

UX, UI, Product Design

for mobile app development

UX IS NOT UI

HOW UX WANTS TO BE SEEN

- Field research
- Face to face interviewing
- Creation of user tests
- Gathering and organizing statistics
- Creating personas
- Product design
- Feature writing
- Requirement writing
- Graphic arts
- Interaction design
- Information architecture
- Usability
- Prototyping
- Interface layout
- Interface design
- Visual design
- Taxonomy creation
- Terminology creation
- Copywriting
- Presenting and speaking
- Working tightly with programmers
- Brainstorm coordination
- Design culture evangelism

HOW UX IS TYPICALLY SEEN

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<https://www.nngroup.com/articles/design-thinking/>

Empathize

Research Methods

Qualitative:

- Interviews
- Observation

Quantitative:

- Survey

User Interviews

Contextual Inquiry: users are first asked a set of standard questions and then observed and questioned while they work in their own environments

Recommended structure: 1 interviewer, 1 note taker, audio recording

Focus on **concrete facts, user motivation and feelings**

“Could you describe the last time you...?”

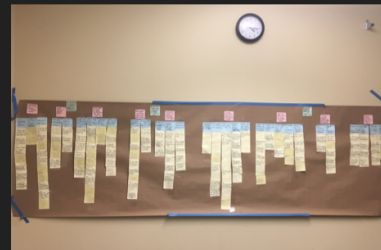
Better for exploring and gaining a broad understanding of a set of users & activities

What to ask

- Background (such as ethnographic data)
- The use of technology in general
- The use of the product
- The user's main objectives and motivations
- The user's pain points

How to conduct user interviews: <https://www.interaction-design.org/literature/article/how-to-conduct-user-interviews>

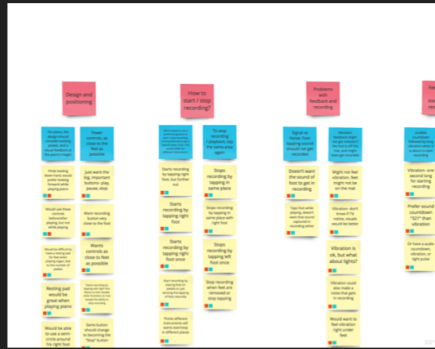
Qualitative Data Analysis: Affinity Mapping



[Mural](#), [Realtime Board](#)

- Write your observation, interview notes down on **yellow notes** (add tags if necessary)
- Each note should be **one statement**
- Group notes into columns by their natural relationships
- Summarize each column with a statement on **blue notes** as column headers
- Group columns into larger clusters and summarize with statements on **pink notes**
- Further group the clusters into larger themes and name them with **green notes** (green notes can just be loose themes instead of summarizing assertions)
- What you write on blue and pink notes are most important, they are key insights from your data

Affinity Mapping with Realtime Board



SI 612 Fall 2017 Musi - Anand Doshi, Chelsea Miller, Wei Cai, Shu Zhou

Surveys

A systematic way to gather quantitative data about a population via sampling

Things to measure:

Factual (characteristics), Attitude, Behavior

Better for making strong claims about narrow phenomena

Persona

"Never ever think you are the user"

3 is enough

Clark Andrews

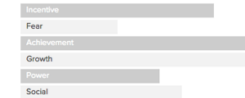
AGE 26
OCCUPATION Software Developer
STATUS Single
LOCATION San Jose, CA
TIER Experience Hacker
ARCHETYPE The Computer Nerd

Friendly Clever Go-Getter



"I feel like there's a smarter way for me to transition into a healthier lifestyle."

Motivations



Goals

- To cut down on unhealthy eating and drinking habits
- To measure multiple aspects of life more scientifically
- To set goals and see and make positive impacts on his life

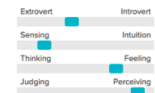
Frustrations

- Unfamiliar with wearable technology
- Saturated tracking market
- Manual tracking is too time consuming

Bio

Aaron is a systems software developer, a "data junkie" and for the past couple years, has been very interested in tracking aspects of his health and performance. Aaron wants to track his mood, happiness, sleep quality and how his eating and exercise habits affects his well being. Although he only drinks occasionally with friends on the weekend, he would like to cut down on alcohol intake.

