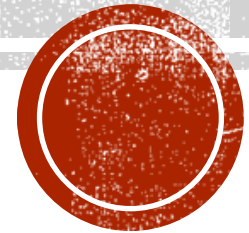


# Module-6 Multimedia and Mobile UX Design

Text For Web Pages – Effective Feedback – Guidance & Assistance – Internationalization – Accessibility – Icons – Image – Multimedia – Coloring - Case Study: Addressing usability in E-Commerce sites

Mobile Ecosystem: Platforms, Application frameworks- User Experience Design for Mobile – Elements of Mobile User Interface and Experience – UI Style guidelines for Mobile – UI Mobile Components and Patterns – User Input and Mobile User Experience



# UX In Mobile

- User experience (UX) in mobile refers to the overall experience a person has interacting with any type of mobile device (phone, tablet, wearable, hybrid). Interactions include apps, interfaces, software, or the hardware itself.
- UX Design:
  - User experience (UX) design is the process of creating products, services, and processes that provide meaningful and relevant experiences to users. The UX design process focuses heavily on the human perspective and encompasses everything from user research to usability to function.
- Who?
  - UX has been around in various forms since the 1940s, however, it was not until the spread of PCs in the early 90's that the term "user experience" design was coined by Donald Norman. Don worked for Apple and saw a need to cover all aspects of a person's experiences with a system
- UX Research?
  - User experience (UX) research is important because it helps create designs that are truly relevant, easy and pleasurable to use, and helps us understand the return on investment of our designs. User research influences all aspects of the UX design process.



# 2015-Google-Mobile UX Design principles

- 5 Categories
  - Home page and site Navigation
  - Site search
  - Commerce and Conversion
  - Form entry
  - Usability and form factor
- 25 Design principles

Call (front & center)	Make site search visible	Let users explore before commit	Streamline information entry	Optimize entire site for mobile
Menu (short & sweet)	Site results are relevant	Let users purchase as guest	Choose simplest input	Don't make pinch to zoom
Easy to Home page	Impl. Filters	Maximize convenience	Visual Calendar for date select...	Product images expandable
Don't let promotion steal the show	Guide users to better search	Click to call button	Min. errors with real time validation	Tell users which orientation works best
		Make it easy to finish on other device	Design efficient forms	Keep users in a single browser window
				Avoid full site label
				Be clear why you need location

<https://developers.google.com/web/fundamentals/design-and-ux/principles/>

<https://developer.apple.com/design/human-interface-guidelines/ios/overview/themes/>



# UX Frameworks:

- Frameworks are repeatable mental models, methodologies, and activities that you can use to synthesize qualitative research, identify emerging insights and opportunities to generate ideas. Use these UX Frameworks to re-frame how you solve problems.
- Unified UX Framework:
  - A unified UX framework is basically a mini-application that presents the visual guidelines, interaction states and patterns in a living library together with code examples. These elements, components and patterns should provide a unified design language that ensures a consistent look and feel when designing new apps based on the framework.
  - It allows project team members to browse through the library and get a better understanding what is already in place and how a new application should look and feel like.
- Benefits:
  - Design Principles
  - Layout and Column Patterns
  - Interaction patterns
  - Responsive behavior
  - Solid foundation



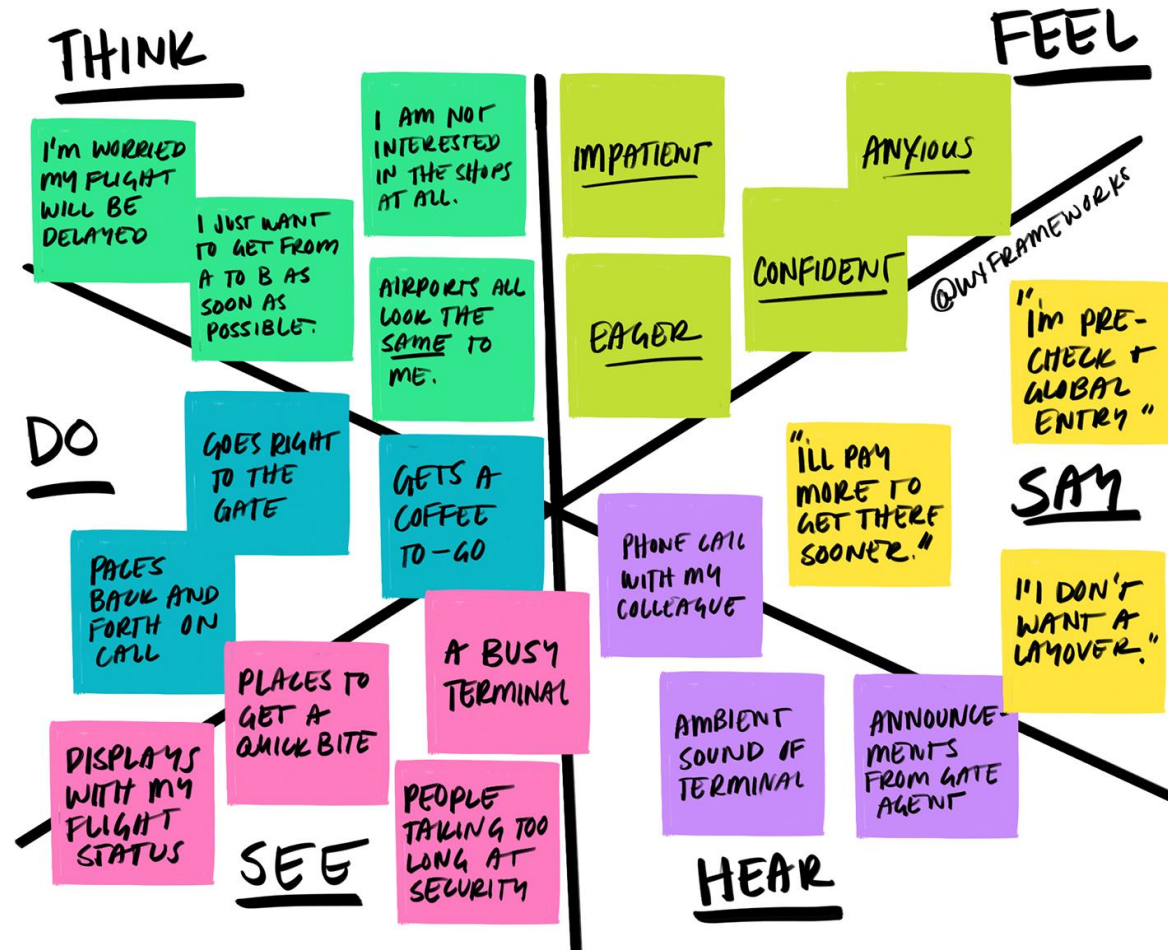
# Challenges Of Unified UX Framework:

