Design Patterns

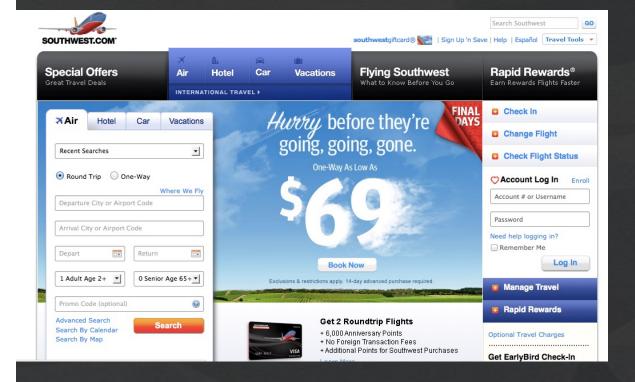
刘哲明

Prof. James A. Landay Computer Science Department Stanford University

Autumn 2024 November 20, 2024

Hall of Fame or Shame?

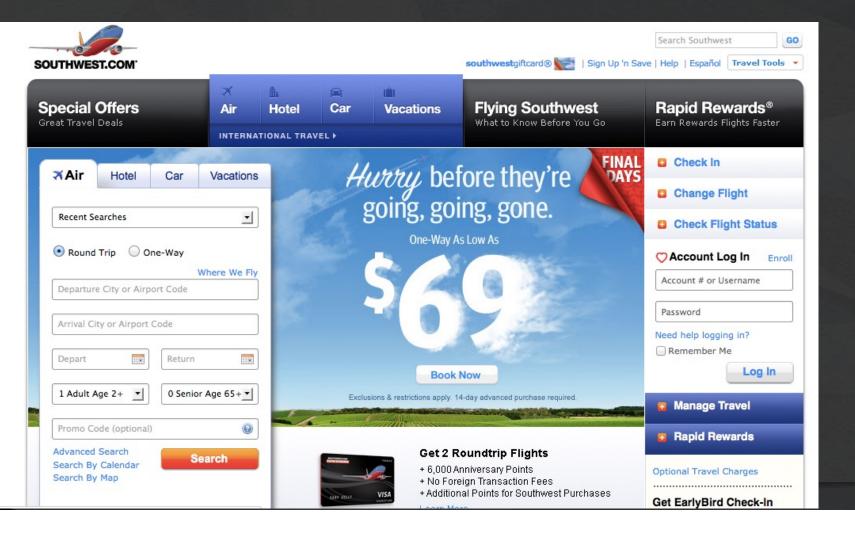




Southwest.com

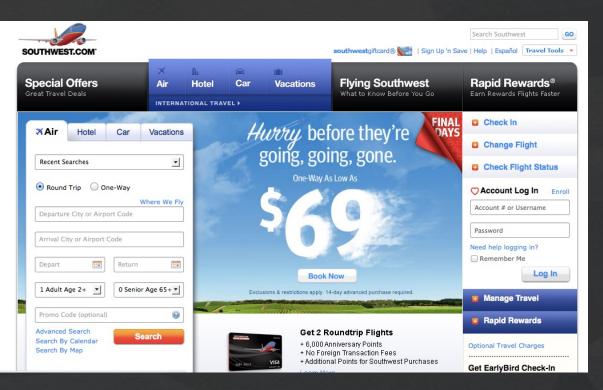
Hall of Fame or Shame?





Hall of Shame!





Southwest.com

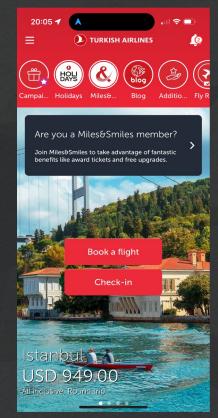
- hard to notice key
 functions on far right
- ads dominating the screen

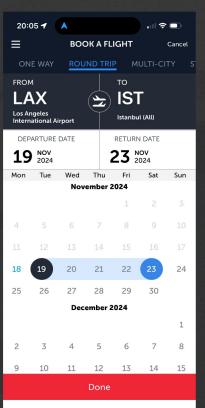
Improved southwest.com

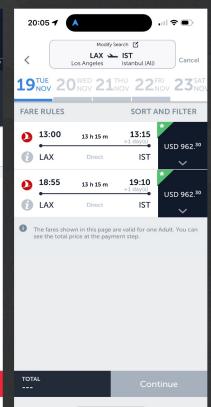


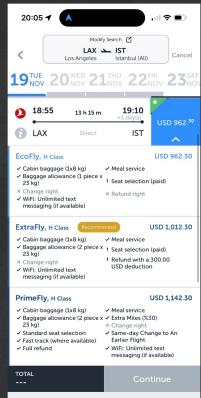
Hall of Fame or Hall of Shame?







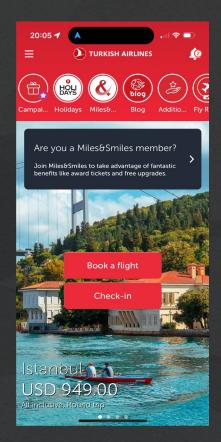




Turkish Airlines App

Hall of Shame!







- Instagram story-like items at top irrelevant/annoying to the user
- Home page: thin text with drop shadow over a highly saturated image → eye nightmare
- "Recommended" lacks contrast
- No color harmony:
 blue + gold + green + existing red & grays
- Lots of small, low-contrast text (e.g., "Direct")
- Unclear what "H Class" is and how it relates to "Ecofly" & "PrimeFly"
- "Modify Search" & "Cancel" at top tiny and hard to tap (small target size → Fitt's)

Design Patterns

刘哲明

Prof. James A. Landay Computer Science Department Stanford University

Autumn 2024 November 20, 2024

Outline

- Detailed Design Example
- Web Design Patterns
- Patterns in the Design Exploration Phase
- Dark Patterns

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Craft Supplies

Gifts & Gift Cards

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Wall decor



Gift Ideas



Outdoor & garden

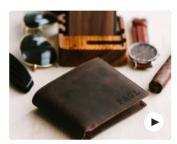


Self-care



Craft kits

Popular gifts right now



Valentines Day Gift for Him,Personalized Wallet,Mens...

★★★★★ (20,991)

\$19.99 \$49.98 (60% off)



Vitamin Me Daily Dose of Love: Cute Gift for Him, Anniversary...

**** (3,893)

\$22.49 \$24.99 (10% off)

FREE shipping



Heart Keychain Set - Made with Authentic LEGO® Bricks,...

**** (4,218)

\$8.38 \$16.76 (50% off)

FREE shipping



Romantic Personalized Record -Birthday Gift for Her -...

**** (1,942)

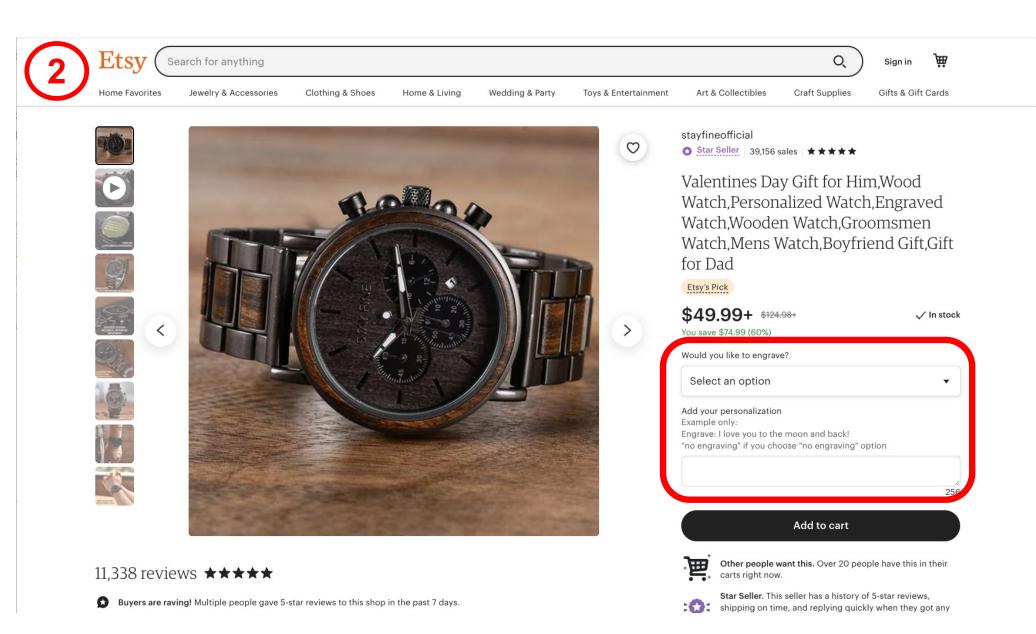
\$22.99 \$45.99 (50% off)

