

Introduction to Human-Computer Interaction

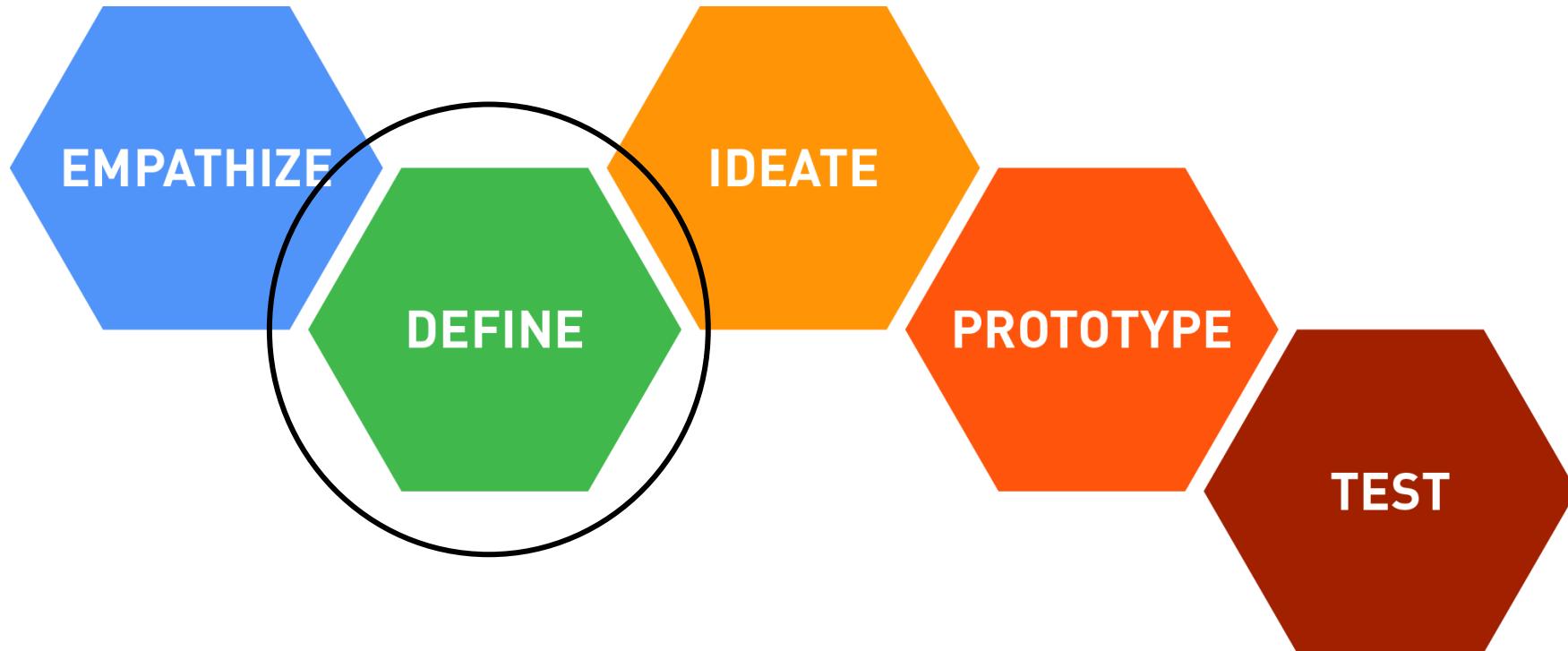
6. Ideation and Prototyping

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Fundamental Design Goals

1. Provide a good mapping between controls and actions
2. Provide the right affordances and signifiers
3. Use constraints to prevent errors
4. Exploit metaphors
5. Help users to build the right conceptual model
6. Make the commands/mechanisms of the system match the thoughts
7. Make things visible

Design Thinking Process



Persona

- **Persona is a precise description of a hypothetical user** and what they suffer from and wish to do when using a system.
 - Based on demographics and on patterns of behavior
 - Not real; an imaginary example of the real users
 - Make it as specific as possible: give a name, personality, etc.
 - A concrete person in the designer's mind
 - A shared basis for communication
 - At least one primary persona – the main focus of the design

Why Persona?

- Hard to reason about users in aggregate and please everyone
- General users have too many conflicting goals
- It's easier to reason about specific fictional people
- Specific personas have clear, well-articulated goals



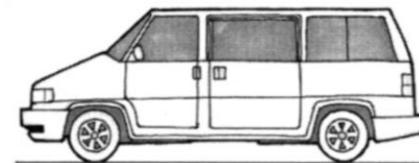
Alesandro's goals

- Go fast
- Have fun



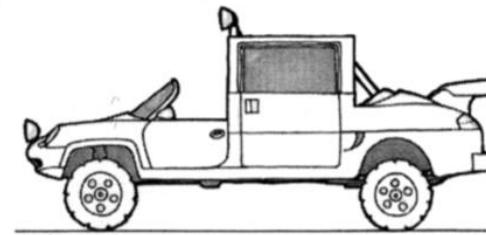
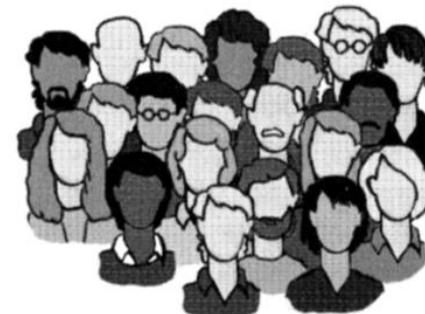
Marge's goals

- Be safe
- Be comfortable



Dale's goals

- Haul big loads
- Be reliable



Defining Personas

- Personas represent a class or type of users but should be used as an individual
- Not a stereotype—which is usually based on assumptions not factual data
- Personas must have motivations / goals
- Identify major clusters from multiple user interviews/inquiries
- Give them names

Meet **Amanda**

Fun and Funky Mom-to-Be

Age: 26

Income: \$82,000

Education: Associate Degree Nursing

Personal: Married. Owns teacup Chihuahua.

Children: Expecting her first child

Job: Orthopedic Nurse

Family goals: Pay off debts. Raise a healthy, well behaved child

Car: Ford Escape hybrid

Travel: Drive up to in-laws in Washington DC once a year. Holidays at the beach and mountain.

Technology use: Savvy Internet user. Has her own blog.

Reads: Mostly online via newsfeeds from BabyCenter.com, Celebrity Baby Blog.

Hobbies/Activities: Working out, yoga, shopping and tailgate parties with friends, relaxing at the spa

Struggles with: Changing her lifestyle to accommodate the child

Life goals: Balanced living with a career as hospital administrator, family life, and personal life.





Donnie the Director

A Hardworking Business Person in a Dying Industry

49 Year Old Male (26% female)¹

Married with 2-3 children

Education: Undergraduate to Masters

Income: \$61,600 - 92,400²

20% Manage/Director, 61% Owner³

Also called a mortician

Awareness Ladder Stage: 3-4

Donnie wants to run a profitable business while providing his grieving customers with the support they need.

He belongs to one or more industry associations and subscribes to industry publications. Though some of his time is spent as a mortician working with the deceased, most of his job involves working with the surviving loved ones to plan and execute the funeral service and related tasks.

Donnie Director describes himself as the owner of a small business that has been in the family for several generations.

Merchant (first time user)



Key Characteristics

37 years old
Married with two kids, lives in Munich, Germany.
Affiliate Marketing expert working in retail sector (what is a typical job title?) for independent, privately run company?
4 people in the company
Has 4 years experience in the industry, 2 years in current role
He has a degree in Marketing from University
Current salary is £38,000
Monthly earning from Affiliate Marketing is ?

Claudia

"This year we're looking to double our sales, we had a disappointing year last year and currently we're looking to find a Network to help us find more suitable affiliates."

Background

Was recommended by a business acquaintance to take a look at what Webgains offer to Affiliates on their network. Has some basic HTML coding knowledge and sort of understands what CSS does. Needs to know more about exactly how cookies work but gets the basic idea of them. Has been using his iPhone for the last two years waiting to upgrade when the iPhone 4S when it comes out. Uses it a lot each day, at work and in leisure time. Has heard only good things about Webgains but wants to make up his own mind so needs to check the website to fully understand how joining Webgains network would benefit his business. Claudia works in the company office in the middle of town. The company has 200 employees throughout Europe and our eventually look to expand globally. She enjoys most of her work duties and is very thorough in her approach to matters of business. She is a very busy person and so doesn't tend to have too much time to spare. She appreciates it when information is easily available rather than requiring more effort and time.

Goals

Wants to work with Merchants (Advertisers) that offer: good commission level, high conversion rate, details on cookie period, high level of transparency, good data-feed quality, various incentives and competitions.

Is looking for an Affiliate Network that offers: reliable tracking, impressive variety of merchants (advertisers) and reliable frequent payments.

Frustrations

Not offering enough statistics
Service doesn't feel very personal
Don't feel like we are improving
Communication can seem a little slow
Lack of help in connecting us with suitable merchants
No help in securing non-cpa deals

Questions

Questions over WG

SOCIALLY COMPETITIVE SAMANTHA



Name	Samantha
Gender	Female
Age	28
Education	Bachelor's degree
Occupation	Marketing; \$75K
Marital Status	Single
Location	Boston, MA



"I love outsmarting friends in a game, but if it comes down to it, I'll spend money to win."

Motivations

Samantha plays mobile games to pass time and compete against friends, but not necessarily at the same time. When passing short periods of time (e.g., waiting in line), Samantha plays games where she competes against herself. In these scenarios, she opts for low time commitment games where she uses strategy to advance. When passing longer periods of time (e.g., work commute), Samantha plays games where she competes against friends.

Samantha's favorite game is *Bejeweled*. Samantha enjoys the feeling of winning against her real-world friends and goes to great lengths to maintain her dominance, including: frequently purchasing coins. The only other in-app purchases Samantha makes are to unlock levels when she's playing good single-player games like *Spongebob's Dinner Rush*.

Samantha primarily downloads games that are recommended/currently played by friends.

Criteria for Selecting Games

- Free to download and play
- Ability to compete against friends
- Strategic thinking needed, but not a time sink (easy to play, advance and pick back up)

Frustrations with Games

- Cost to download
- Too hard to advance
- When friends become unresponsive

In Samantha's Words

"I get so competitive when I play *Bejeweled* against my friends at work. I spend way too much money just so I can win. Of course, I don't tell my friends I spend anything. I like them thinking I'm naturally gifted."

"*Spongebob's Dinner Rush* is super addictive. When I have few minutes to kill, like waiting in line for coffee in the morning, I try to beat a couple of levels."

Persona Types

- **Primary:** primary target for the design of an interface
 - can be only one primary persona per interface for a product
 - A primary persona will not be satisfied by a design targeted at any other persona, but if the primary persona is the target, all other personas will not, at least, be dissatisfied.
- **Secondary:** mostly satisfied with the primary persona's interface
 - but has specific additional needs that can be accommodated without upsetting the product's ability to serve the primary persona
 - First design for the primary, and then adjust the design to accommodate the secondary.

	AMANDA	GLORIA	CHARLES
Age	7	34	66
Occupation	Second grade student	Part-time office administrator	Retired accountant
Home Life	Lives with her mother, father, and younger sister in the suburbs of a large city.	Lives with her husband and two children in a mid-sized city.	Lives with his wife in the suburbs; has four children and six grandchildren.
Education	In elementary school	Has a bachelor degree	Has an MBA
LIFESTYLE			
Activities	Plays soccer, reads, and takes ballet lessons; saves her birthday money and allowance to spend at the mall.	Enjoys crossword puzzles and reading mystery novels. Spends a lot of time driving her children to activities.	Likes to work in the garden and drink wine. Enjoys traveling with his wife and investing in the stock market.
Ultimate Goal	Goal is to turn 10 so that her parents will let her baby-sit her cousins.	Goal is to make sure her family is taken care of and to find a little time for herself each day.	Goal is to make sure he and his wife have enough money to enjoy retirement and leave his children an inheritance.

WEB USE AND INFORMATION NEEDS

Introduction to Human-Computer Interaction - 06. Ideation and Prototyping

Storyboard

- A linear **sequence of illustrations**, arrayed together to **visualize a story**.
- Can be used for define & ideation stages.
- A tool that helps you visually predict and explore a user's experience with a product
- Illustrate what's going on in the real world and how the product can make a better life
- Storyboards shape the user journey and the character (persona).
- Stories are an effective and inexpensive way to capture, relate, and explore experiences in the design process



Why Storyboard?

- **Visualization:** Pictures are worth a thousand words. Illustrating things works best for understanding of any concept or idea.
- **Memorability:** Stories are 22 times more memorable than plain facts
- **Empathy:** It's possible to tell a story that everyone could see and relate to. People often empathize with characters who have real-life challenges similar to their own.
- **Engagement:** Stories capture attention. People engage more when they can sense a meaningful achievement.

Benefits of Storyboards

- Design approach is **human-centered**: Storyboards put people at the heart of the design process.
- Forces thinking about **user flow**: Designers are able to walk in the shoes of their users and see the products in a similar light.

Benefits of Storyboards

- Allows for “**pitch and critique**” method: Storyboarding is a team-based activity, and everyone on a team can contribute to it (not just designers). Approaching UX with storytelling inspires collaboration, which results in a clearer picture of what’s being designed.
- Simpler **iteration**: Iterative sketching makes it possible for designers to experiment multiple design concepts. Designers don’t get too attached to the ideas generated because the ideas are so quick and rough.

Storyboard

- The primary purpose of storyboarding is **COMMUNICATION!**
 - A great storyboard artist isn't a skilled illustrator.
Rather, a great storyboard artist is a great communicator.
 - When thinking about storyboarding, most people focus on their ability (or inability) to draw. You don't need to be good at drawing in order to create storyboards. A UI designer's main skill isn't in Photoshop or Illustrator but **the ability to formulate and describe a scenario.**



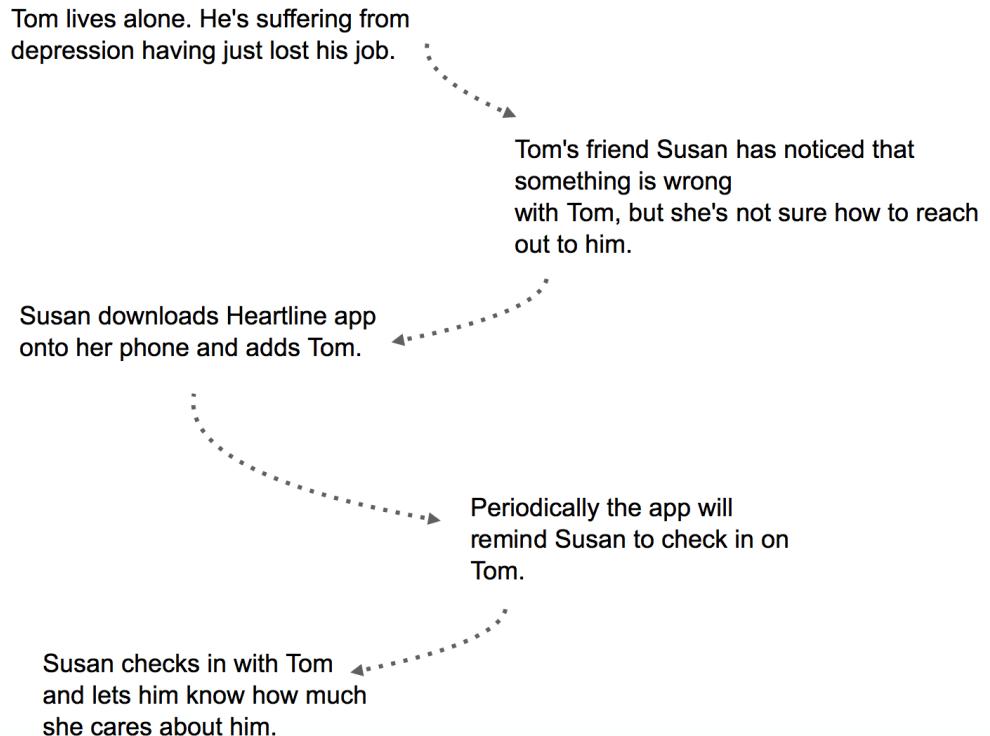
Making a Storyboard

1. **Create a scenario:** a logical and understandable story

- Each scenario should have following elements:
- **Character:** the persona in your story. Behavior, expectations, feelings, as well as any decisions your character makes along the journey are very important. Revealing what is going on in the character's mind is essential to a successful illustration of their experience
- **Scene:** the environment inhabited by the character (a real-world context that includes a place and people)
- **Plot:** the plot should start with a specific event (a trigger) and conclude with the benefit of the solution or the problem that the persona is left with
- **Narrative:** focus on a goal that the character is trying to achieve. Your story should have a beginning, middle and end.

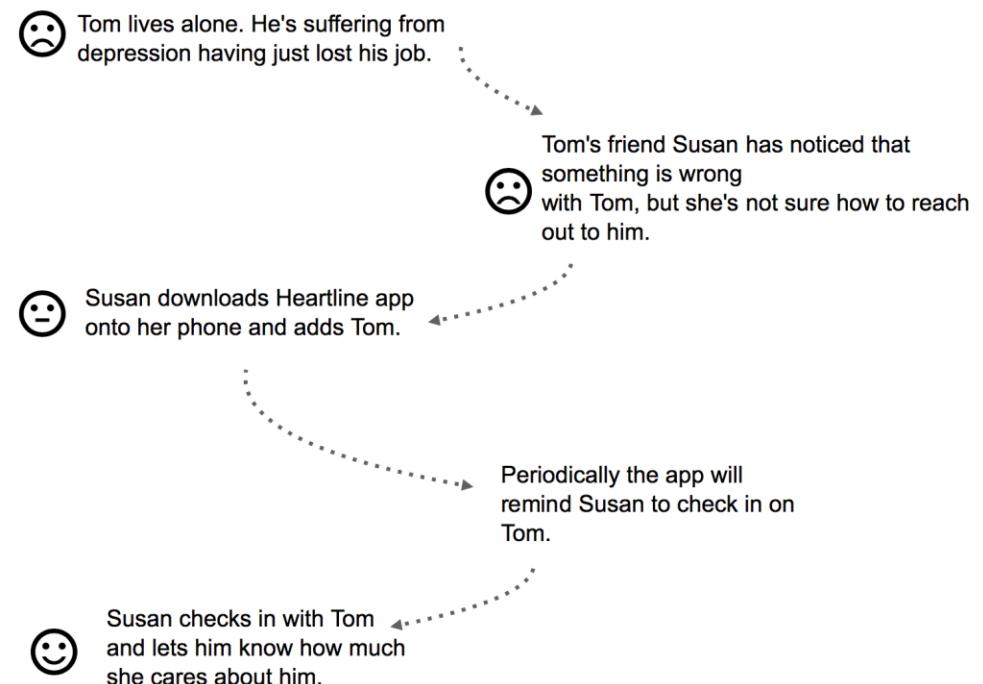
Making a Storyboard

2. **Start with a plain text and arrows:** break the story up into the moments (context, trigger, the decisions a character makes along the way, and ends up with the benefit or the problem).



Making a Storyboard

3. **Add emotions to your story** to help others get a feel for what's going on inside the character's head. Illustrate any reactions to success/ pain points along the way. Try drawing in each emotional state as a simple expression.



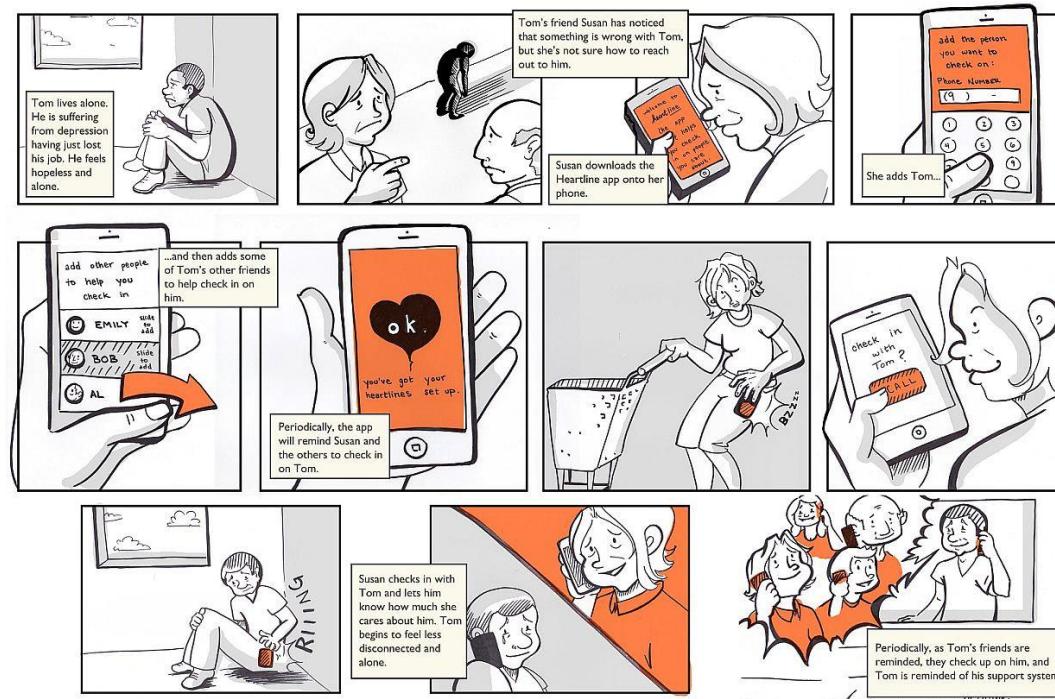
Making a Storyboard

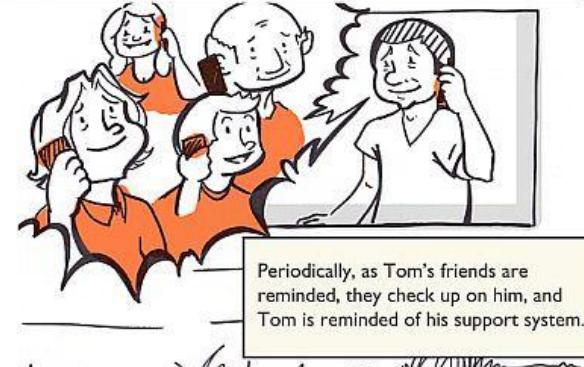
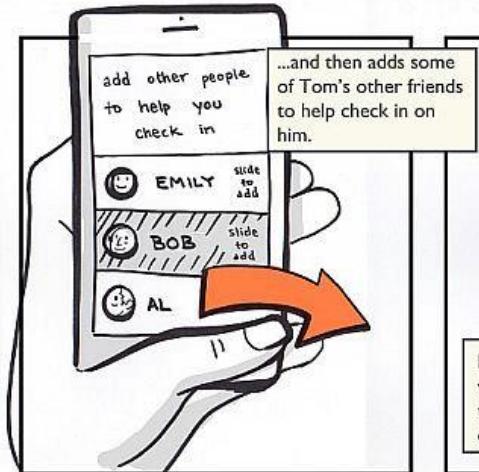
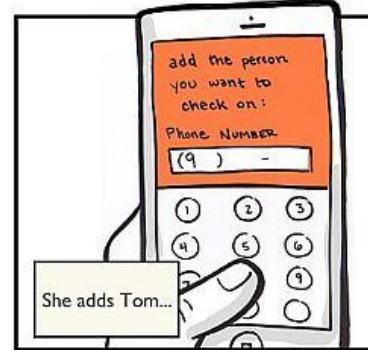
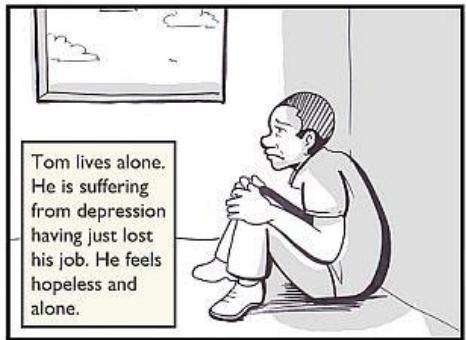
4. **Translate each step into a storyboard frame.** Emphasize each moment, and think how your character **is feeling about it**.



