				All My Files	coms4170-2ation-design		
	Control Parler	FILLERS				iCloud Drive	coms4170-2design.pptx		
	J 5 object(s)					Applications	coms4170-4type-gestalt		
্ ভ্						Desktop	coms4170-at1-rubic.pptx		
Recycle B	in					Documents	hw2		
						Downloads			
msn.						Remote Disc			
Set Up Th	e					Evernote 🔺			
Microsoft						Skype≜			
NEWOIK						Tags			
		Mu Folder				Red			
	Document	any rolden				Orange	NEEDER INTERNE	area an	
							AT SAMADA	DI HAR ANK	VIII AND
🄀 Start	🔜 My Computer			🍕 🗧 5:58 PM				And the state of the second	

### Fitts's Law: What are **a** and **b**?

Conset



time = 
$$\mathbf{a} + \mathbf{b} * \log\left(\frac{2\mathbf{D}}{\mathbf{s}}\right)$$









### Time to move the pointer: Fitts's Law



Time to move your pointer to a target

$$= a + b * \log\left(\frac{2D}{S}\right)$$

# Buttons on the edges are fast to get to because they have infinite size



# More moving + clicking: Tunneling Menus



# More moving + clicking: Cascading Tunnel Menus



# More moving + clicking: Cascading Tunnel Menus fix



# What are all the low-level interactions are needed to accomplish this subgoal?

Secure Payment Info
Name (as it appears on your card)
Card number (no dashes or spaces)
Expiration date
01 - January



# How could you improve this?



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

123

1234

# Low-level Interactions take time and effort. Minimize them because you do them a lot.



Secure Payment Info	
Name (as it appears on your card)	
Card number (no dashes or spaces)	
Expiration date	
01 - January ‡ 2013 ‡	
Security code (3 on back, Amex: 4 on front)	
123	

Add to Cart

Buy now with 1-Click<sup>®</sup>

# The Interaction Loop

### Establish a goal: Buy a book.



# What happens after you place an order?



# The Seven Stages of Action



1. Form the goal

Plan the action
 Specify the action sequence
 Perform the action sequence

5. Perceive the state of the world6. Interpret the perception7. Compare the outcome with the goal

# Goal Execution Step 1: **Plan the action**

Specify the action sequence Perform the action sequence





Add to List

#### Goal Execution Step 2: Plan the action Specify the action sequence

#### Perform the action sequence



GOAL PLAN PLAN PLAN PLAN PLAN PERFORM PERFORM WORLD

#### Goal Execution Step 3:

#### Plan the action Specify the action sequence

#### Perform the action sequence



GOAL PLAN SPECIFY PERFORM WORLD



#### Goal Evaluation Step 1: Perceive the State of the world

Interpret the perception Compare the outcome with the goal

LI-W-		
Thanks for your order. We'll let you know once y below.	our item(s) have dispatched. Your estimated delivery date	s ir
Arriving Wednesday, January 4 - Monday, January 9	Your order will be sent to: Olayemi Osonuga 2B HERBERT ROAD LONDON, SE18 3SH United Kingdom	
Order Details		
Placed on January 02, 2017 EFFORTING V	Intage Chandelier Deer Hom Resin 6 197	.99
Lights,Rural of Room/Office, D Condition: New Sold by EFFO	ountryside antier chandeliers, Study G Dining Room, Bedroom, Living Room Chand	B



#### Goal Evaluation Step 2: Perceive the State of the world Interpret the perception

Compare the outcome with the goal

amazon.co.uk	Order Confirma
Hello, Thanks for your order. We'll let you know once y	our item(s) have dispatched. Your estimated delivery date is indi
Arriving	Your order will be sent to
Wednesday, January 4 - Monday, January 9	Olayemi Osonuga 28 HERBERT ROAD LONDON, SE18 3SH United Kingdom
Order Details	
Placed on January 02, 2017 EFFORTING V	Intage Chandelier Deer Hom Resin 6 197.99
Lights Rural or Room/Office, I Condition: Ner Sold by EFFO	ountryside antier chandeliers, Study GBP Dining Room, Bedroom, Living Room Chand w RTINC Tiffany