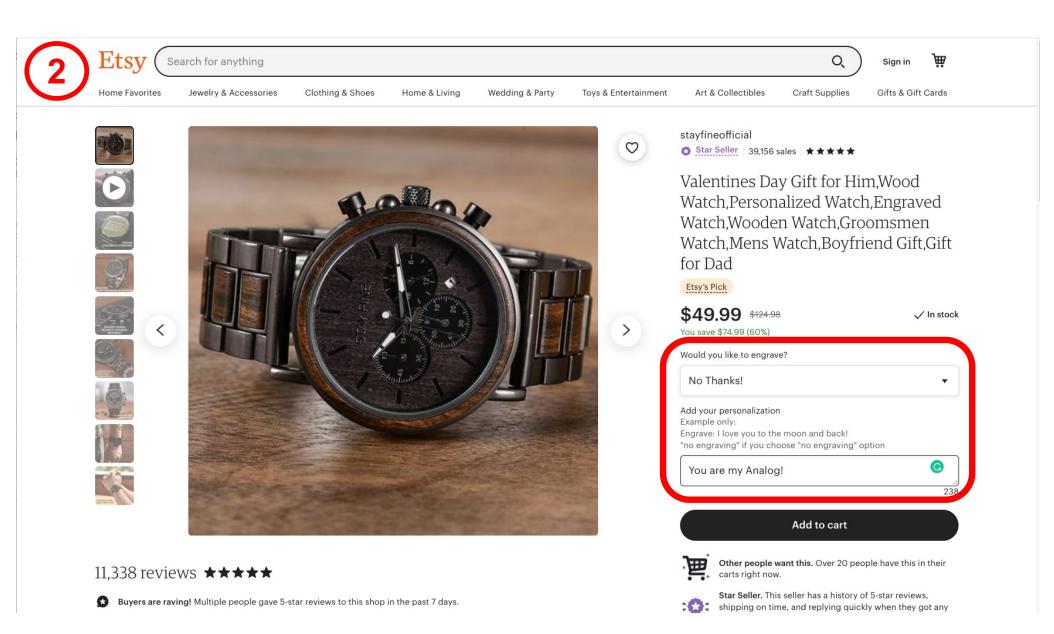


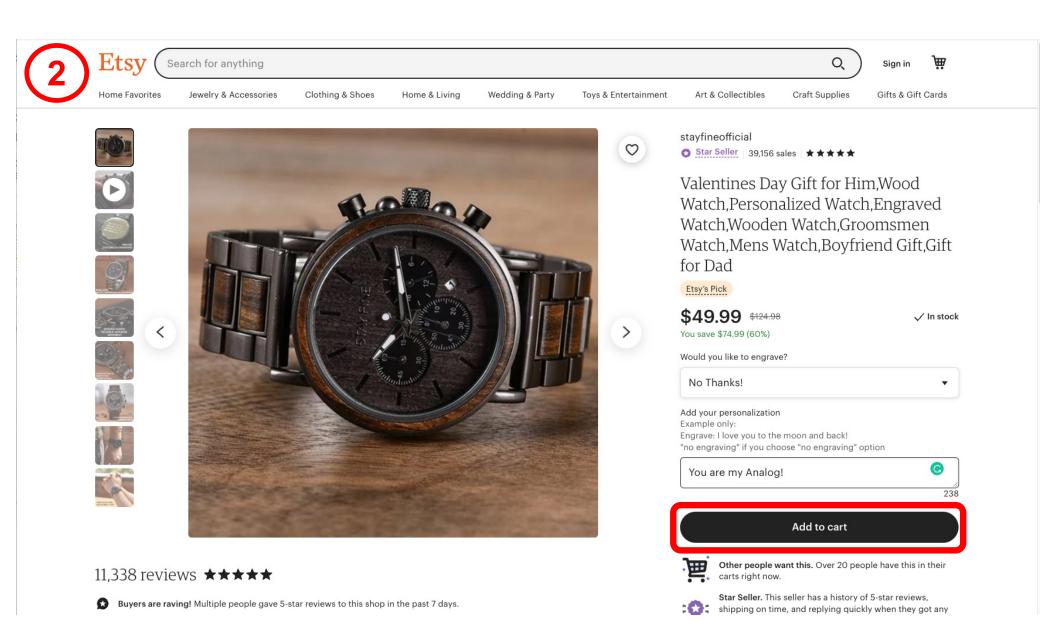
Valentines Day Gift for Him,Wood Watch,Personalized...

**** (11,338)

\$49.99 \$124.98 (60% off)











Home Favorites

Search for anything

Jewelry & Accessories



Toys & Entertainment

Art & Collectibles

Craft Supplies

Q

Gifts & Gift Cards

Keep shopping

Sign in

1 item in your cart





Valentines Day Gift for Him, Wood Watch, Personalized Watch, Engraved Watch, Wooden Watch, Groomsmen Watch, Mens Watch, Boyfriend Gift, Gift for Dad Would you like to engrave?: No Thanks! [\$49.99]

Clothing & Shoes

Home & Living

Edit

Personalization: You are my Analog!

Save for later

Remove

☐ This order is a gift Prices will not be shown on packing slip

Add a note to stayfineofficial (optional)

Contact shop

\$49.99 \$124.98

Over 20 people have this in their cart

Sale: 60% off

Apply shop coupon codes

Estimated delivery: Mar 7-9 from United States

How you'll pay



Klarna. 4 interest-free installments

\$50.00 product minimum applies

Item(s) total \$124.98

Shop discount -\$74.99

Subtotal \$49.99

Get shipping cost

Proceed to checkout



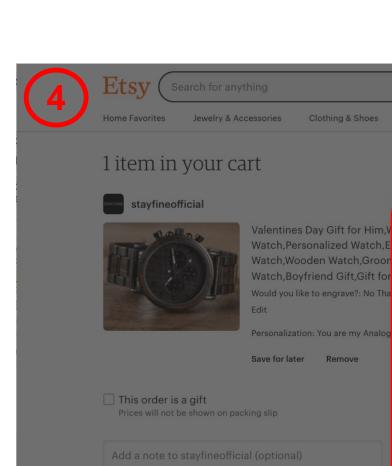
The Uplift Fund supports nonprofits that provide resources to creative entrepreneurs in communities that need it most. You can donate your change at Checkout. Learn more

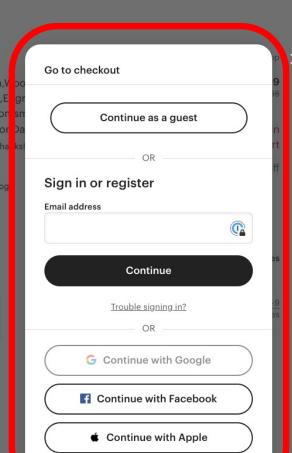


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Wedding & Party

Toys & Entertainment

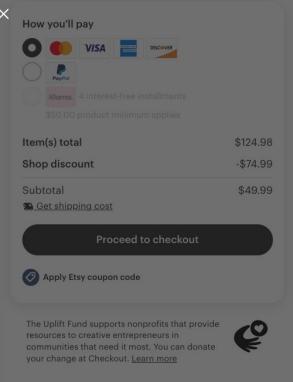
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Gifts & Gift Cards



0.



Home Favorites

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Jewelry & Accessories

Clothing & Shoes

Home & Living

Wedding & Party

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Art & Collectibles

Q.

Gifts & Gift Cards

1 item in your cart



stayfineofficial



Valentines Day Gift for Him,V Watch, Personalized Watch, E Watch, Wooden Watch, Groon Watch, Boyfriend Gift, Gift for Would you like to engrave?: No Tha

Personalization: You are my Analog

Save for later

Remove

This order is a gift

Go to checkout



landay@gmail.com Not your email? Go back.

Sign in

For your security, we ask for a security code for new device sign ins. You should be receiving a six digit security code at landay@gmail.com. It may take a few minutes.

If you still cannot find the code, please check any spam or trash folders for the code.

Security Code



✓ Stay signed in

Sign in

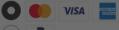
Resend security code

Keep shopping

\$124.98

\$49.99

How you'll pay



Item(s) total

Shop discount -\$74.99

Subtotal

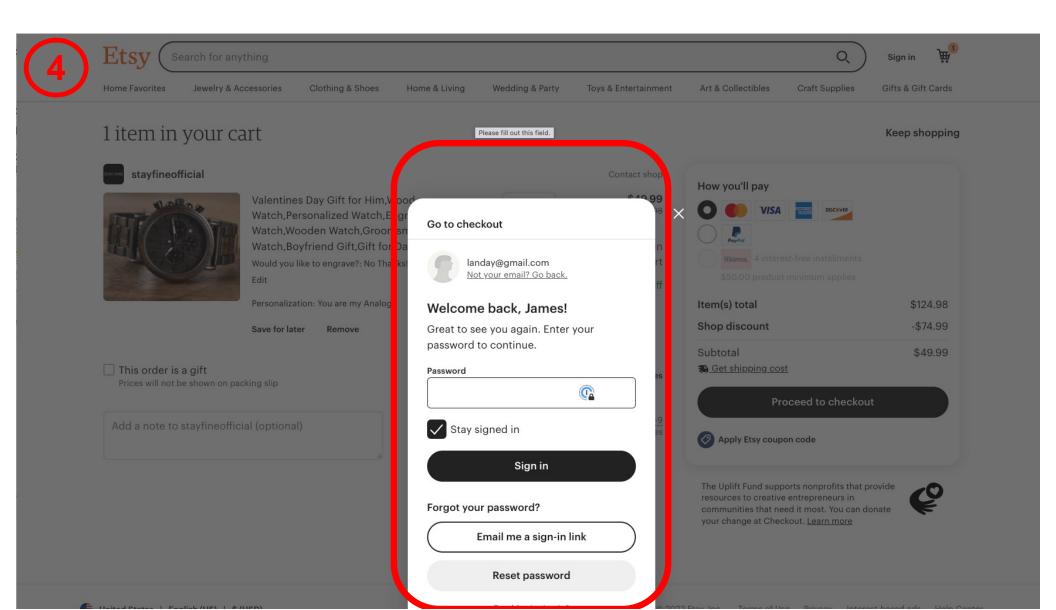
Get shipping cost



Apply Etsy coupon code

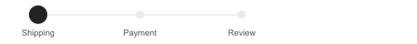
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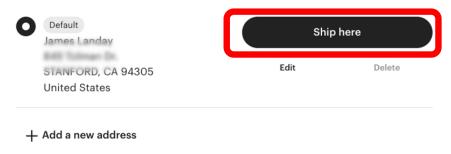




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Choose a shipping address



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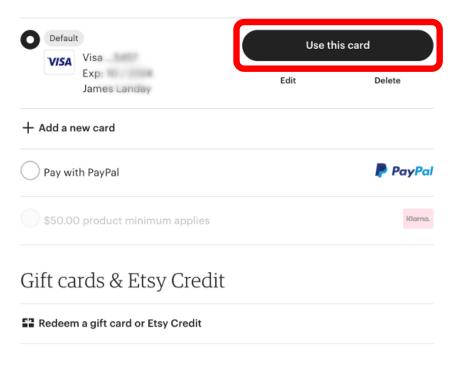


Etsy & Secure checkout



Choose a payment method

You will not be charged until you review this order on the next page.



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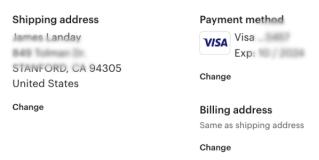
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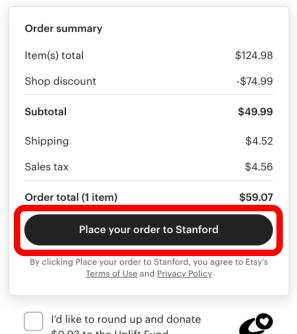


Etsy



Double check your order details





\$0.93 to the Uplift Fund Learn more







Valentines Day Gift for Him, Wood Watch, Personalized



\$49.99 Choose a shipping method



Basic Web Design

Let's take a closer look page by page

Art & Collectibles

Craft Supplies

Gifts & Gift Cards

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Wall decor



Gift Ideas



Outdoor & garden



Self-care



Craft kits

Popular gifts right now



Valentines Day Gift for Him,Personalized Wallet,Mens...

★★★★ (20,991)

\$19.99 \$49.98 (60% off)



Vitamin Me Daily Dose of Love: Cute Gift for Him, Anniversary...

★★★★ (3,893)

\$22.49 \$24.99 (10% off)

FREE shipping



Heart Keychain Set - Made with Authentic LEGO® Bricks,...

**** (4,218)

\$8.38 \$16.76 (50% off)

FREE shipping



Romantic Personalized Record - Birthday Gift for Her -...

★★★★★ (1,942)

\$22.99 \$45.99 (50% off)



Valentines Day Gift for Him,Wood Watch,Personalized...

**** (11,338)

\$49.99 \$124.98 (60% off)

Jewelry & Accessories

Find things you'll love. Support independent sellers. Only on Etsy.



Face masks

Wall

What site is this?

- Logo in top-left corner denotes the site
- examples of SITE BRANDING (E1)

Popular gifts right now



Valentines Day Gift for Him,Personalized Wallet,Mens...

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Popular gifts right now



Valentines Day Gift for Him,Personalized Wallet,N ★★★★ (20,991) \$19.99 \$49.98 (60% off)

What kind of site is this?