- Shared understanding of design and front end development best practices
- Allows re-use of assets in the application
- Allows the UX designer and developers to standardize a consistent set of pattern throughout the applications
- Great for rapid-wireframes to serve as prototypes
- Allows to move toward a user-centered requirement gathering and specification documentation by providing the basic layout and patterns
- Supports the growth of patterns and components over time to be shared with all applications



# UX Frameworks Examples:

- Empathy Map





# UX Frameworks Examples:

- Idea Framework

OPPORTUNITY

HOW MIGHT  
WE IMPROVE  
THE SECURITY  
SCREENING  
PROCESS?

@UXFRAMEWORKS

INSIGHT TREND

PEOPLE ARE  
CONCERNED  
WITH PRIVACY,  
BUT IN THE  
AIRPORT WILL  
TRADE IT FOR  
CONVENIENCE.

+

FACIAL  
RECOGNITION  
AS ID.

=

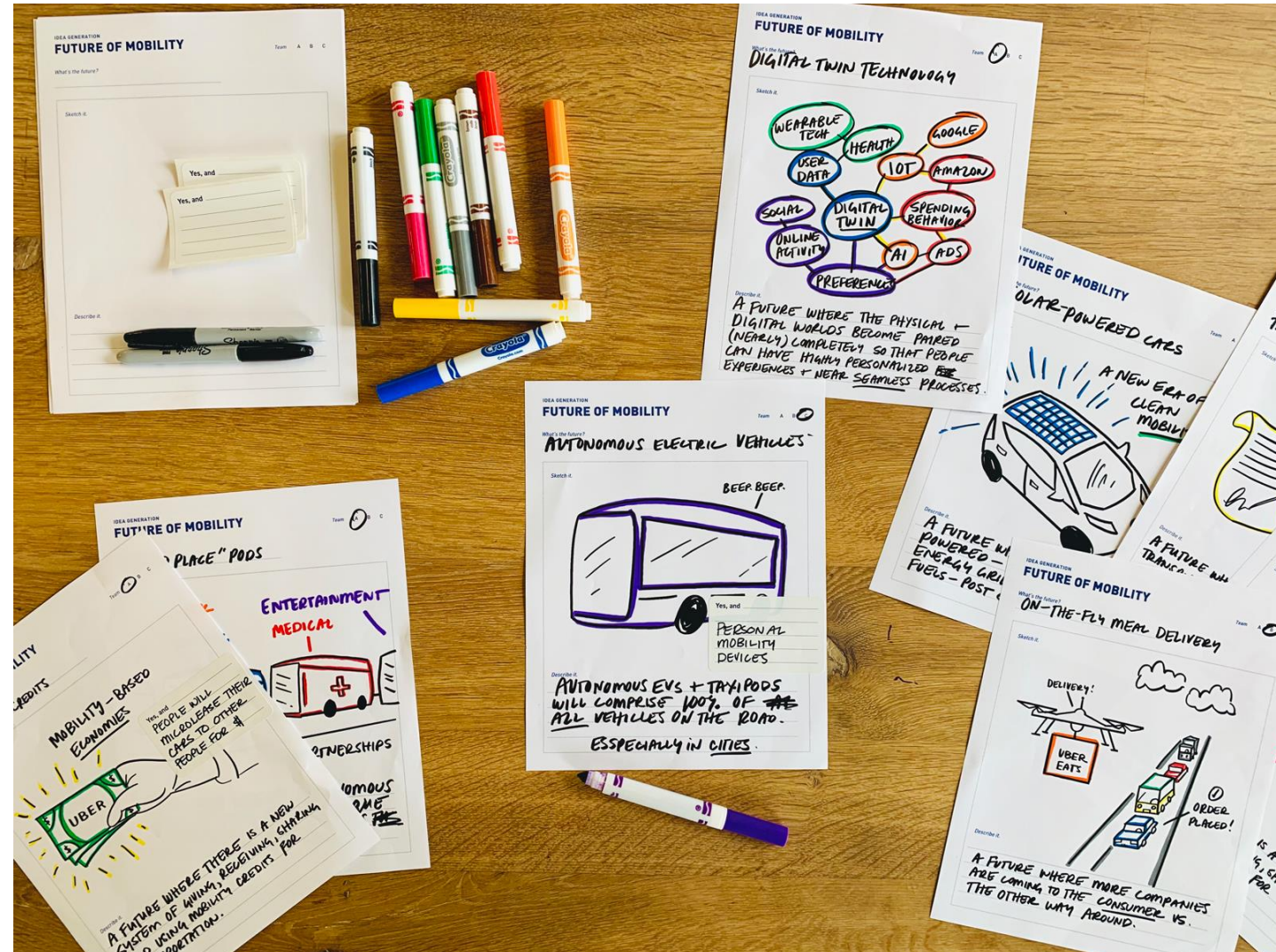
FRICITIONLESS  
SECURITY CHECK-  
WALK RIGHT TO  
YOUR GATE  
WITHOUT QUEUES  
OR SCREENING BAG.