#### Goal Evaluation Step 3:

Perceive the State of the world Interpret the perception

#### Compare the outcome with the goal

amazon.co.uk	Order Confirma
Hello, Thanks for your order, We'll let you know once y	your item(s) have dispatched. Your estimated delivery date is ind
Arriving Wednesday, January 4 - Monday, January 9	Your order will be sent to: Olayemi Osonuga 2B HERBERT ROAD LONDON, SE18 3SH United Kingdom
Order Details	
Placed on January 02, 2017 EFFORTING V Lights,Rural of Room/Office, I Condition: Net Sold by EFFO	Antage Chandelier Deer Hom Resin 6 197.99 ountryside antier chandeliers, Study GBP Dining Room, Bedroom, Living Room Chand w RTINC Tiffany

#### What's the users goal? Post a tweet





# What does the execute?

### Put cursor in box Type message Move mouse to button and click





# What does the user evaluate?

# Did it get posted?





# How does the userIt's my face.know?It's my text.

### It's my face. It's my text. It has new options.





# Goal: Perfect DDR score. What's the users subgoal? Step on the correct arrow at the correct time.





#### Execution 1: How does the user plan the action?







#### Execution 2&3: How does the user execute the action?







#### Evaluation: How does the user evaluate the action?



You can see the arrow flash It tells you a grade



#### What's the users goal? To set the alarm for 9:07am







#### Move the wheel to the time Switch it to "on"





#### **Evaluation**?

#### Turns to an alarm screen





#### Next time:

# Programing interactions in JavaScript

#### HTML

<u> </u>	
21	chadus
21	Should have been a second s
22	
32	
22	
33	<pre><pre><pre><pre><pre><pre><pre><pre></pre></pre></pre></pre></pre></pre></pre></pre>
34	
<u> </u>	
25	
55	
26	
- 30	



#### JavaScript





# Summary

# Users interact with a system to accomplish a goal

→ C A https://mail.go	cogle.com/mail/u/0/#inbox	-			
Apps Imported From Firefo	Holiday Guide   TVG Ke Web He	lip Desk 🔛 Pixabay - Free In	Loading	- Q	
Mail -	C C	More *			1-
COMPOSE	Primary	Social	Promotions	Updates	+
Inbox (2) Sent Mail	🗌 🏫 🕑 Baldwin, BPS (2)	Bloglovin' - I	Not that I know of. Sometimes block	ked sites come in on a hug	11:08 am
Drafts (54) Need to Read	🗌 📩 🕑 Feldmann, Ann	Fwd: 21st Ce	antury Classroom Visit? - Ann Fe	Idmann District Technolog	10:18 am
Technology Coach	🗌 🚖 💌 me, Lambert (2)	8th Period - H	ley, Jeff. I am planning on doing the	e Mystery Hangout lesson	8:05 am
More -	🗆 🛨 💌 me	(no subject) -	- Jeffrey Bernadt District Technolo	ogy Specialist Bellevue Pu	Jan 12
	🗌 🚖 💌 me, Braasch, Klam	nm (3) Visitation & C	bservation Request - Good mornin	g! The second semester is	Jan 12
	🗌 🛨 💌 me, Cox (2)	Bri Cox - Coa	ching Doc - Invitation to edit - Jeff,	I finally was able to read a	Jan 12
	🗌 🛨 😕 Tripple, Todd	3D Printer - H	ello Amy, I received some informat	tion from a 3D printing exp	Jan 11
	🗆 🛨 🖂 donotreply	Education Pro	eview Build Notice - & AppleSeed E	Build Notice Education Pre	Jan 11
	🗌 📩 💿 Ann Feldmann	Fwd: [New po	ost] What "Innovative Leadership" L	ooks Like - A good read! :-	Jan 11
	🗌 🌟 🝺 me, Campbell (7)	Khan Acaden	ny Issues - It kept repeating that "ch	nanged password 7 month @	p Jan 8
	🗌 📩 🕑 Toelle, me (3)	6 Word Storie	es - Hey Jeff! We just returned from	lunch, but still have quite	Jan 8
	🗌 🚖 💌 me, Evon (4)	Request to V	isit on Thursday AM - Hi Jeff, Happ	y New Year! We would lov	Jan 6
	🗌 🕁 🝺 Jeffrey Bernadt	Shared from	Twitter: What teachers need to kno	w about multicultural educ	12/23/15