- Shopping cart icon
- Tab row categories/featured navigation
- UP-FRONT VALUE PROPOSITION (C2)
- example of PERSONAL E-COMMERCE (A1)



Find things you'll love. Support independent sellers. Only on Etsy.













Face masks

Wall decor

Gift Ideas

Heart Keycl

Authentic L

***** (4

\$8.38 \$16.76

FREE shipping

Outdoor & garden

Self-care

Craft kits

Popular gifts right now



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★★★★★ (3,893)

\$22.49 \$24.99 (10% off)

FREE shipping

What can I do here?

- Support sellers → buy
- Tab row / Search on top
- Click on popular gifts





Find things you'll love. Support independent sellers. Only on Etsy.







Wall decor



Gift Ideas

\$8.38 \$16.3

FREE shippin



Outdoor & garden



Self-care



Craft kits

Popular gifts right now



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Romantic Personalized Record -Birthday Gift for Her -...



Valentines Day Gift for Him,Wood Watch,Personalized...

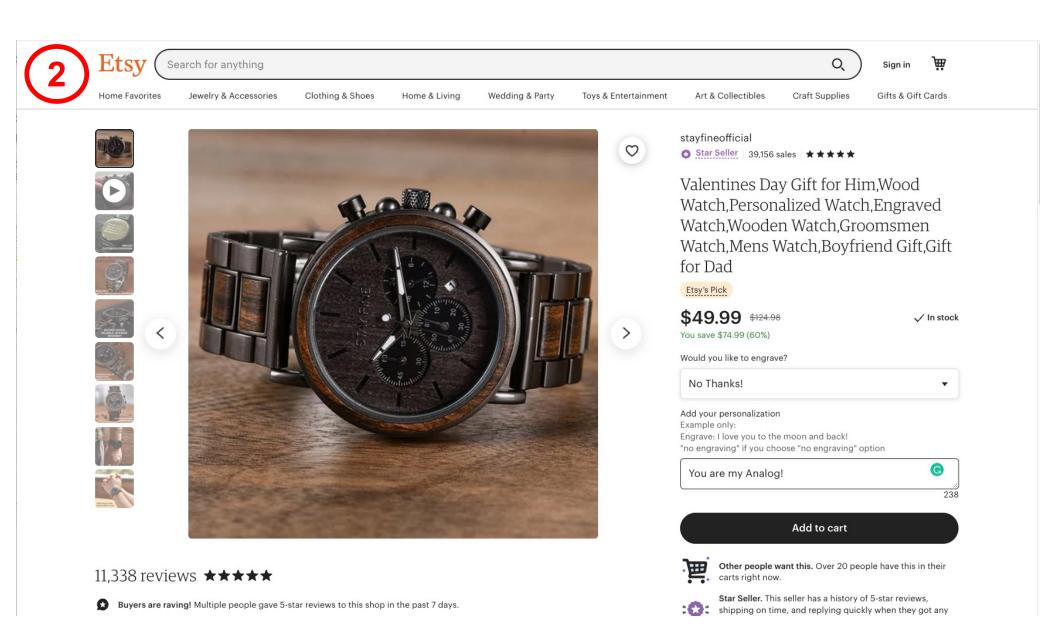
 Most important info visible without scrolling

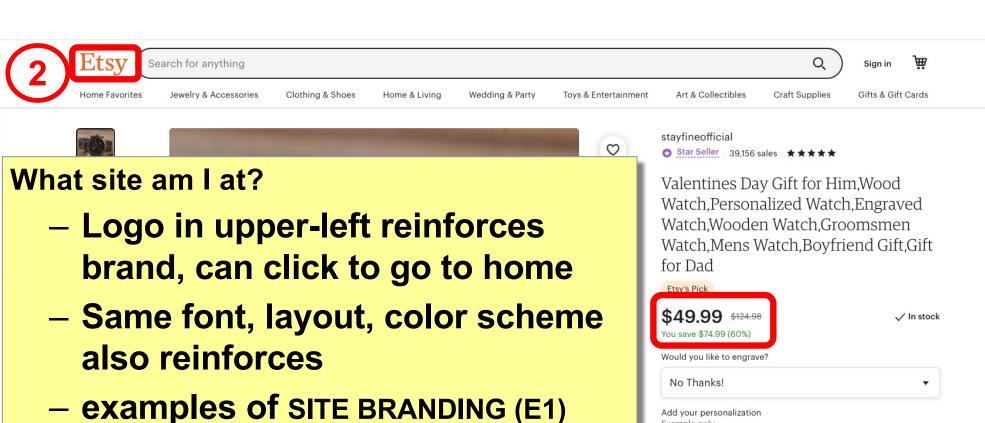
ABOVE THE FOLD (I2)

Editors' Picks

Wall Art and Decor

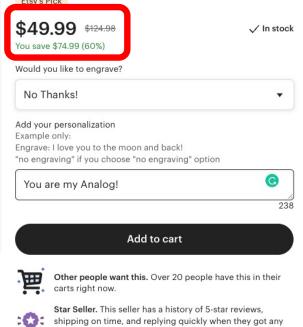
Shop these unique finds →

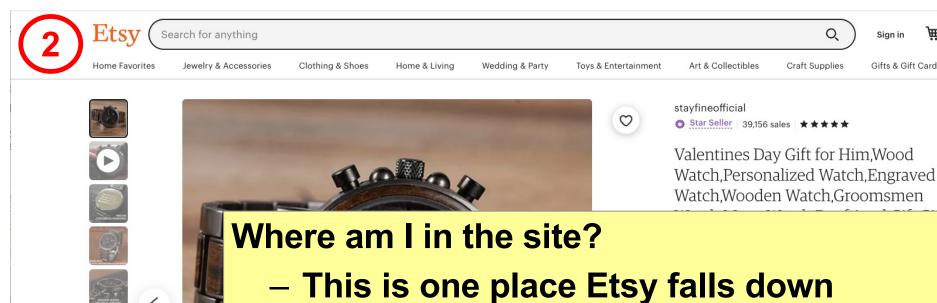




- price emphasizes I can buy
- i.e., PERSONAL E-COMMERCE (A1)







- This is one place Etsy falls down
- Could have had
 - "Home > Watches" as **LOCATION BREADCRUMBS (K6)**
 - "Jewlery & Accessories" could be selected in **TAB ROW (K3) & SEARCH ACTION MODULE (J1)**

11.338 reviews ★★★★

Buyers are raving! Multiple people gave 5-star reviews to this shop in the past 7 days.



Other people want this. Over 20 people have this in their carts right now.

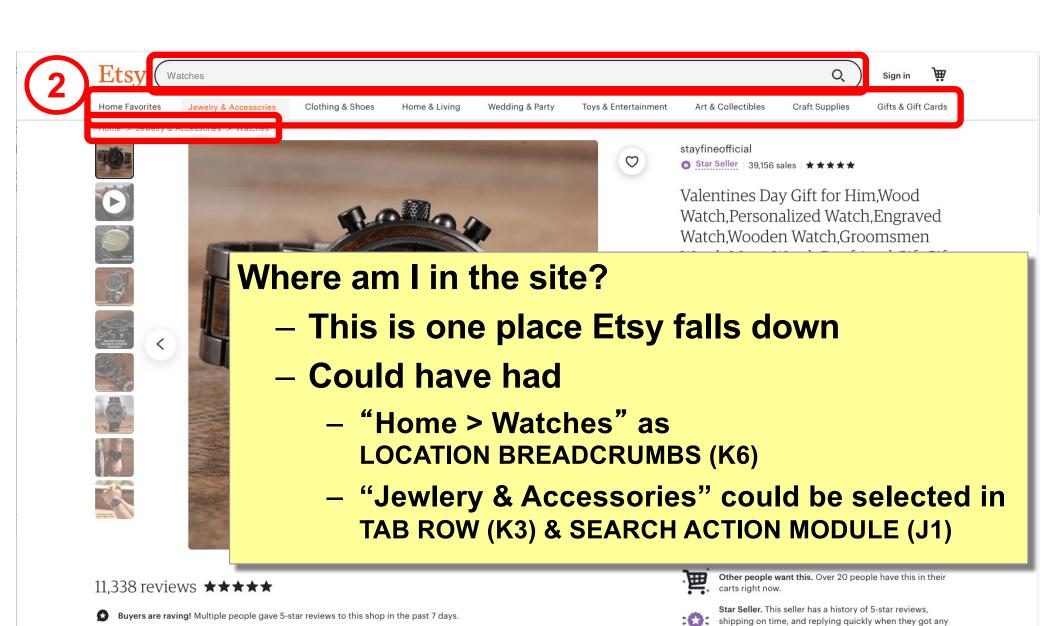
Sign in

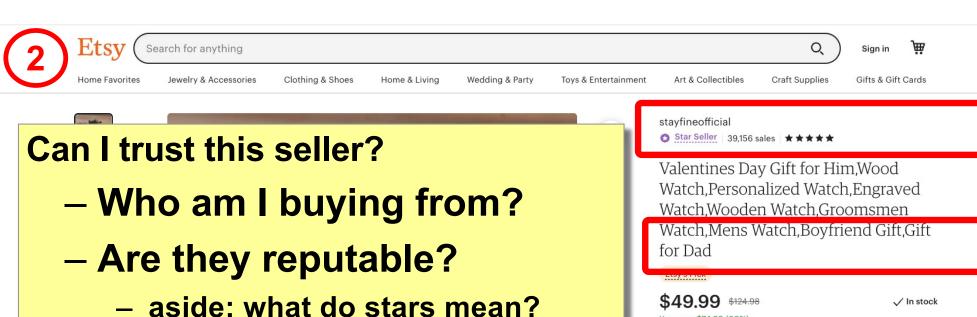
Gifts & Gift Cards

Craft Supplies

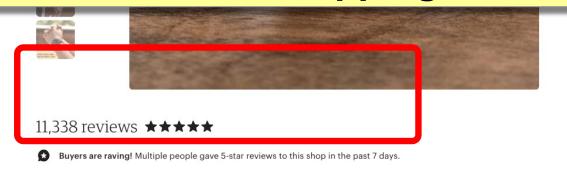


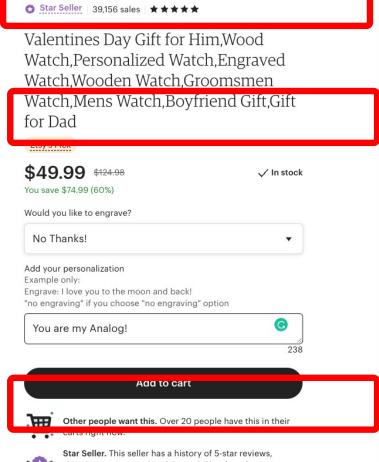
Star Seller. This seller has a history of 5-star reviews, shipping on time, and replying quickly when they got any