IDEA



# UX Frameworks Examples:

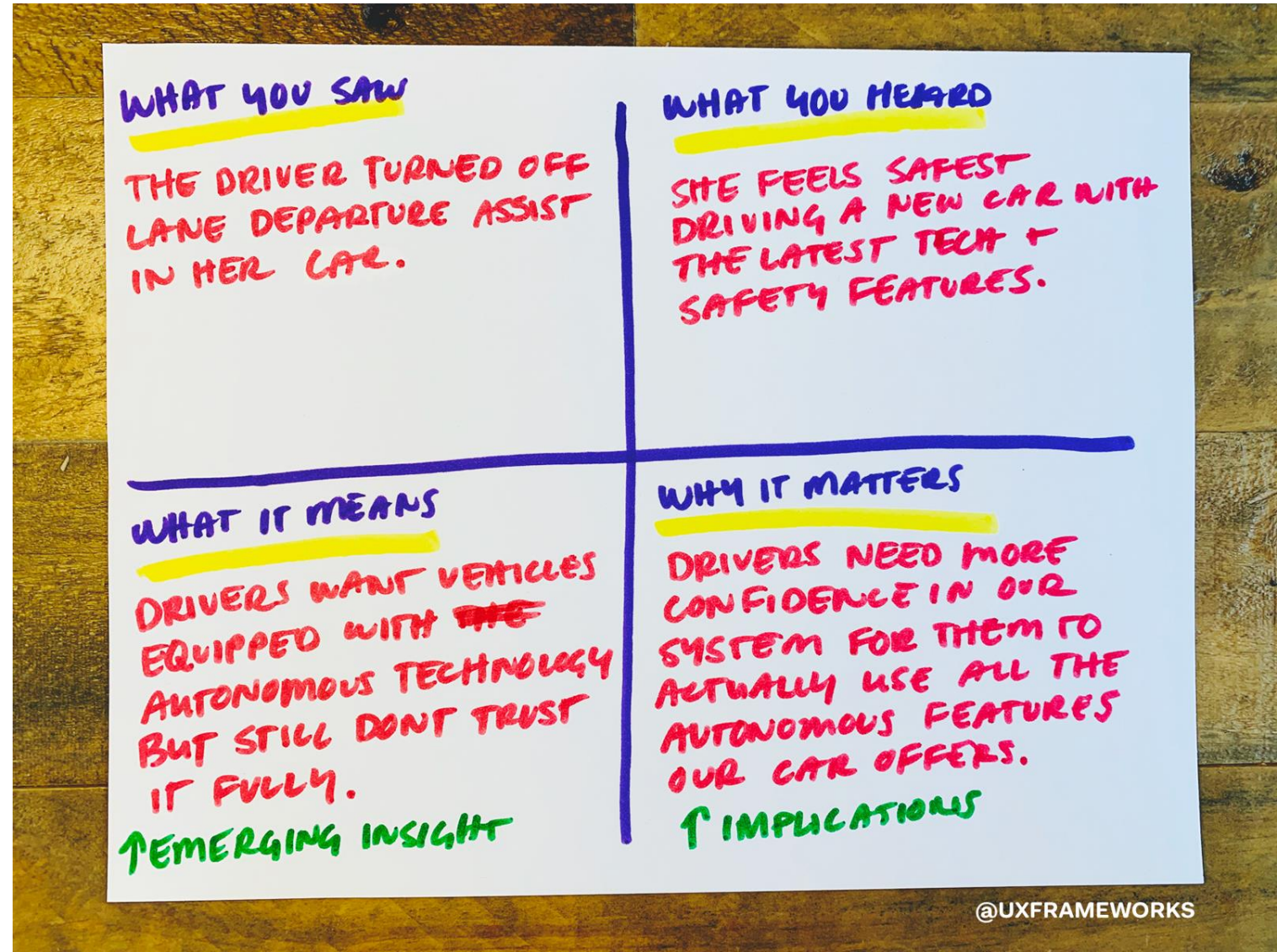
- Future of Activity





# UX Frameworks Examples:

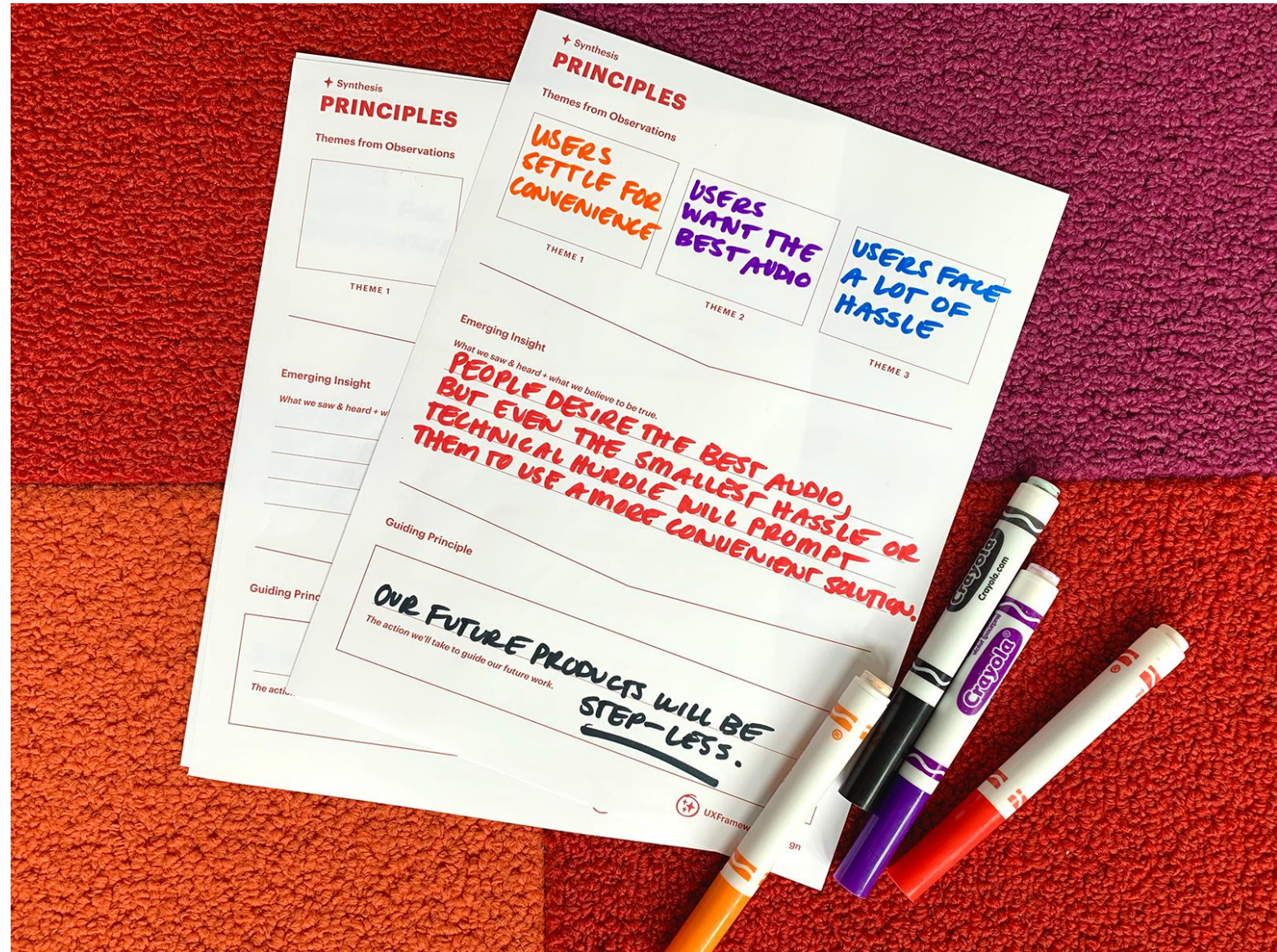
- 4 w's Framework





# UX Frameworks Examples:

- Principles Framework



# Mobile UI Components Design Patterns:

- Navigation Patterns
  - Primary Navigation Patterns (Persistent)
    - Spring board
    - List Menu
    - Dash board
    - Gallery
    - Tab Menu
    - Skeuomorphic