To read and respond to all email.



#### To buy a book

The designer must create the subgoals and interactions to help them accomplish it.

\$11.33

List Price: \$18.99

Save: \$7.66 (40%)

FREE Shipping on orders over \$25

-or get FREE Two-Day Shipping with

Ships from and sold by Amazon.com.

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-Dav

Delivery at checkout, Details

Buy New

√prime

In Stock.

γŗ

Ship to:

newyork, 10001

Add to List

Qty: 1 🗘

**Amazon Prime** 

Gift-wrap available.

**Goal**: Buy a book

Find it Subgoal: Add to cart Interaction: Type, click click

amazon	All + design of everyday things						
Departments -	Your Amazon.com Today's Deals	Gift Cards Registry Sell Help					
1-16 of over 6,000 results for "design of everyday things"							
FREE Shipping All customers get FREE Ship orders over \$25 shipped by Amazon	bping on Best Seller	The Design of Everyday Thir					
Show results for Books Popular Applied Psycholog Medical Applied Psycholog Business & Money Industrial & Product Desig Retailing Industry * See more	The DESIGN of EVERYDAY THINGS	by Don Norman Paperback \$1133 \$438-99 .vprime Get it by TODAY, Jan 31 FREE Shipping on eligible orders More Buying Choices \$4.93 (129 used & new offers) Kindle Edition \$1199 Get it TODAY, Jan 31					
Kindle Store Applied Psychology Retailing Industry Consumer Behavior Business & Investing Web Site Design * See more * See All 15 Departments		The Design of Everyday Thir by Donald A. Norman Paperback \$3.22 (147 used & new offers) Audible Audio Edition \$∩00					

Masterend VISA AMEX DISCOVER PayPar Name (as it appears on your card) Card number (no dashes or spaces) Expiration date 01 - January \$ 2013 Security code (3 on back, Amex: 4 on front)

Enter payment info

Type, click, point

Place order Click

Place your on	ler	
Order Summary		
Items: Shipping & Handling:	\$29.9 \$0.0	
Total Before Tax: Estimated Tax To Be Co Rewards Points	\$29.9 lected: \$0.0 -\$4.5	
Order Total: \$	\$25.37	
How are shipping costs	calculated?	
Amazon Prime Shipping applied to the eligible ite	has been ns in your	

÷

1234

### Time to move to a target : Fitts's Law



Time to move your pointer to a target

$$= a + b * \log\left(\frac{2D}{S}\right)$$

Buttons on the edges are fast to get to because they have infinite size



Low-level interactions take time and effort. Minimize them because you do them a lot.



TypeTypeTypeType

### Know the users' goals and design interactions as: execution and evaluation



	Knicks vs. Celtics tonight!					© _
		GIF	₽	0		+ Tweet
6	What's happening?					
	Lydia Chilton Knicks vs. Celtics tonight!				$\sim$	
	$\heartsuit$	<b>↑</b> ↓		$\bigcirc$	ılı	

#### Execution

Plan the action Specify the action sequence Perform the action sequence

#### Evaluation

Perceive the state of the world Interpret the perception Compare the outcome with the goal