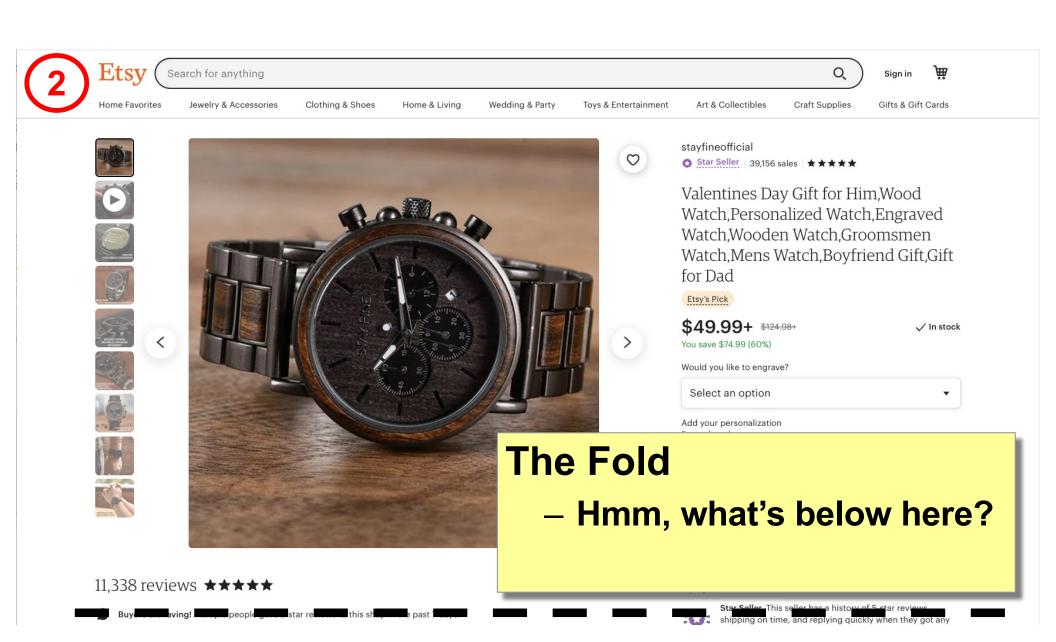


- Do people like the product?
- What about shipping cost?

























11,338 reviews ★★★★

Buyers are raving! Multiple people gave 5-star reviews to this shop in the past 7 days.

Reviews for this item 6,131 Reviews for this shop 11,338

Sort by: Recommended ▼



Caitlyn Feb 27, 2022



Would you like to engrave?: Yes + Extra Links Everything about this watch was even more beautiful in person! Shipping was super fast and Paul even sent a message to make sure I was happy with my purchase!



Watch, Mens Watch, Boyfriend Gift, Gift for Dad

Etsy's Pick

\$49.99+ \$124.98+ ✓ In stock You save \$74.99 (60%) Would you like to engrave? Select an option

Add your personalization

Example only:

Engrave: I love you to the moon and back!

"no engraving" if you choose "no engraving" option

Add to cart

256

Other people want this. Over 20 people have this in their carts right now.

Star Seller. This seller has a history of 5-star reviews, shipping on time, and replying quickly when they got any messages.

Arrives by Mar 7-9 if you order today.

Details

Handmade item

Can be personalized

Description

Helpful?



Alyssa Strausser Feb 22, 2022



Would you like to engrave?: Yes Please!

I ordered this for my boyfriend for Valentine's Day and I could not be happier! The quality was impeccable and the customer service was even better. I chose to get it engraved and after I submitted my order, I thought of something different to have engraved. The... ••••

Helpful?



Meghan Welter Feb 23, 2022



Would you like to engrave?: Yes + Extra Links

I will definitely order from Paul again. And I highly recommend ordering from Paul! He was quick to respond when I had a moment of panic that I wrote the message I wanted engrave wrong, which I didn't, and he understood exactly what I meant and needed. M....

Helpful?



Emily Cromer Feb 22, 2022



Would you like to engrave?: Yes Please!

This watch is beautiful! It looks even better in person! This is the first thing I've ordered through Etsy, and it couldn't have been a better outcome!



Helpful?

Description

© Complimentary adjustment tool for wood link.
-For very large wrist, if you need extra links, please select "+Extra links" option when you place the order, and we'll provide 4 extra links for you in the box.

ENGRAVED MESSAGE INSTRUCTIONS

Learn more about this item

Shipping and return policies

^

^

Estimated arrival

Mar 7-9

Mar 2 Mar 3-4

Mar 7-9

曲

Order placed

Order ships

Delivered!

Cost to ship

Returns & exchanges

\$4.52

Accepted

Exceptions may apply

Etsy offsets carbon emissions from shipping and packaging on this purchase.

Deliver to United States, 94305 >

Ships from Redding, CA

View shop policies





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Clothing & Shoes Home & Living

Wedding & Party

Toys & Entertainment

Art & Collectibles

Craft Supplies

Q

Gifts & Gift Cards

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Sign in

1 item in your cart



stayfineofficial



Valentines Day Gift for Him, Wood Watch, Personalized Watch, Engraved Watch, Wooden Watch, Groomsmen Watch, Mens Watch, Boyfriend Gift, Gift for Dad Would you like to engrave?: No Thanks! [\$49.99]

Personalization: You are my Analog!

Save for later Remove

Edit

☐ This order is a gift Prices will not be shown on packing slip

Add a note to stayfineofficial (optional)

Contact shop

\$49.99 \$124.98

Over 20 people have this in their cart

Sale: 60% off

Apply shop coupon codes

Estimated delivery: Mar 7-9 from United States How you'll pay











\$50.00 product minimum applies

Item(s) total \$124.98 Shop discount -\$74.99

Subtotal \$49.99

Get shipping cost

Proceed to checkout



The Uplift Fund supports nonprofits that provide resources to creative entrepreneurs in communities that need it most. You can donate your change at Checkout. Learn more



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Valentines Day Gift for Him, Wood Watch, Personalized Watch, Engraved Watch, Wooden Watch, Groomsmen Watch, Mens Watch, Boyfriend Gift, Gift for Dad Would you like to engrave?: No Thanks! [\$49.99]

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Contact shop

\$49.99 \$124.98

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Sale: 60% off

How you'll pay



Klarna. 4 interest-free installments

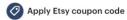
Item(s) total \$124.98

Shop discount -\$74.99

Subtotal

Get shipping cost

Proceed to checkout



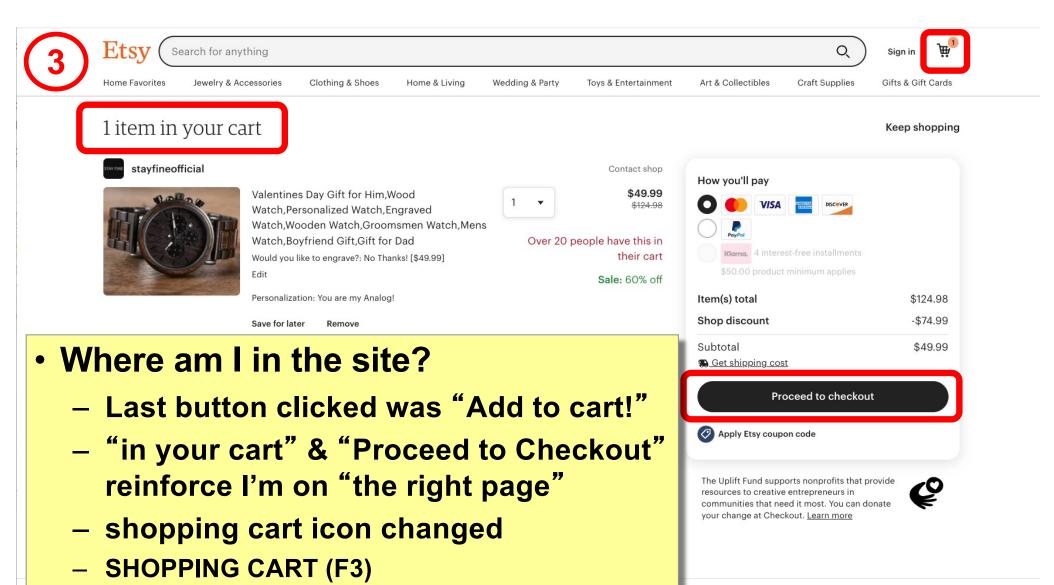
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\$49.99

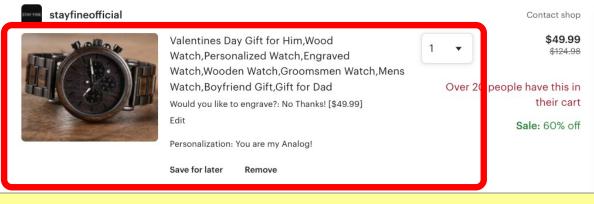
What site am I at?

- Logo in upper-left
- Colors, layout, font
- examples of SITE BRANDING (E1)

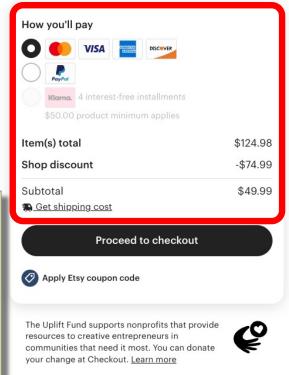


1 item in your cart

Keep shopping



- What am I going to buy?
 - Easy to remove & save for later
- How much will it cost?
 - Could be better as need to click for shipping costs – surprise!
- SHOPPING CART (F3)







Home Favorites

Search for anything

Jewelry & Accessories

Clothing & Shoes Home & Living

Wedding & Party

Toys & Entertainment

Art & Collectibles

Craft Supplies

Q

Gifts & Gift Cards

Sign in

1 item in your cart





Valentines Day Gift for Him, Wood Watch, Personalized Watch, Engraved Watch, Wooden Watch, Groomsmen Watch, Mens Watch, Boyfriend Gift, Gift for Dad

Would you like to engrave?: No Thanks! [\$49.99]

Personalization: You are my Analog!

Contact shop

\$49.99 \$124.98

Over 20 people have this in their cart

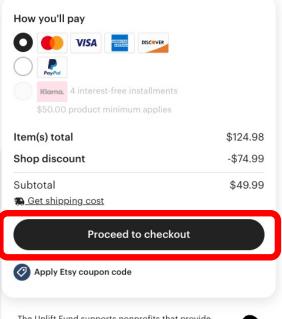
Sale: 60% off

What can I do (they want me to do)?