  - Primary Navigation Patterns (Transient)
    - Side Drawer
      - Overlay (swipe)
      - Inlay (point/touch)
    - Toggle
    - Pie
  - Secondary Navigation Patterns
    - Page Swiping
    - Scrolling Tabs
    - Expand/Collapse Panel

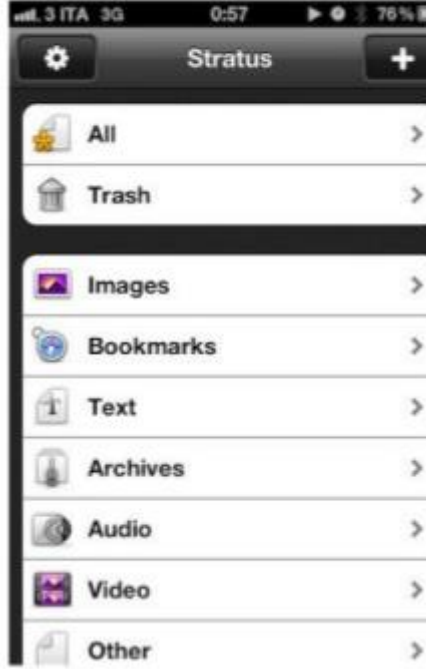




## Springboard



## List Menu



## Tab Menu



## Gallery



## Dashboard

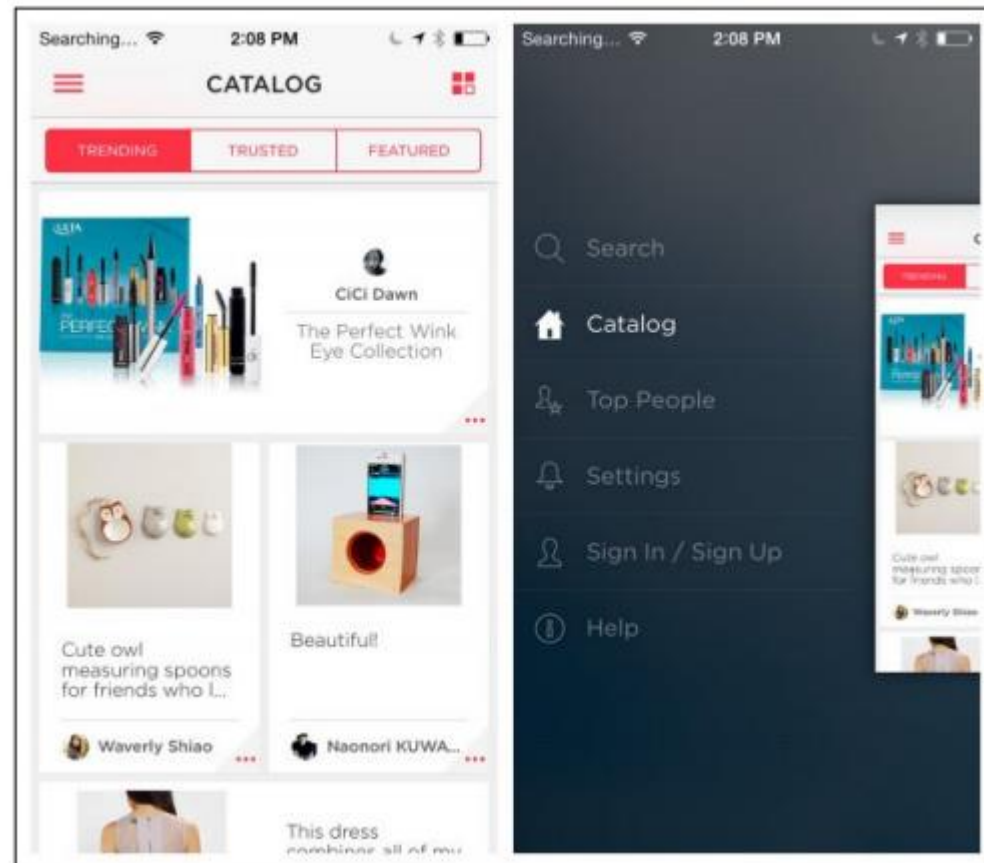
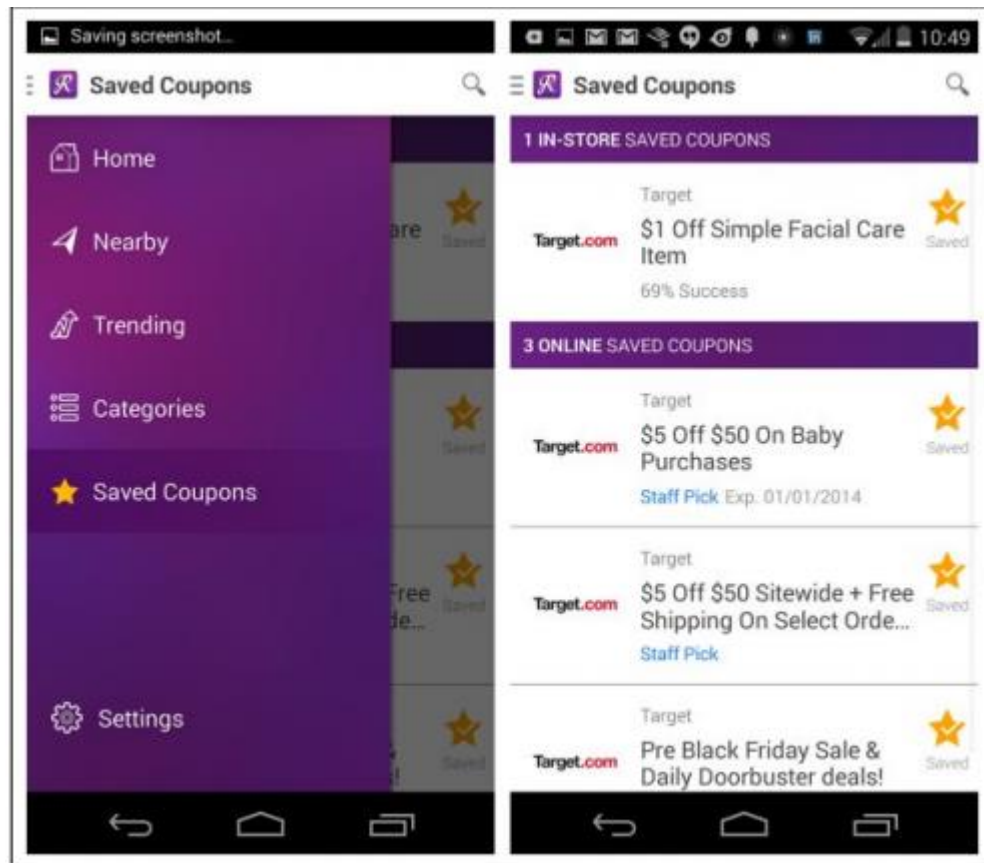