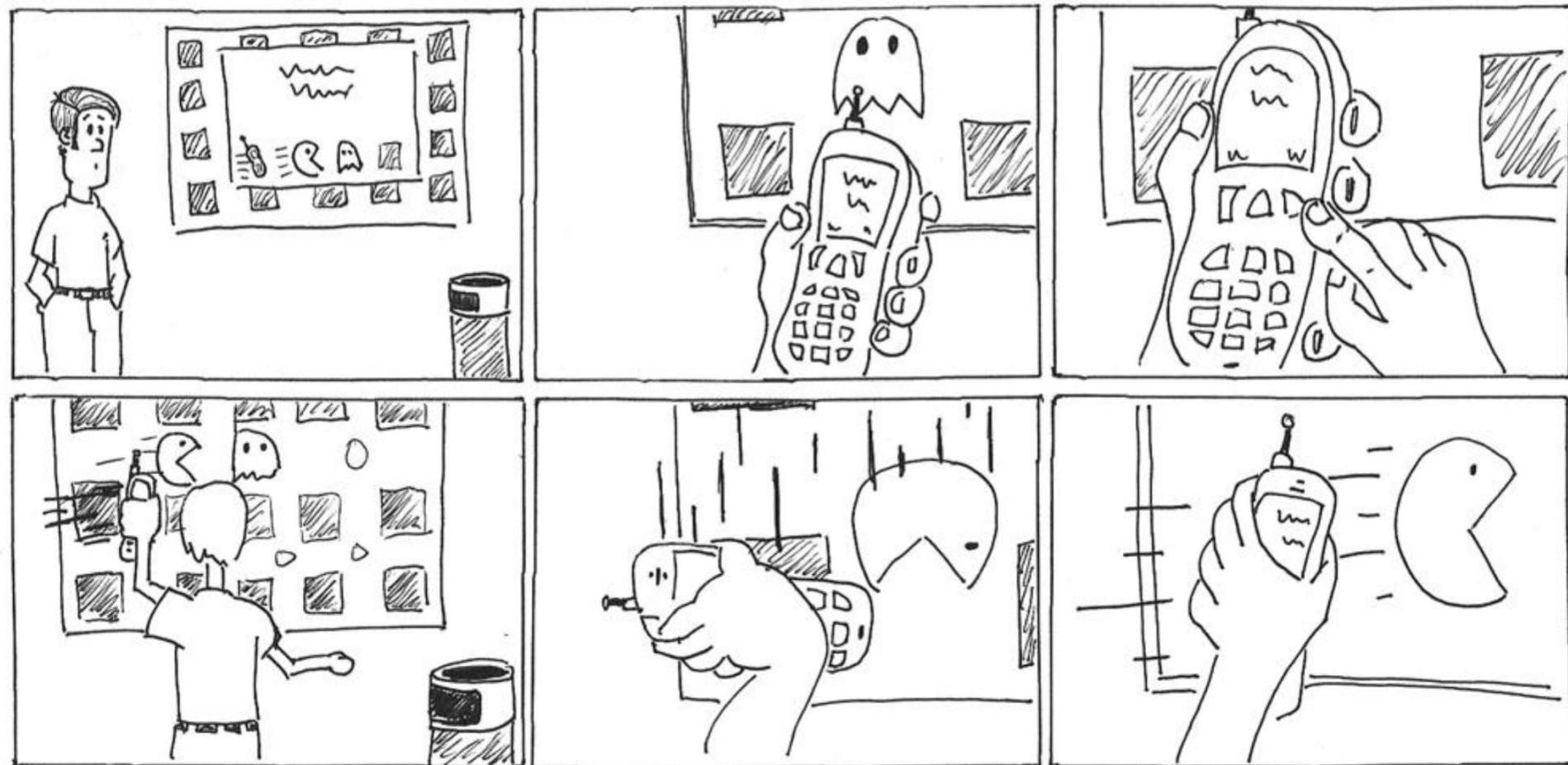
Making a Storyboard

5. **Design clear outcome.** Make sure your storyboard leaves your audience with no doubt about the outcome of the story: if you're describing an unfavorable situation, end with the full weight of the problem, if you're presenting a solution, end with the benefits of that solution to your character.

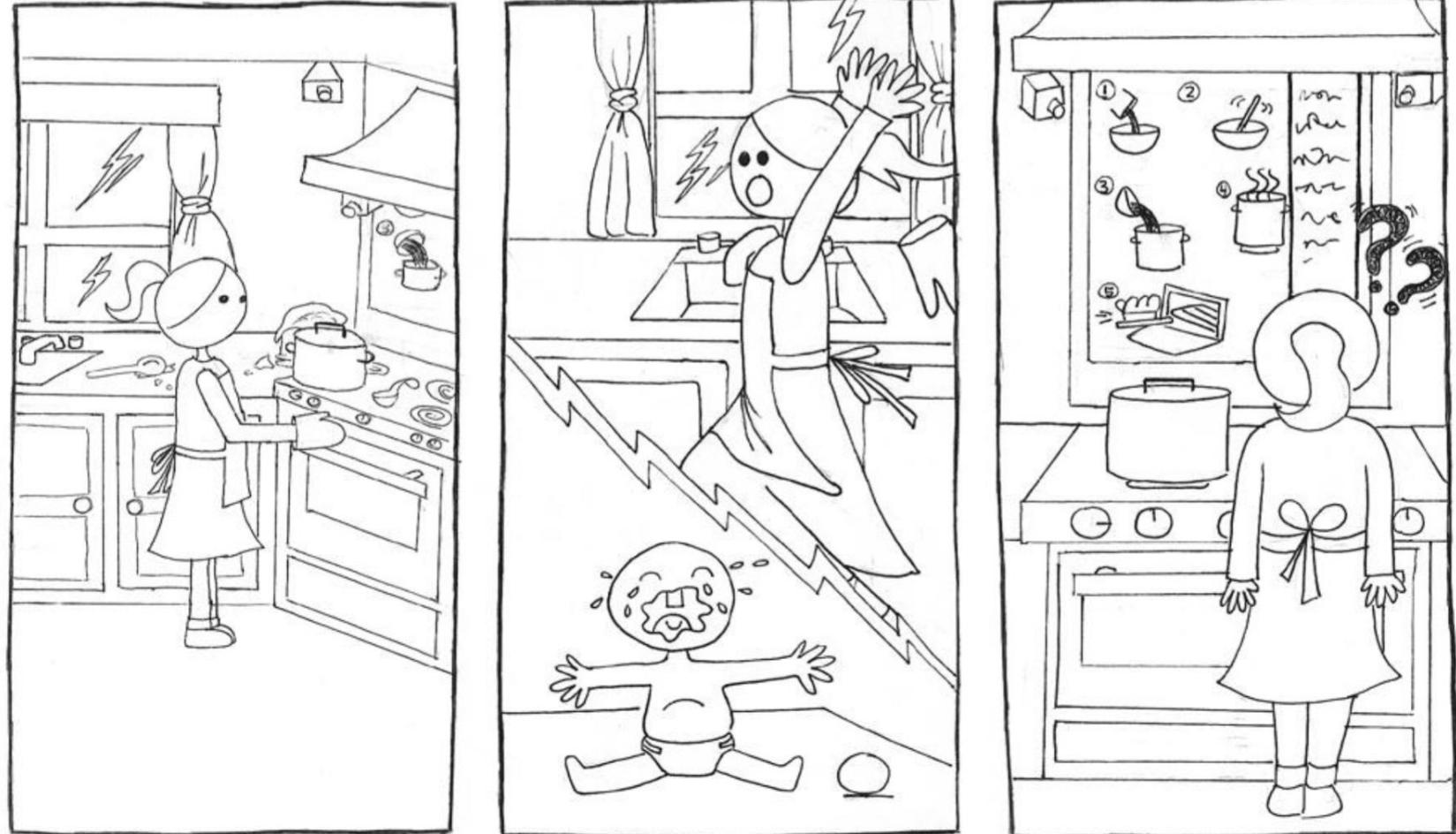




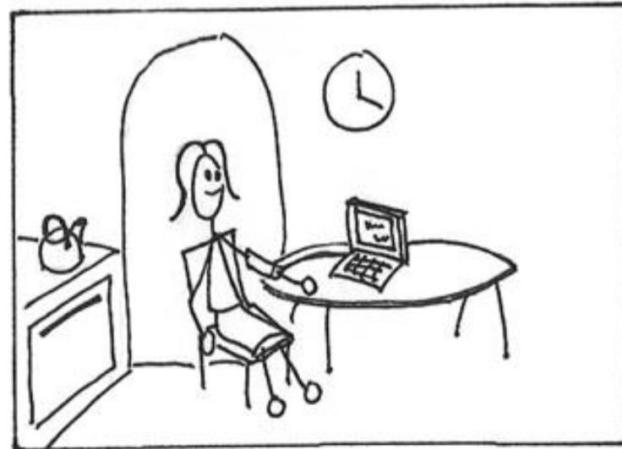
Storyboard: Frame



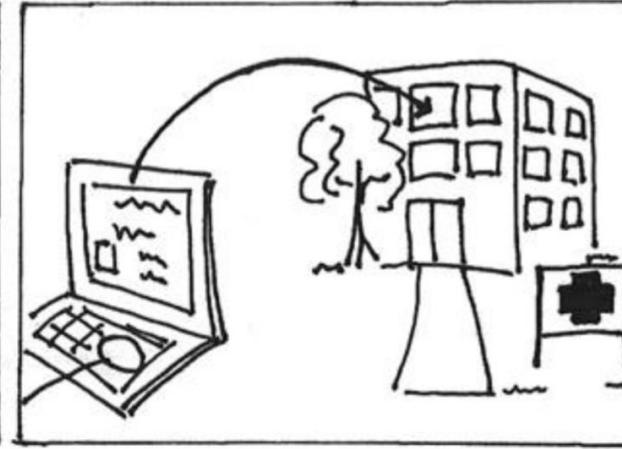
Storyboard: Detail



Storyboard: Text



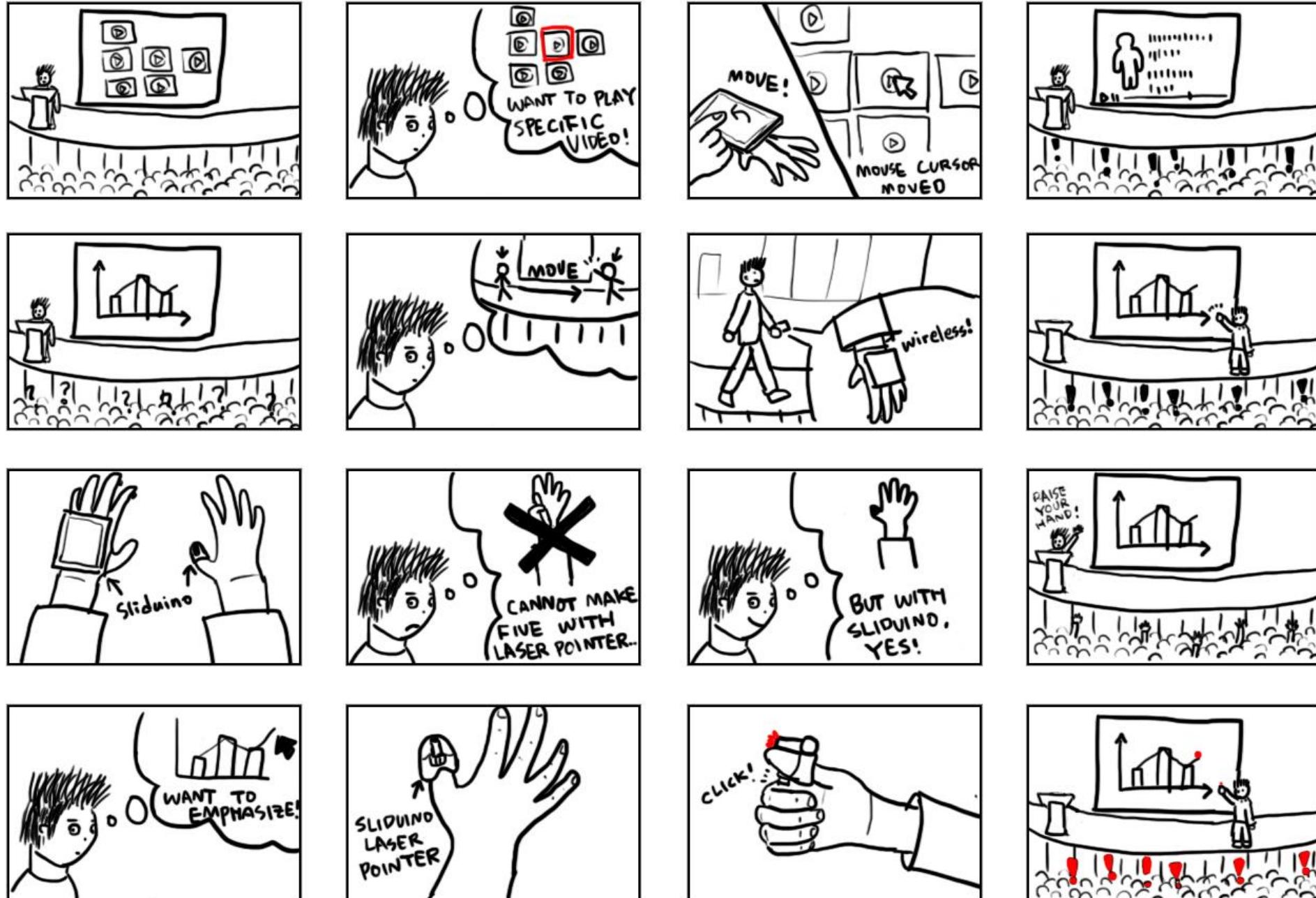
1. At home, Mary checks her blood pressure.

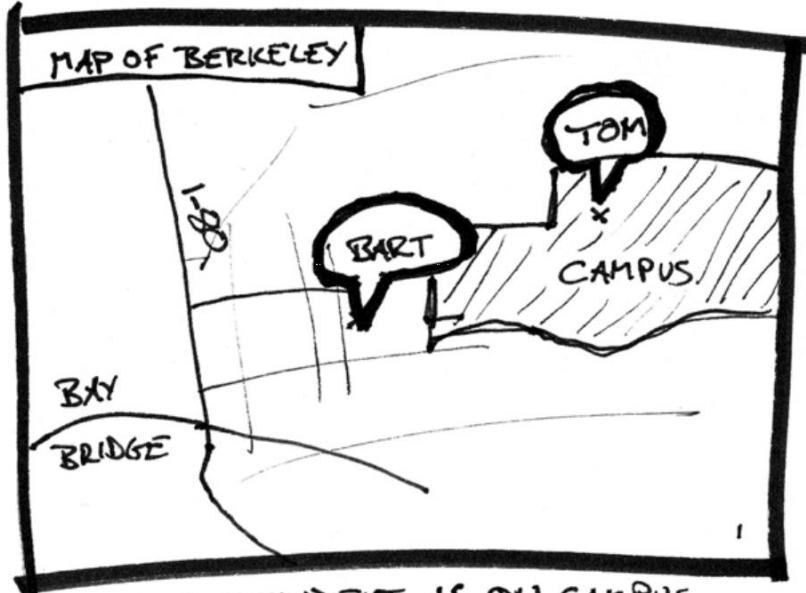


2. After a few simple key presses, her blood pressure readings get sent to a clinic.

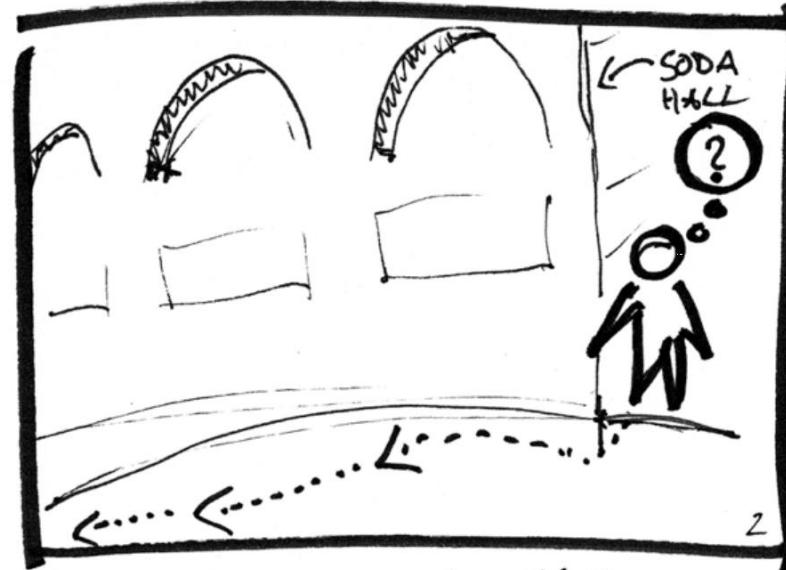


3. The information is made available to her doctor.

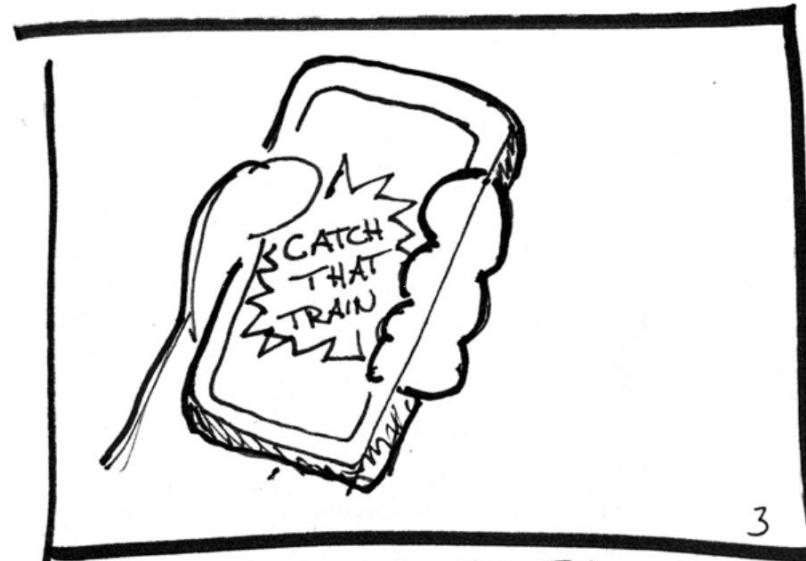




TOM, A CS STUDENT, IS ON CAMPUS AND WANTS TO TAKE A TRIP TO SF BY BART.



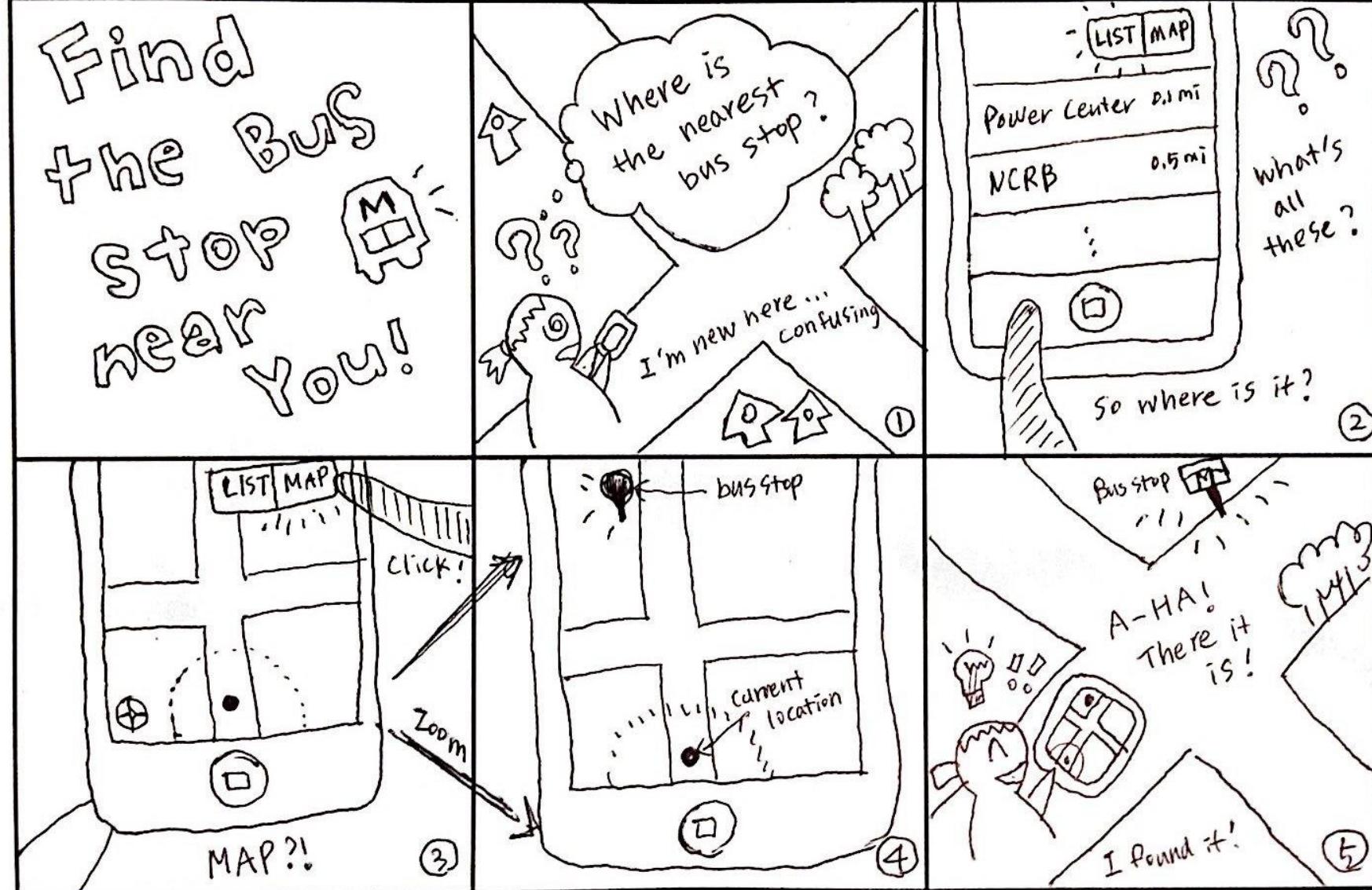
"I WONDER WHEN I'LL HAVE TO START WALKING DOWN HILL TO CATCH THE TRAIN..."