- "Proceed to Checkout" **HIGH VISIBILITY ACTION BUTTON (K5)**
 - visually distinct, looks clickable
 - large

Etsy offsets carbon emissions from every delivery

Keep shopping

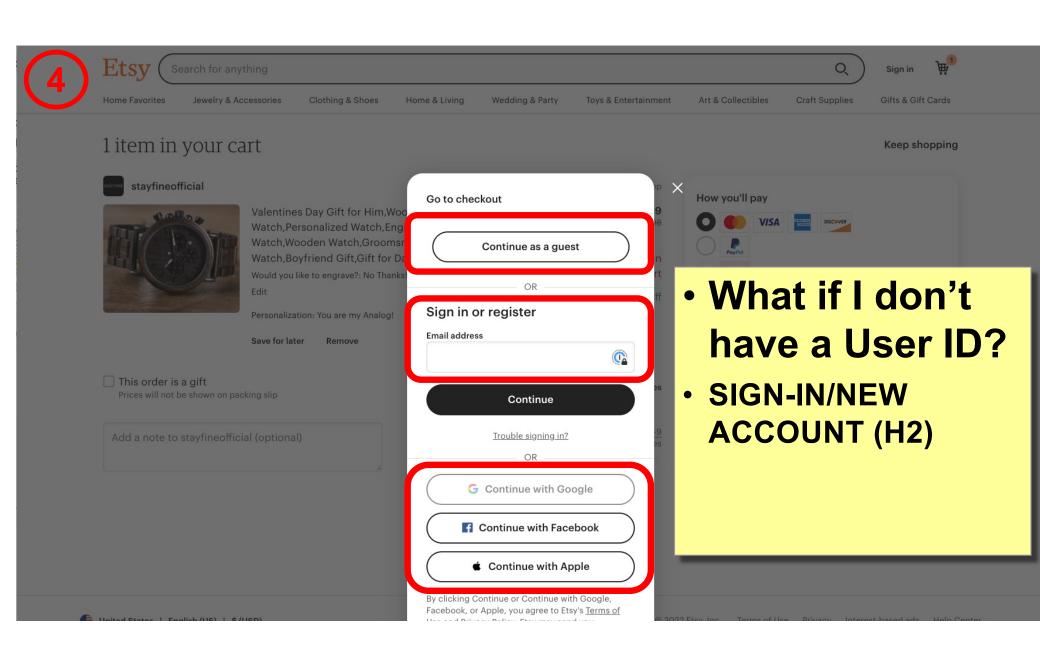


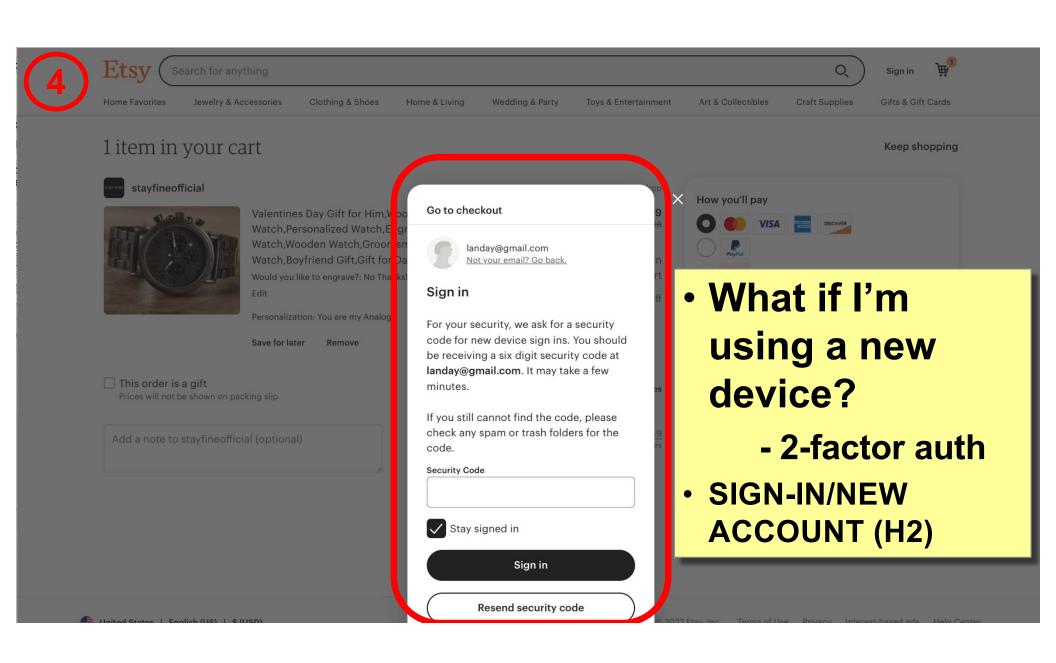
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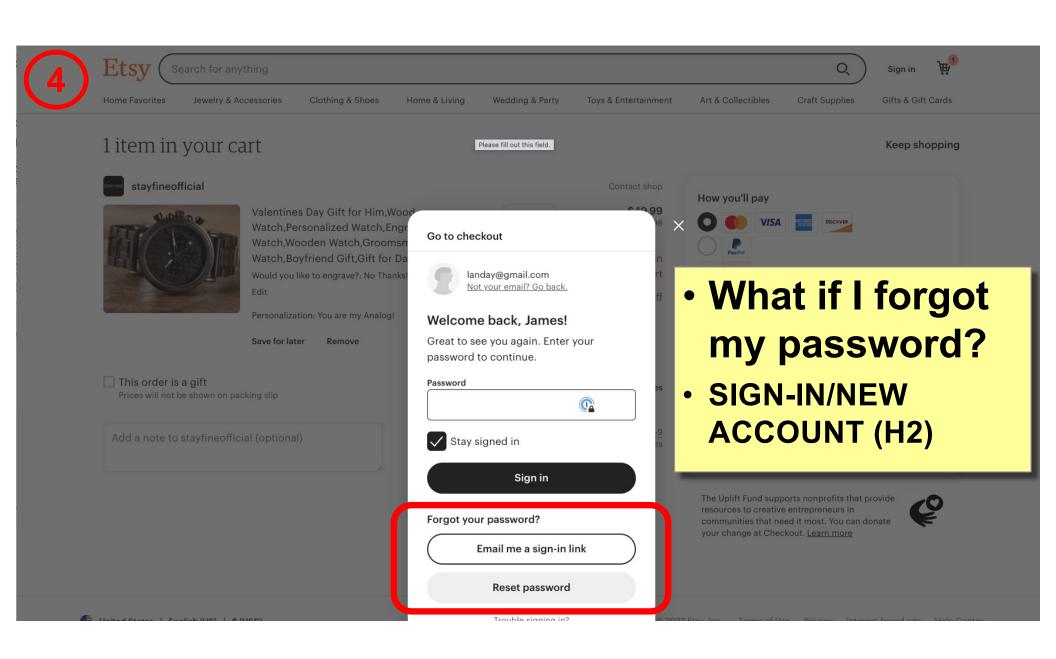


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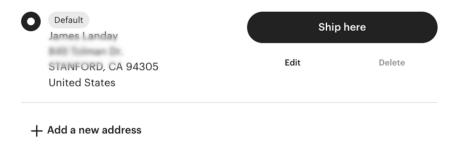




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Choose a shipping address



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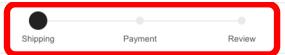
If you donate to the Uplift Fund, your Merchant for the donation amount will be Brooklyn Community Fund. See Eouto Logo Community Fund. See Eouto Logo Community Fund. See Eouto Logo Community Fund. See Eouto Logo Community Fund. See Eouto Logo Community Fund. See Eouto Logo Community Fund. See Eouto Logo Community Fund. See <a href="Eouto Logo Community Fund. See Eouto Logo Community Fund. See Eouto Logo Community Fund. See Eouto Logo Community Fund. See Eouto Logo Community Fund. See Eouto Logo Community Fund. See Eouto Logo Community Fund. See Eouto Logo Community Fund. See Eouto Logo Community Fund. See Eouto Logo Community Fund. See Eouto Logo Community Fund. See Eouto Logo Community Fund. See Eouto Logo Community Fund. See Eouto Logo Community Fund. See Eouto Logo Community Fund. See Eouto Logo Community Fund. See Eouto Logo Community Fund. See Eouto Logo Community Fund. See

Etsy, Inc., USA 117 Adams Street Brooklyn, NY 11201

Etsy Ireland UC 66/67 Great Strand Street Dublin 1







Choose a shipping address



+ Add a new address

What site?

Logo, layout, color, fonts

Where in site?

- Checkout, step 1 of 3
- "Choose a shipping address"
- QUICK-FLOW CHECKOUT (F1)

Merchant is Etsy, Inc. (USA) or Etsy Ireland UC (Ir

If you donate to the Uplift Fund, your Merchant for t

Etsy, Inc., USA 117 Adams Stre



Etsy a



Choose a shipping address



+ Add a new address

Merchant is Etsy, Inc. (USA) or Etsy Ireland UC (Ireland), dep If you donate to the Uplift Fund, your Merchant for the donation

Etsy, Inc., USA 117 Adams Street Brooklyn

Ship here

Eait

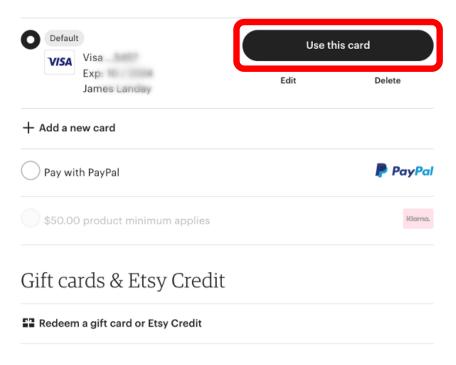
Delete

- Note what's different (?)
 - No tab rows
 - No impulse buys
 - Only navigation on page takes you to next step
- This is a PROCESS FUNNEL (H1)
 - Extraneous info & links removed to focus customers



Choose a payment method

You will not be charged until you review this order on the next page.



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Double check your order details

Shipping address

James Landay 849 Tolman (In

STANFORD, CA 94305 **United States**

Change

Payment method

Change

Billing address

Same as shipping address

Change

Order summary

Shipping

Item(s) total \$124.98

Shop discount -\$74.99

\$49.99 Subtotal

Sales tax \$4.56

Order total (1 item) \$59.07

Place your order to Stanford

By clicking Place your order to Stanford, you agree to Etsy's Terms of Use and Privacy Policy

I'd like to round up and donate \$0.93 to the Uplift Fund Learn more



\$4.52





Valentines Day Gift for Him, Wood Watch, Personalized Watch, Engraved Watch, Wooden



\$49.99 Choose a shipping method \$124.98



USPS First-Class Mail

\$4.52







Double check your order details

Shipping address Payment method James Landay 849 Tolman Dr. STANFORD, CA 94305 Change **United States**

- Last step of process
 - Step 3, "Review/Place Order"
 - "Place your order" button
- **HIGH-VISIBILITY ACTION BUTTON (K5)**

Place your order to Stanford	
Order total (1 item)	\$59.07
Sales tax	\$4.56
Shipping	\$4.52
Subtotal	\$49.99
Shop discount	-\$74.99
Item(s) total	\$124.98

I'd like to round up and donate \$0.93 to the Uplift Fund Learn more







Valentines Day Gift for Him, Wood Watch, Personalized Watch, Engraved Watch, Wooden



\$49.99 Choose a shipping method \$124.98



USPS First-Class Mail

\$4.52



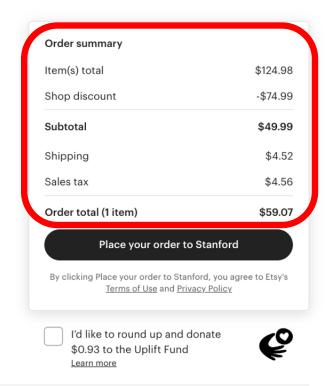


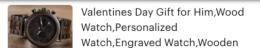


Double check your order details



- No nasty surprises
 - Can see order
 - Total price is same as shopping cart
 - ORDER SUMMARY (F7)