## Metaphor

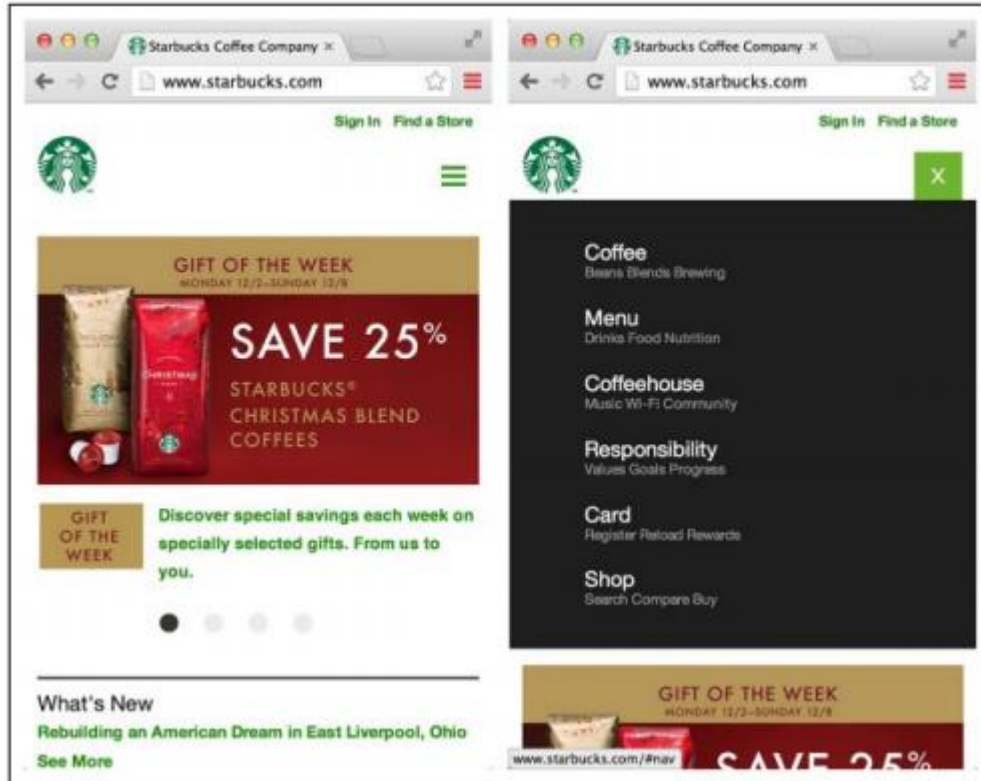




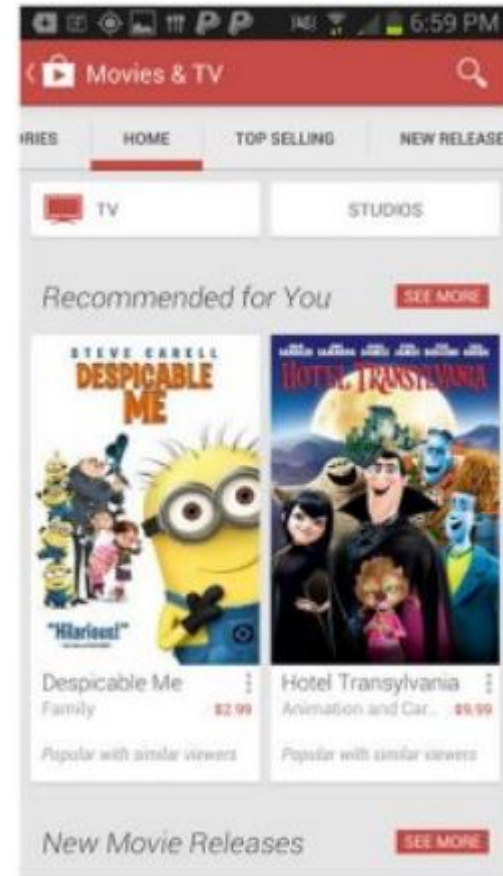
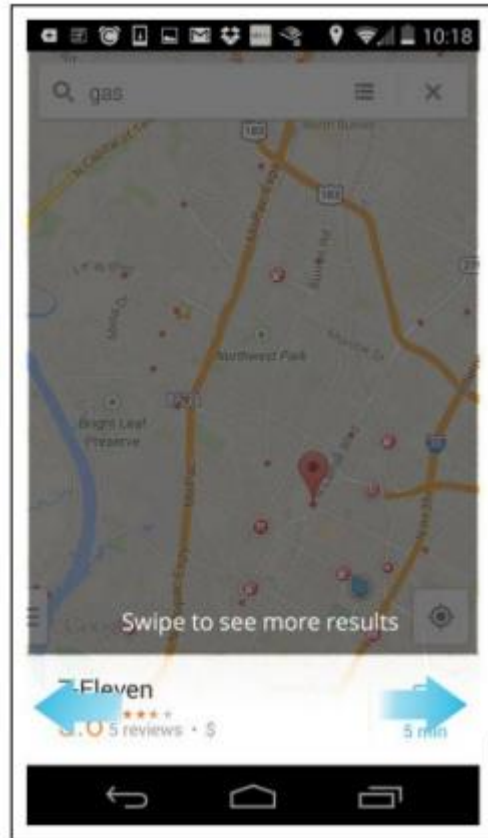
# Sidedrawer: (hamburger)



# Toggle & Pie Menu:



# Page Swiping & scrolling tab:



# Intelligent UI (IUI)

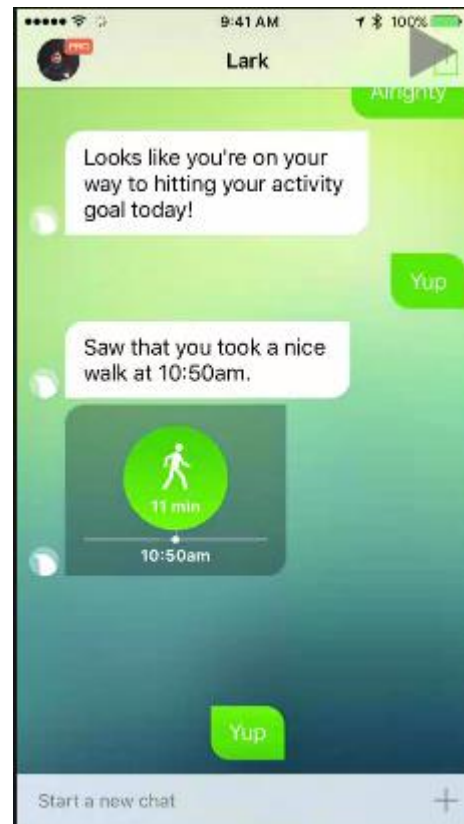
- IUI = UX (User Experience) + AI (Artificial Intelligence)
- Enriches communication between user and interface
- Many E-Commerce and social media companies are making efforts to implement AI and machine learning algorithms in the applications interface in an attempt to understand their customers.