SO HE PULLS OUT HIS PHONE AND LAUNCHES THE "CT.T." APP



USING DROPODOWN MENUS, HE SELECTS THE DOWNTOWN BERKELEY BART, AND TOOK ONE OF THE



Storyboard : Initial Idea sketch using "My app" for easy shopping at Safeway



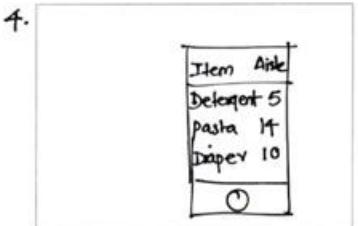
Jim wants to shop his grocery at Safeway today



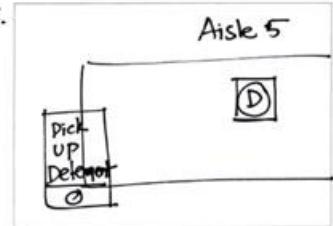
He pulls the cart and checks list of items on his mobile phone.



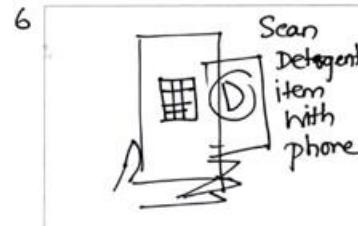
He thinks of using an app "My App" which I will design.



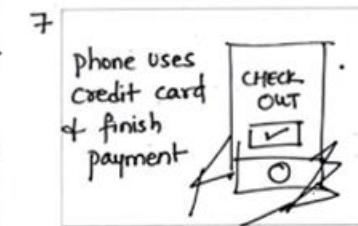
As soon as he opens the app, his grocery items get rearranged per aisles in the store.



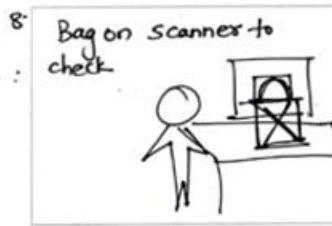
As he starts to aisle 4, and app recognizes his item it vibrates.



He quickly scans the item and enters quantity



He finishes shopping and decides to pay in his phone.



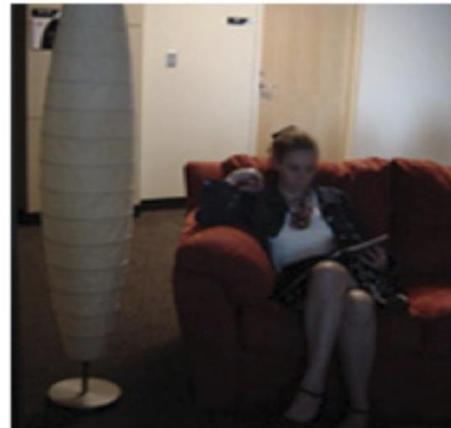
He then places his items on Safeway Scanner + enters his code for payment.



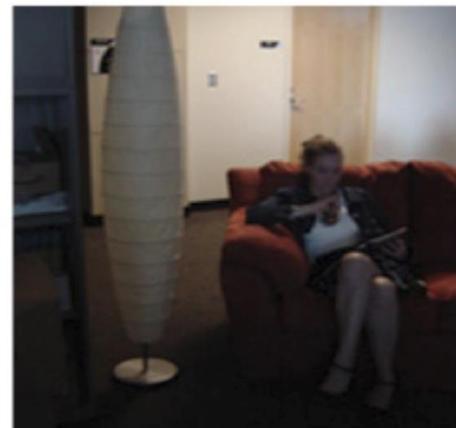
He is now finished shopping.

Storyboards != Drawing

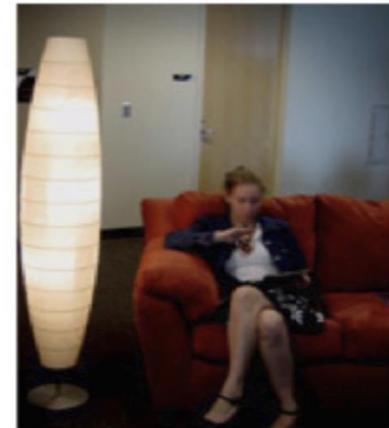
- Drawing is hard!
- Yes, but you can use other means, such as taking photos (blur out unnecessary details), or software to describe your idea.



IT IS SO DARK JANE CAN
HARDLY READ HER BOOK



SHE GESTURES IN FRONT OF HER
SPECIAL PENDANT TO TURN ON
THE LIGHTS

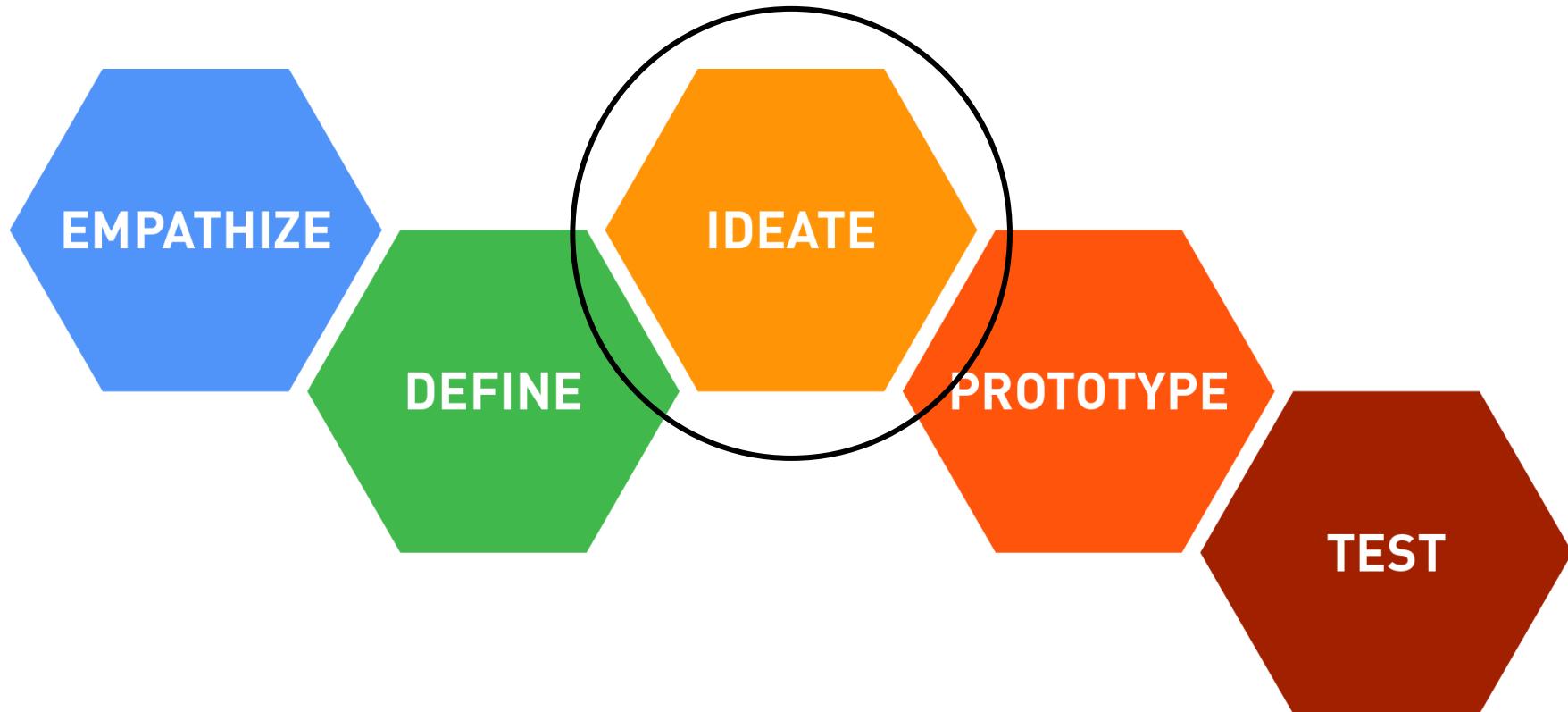


THE LIGHTS TURN ON!



FINALLY, SHE CAN
READ HAPPILY.

Design Thinking Process



Brainstorming

- **Brainstorming** is a group creativity technique by which efforts are made to find a conclusion for a specific problem by gathering a list of ideas spontaneously contributed by its members.



IDEO's Brainstorming Rules

IDC Lab



Rules of Brainstorming

-  Defer Judgment
-  Encourage Wild Ideas
-  Build on the Ideas of Others
-  Stay Focused on the Topic
-  One Conversation at a Time
-  Be Visual
-  Go for Quantity

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Go for Quantity

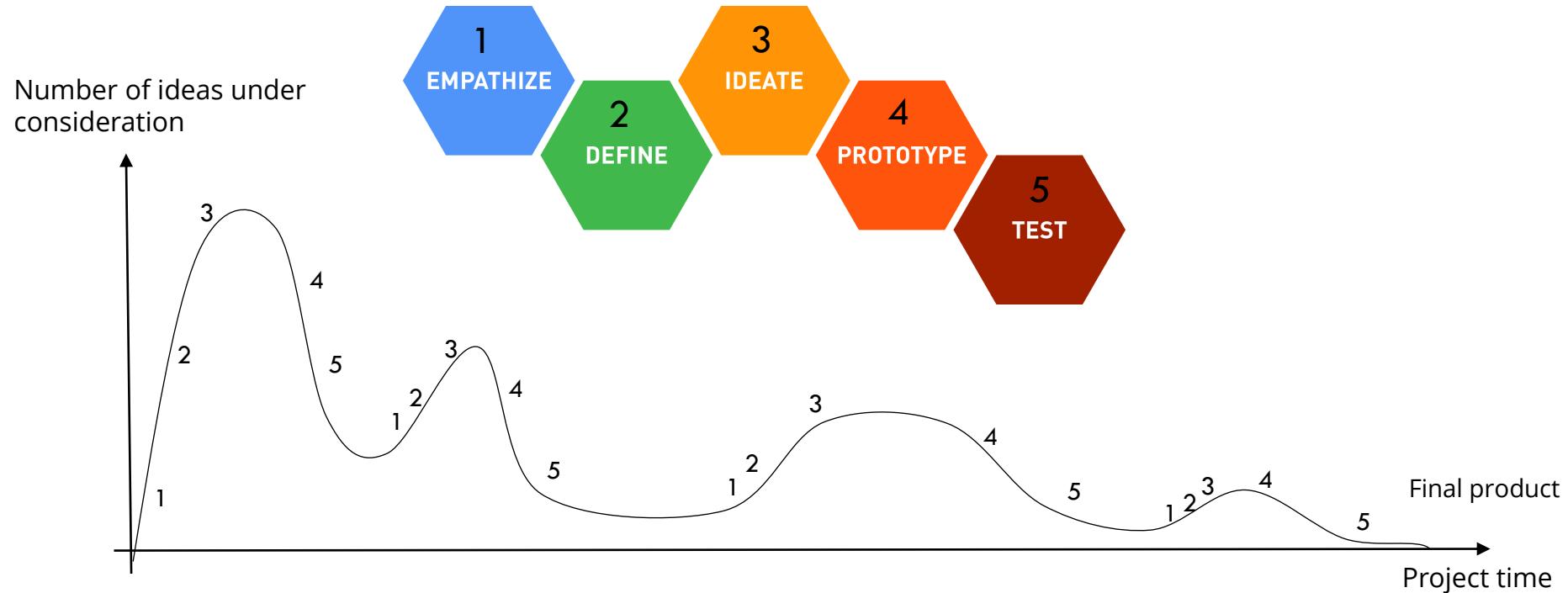
IDCLab



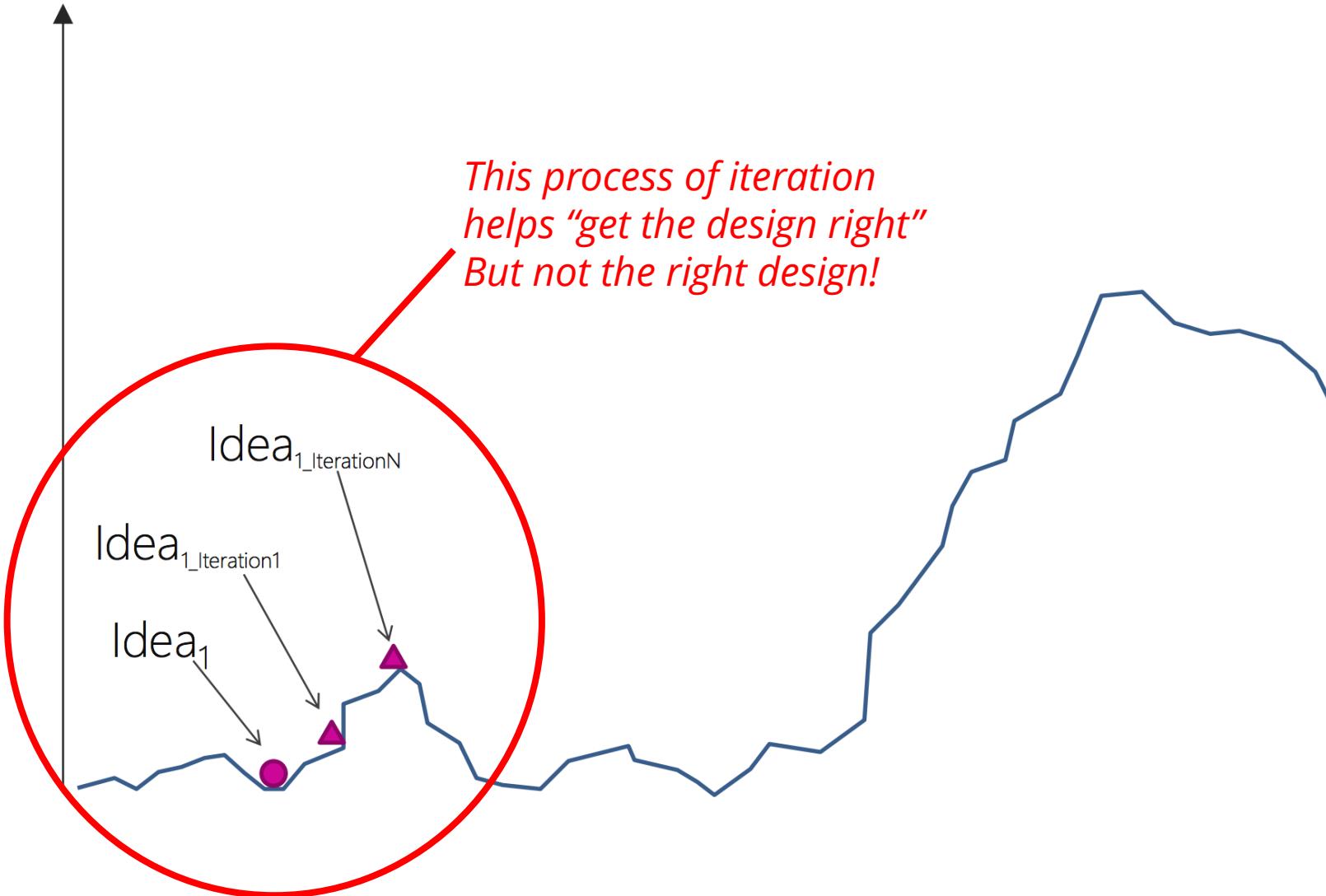
- Go for quantity, Hope for quality
- > 100 ideas can be in play



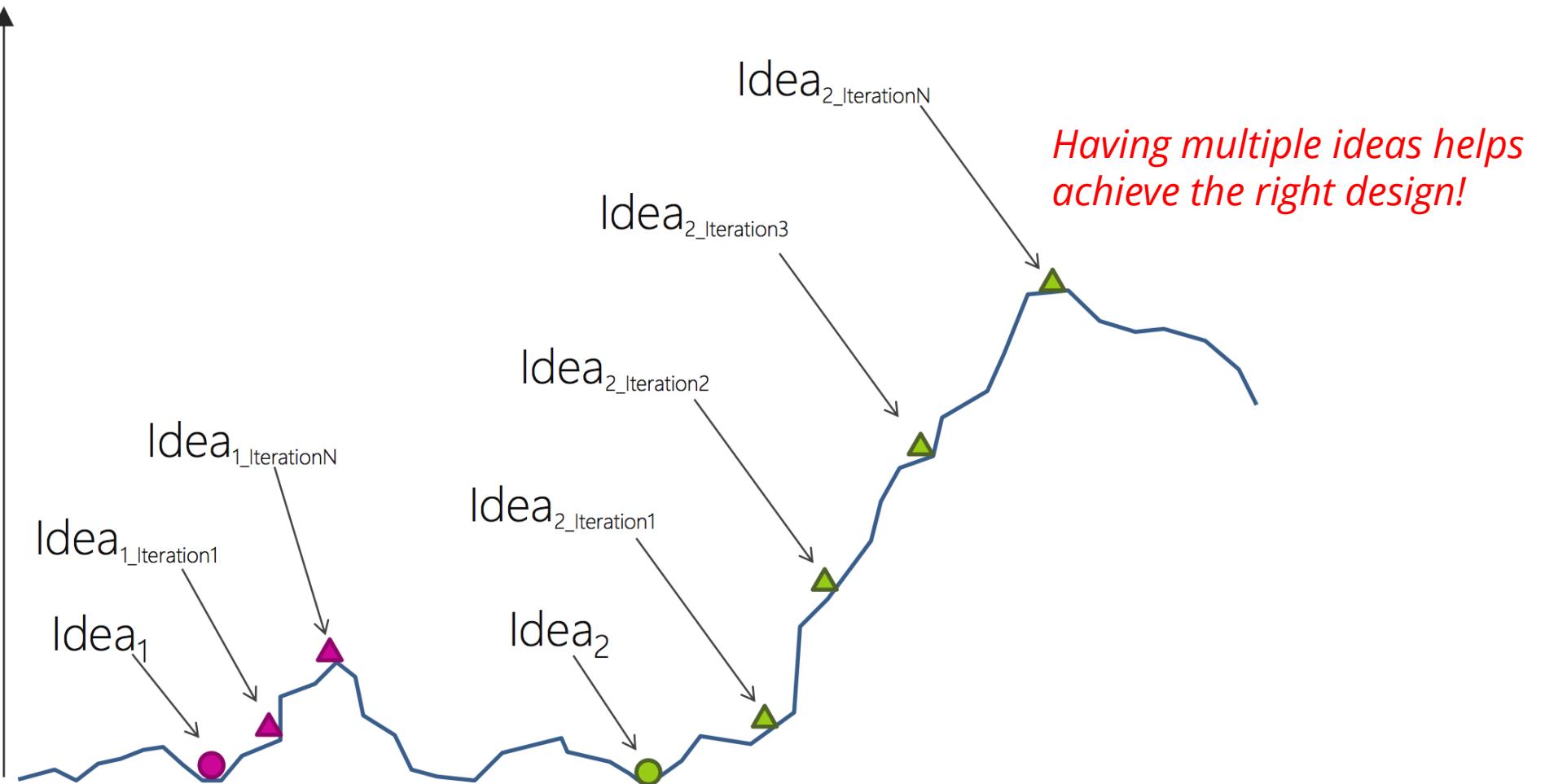
of Ideas by Project Time



Awesomeness

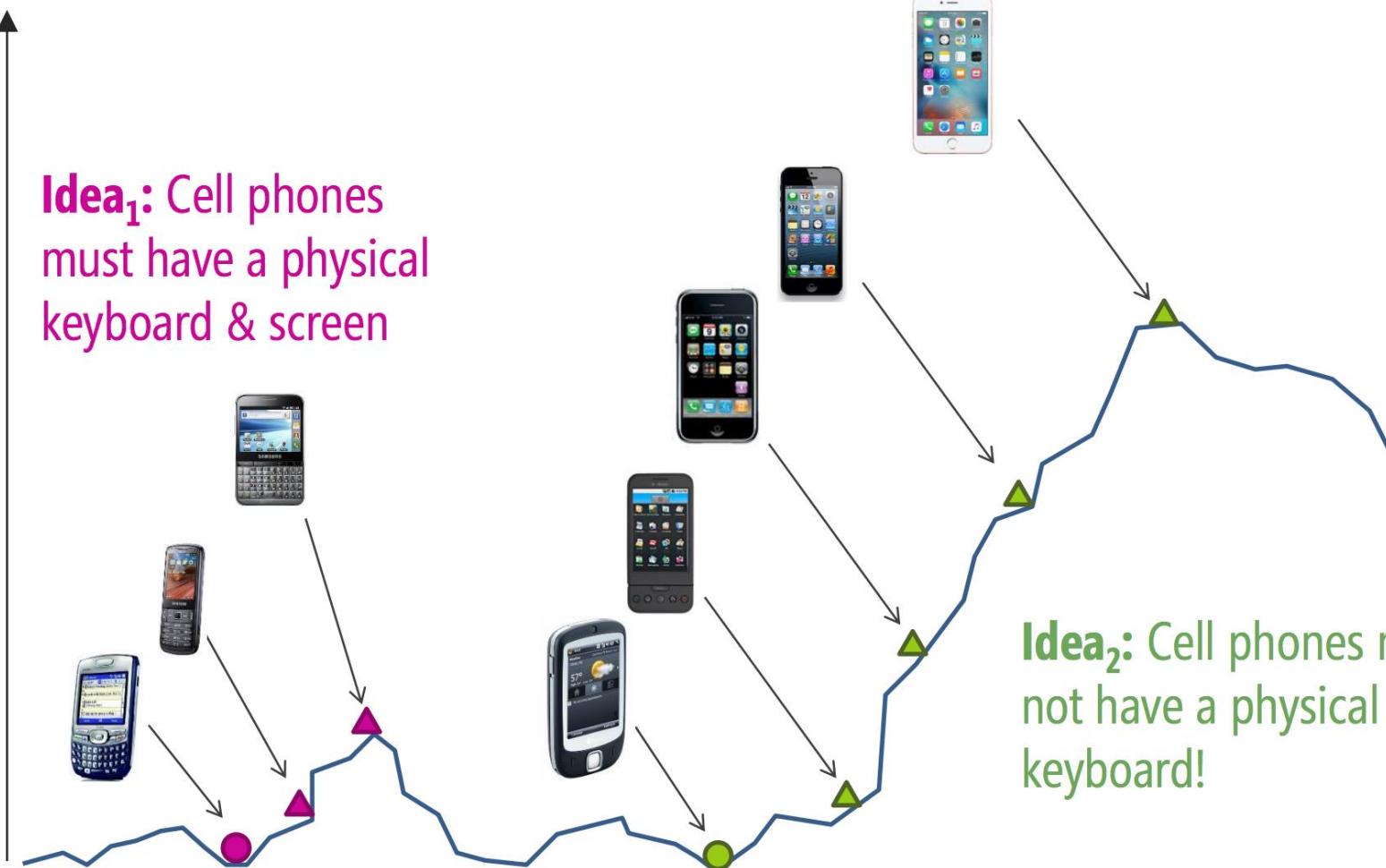


Awesomeness



Awesomeness

Idea₁: Cell phones
must have a physical
keyboard & screen



Idea₂: Cell phones need
not have a physical
keyboard!