\$49.99 Choose a shipping method \$124.98

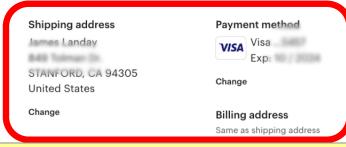




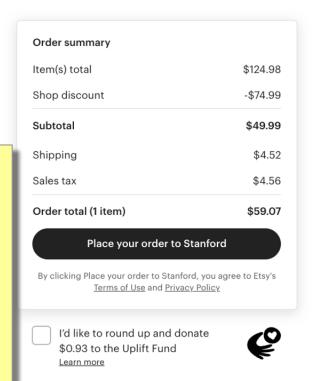




Double check your order details



- Easy to change shipping & billing
- All of these things are part of the design pattern
 - QUICK-FLOW CHECKOUT (F1)





Valentines Day Gift for Him, Wood Watch, Personalized Watch, Engraved Watch, Wooden



\$49.99 Choose a shipping method \$124.98



USPS First-Class Mail

\$4.52

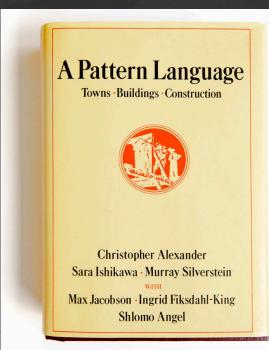
Design = Solutions

- Design is about finding solutions
- Unfortunately, designers often reinvent
 - Hard to know how things were done before
 - Why things were done a certain way
 - How to reuse solutions

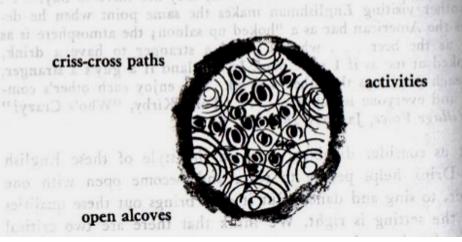
Design Patterns

Communicate common design problems & solutions

- First used in architecture [Alexander et al.]
 - Ex. How to create a beer hall where people socialize?



Somewhere in the community at least one big place where a few hundred people can gather, with beer and wine, music, and perhaps a half-dozen activities, so that people are continuously criss-crossing from one to another.

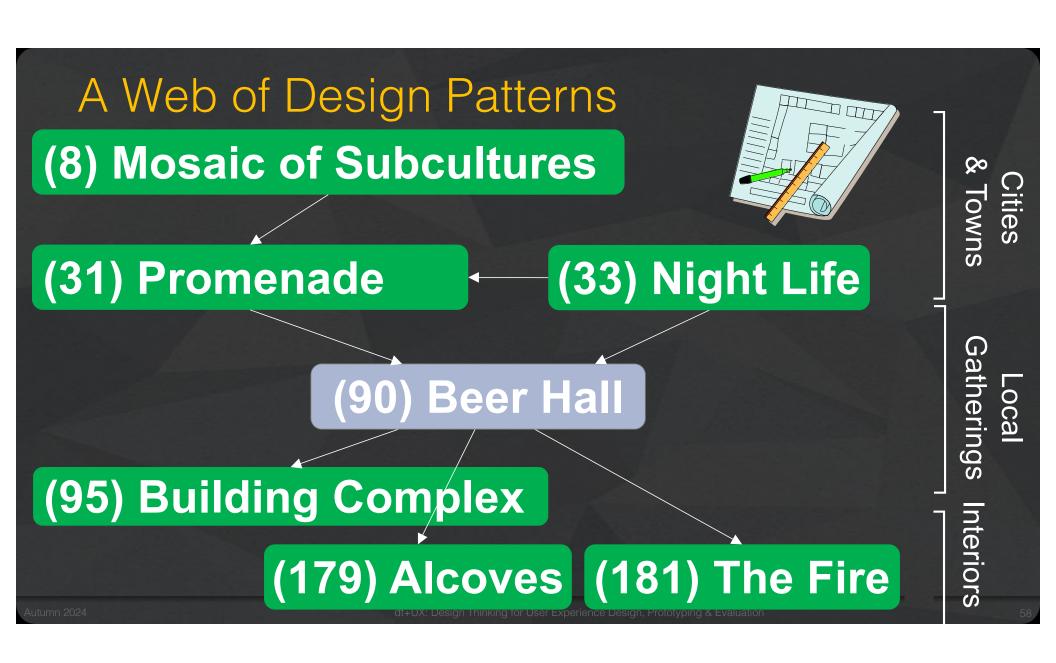


Somewhere in the community at least one big place where a few hundred people can gather, with beer and wine, music, and perhaps a half-dozen activities, so that people are continuously criss-crossing from one to another.



Using Design Patterns

- Not too general and not too specific
 - use a solution "a million times over, without ever doing it the same way twice"
- Design patterns are a shared language
 - for "building and planning towns, neighborhoods, houses, gardens, & rooms."
 - Ex. Beer hall is part of a center for public life...
 - Ex. Beer hall needs spaces for groups to be alone...
 ALCOVES



Web Design Patterns

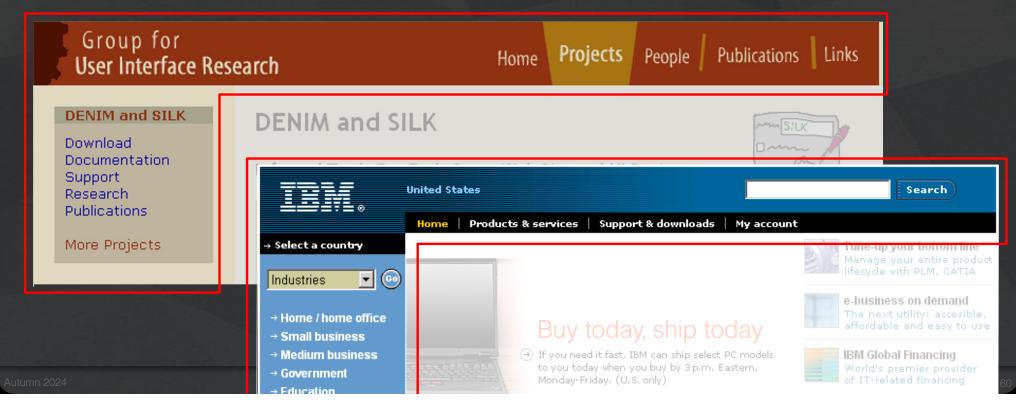
- Also used in UI design
- Communicate design problems
 & solutions
 - how to create navigation bars for finding relevant content...
 - how to create a shopping cart that supports check out...

- how to make e-commerce sites where people return & buy...



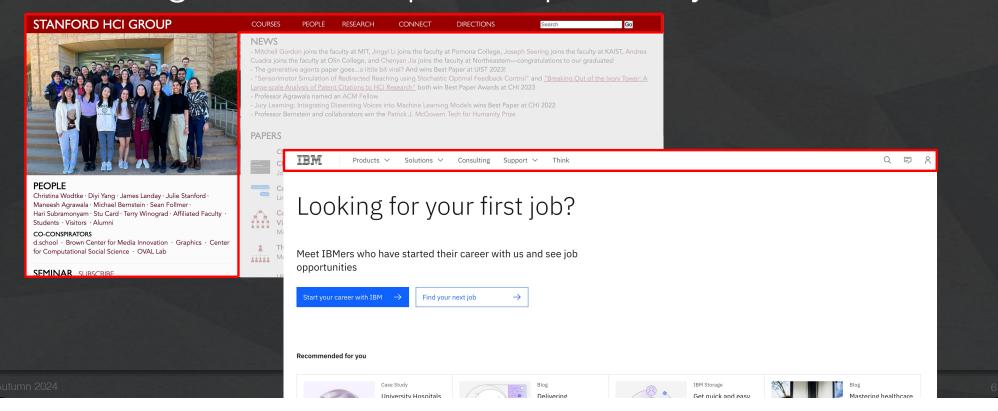
NAVIGATION BAR (K2)

Problem: Customers need a structured, organized way of finding the most important parts of your Web site



NAVIGATION BAR (K2)

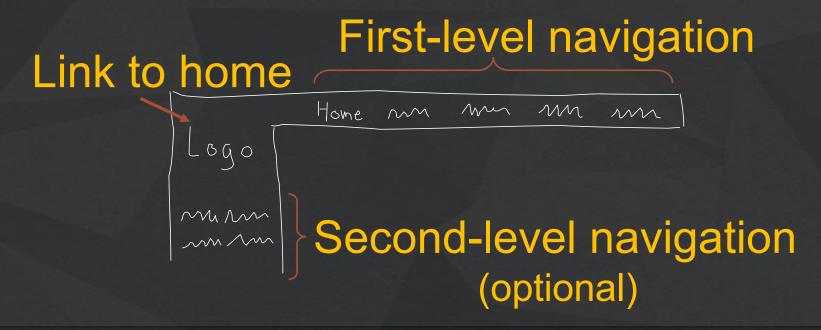
Problem: Customers need a structured, organized way of finding the most important parts of your Web site



NAVIGATION BAR (K2)

Solution diagram

- captures essence on how to solve problem



Pattern Groups

Our patterns organized by group

- Site genres
- Navigational framework
- **c** Home page
- Content management
- Trust and credibility
- (F) Basic ecommerce

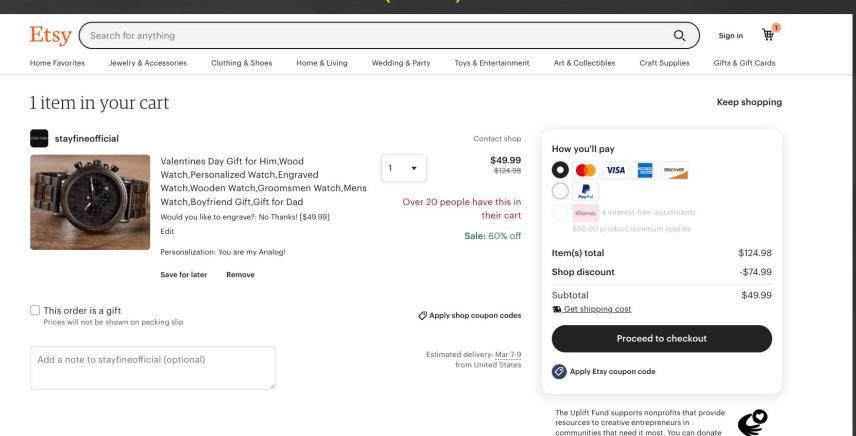
- Advanced ecommerce
- Completing tasks
- Page layouts
- Search
- Representation of the contraction of the contrac
- Speed
- The mobile web

PROCESS FUNNEL (H1)