- Examples:
  - Google Assistance
  - Amazon Alexa
  - Nest Thermostat
  - IBM Watson
  - Facebook Automatic Tagging system
  - Spotify





# AIML (Artificial Intelligent Markup Language) Design Pattern For Mobile

- <https://www.mobile-patterns.com/aiml-intelligent-design#>



# Forms: Patterns

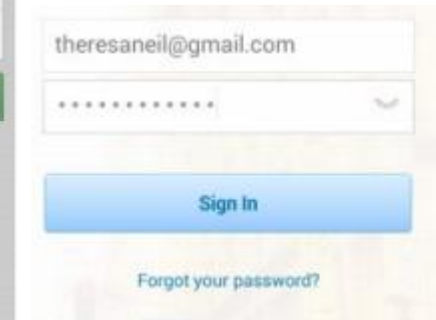
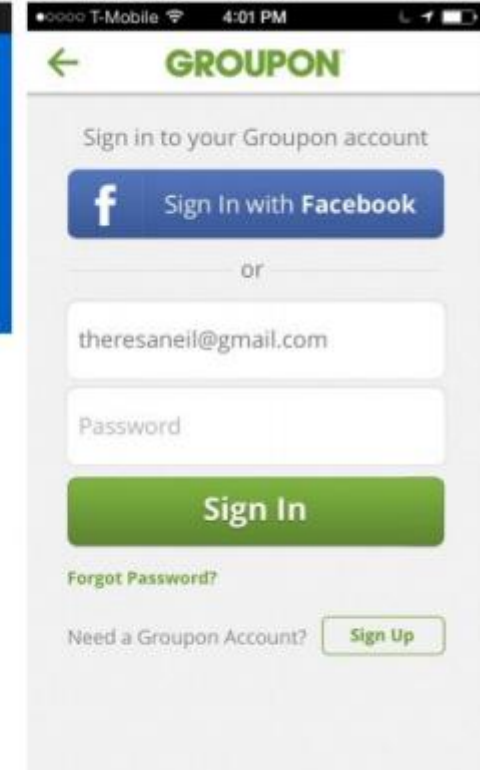
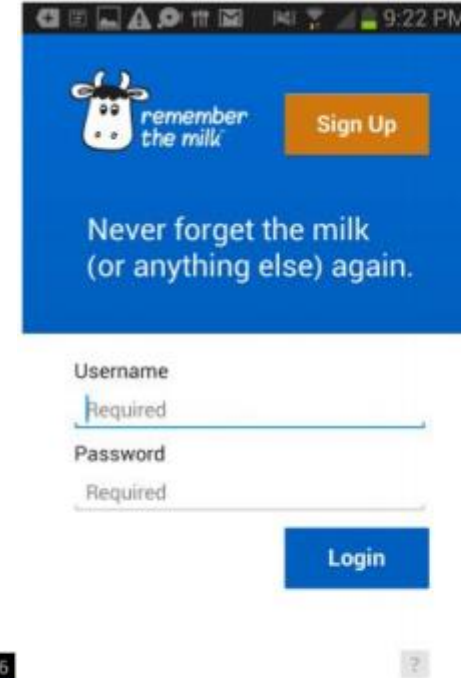
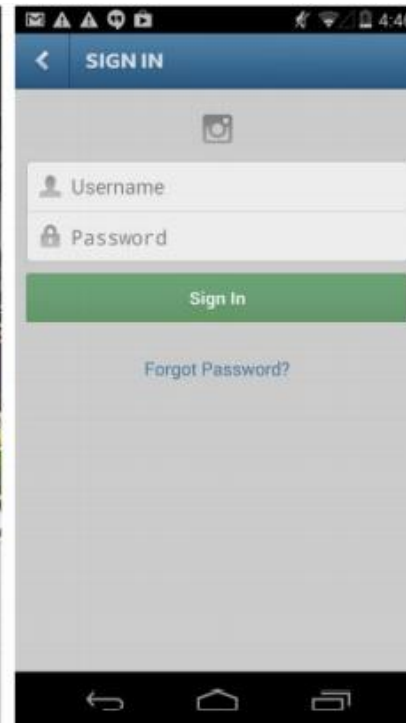
- Sign-in
- Registration
- Registration with Personalization
- Checkout
- Calculator
- Search form
- Multi step
- Long form