Stay Focused on the Topic

- Try to keep the discussion on target. Divergence is good, but you still need to keep your eyes on the prize.
- Posing the right problem is critical – neither too narrow, nor too fuzzy
- Not “bicycle cup-holders” but “helping cyclists to drink coffee without accidents”



Be Visual

IDC Lab

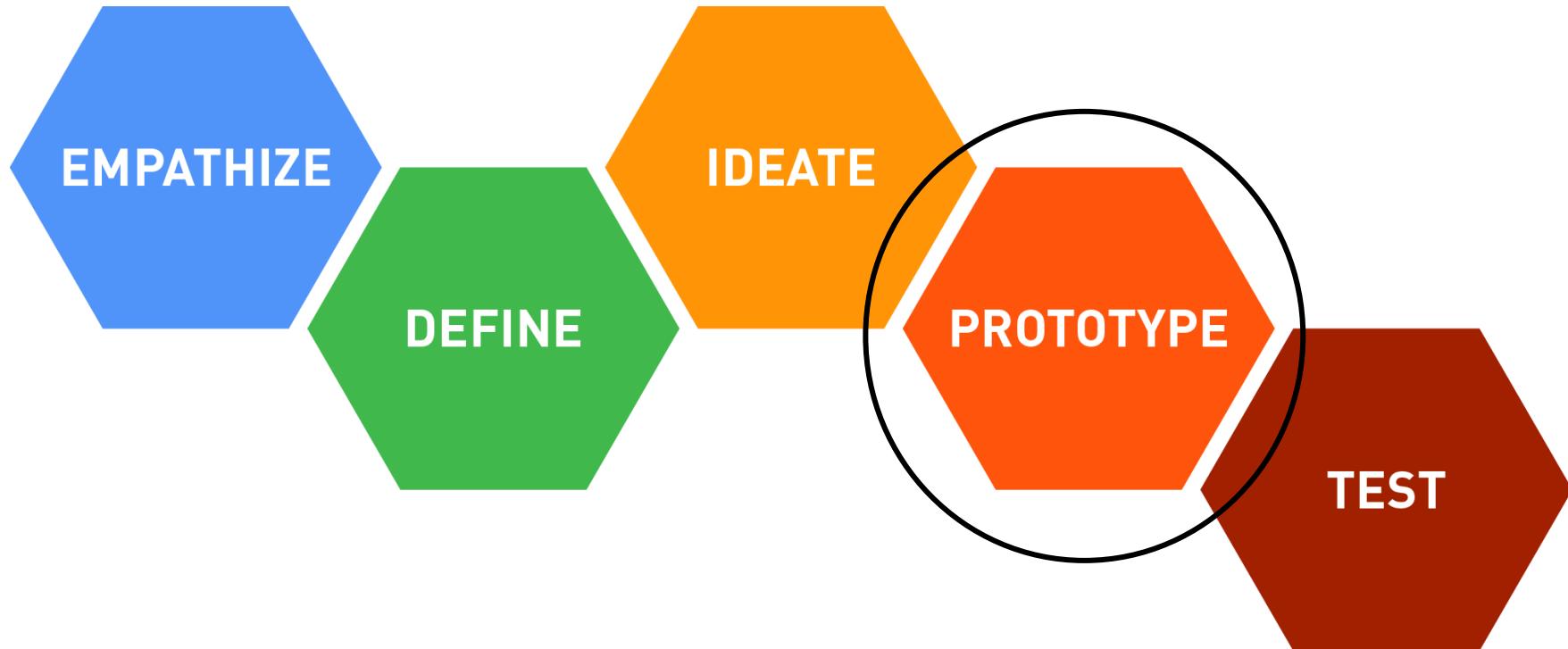


- Use colored markers and Post-its.
- Stick your ideas on the wall so others can visualize them.
- External memory of a group





Design Thinking Process



Prototypes

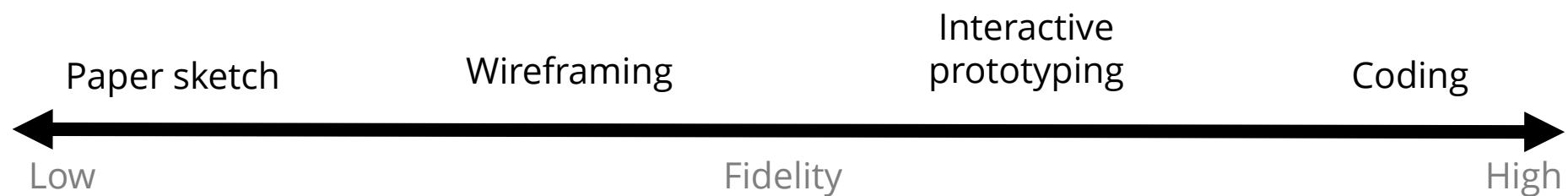
- A simulation of the final product using visuals to describe how a system should behave
- Why prototypes?
 - To test whether or not the flow of the product is smooth and consistent
 - To test the feasibility and usability of our designs before we actually begin writing code

Prototypes

- A representation of an interactive system
 - Support creativity
 - Encourage communication
 - Permit early evaluation
- Users often can't articulate clearly what they need/want; If you give them something and they get to use/test it, they know what they don't want
- A designer needs a bridge between talking to users in the abstract about what they might want and building a full-blown system: Prototype is that bridge - "*A picture speaks a thousand words*"

Prototyping Fidelity

- Low-fidelity (lo-fi) prototypes: prototypes without faithful representations
 - Give high-level, more abstract impressions of the design
 - c.f.) High-fidelity (hi-fi)

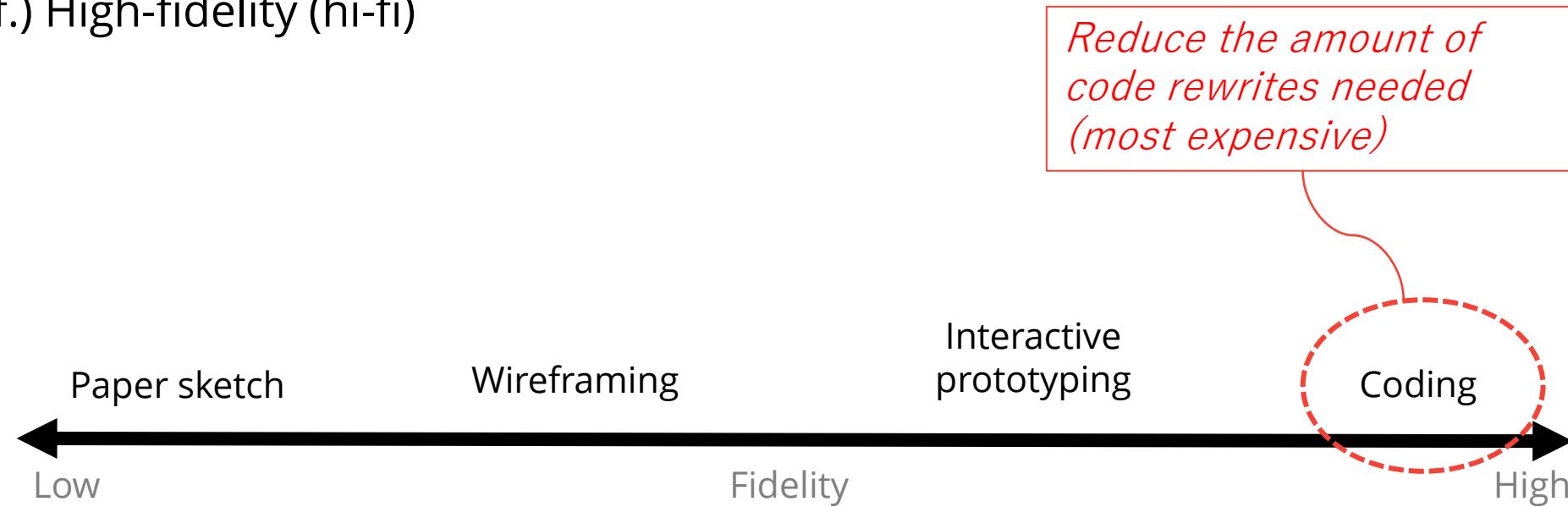


Prototyping Fidelity

IDCLab

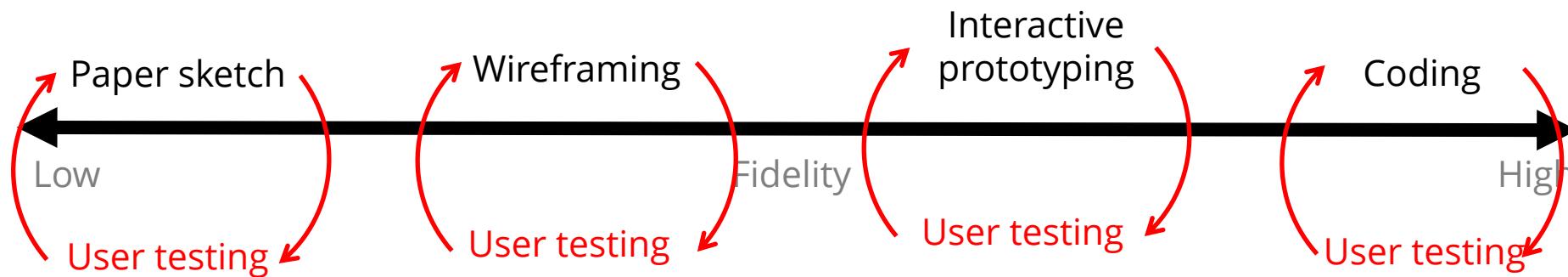


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Prototyping Process

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Paper sketches

Low fidelity



Wireframing

Medium fidelity

A detailed wireframe of a web page titled 'VMS Video Downloads'. It features a header with 'Welcome Guest | Sign In | Create Account | Cart 0 Items: Subtotal: \$0.00'. Below the header are sections for 'BROWSE BY CATEGORY' (Action, Adventure, Animation, Classics, Comedy, Documentary, Drama, Fantasy, Independent, Music & Performance, Mystery & Suspense, Romance, Sci-Fi & Fantasy, Special Interest, Westerns, View All Genres) and 'SEARCH' with a 'FIND' button. The main content area is titled 'TV Time Machine' and displays a list of shows from the 1990s: 'The A-Team - Season 2', 'B.J. & The Bear - Season 3', 'Knight Rider - Season 1', 'Melrose Place - Season 4', 'Robot Wars - Season 1', and 'Wonder Years - Season 2'. Each show entry includes a thumbnail, a brief description, price (\$2.99), and buttons for 'Preview', 'Add To Cart', and 'View Entire Season'. On the right side, there are two columns of text: 'TV Tool 1' and 'TV Tool 2', both containing placeholder Latin text.

A high-fidelity prototype of the 'VMS Video Downloads' website. The layout is identical to the wireframe, but the content is replaced by actual video thumbnails and titles. The 'TV Time Machine' section shows 'DOOGIE GROWLERS', 'KIDS IN THE KITCHEN', 'BRAIN CANDY', 'NURSED', 'THE A-TEAM', 'B.J. & THE BEAR', 'KITT RIDER', 'MELROSE PLACE', 'ROBOT WARS', and 'WONDER YEARS'. The right sidebar includes a 'TV Discover Tools' section with links to 'Top 100 Shows', 'Top 10 TV Shows', 'Actor Profiles', and 'TV Time Machine'. The footer contains standard links like 'About Us', 'Privacy', 'Terms & Conditions', and 'Help'.

Interactive prototyping

High fidelity

Low-Fidelity Prototype

- Rapid prototyping – Paper prototype
- A starting point: easy to create and very easy to deliver
- **Allow you to check that concepts and requirements have been fully-understood without putting in too much effort**

Low-Fidelity Prototype

- Ideal during brainstorming (early exploration of design ideas)
- Static and usually have low visual and content fidelity
- A quick way to create rough mock-ups of design approaches: Allows making changes easily and quickly
 - This forces users to focus on how they will *use* the system instead of what it will *look like*, and it makes designers more open to changes based on user feedback

Sketching

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- Sketching is fundamental to ideation and design.
- Traditional disciplines such as industrial design, graphic design and architecture make extensive use of sketches to develop, explore, communicate and evaluate ideas.

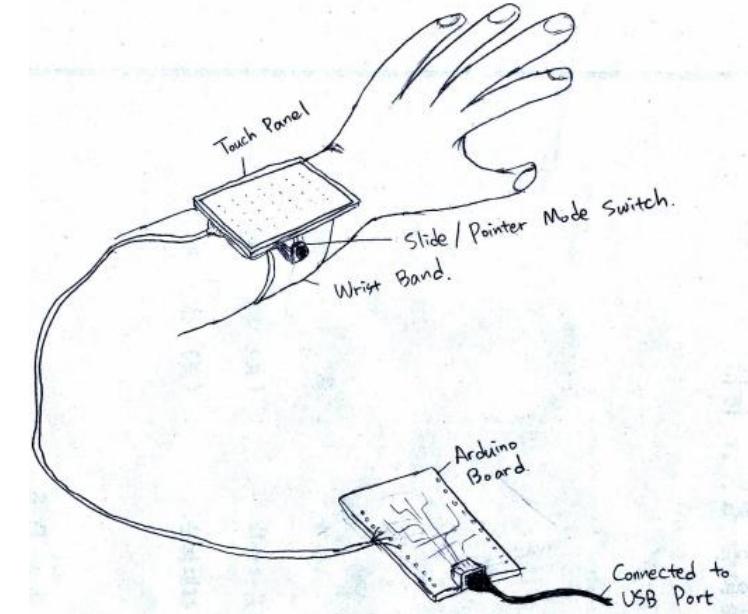


Why Sketching?

- Think more openly & creatively about your ideas
 - Create abundant ideas w/out fixating on quality
 - Invent and explore concepts visually
 - Iterate quickly
-
- Choose ideas worth pursuing
 - Archive ideas for later reflection

Sketching Practices

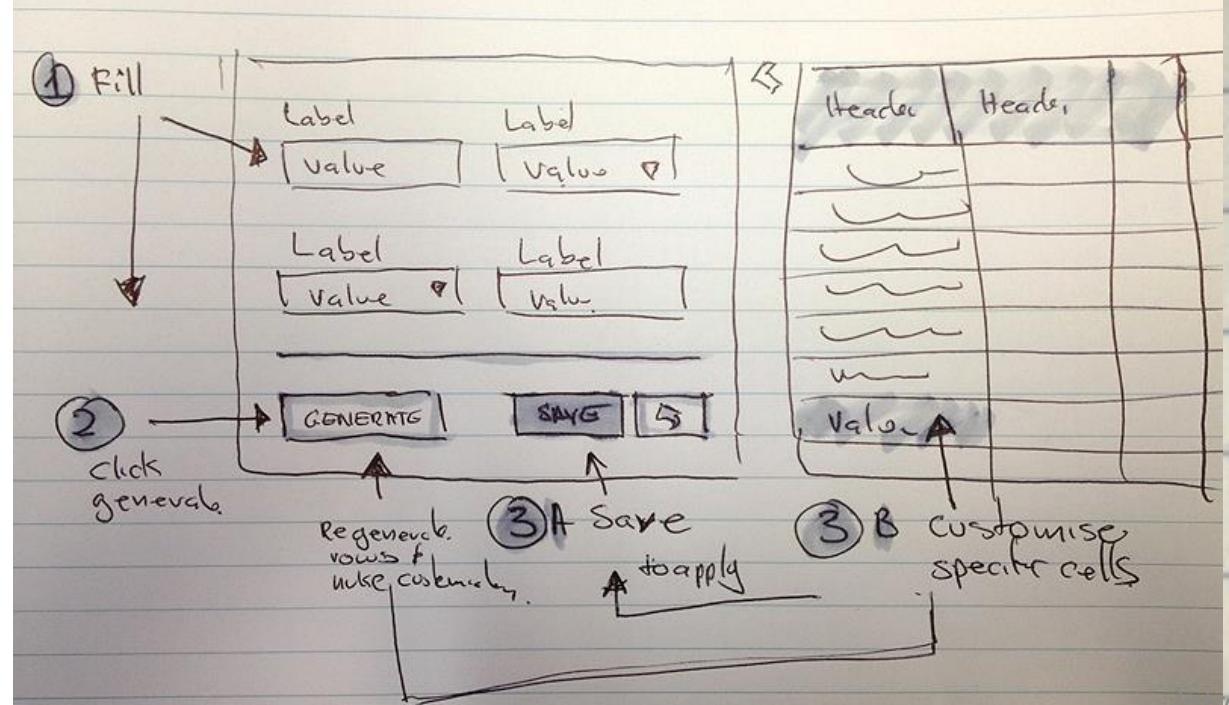
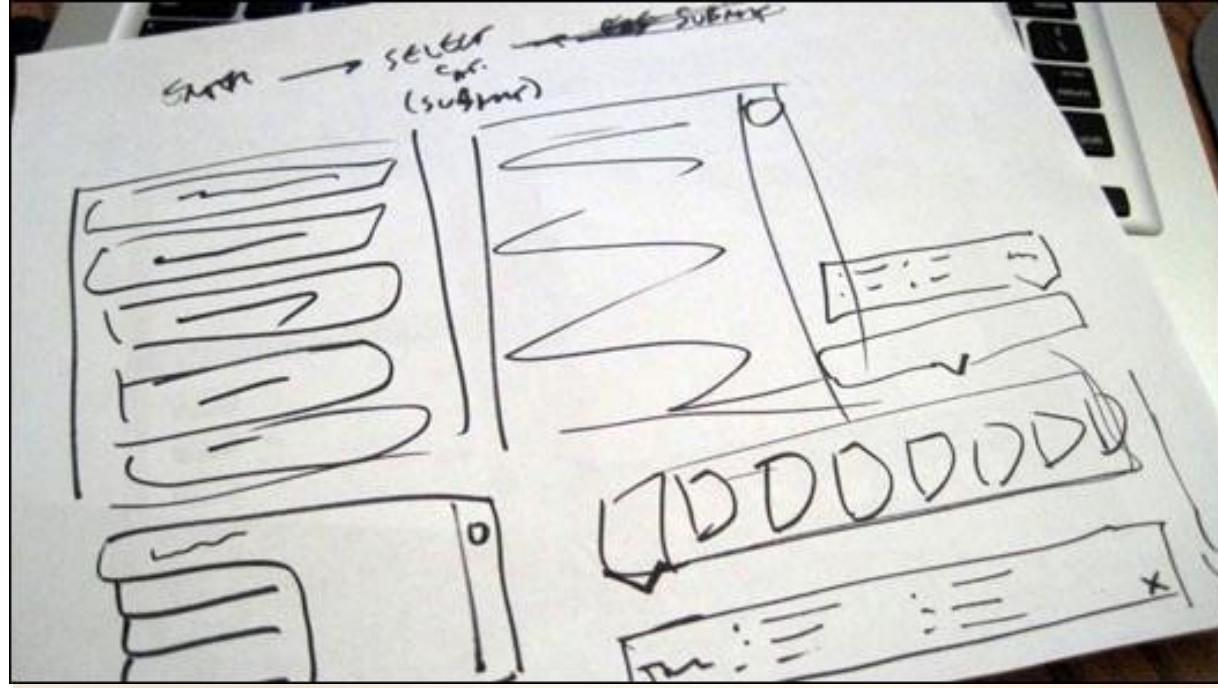
- Sketch frequently
- No bad ideas or sketches (don't erase)
- Always annotate (for your future self & others)
- Explore broad space (getting right design)
- Refine and iterate (getting design right)
- Record ideas you see elsewhere
- Collect existing materials (printouts, magazines)



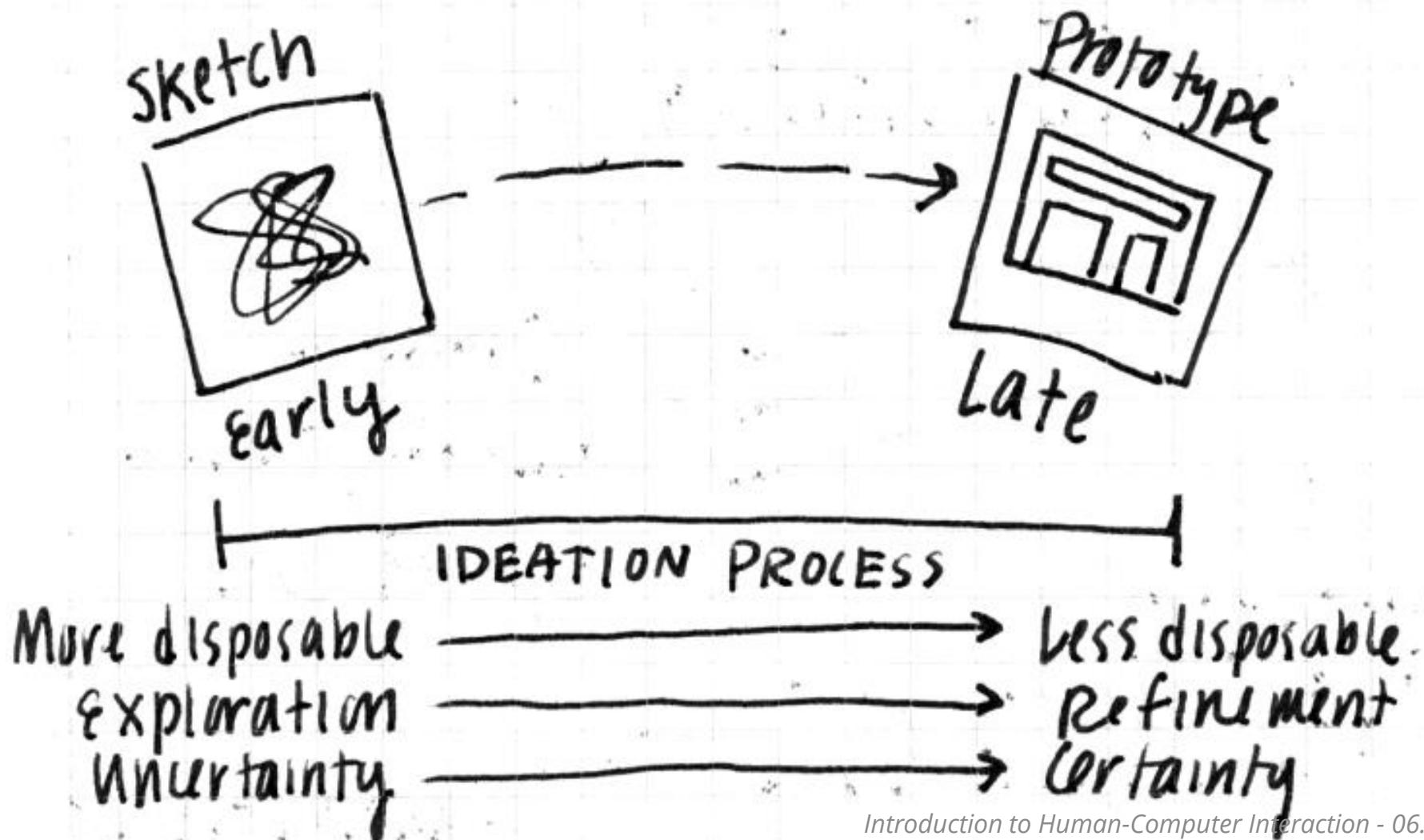
Sketching is not about drawing!