Problem: Need a way to help people complete highly specific stepwise tasks

- Ex. Create a new account
- Ex. Fill out survey forms
- Ex. Check out

PROCESS FUNNEL (H1)

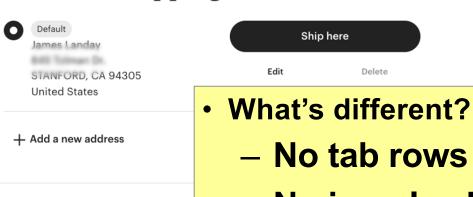


your change at Checkout. Learn more





Choose a shipping address



Merchant is Etsy, Inc. (USA) or Etsy Ireland UC (Ireland), depending o If you donate to the Uplift Fund, your Merchant for the donation amount

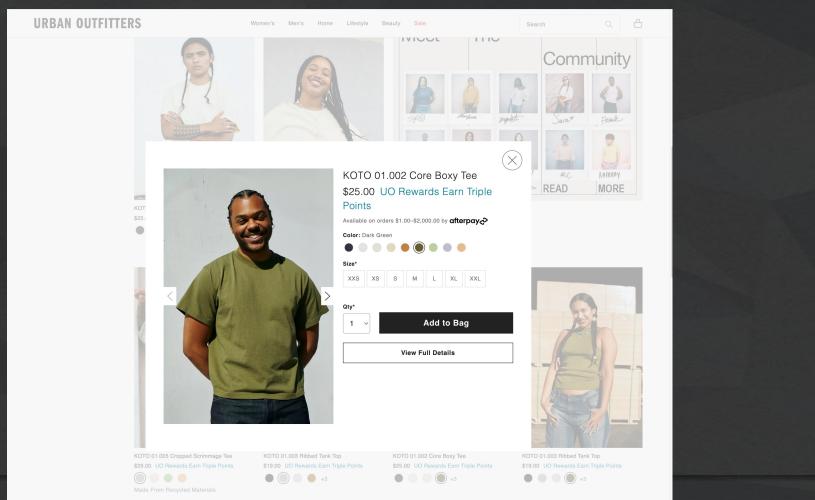
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- - No tab rows
 - No impulse buys
 - Only navigation on page takes you to next step
- What's the same?
 - Logo, layout, color, fonts

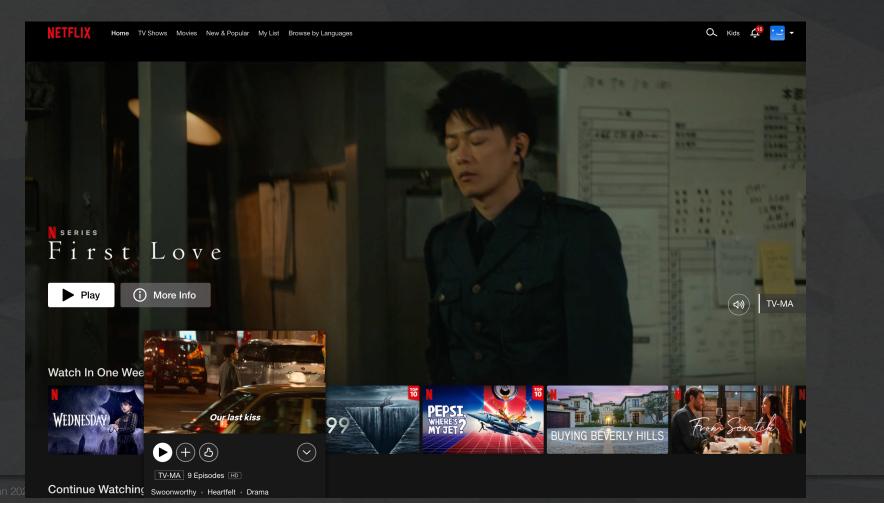
PROCESS FUNNEL (H1)

Problem: What if users need extra help?

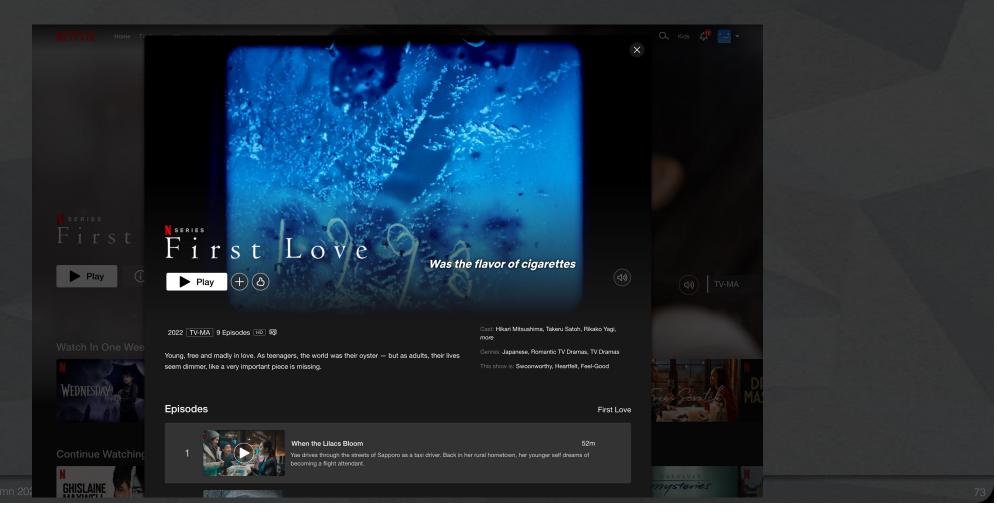
FLOATING WINDOWS (H6)



FLOATING WINDOWS (H6)

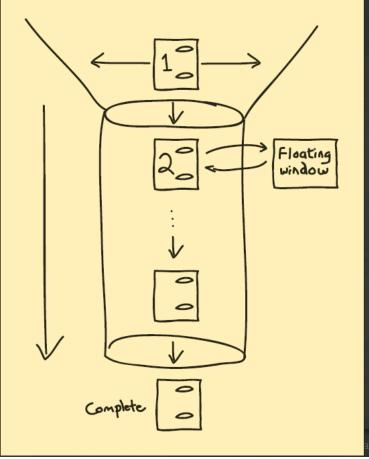


FLOATING WINDOWS (H6)



PROCESS FUNNEL (H1)

Solution Diagram



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aluation

74

PROCESS FUNNEL (H1) Related Patterns (A11) Intranets (A10) Web Apps (A1) E-Commerce (H1) Process Funnel (K2) Navigation Pars (H8) Context-Sensitive Help (I2) Above the Fold (K3) Tab R ws (K5) High-Viz Action Buttons (K4) Action Buttons (H6) Floating Windows

Patterns Support Creativity

- Patterns come from successful examples
 - sites that are so successful that lots of users are familiar with them (e.g., Google, Amazon, Yahoo, Facebook, Instagram...)
 - interaction techniques/metaphors that work well across many sites (e.g., shopping carts)
- Not too general & not too specific
 - you need to specialize to your needs
- Patterns let you focus on the hard, unique problems to your design situation
 - every real design will have many of these

Patterns Offer the Best of Principles, Guidelines & Templates

- Patterns help get details right, without over-constraining the solution
 - unlike principles, patterns not too general, so can see how to apply to your situation
 - unlike guidelines, patterns discuss tradeoffs, show good examples & tie to other patterns
 - unlike style guides, patterns not too specific, so can still be specialized
 - unlike page templates, patterns illustrate flows among different pages
- Patterns can serve as documentation for teams
- Often used along with or as part of design systems

Administrivia

- Project Questions?
- Project Fair Questions?

TEAM BREAK

WORK ON PROJECT

- 1. PROTOTYPE (1 TASK)
- 2. REPORT

Grading on the Heuristic Eval Assignments

Assignment #7 Heuristic Evaluation (individual)

```
A7 HE (individual): -: 7% ✓--: 1% ✓-: 22% ✓: 40% ✓+: 30% ✓++: 1%
```

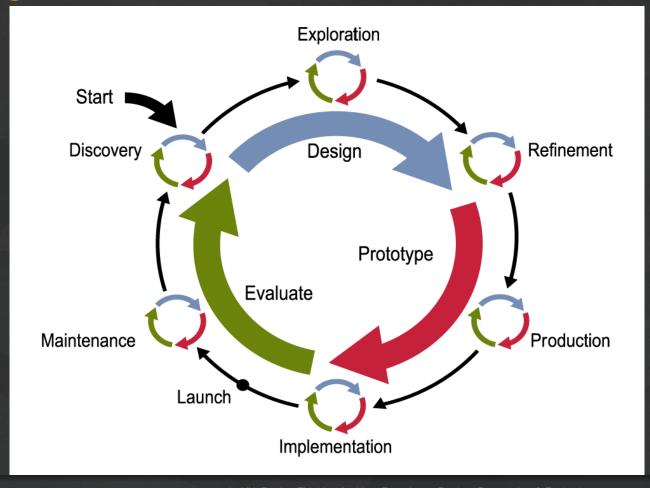
A7 HE (individual) Avg: 89% (down 2% from 2023 but see "-")

Assignment #9 Heuristic Evaluation (group)

```
A9 HE (group): -: 0% ✓--: 0% ✓-0% ✓: 72% ✓+: 28% ✓++: 0%
```

A9 HE (group) Avg: 92% (down 1% from 2023)

Design Process



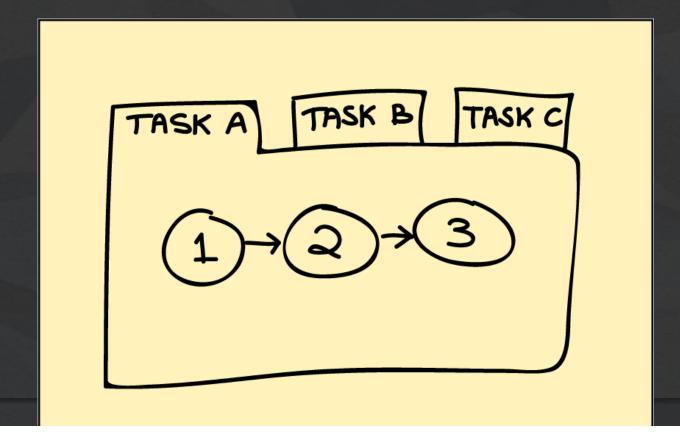
Patterns in Exploration Phase

- Exploration-level patterns to design overall structure
 - different choices will give radically different designs
- For example, how to organize information
 - HIERARCHICAL ORGANIZATION (B3)
 - TASK-BASED ORGANIZATION (B4)
 - ALPHABETICAL ORGANIZATION (B5)