The image displays two sequential screenshots of the American Airlines flight booking interface, demonstrating a multi-step form pattern. The left screenshot, titled 'Find Flights Step 1 of 6', shows the initial search stage with fields for 'From:', 'To:', 'Departure Date' (Month, Day, and Early Morning time slot), and 'Return Date'. It includes a 'Find Code' button and radio buttons for 'Round-Trip' and 'One-Way'. The right screenshot shows the subsequent steps, including 'Return Date' selection, 'Passengers' (1 Adult), 'Cabin Preference' (Economy - With Restrictions), and 'Country of Residence' (United States). It features 'Start Over' and 'Continue' buttons. Both screenshots are marked with a red 'X' in the top left corner, indicating a design critique or error.



# Sign-in:

- Require minimal number of inputs
  - User name
  - Password (hide/show)
  - Command button
  - Password help
  - Option to register



# Registration

- Should have minimal inputs
- Eliminate redundant inputs
  - Confirm e-mail

Path Create Account Next

Email Address

Password

First Name Last Name

Phone Number (optional)

Birthday (optional) Female Male

Picture

By signing in, I accept Path's Terms of Service and Privacy Policy.

Path Create Account Next

theresa@tnid.com

Theresa Neil

Does your email address look right?  
theresa@tnid.com

Change Looks Good!

By signing in, I accept Path's Terms of Service and Privacy Policy.

nook Create NOOK Account

\*all fields required

First Name

Last Name

Your email address

Confirm email address

Please Choose a Password

Enter Password Again

15 letters, numbers, or numeric symbols.

nook Create NOOK Account

\*all fields required

First Name

Last Name

Your email address

Confirm email address

Please Choose a Password

Enter Password Again

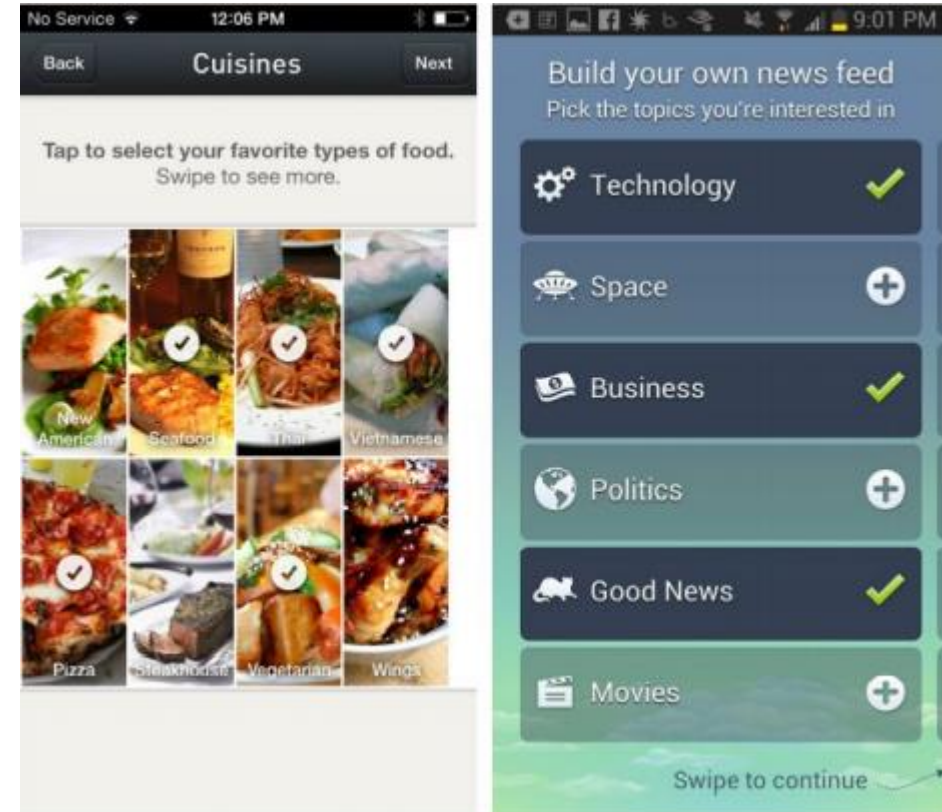
15 letters, numbers, or numeric symbols.