Sketching is about design!

“Sketching is a fundamental tool that helps designers express, develop, and communicate ideas.”

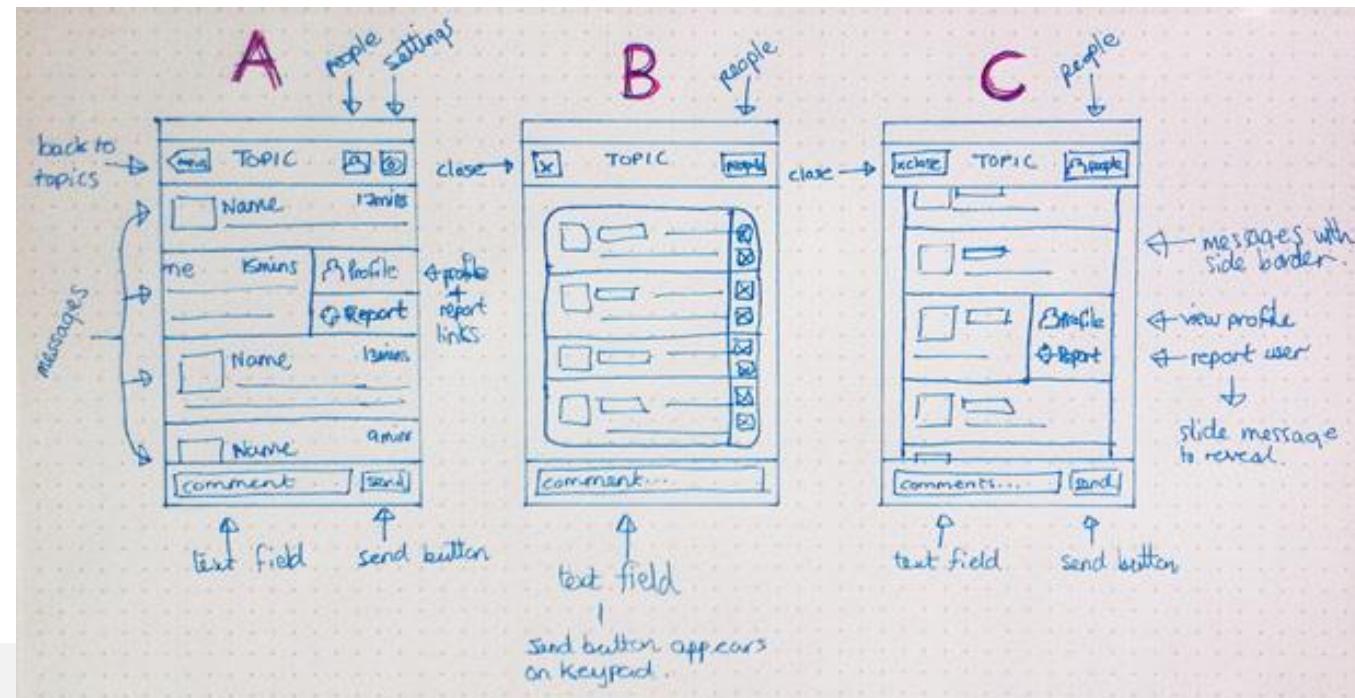
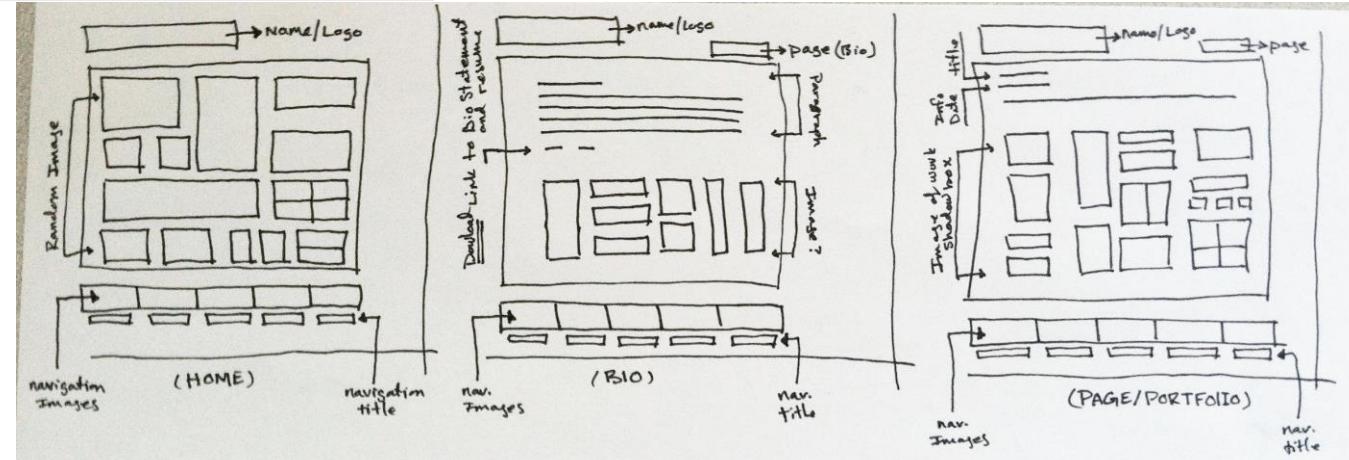


SKETCHES ARE NOT PROTOTYPES



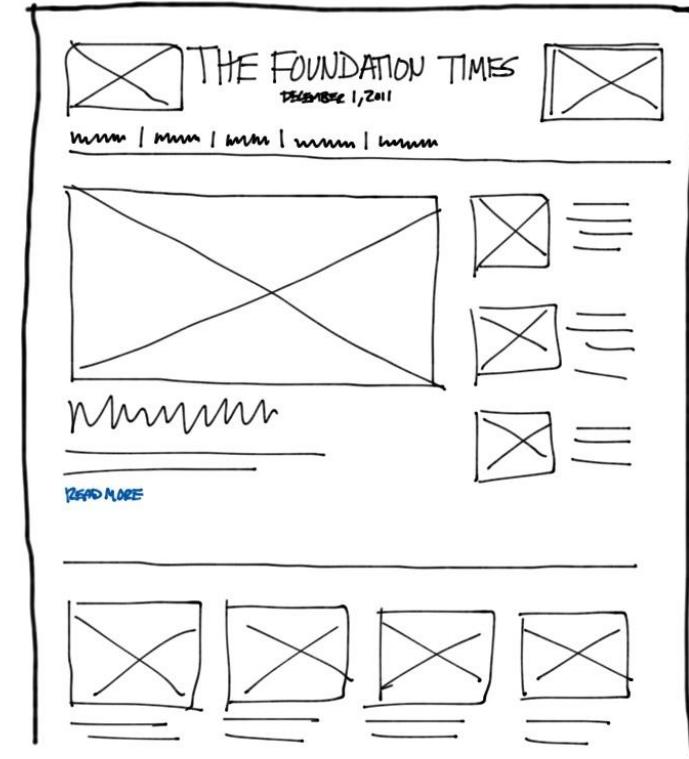
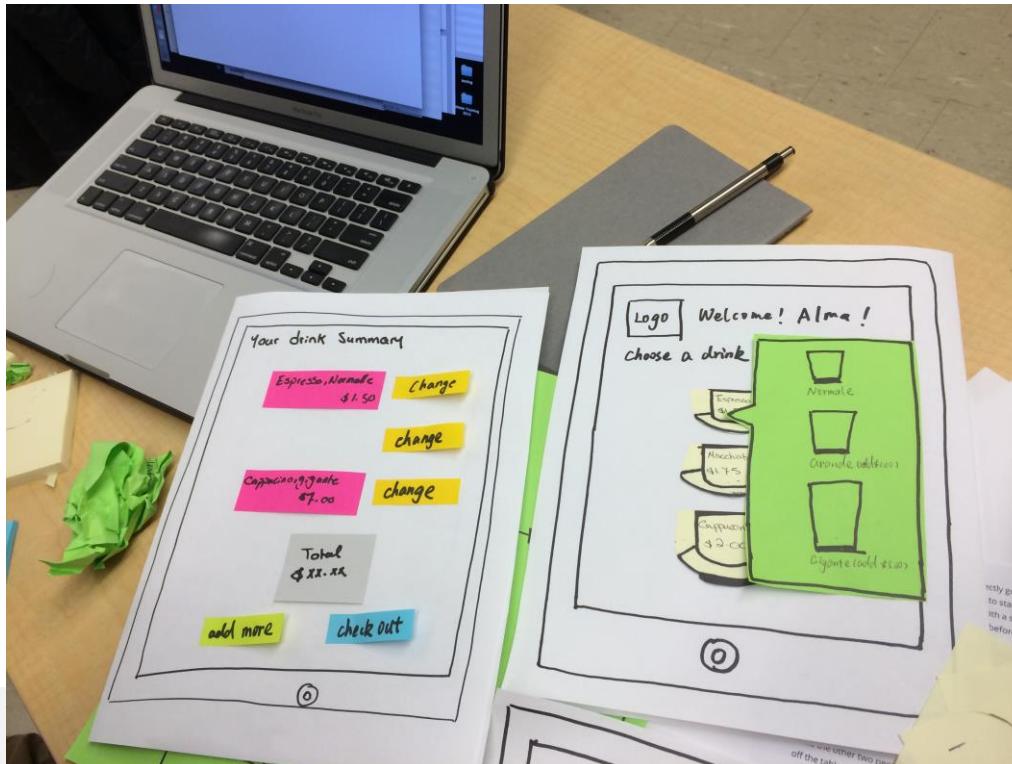
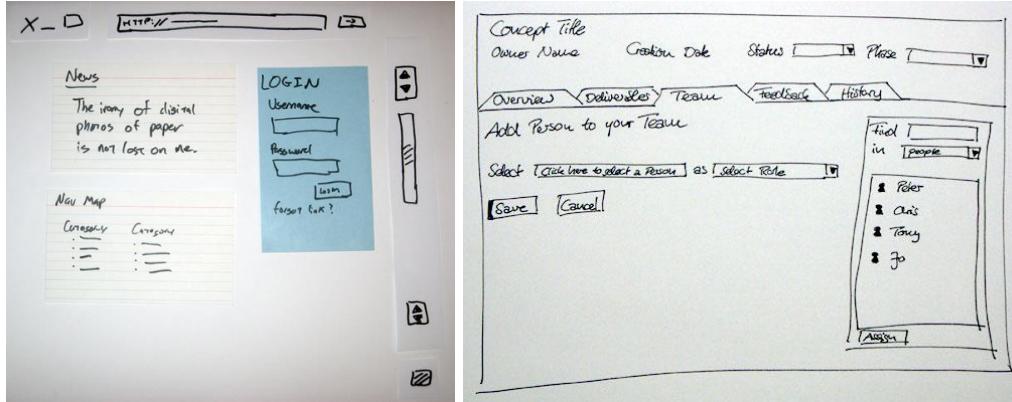
Lo-Fi Prototypes

IDCLab



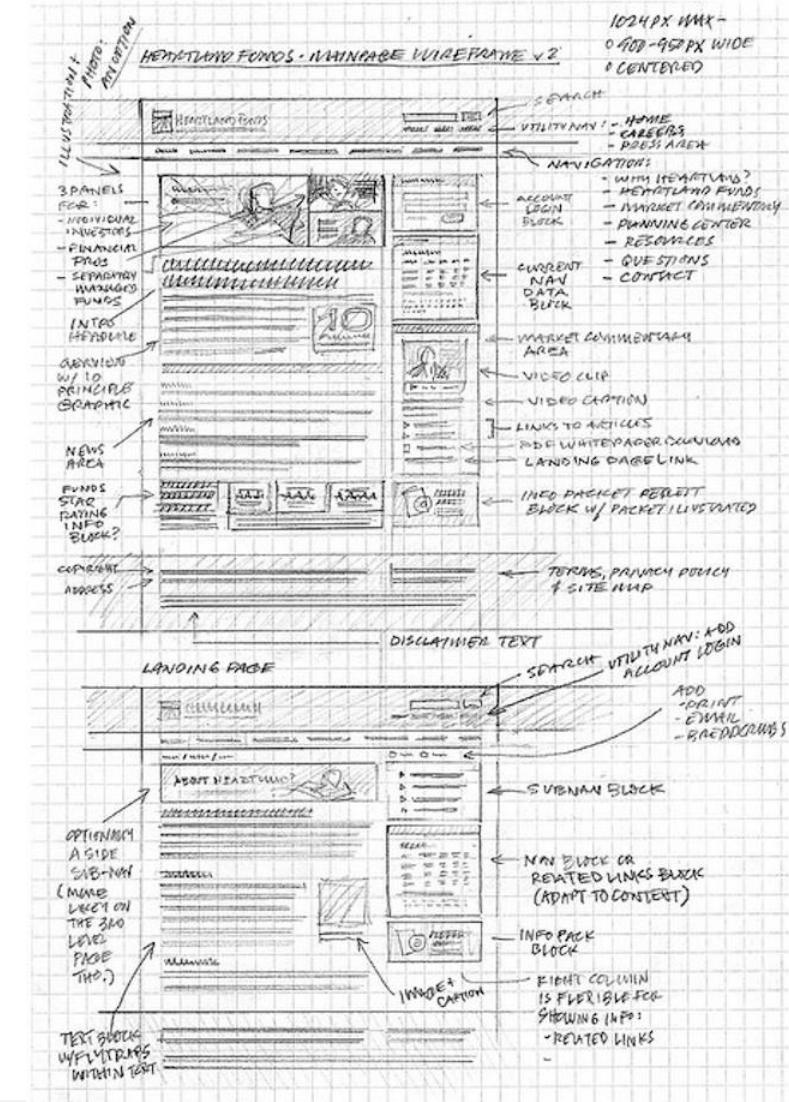
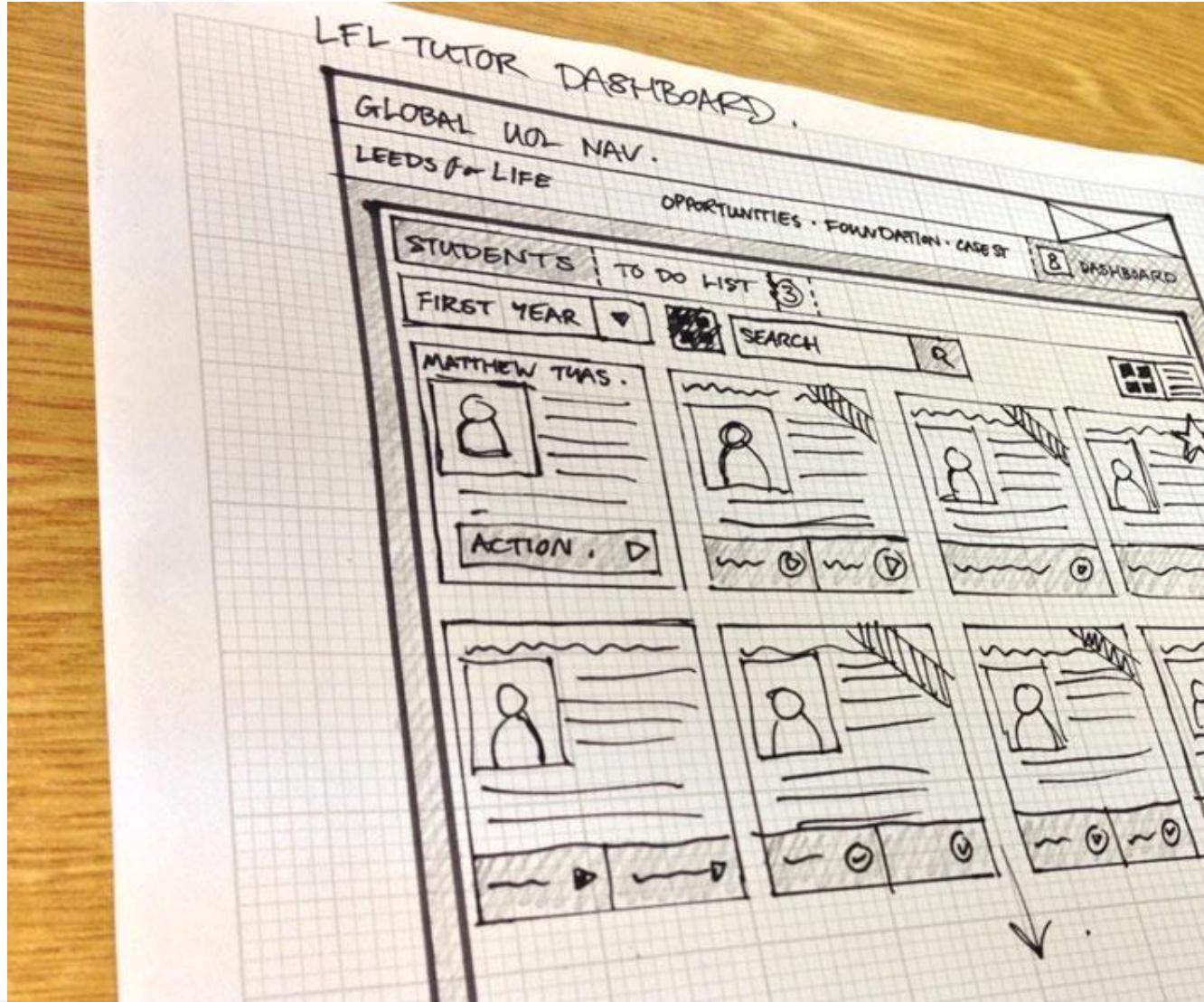
Lo-Fi Prototypes