 $-\dots$

Patterns in Exploration Phase

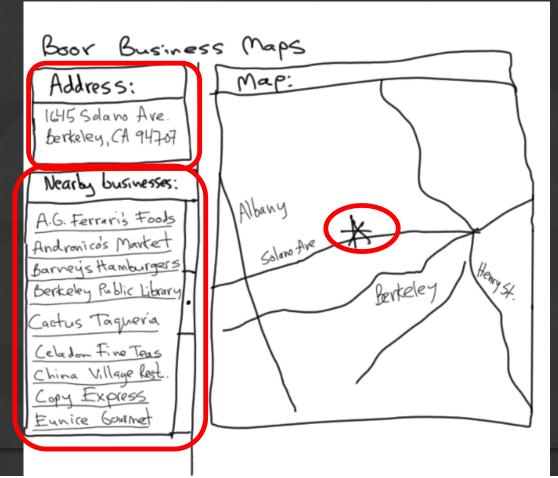
TASK-BASED ORGANIZATION (B4): Link the completion of one group of tasks to the beginning of the next related task(s)



Design Exploration Example

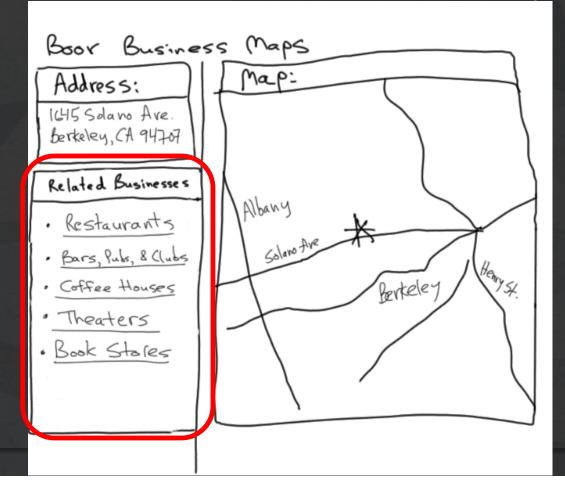
- John given the task of designing a new subsite for showing maps to businesses
 - listings found by typing in address
 - key feature: show nearby businesses
- John comes up with two design sketches
 - Design #1 uses ALPHABETICAL ORGANIZATION (B5) for list of all nearby businesses
 - Design #2 uses TASK-BASED ORGANIZATION (B4) for list of related nearby businesses

Design #1 ALPHABETICAL ORGANIZATION (B5)



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Design #2 TASK-BASED ORGANIZATION (B4)



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- Low-fidelity Usability Test
 - sketches the rest of the key screens on paper
 - brings in 5 participants to his office
 - asks each to carry out 3 tasks while colleague Sam "plays computer"
 - John observes how they perform

Tasks

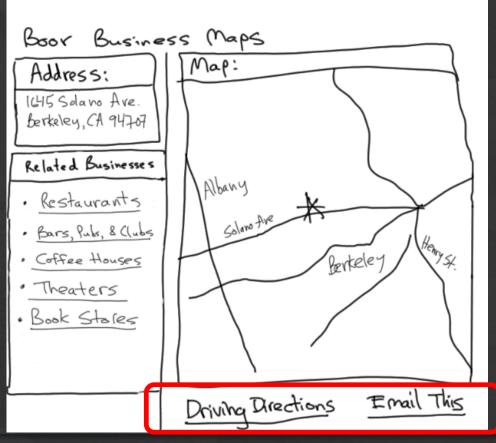
- look up 1645 Solano Ave., Berkeley CA
- look up 1700 California Ave, San Francisco CA & find Tadich Grill
- look up 2307 Birch St., Palo Alto CA & find a Sushi restaurant nearby

- Results with Design #1 (Alphabetical)
 - Task 1: look up 1645 Solano Ave
 - no difficulties encountered warm-up task!
 - Task 2: look up 1700 California & find Tadich Grill
 - several users didn't notice that the list of nearby businesses was scrollable (due to paper affordances?)
 - those that scrolled took awhile to find in list of over 500
 - Task 3: look up 2307 Birch St. & find nearby Sushi restaurant
 - 3 users only picked restaurants that had "restaurant" in the name & thus couldn't find "Daigo"

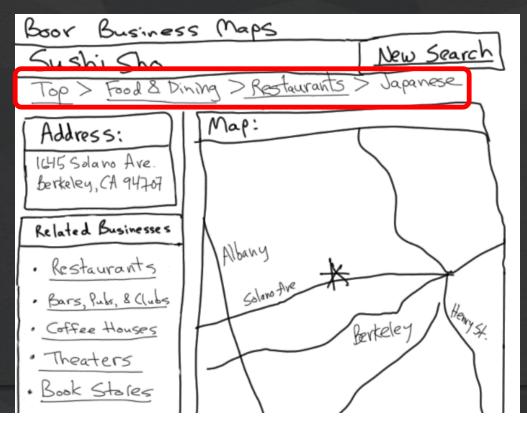
- Results with Design #2 (Task-based)
 - Task 1: look up 1645 Solano Ave
 - no difficulties encountered warm-up task!
 - Task 2: look up 1700 California & find Tadich Grill
 - 1 user took awhile to figure out that Tadich Grill was a restaurant & to click on the "Restaurants" link
 - all others found it in 2 clicks (Restaurants->Tadich Grill)
 - Task 3: look up 2307 Birch St & find nearby Sushi restaurant
 - 3 found "Daigo" in 2 clicks
 - 2 others asked for a listing of Japanese restaurants

- General comments
 - 2 users said they often want to email/text maps to friends who they will be meeting (task-based)
 - 3 users wanted driving directions (task-based)
- → TASK-BASED ORGANIZATION (B4) worked better, but still had some minor problems

Design #2 – Revision 1 Adding More Related Tasks

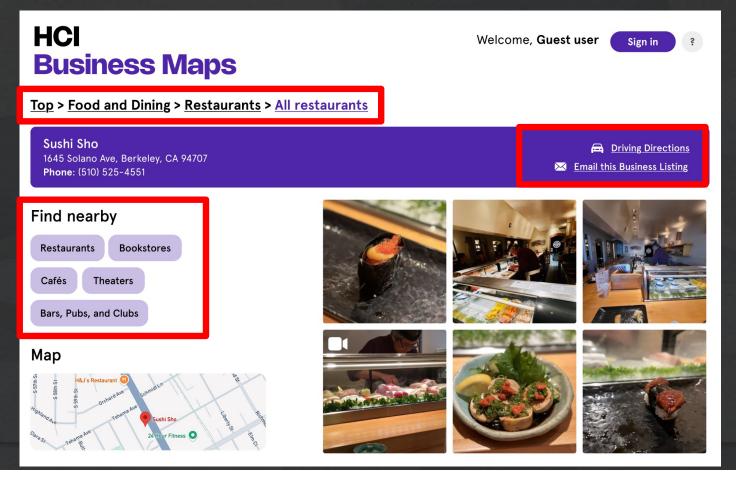


Design #2 – Revision 2 Adding HIERARCHICAL ORGANIZATION (B3) & LOCATION BREADCRUMBS (K6)

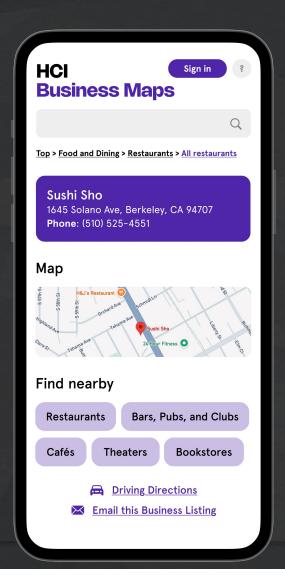


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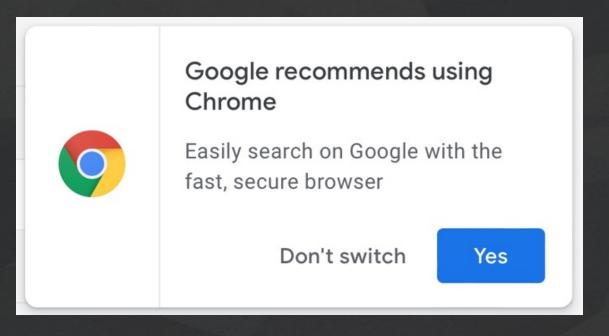
Design #2 – Revision 3 Hi-Fi Prototype Adding SEARCH ACTION MODULE (J1)



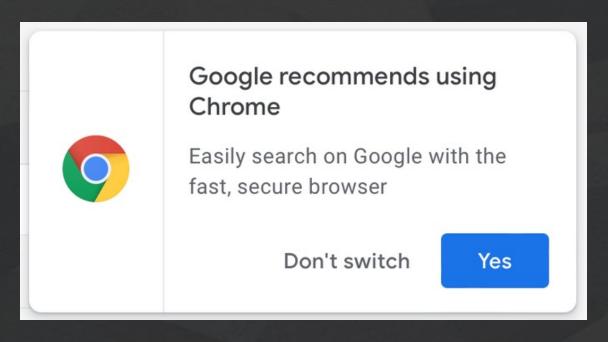
Design #2 – Revision 3 Hi-Fi Prototype Adding SEARCH ACTION MODULE (J1)



Anything wrong here?



Anything wrong here?



- Makes the default to switch to their browser overly easy
- https://twitter.com/m ciarlo/status/154936 7530032185345

Anything wrong here?

Title:	Mr. \$
First name * :	First name
Last name *:	Last name
Email *:	Email
Phone number *:	Phone number
Diagon do not cond mo d	etails of products and offers from Currue so uk
riease do not send me d	etails of products and offers from Currys.co.uk

Dark Patterns (AKA Deceptive Patterns)

Please enter your details to reserve your item(s) Title: Mr. First name *: First name Last name *: Last name Email *: Email Phone number *: Phone number Please do not send me details of products and offers from Currys.co.uk Please send me details of products and offers from third party organisations recommended by Currys.co.uk Reserve items

- Trick questions
 - meaning of checkboxes alternates so 1st is "opt out" but 2nd is "opt in"
- Many other types of dark patterns
 - confirmshaming
 - bait & switch
 - hidden costs
 - friend spam...
- https://www.darkpatterns.org/ or https://deceptive.design

Summary

- Lots of issues involved in designing compelling, usable interfaces (web or mobile)
- Design patterns are one way of capturing good design knowledge
 - generative (help you create new designs)
 - consider trade-offs
 - concrete examples of successful uses
 - a networked language that works together

Further Reading Books on Web Design

- The Design of Sites. Doug Van Duyne, James Landay, Jason Hong. Addison-Wesley. 2nd edition. 2007. [at this point out of date]
- Information Architecture for the Web and Beyond.
 Louis Rosenfeld, Peter Morville, Jorge Arango.
 O'Reilly. 4th edition. 2015
- Don't Make Me Think!, Revisited. Steven Krug. Que.
 3rd edition. 2014.

Further Reading Websites on Web Design

- digital.gov, for building accessible websites & more
- User Interface Engineering, at http://www.uie.com
- Mark Hurst's creativegood.com
- Jakob Nielsen's <u>www.nngroup.com</u>
- What are your favorite web design blogs?

Next Time

- Lecture
 - Special career panel with 5-7 former CS147 CAs who are:
 - Product Designers, Product Managers, Software Engineers, & UX Researchers
 - lots of time for Team Work on Project
- Studio
 - A8 mid-way presentations & Team Work on Project
- Project Expo: required attendance this is your final exam!)
 - 100+ guests have RSVPd so far!