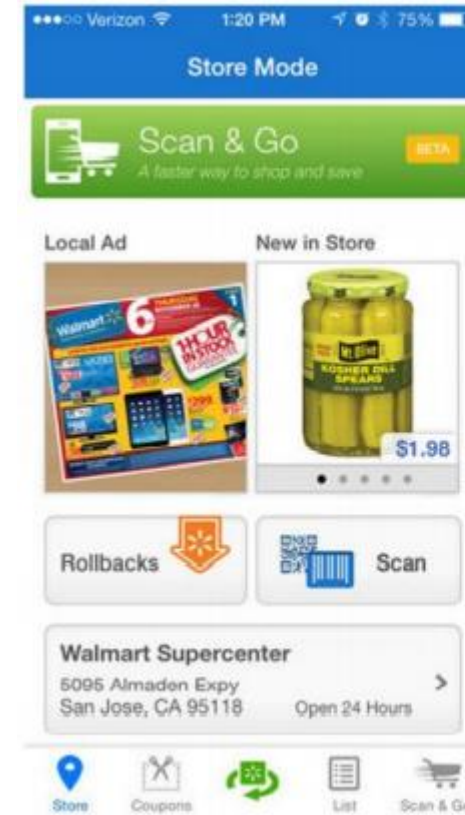
# Registration With Personalization

- To enhance experience



# Tips For Form Patters:

- Include Sign-in, Register and Guest Options
- Streamline the flow
- Provide time-saving short cuts (auto fill)
- Offer express checkout
- Forget the web (Walmart shopping)
  - Self check out



# Calculator forms:

- Weight Tracker
- Tax estimator
- Loan calculator
- Real-estate calculator
- Mortgage calculator



IPod 9:18 PM

Back valspar paint™ Home

plan a project

Interior Calculator

Select a room size

small medium large

or enter your room dimensions

Length of Room 0 ft

Width of Room 0 ft

Height of Room 0 ft

# of doors 0

# of windows 0

Cancel Calculate



9:21 PM

Paint Calculator

Select Measurements Units

Standard Metric

Enter the details of the room you wish to paint.

Small Medium Large Custom

Room Length 5 ft Doors 1

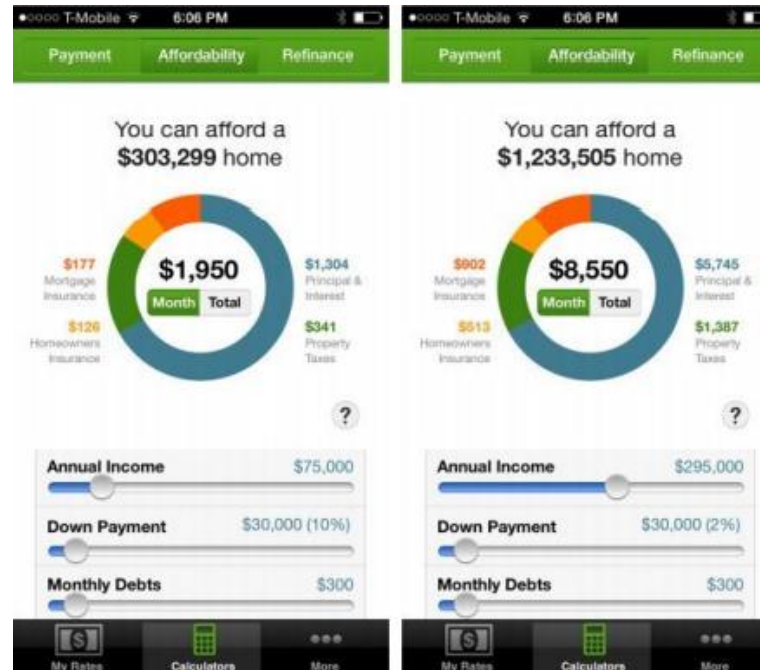
Room Width 8 ft Windows 1

Vaulted Ceiling? Yes No

Need Touch Up Paint? Yes No

Calculate

Explore Color Photo Match Preview Colors Favorites More



# Search Forms:

- Should have only essential fields
- Short and simple

The image displays two sequential screenshots of a mobile application for flight searching.

**Left Screenshot (Flight Search):** The screen has a blue header with a back arrow and the title "Flight Search". Below the header are three white input fields with blue icons: an airplane for "Select your departure location", a plane with a checkmark for "Select your arrival location", and a calendar for "Select your travel dates". Below these fields are three blue buttons labeled "Coach", "Business", and "First". Underneath the buttons is a blue bar with a person icon, "1 Person", and minus/plus buttons. At the bottom is a large grey "Search" button.

**Right Screenshot (Searching):** The screen has a blue header with a back arrow and the title "Searching". Below the header is a cartoon dog mascot wearing goggles and a scarf. Underneath the mascot is the text "Get free Fare Alerts!" followed by "Get notified immediately when prices change." Below this is a flight summary section showing "AUS Bergstrom I..." and "SFO San Francisco" with arrows between them, and "Depart Fri, Nov 01" and "Return Thu, Nov 07". At the bottom is a blue button labeled "Subscribe to this Alert" and a small note "This will not interfere with your search."





# Long Form:

- Some forms can't fit on a single screen
- Long scrolling page is vastly preferable
- Trick: to put command and escape button

The image displays three sequential screenshots of a mobile application interface, illustrating a long form designed for scrolling. The first screenshot, titled 'PAYMENT METHOD', shows fields for 'Credit Card Number', '01/2013' (expiration date), 'Security Code', 'Theresa' (first name), 'Neil' (last name), 'Address Line 1', 'Address Line 2', 'ZIP', 'United States' (country), 'City', 'State', 'Phone Number', and a privacy notice: 'Rest easy, your personal and payment information will always remain private.' The second screenshot, titled 'Your personal information', includes a 'Continue' button and sections for 'YOUR LEGAL NAME' (First/Last), 'YOUR HOME ADDRESS' (Street, Apt/Suite, ZIP), 'YOUR PHONE NUMBER' ((555) 555-5555), and 'YOUR DATE OF BIRTH'. The third screenshot shows a 'Cancel', 'Edit Card', and 'Save' header, followed by fields for 'Card type' (Credit Card), 'Cardholder' (THERESA NEIL), 'Card number' (masked), 'Expiration date' (04/15), 'Card name' (Visa), 'Notes', 'CVV' (masked), 'Type' (Personal), an 'Upgrade to PLUS' notification, and a 'Balance' field with a circular progress indicator.



# References:

- <https://www.mobile-patterns.com/aiml-intelligent-design#>
- <https://www.niceverynice.com/components>