IDCLab



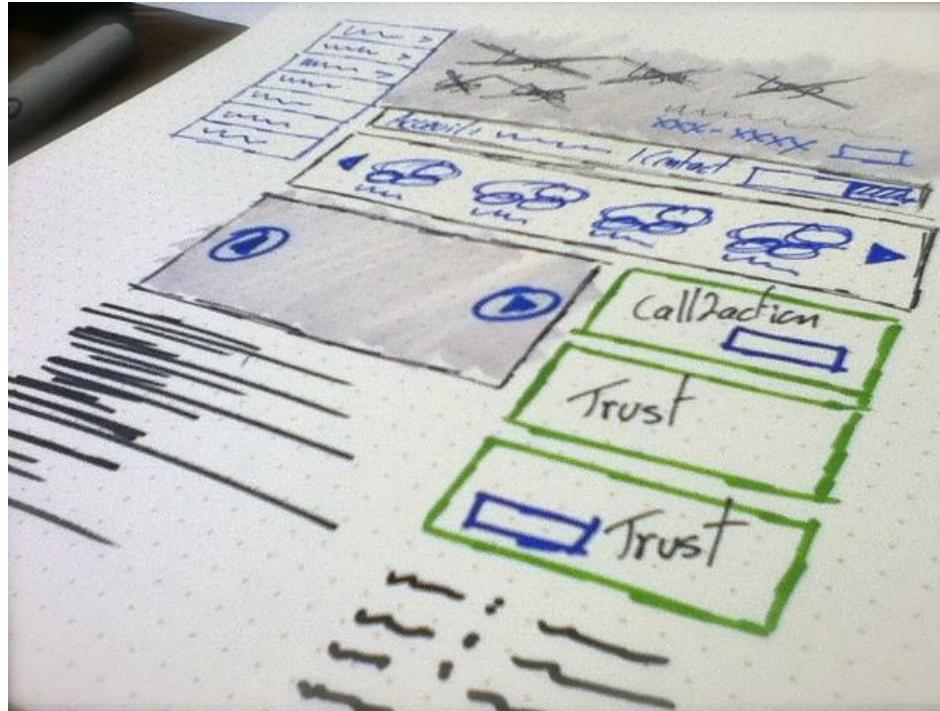
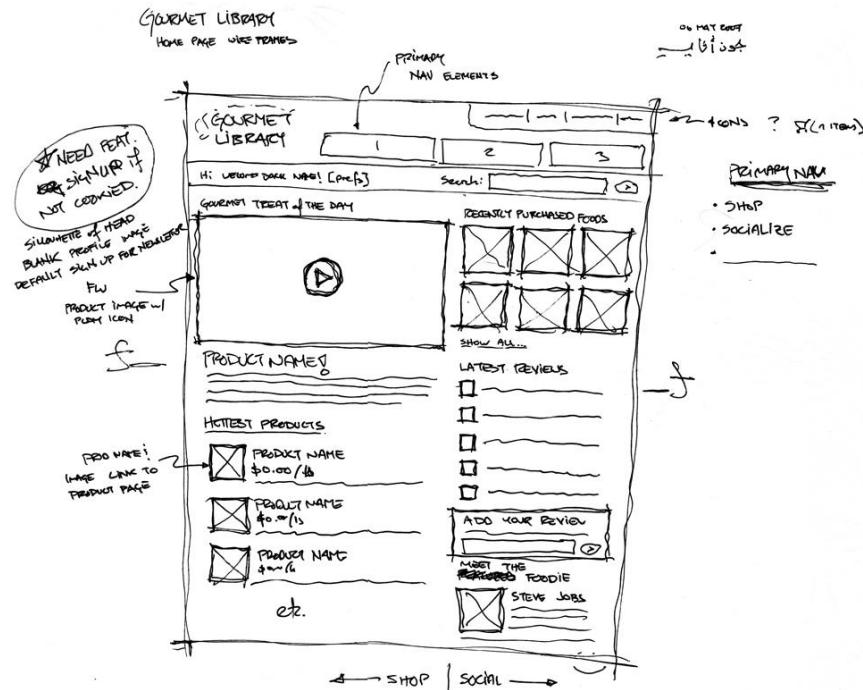
Lo-Fi Prototypes

IDCLab



Lo-Fi Prototypes

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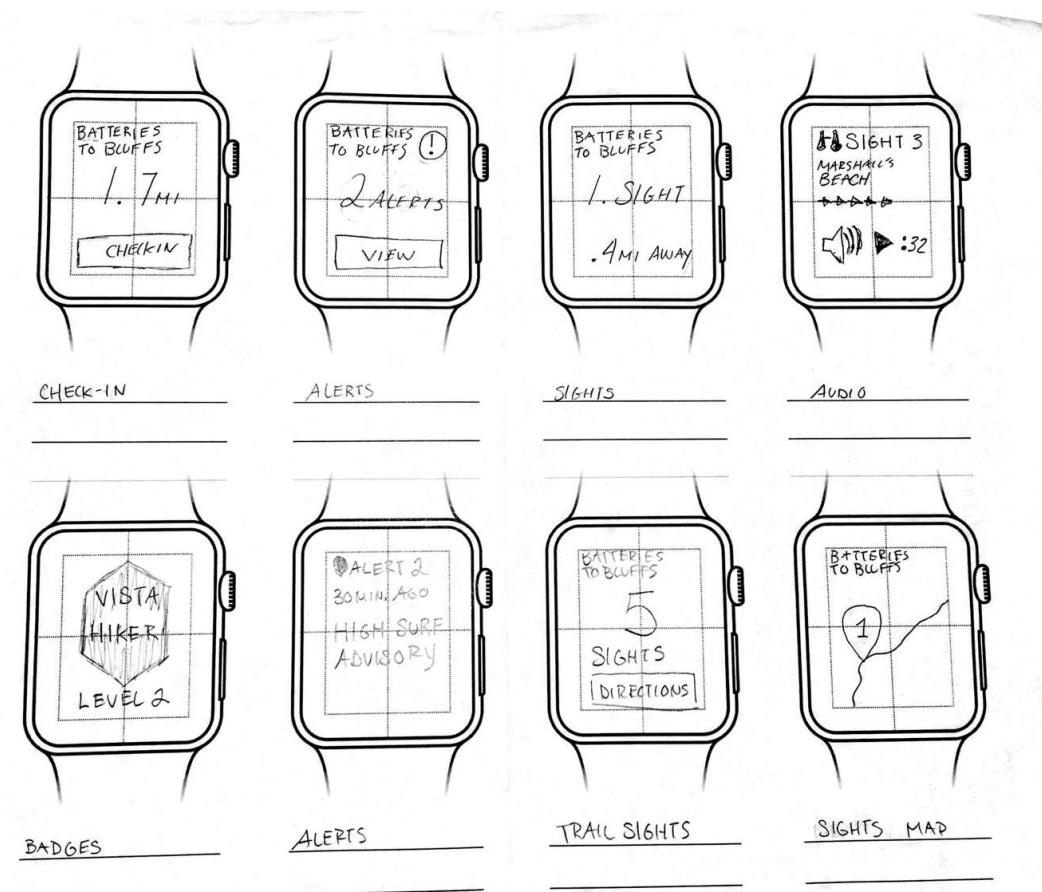


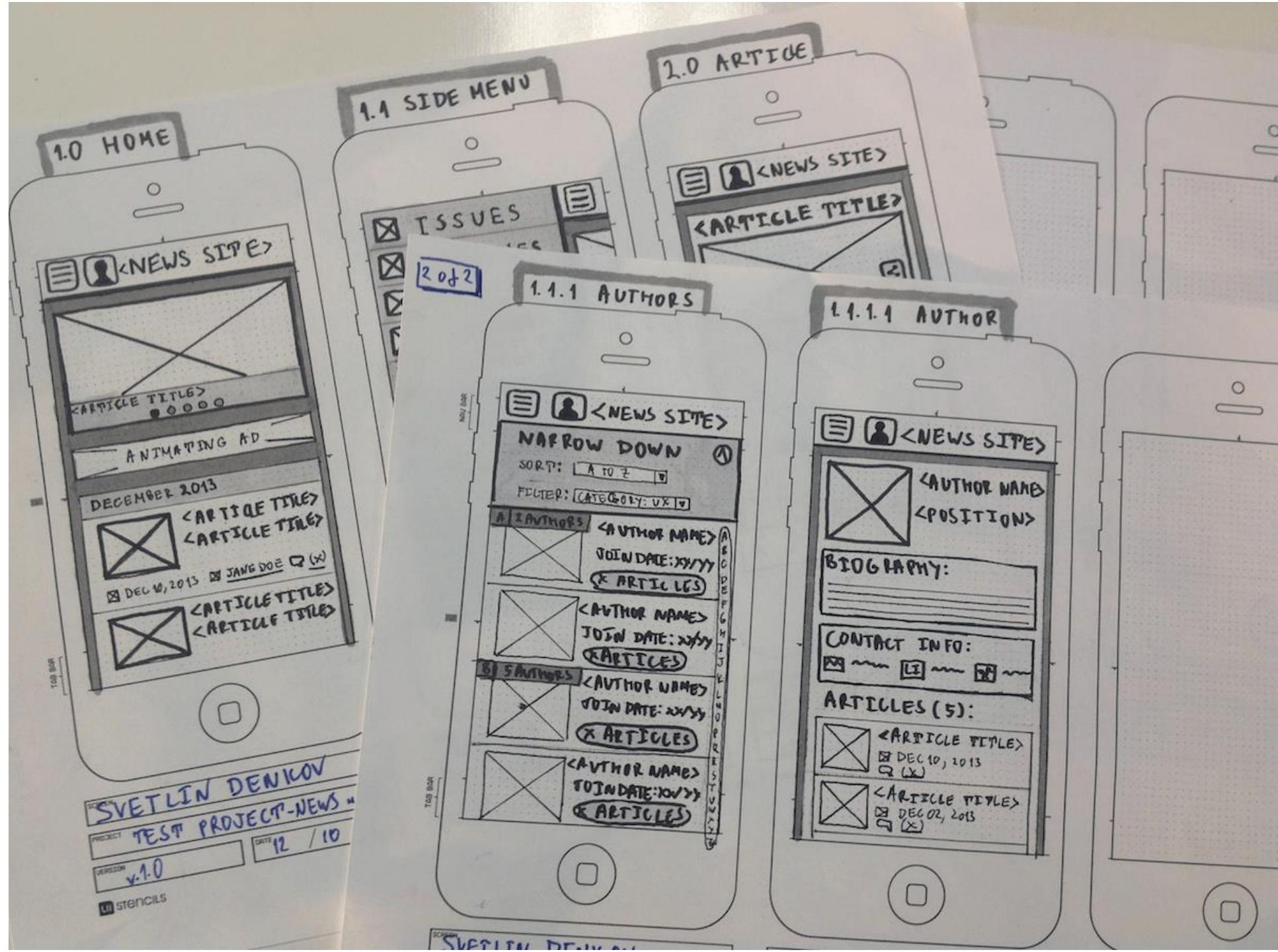
Lo-Fi Prototypes

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- Use printable sketching templates



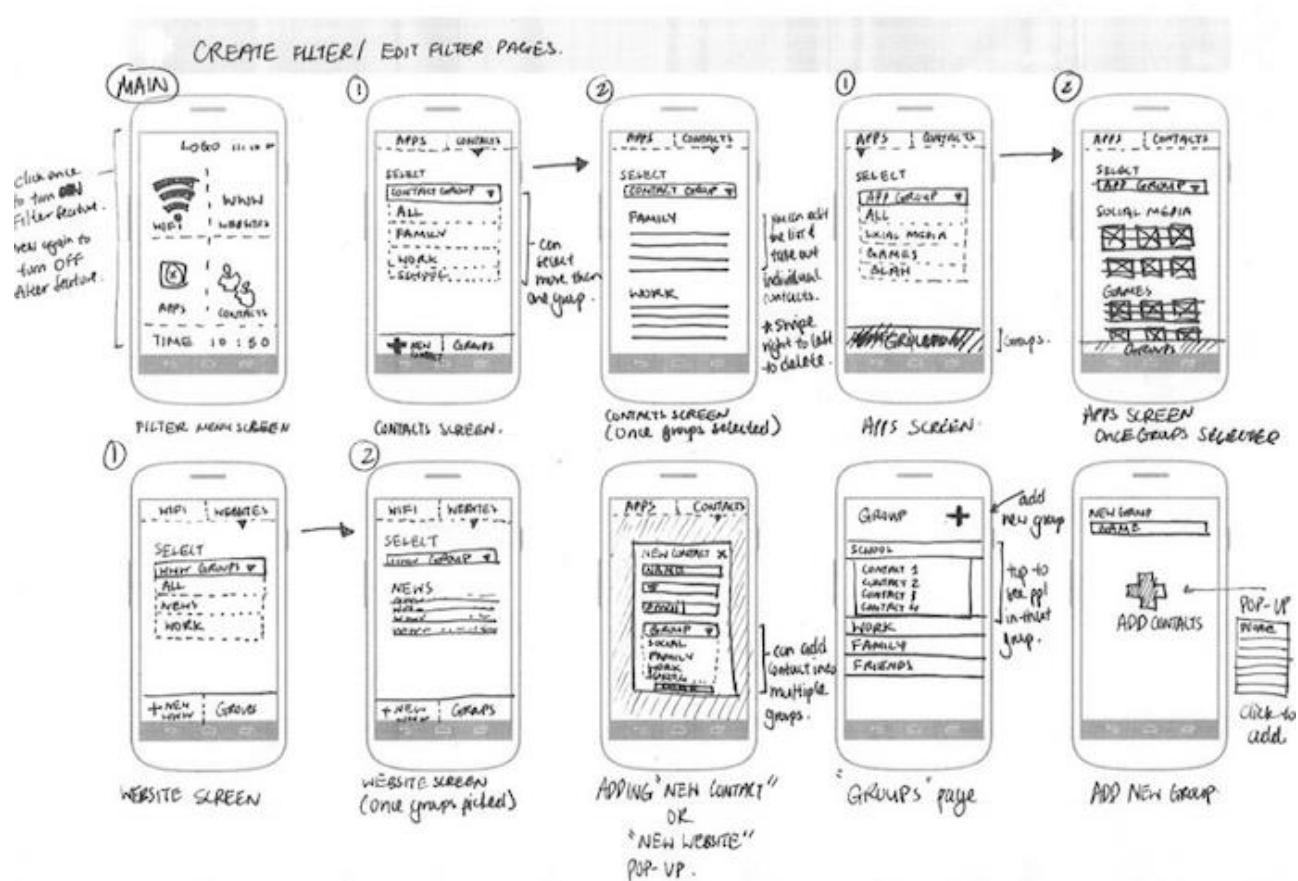


Lo-Fi Prototypes

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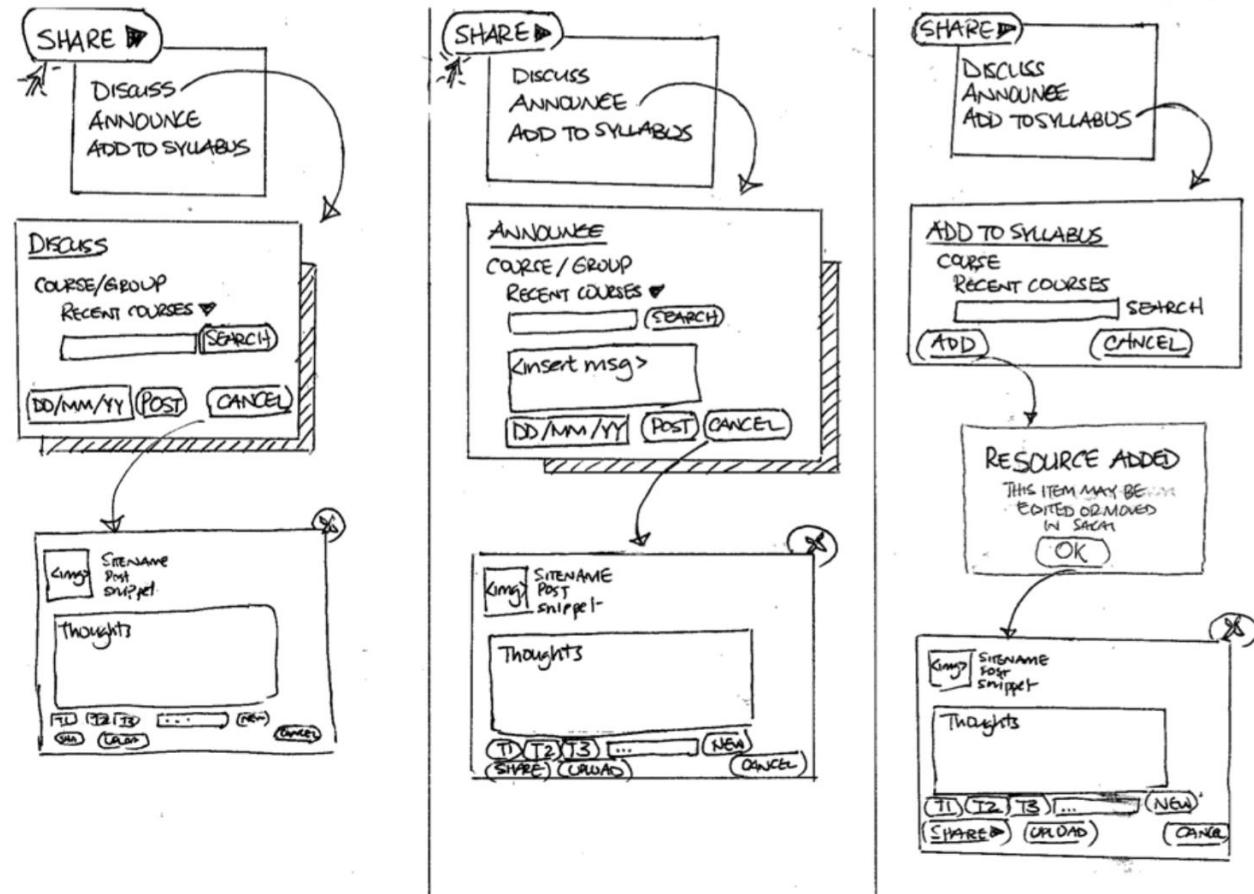


- Sketching a storyboard



Lo-Fi Prototypes

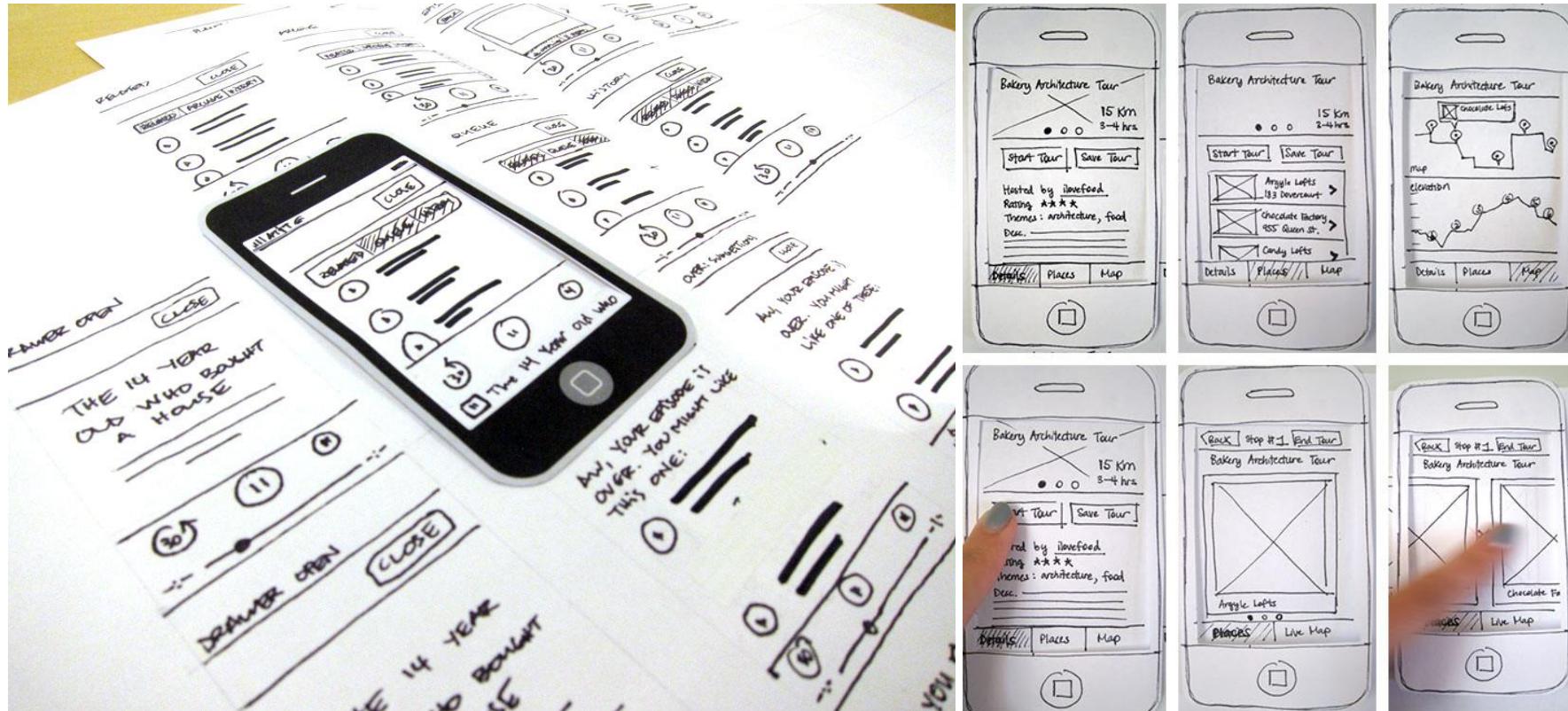
- Sketching a storyboard



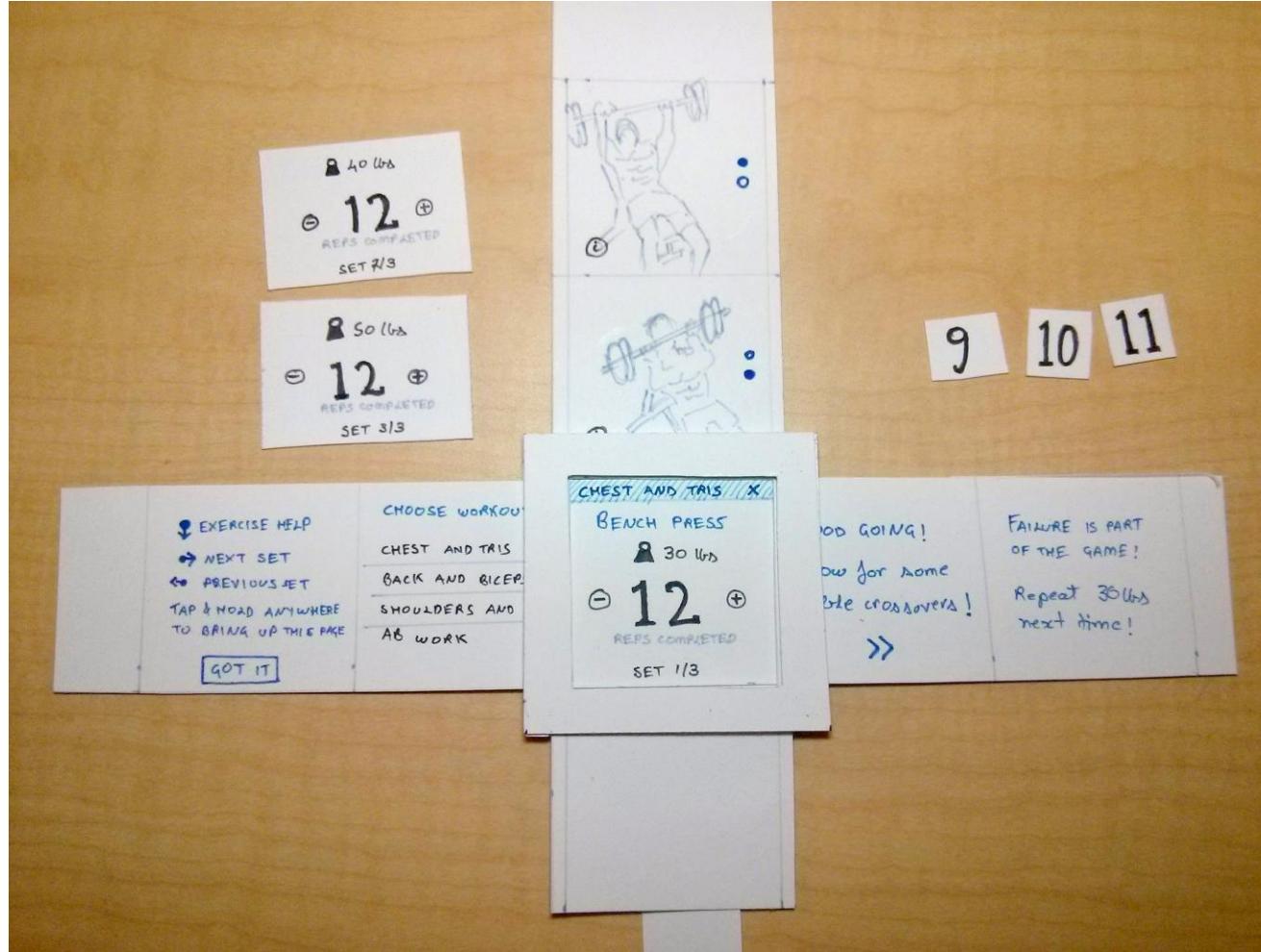
Interactivity in Paper Prototypes



Interactivity in Paper Prototypes



Interactivity in Paper Prototypes



Mid-Fidelity Prototype: Wireframe

- Using computer-based tools (e.g., balsamiq, visio)
- Take more time and effort but look more formal and refined: more detailed than sketches
 - You don't need to make these things pretty but you do need to include enough detail to see how the system performs
 - Force users to view it as a draft or work in progress, rather than a polished and finished product
 - Prototype in a high visual fidelity (e.g., done in Photoshop) makes the user to focus on the visual design and look and feel, including color, fonts, layout, logo and images
- Interactivity can be simulated (e.g., linking slides)

Wireframe

IDC Lab



Default / Browser
Viewport 1024x768 - Grid Width 940

A Big Title

Home Event Accessories Apparel Featured Items

Image Gallery of Featured Products

Intro Copy Headline
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Image of Featured Product

Item Title
Item Category
\$88.00

Image of Featured Product

Item Title
Item Category
\$88.00

Image of Featured Product

Item Title
Item Category
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Image of Featured Product

Item Title
Item Category
\$88.00

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Announcements / Promoted Content
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Coming Soon
Image of upcoming product

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Tablet Portrait
Viewport 768x1024 - Grid Width 724

A Big Title

Home Event Accessories Apparel Featured Items

Image Gallery of Featured Products

Intro Copy Headline
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Image of Featured Product

Item Title
Item Category
\$88.00

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Item Title
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Item Title
Item Category
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Coming Soon
Image of upcoming product

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Smartphone
Viewport 320x480 - Grid Width 280

A Big Title

Home

Intro Copy Headline
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Image of Featured Product

Item Title
Item Category
\$88.00

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Coming Soon
Image of upcoming product

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Wireframe



Wireframe

IDC Lab



webwise
SOLUTIONS

building great communities powered by drupal

Introducing...
WebWise Solutions is dedicated to one goal: making your customers insanely happy with your products. Everything we do is designed to attract, compel, delight, tantalize, and educate people so they can't imagine life without you.

How do we do it? We have spent the last twelve years creating corporate web sites and web communities, and have learned what works and what doesn't work: most

Clients we serve

What we specialize in
We build engaging communities powered by the powerful open-source software, Drupal.
• Full Service Packages
• Editorial and Community Management Only
• Communities On-Demand

FAQ
Q: What's the difference between a web community and an online forum?
A: This is the most common question we get into with our clients. As we consult with them about their needs, they'll often say "Oh, we already have a forum, so I guess that's our community" - see full answer

Advertising opportunities
Helping clients with their communities gives us the occasional opportunity to match up advertisers and available space. Click here to view the inventory we are currently helping to fill.

selected testimonial

Put us to work for you. We live to serve.
Use our Talk to Us form to drop us a note.

Home **About** **Services** **Case Studies** **Testimonials** **F.A.Q** **Say Hello**

TV Series
SERIES TITLE
33 episodes Thursdays 9:00p
+ Add to list
- Remove from list

Event
EVENT TITLE
Team Name vs. Team Name
Sunday at 2:00 pm 03:14:37
+ Add to list
- Remove from list

Movie
MOVIE TITLE
2008 Action, Comedy 120 min
+ Add to list
- Remove from list

DETAILS **SCHEDULE** **RELATED**

Eiam porta sem malesuada magna mollis euismod. Morbi leo risus, porttitor ac, vestibulum at eros. Maecenas sed diam eget risus varius blandit sit amet non magna. Aenean eu leo quam. Pellentesque ornare sem lacinia quis venenatis vestibulum.

available HD | SD | Tap actors: Actor Name, Actor Name, Actor Name, Actor Name, Director: Director Name release date: 2008

Settings Wi-Fi Networks
Wi-Fi ON
Choose a Network:
Alice
✓ Balsamiq
Untitled
Other
Ask to Join Network ON

Settings
Start Screen Last Used
Search
Searchable Items Moderate
Voice Search ON
Voice Search only works in English, and works best for North American English accents.

Friends
Scobleizer
Balsamiq
timoreilly: RT ...
guykawasaki...

myTunez

Jack Johnson - Belle

Music
Movies
TV Shows
Podcasts
Audiobooks
Radio
Shore
myTunez Store
Purchased
Playlists
Party Shuffle
90's Music
Music Videos
My Top Rated
Recently Added
Recently Played
Top 25 Most Played

Name Artist Album Genre
Better Together Jack Johnson In Between Dreams Rock
Never Know Jack Johnson In Between Dreams Rock
Banana Pancakes Jack Johnson In Between Dreams Rock
Good People Jack Johnson In Between Dreams Rock
No Other Way Jack Johnson In Between Dreams Rock

Timeline 37 New Tweets

Michael @tehmikinator @bobbybill Yeah, yeah, pretty, he's pretty good, Bob Retweeted by Bob

The surface is a smooth, level plane and artisan light emanates from unexpectedly delightful corners.

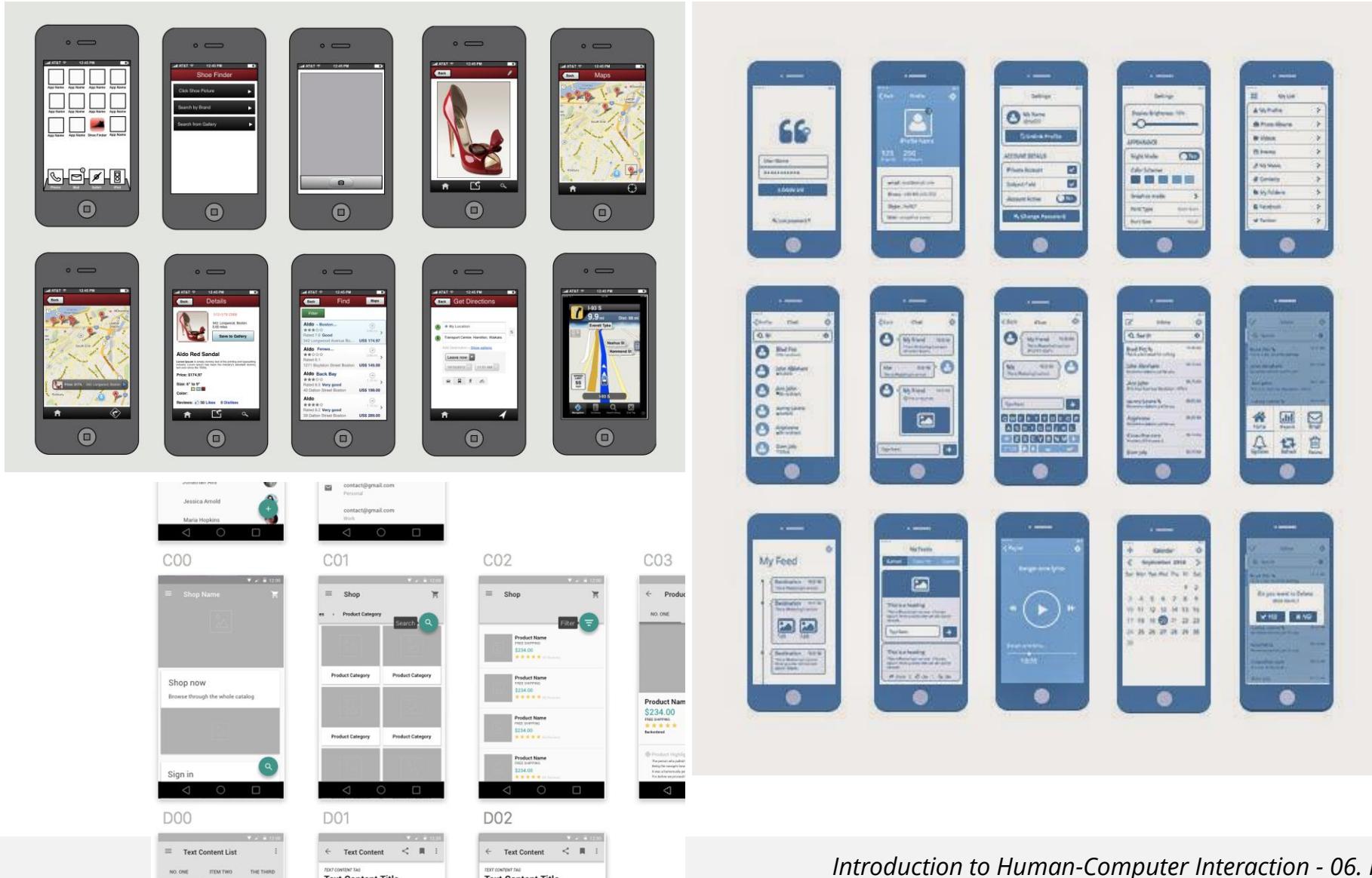
Michael @tehmikinator @bobbybill Yeah, yeah, he's pretty good, I guess.

Bob @bobbybill For my money, I don't think it gets any better than when he sings when a man loves a woman.

Bob @bobbybill @tehmikinator To be honest with you, I love his music. I am a Michael Bolton fan.

Michael @tehmikinator @bobbybill It's just a coincidence

Wireframe



Wireframe



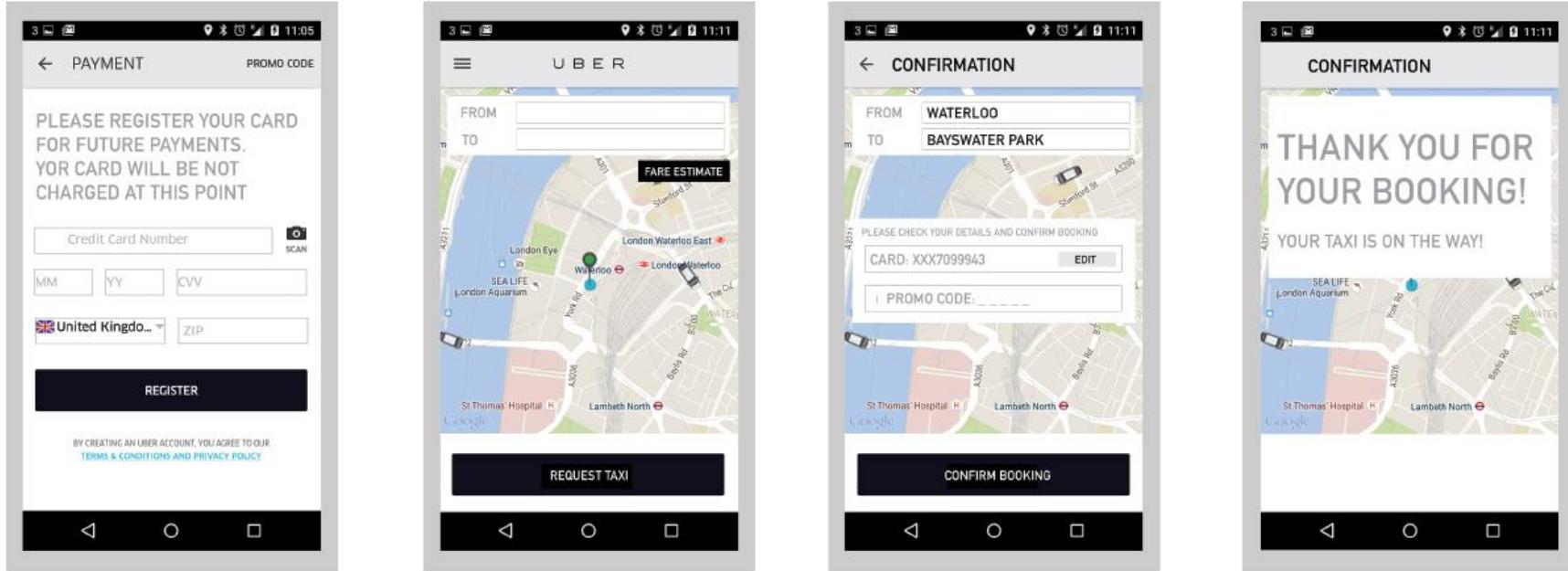
Hi-Fidelity Prototype

IDC Lab

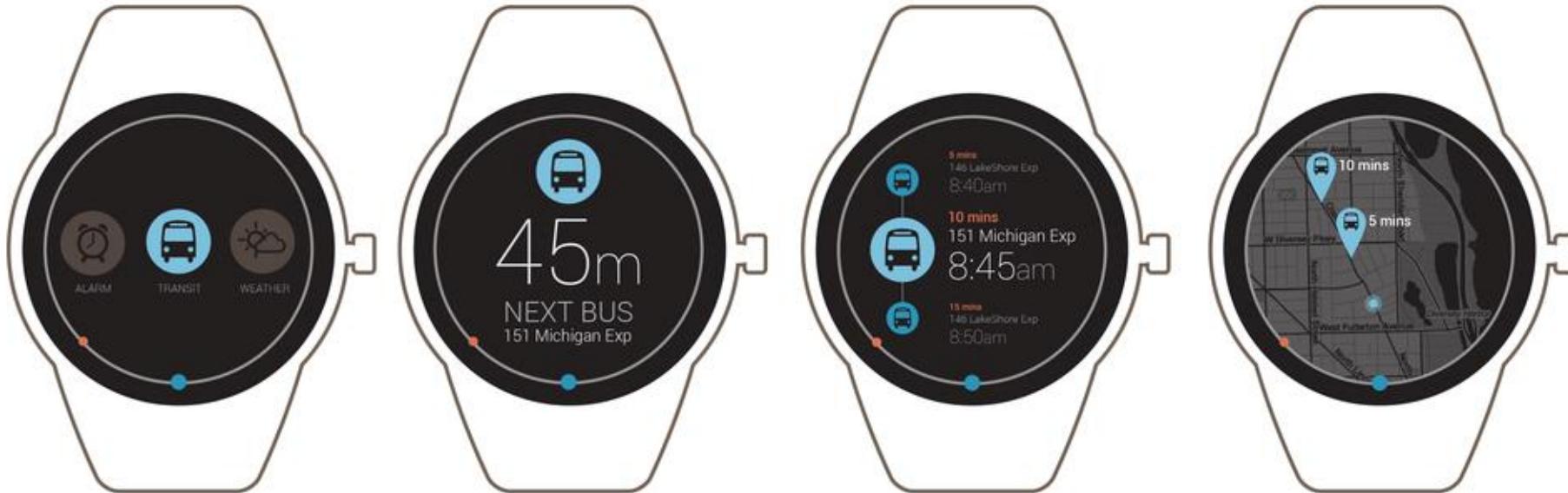


- The most realistic but time-intensive; You need to **CODE!**
- These days, you can create high-fidelity prototypes that simulate the functionality of the final product without coding (e.g., Axure, iRise, omni graffle)
- Appropriate when high visual and functional fidelity is required
- An excellent reference for developers

Hi-Fidelity Prototype

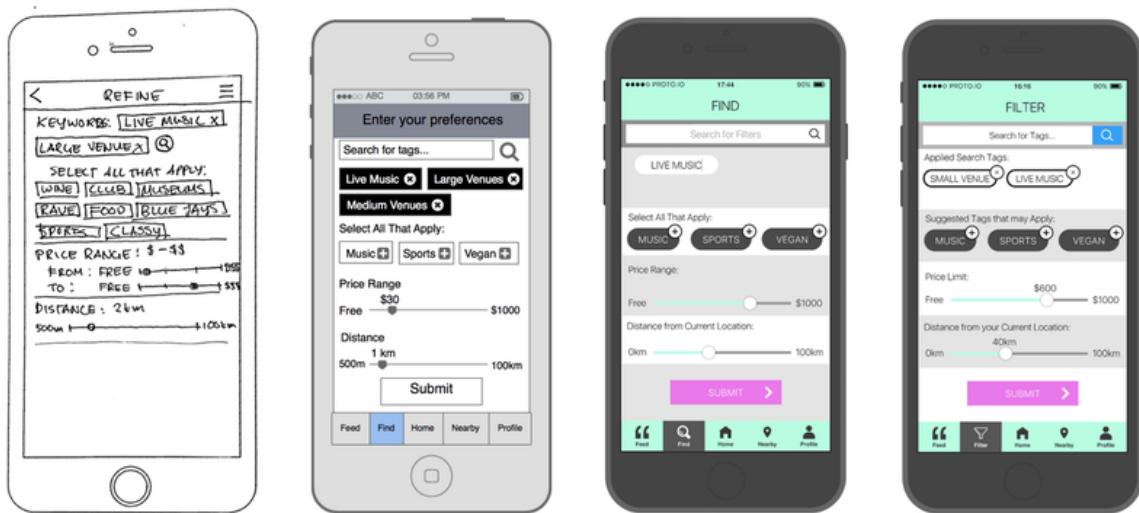
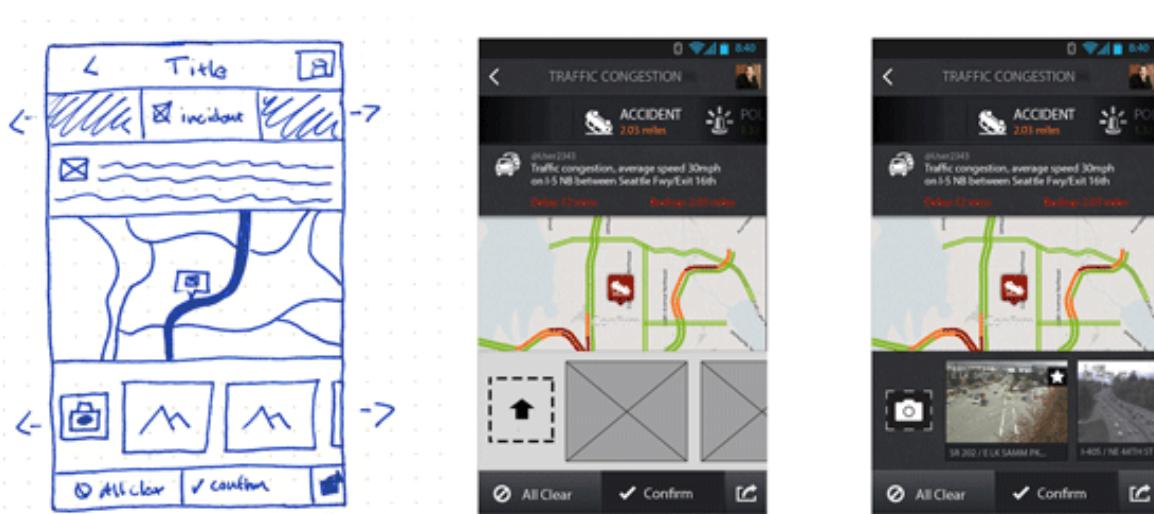


Hi-Fidelity Prototype

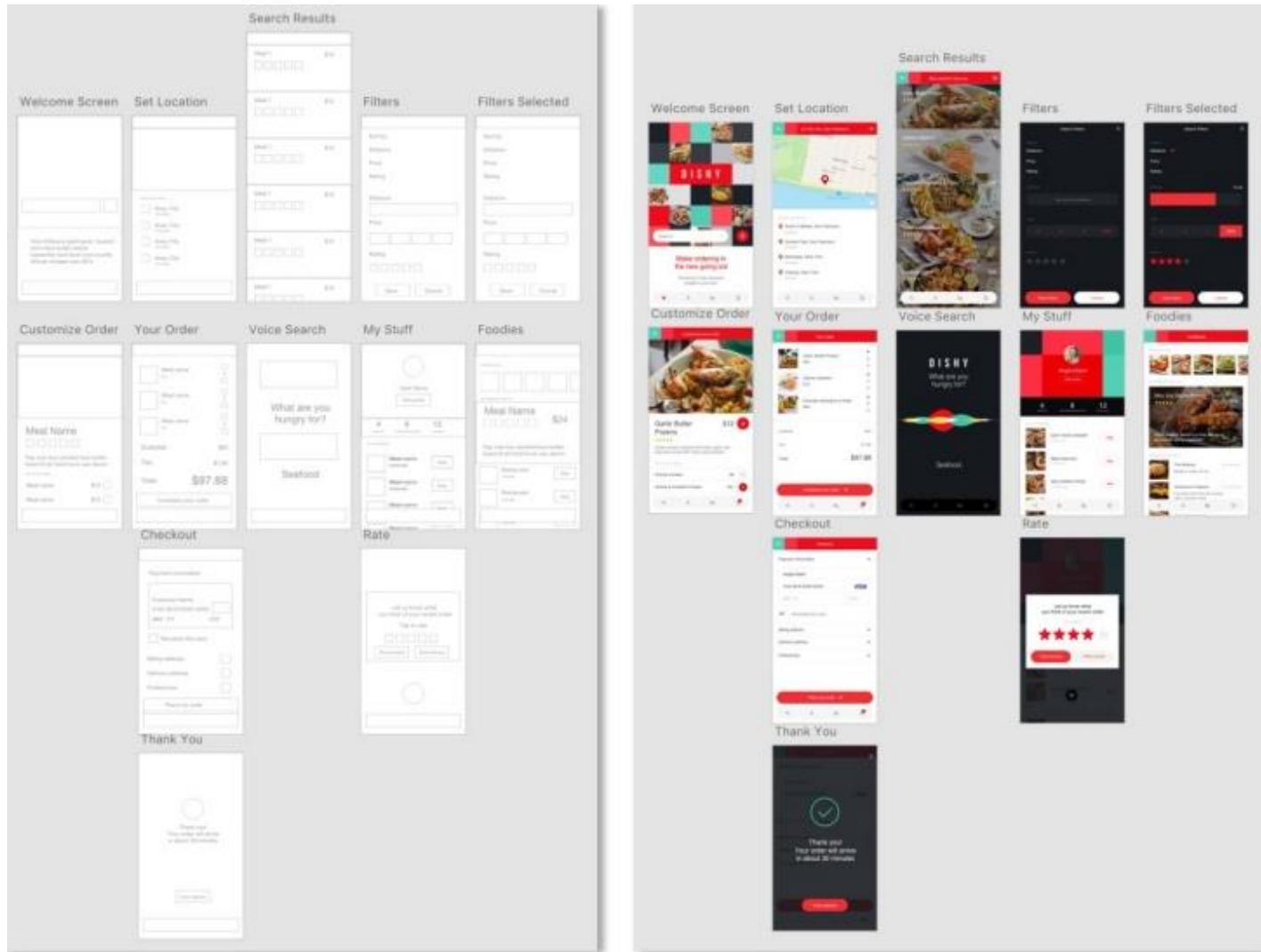


Lo-Fi to Hi-Fi

IDC Lab

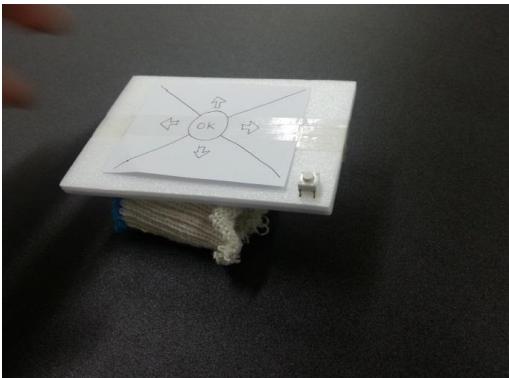
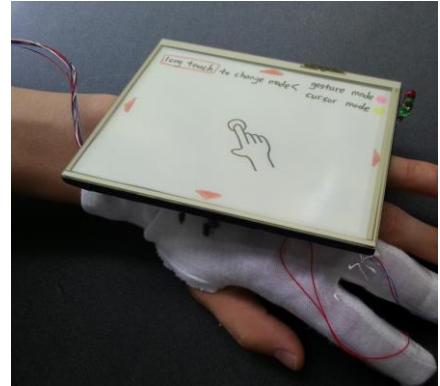
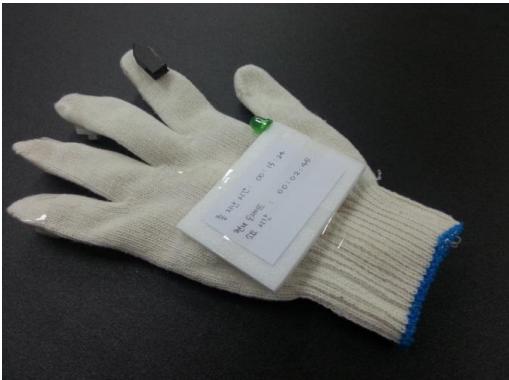
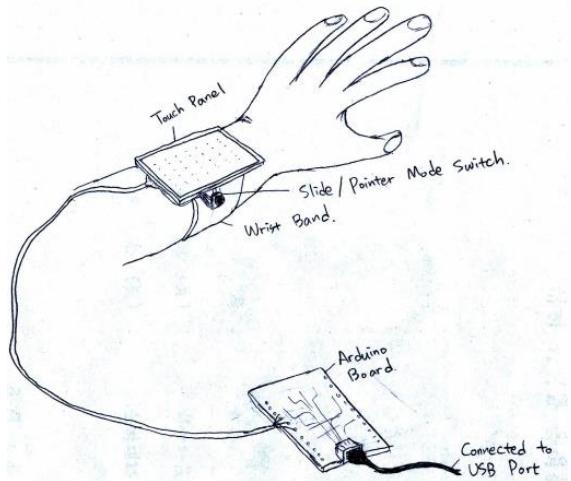


Lo-Fi to Hi-Fi



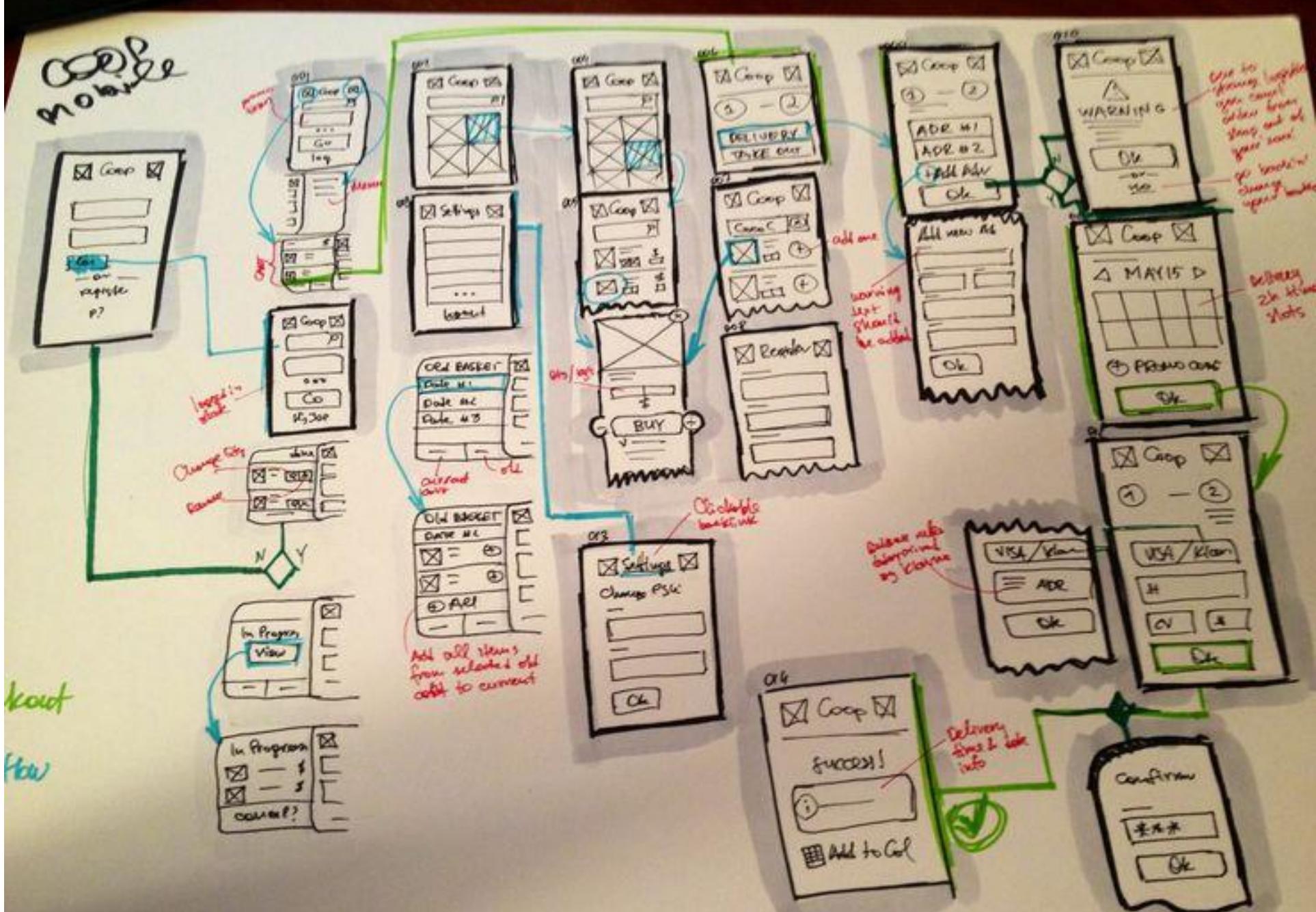
Lo-Fi to Hi-Fi

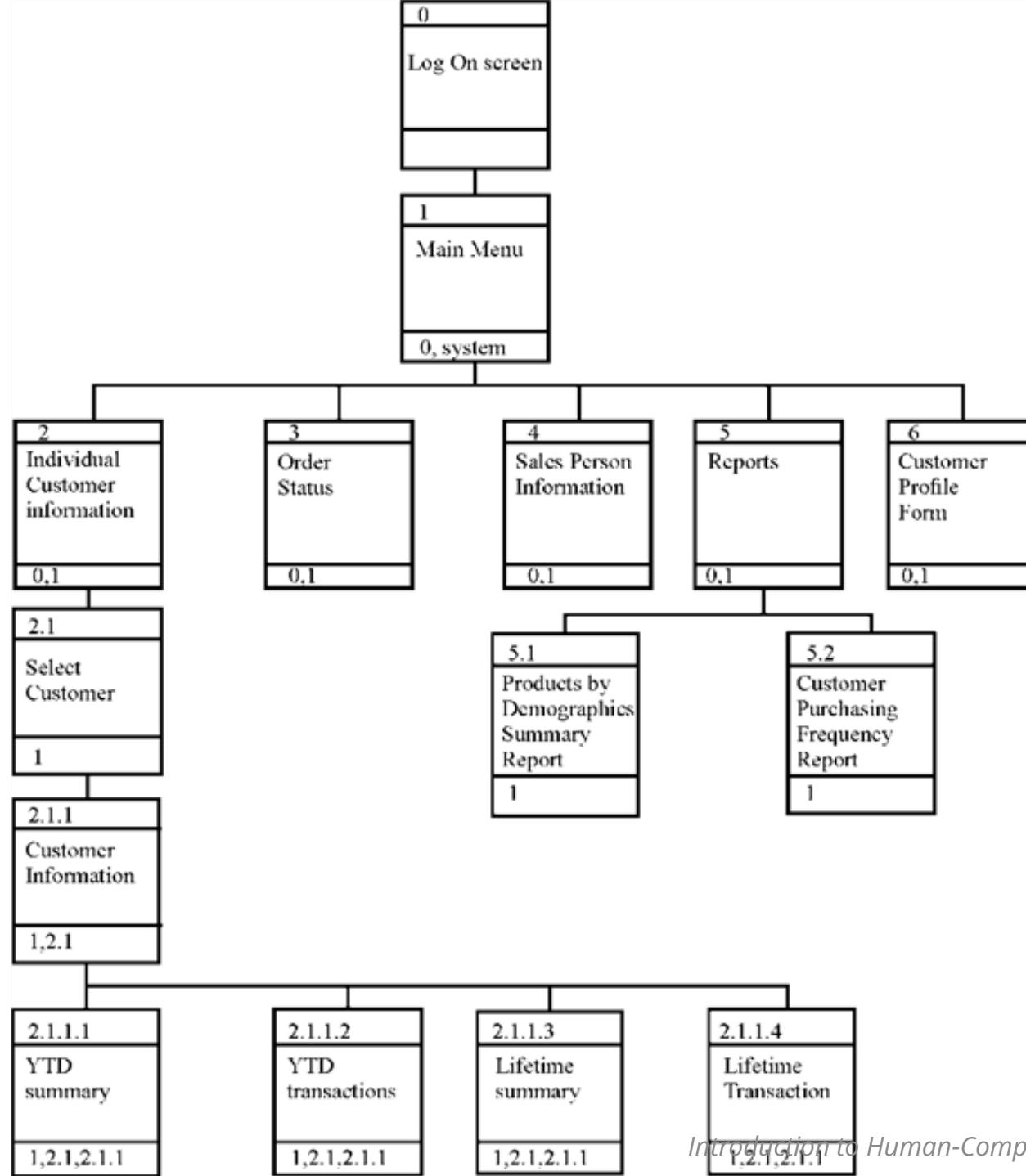
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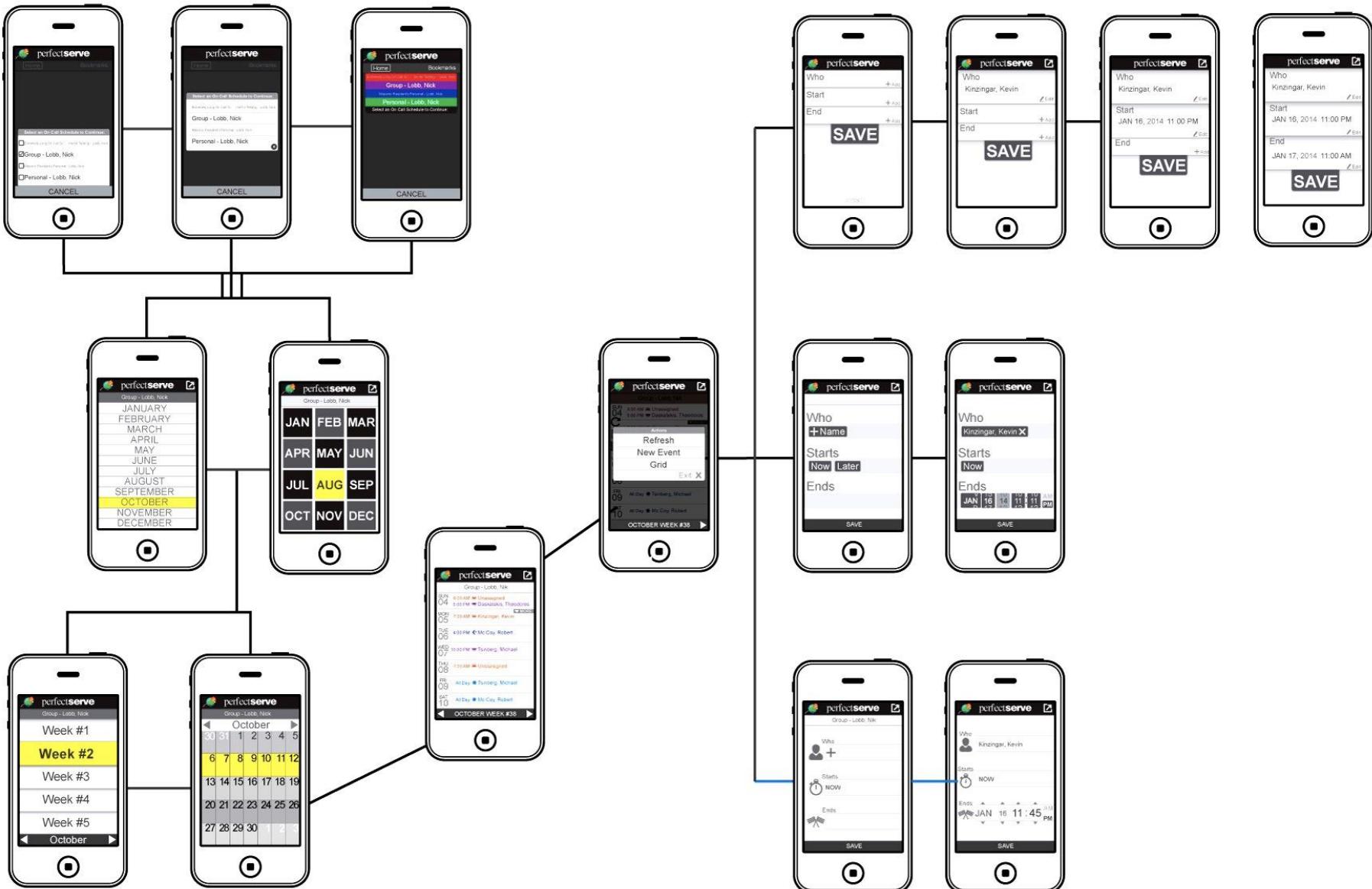


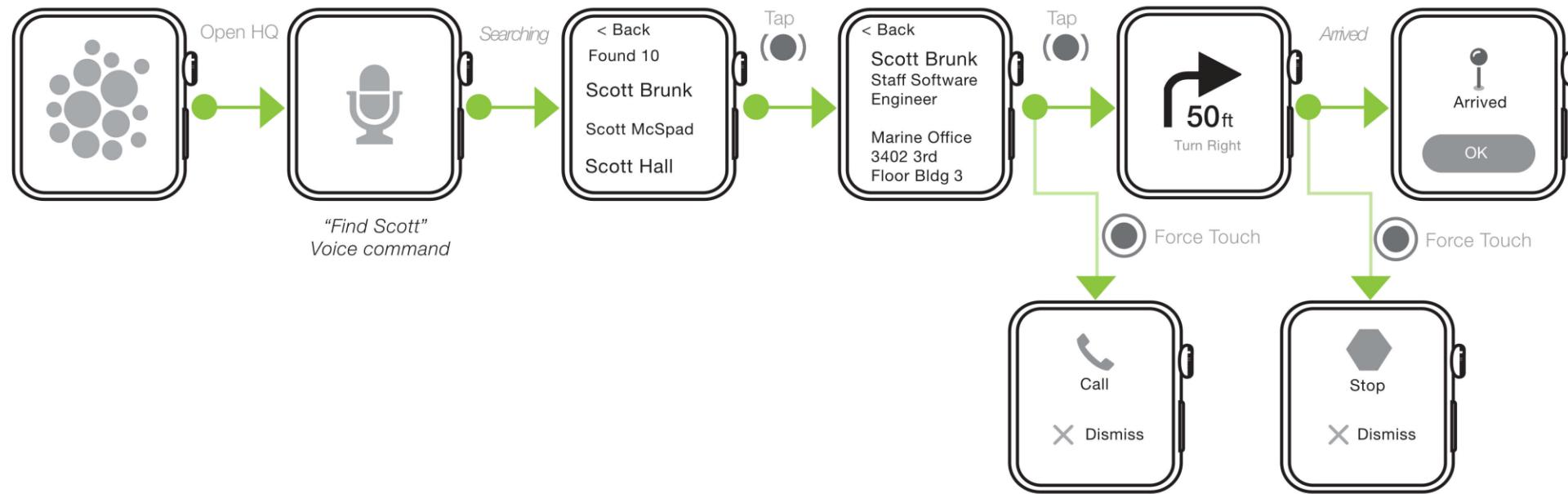
Flow Chart

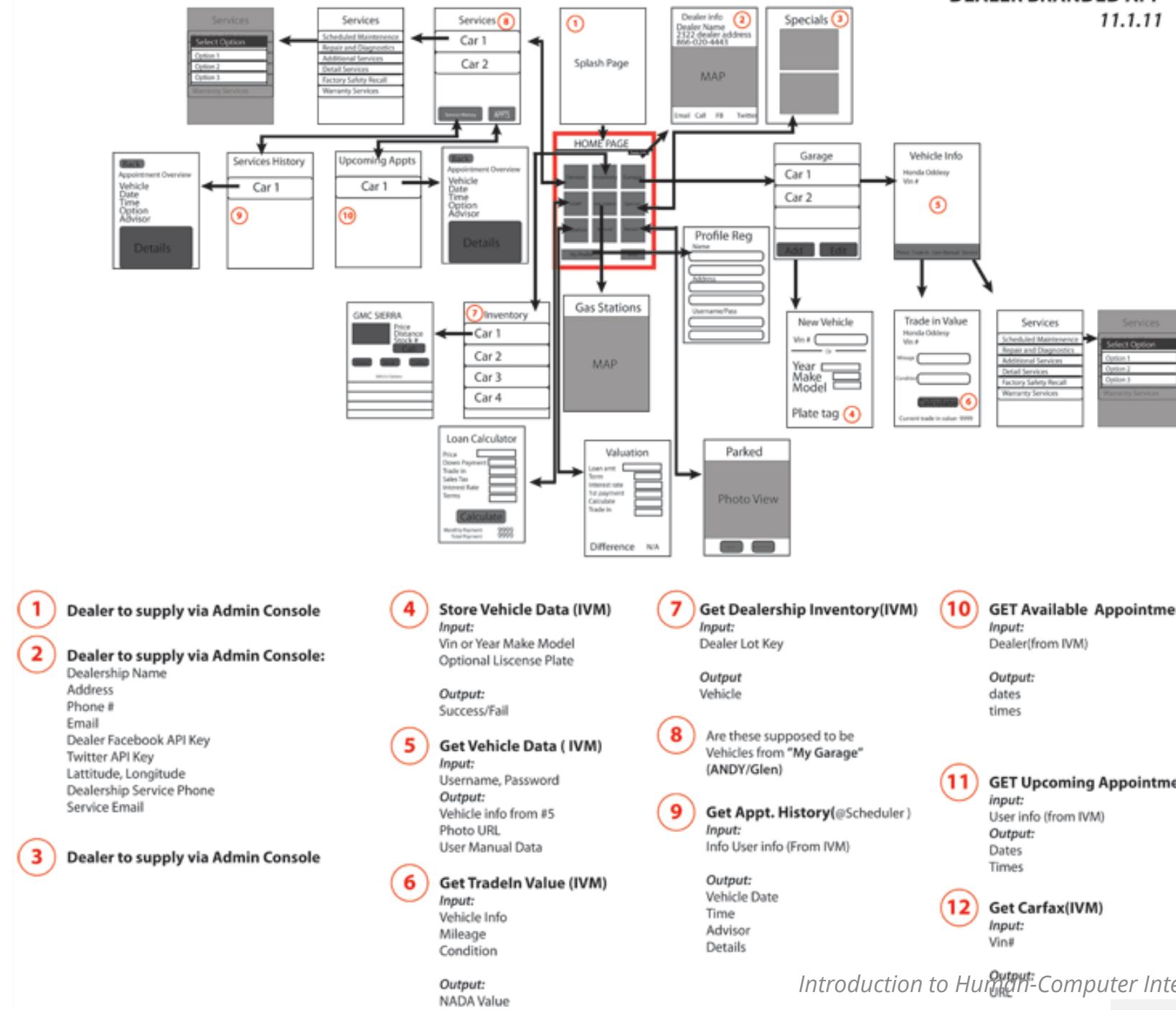
- Specific sequence of actions
- Visualize the entire process of how a user walks through the system
 - Visualize what is going on and thereby help understand a process, and perhaps also find flaws, bottlenecks, and other less-obvious features within it
- Can be used in any prototyping process











Credits

IDCLab



- Many slides of this material were adapted/inspired from the HCI course instructed by [Sunyoung Kim](#).