Personality



Technology



Brands



Define

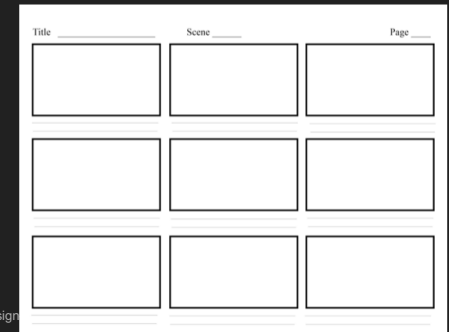
Scenarios, Storyboarding

Start with text and arrows

Add emotion 😊 😞 😡 😢 😠

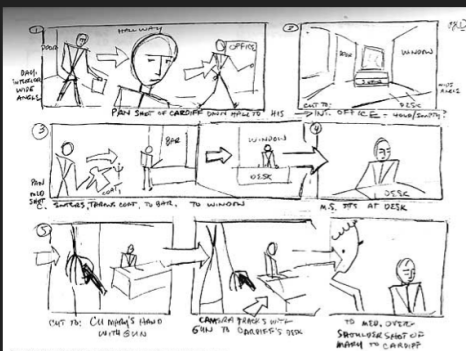
Turn each step into a storyboard frame

Design a clear outcome



Storyboarding in UX Design: <https://uxplanet.org/storyboarding-in-ux-design>

Don't be afraid of sketching

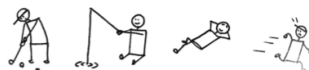


<https://accad.osu.edu/womenandtech/Storyboard%20Resource/>
Book: Creative Confidence

Stick Figures = EMOTION



Block Figures = ACTION



Blob Figures = RELATION



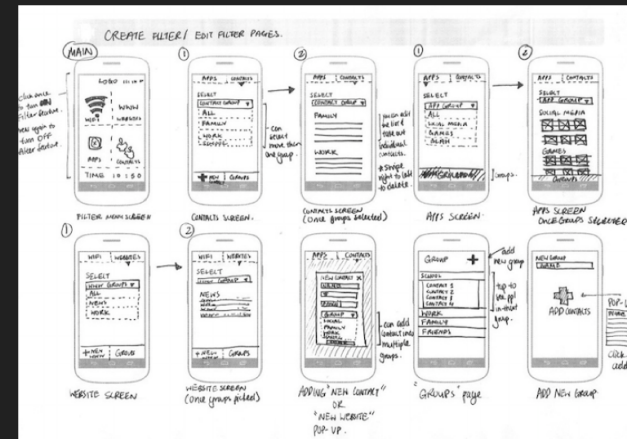
ILLUSTRATION BY DAN ROAM

Ideate & Prototype

Brainstorming and Sketching

The more the better

Sketches are meant to be messy



<https://www.uxpin.com/studio/blog/practical-look-using-wireframes/>

Paper prototype

Cheap

Lo-fidelity

Good for testing general ideas and features

[Demo](#)



Digital Design

Sketch

Adobe Illustrator, photoshop

Digital Prototyping

Powerpoint / Keynote [magic move]: <https://vimeo.com/100377108>

Invision

Proto.io

Animation:

[Principle](#)

[Form](#)

[Framer](#): Uses coffee script, full control of animation and interactions

Hybrid Tools

[Figma](#)

[Marvel](#)

[Demo](#)

Usability Testing

Design scenarios

Write down your key question

Write pre-test questions (demographic, behavioral, etc.) and debriefing questions (overall impression, specific interactions)

Write a script which includes asking users if you can video record

[Ask users to "think aloud"](#)

Color

Usually one primary, one accent is sufficient

Try to introduce as few colors as possible

Color contrast is important

[Material color picker](#)

Typography

Pick one typeface

Design a type hierarchy and stick to it



More Resources

[The iOS Design Guidelines](#)

[Apple Human Interface Guidelines](#)

[Google Material Design](#)

User Research vs Comparative Analysis

Research:

- Why people use competitors' products
- What they like, dislike
- How people use competitors' products
- How many people in a population use different products
- Are people using multiple products at once
- How do people perceive the products

User Research vs Comparative Analysis

Analysis:

- Involves “research” in the form of learning about various products
- Reading about them
- Using them (when possible)
- Reading what others (including users) have said
- [Product hunt](#)

Gate Researcher Competitive Analysis Matrix

Product Name	GALE	MIT OCW	MIT Open CourseWare	MIT Learning Experience Center	Google English Portal	Individual's Manual for People Who Don't Ask Questions	MIT Advisor
Competitor Type	Client	Client	Client	Client	Client	Client	Client
Content							
Offers search results	●	●	○	○	○	○	○
Offers a range of content on a given topic	●	●	○	○	○	○	○
Offers introductory text to a subject	●	●	○	○	○	○	○
Offers more in-depth content on a subject	●	●	○	○	○	○	○
Written in approachable language	●	●	○	○	○	○	○
Supports the appropriate educational level of students	●	●	○	○	○	○	○
Engages students through multiple means of engagement	○	○	○	○	○	○	○
Features							
Has a search and filters	●	●	○	○	○	○	○
Search provided for content	●	●	○	○	○	○	○
Offers collaboration among communication between faculty members	○	○	○	○	○	○	○
Offers content specific content	○	○	○	○	○	○	○
Offers plans from other performance/level courses	○	○	○	○	○	○	○
Offers step-by-step tutorials for creating a new course	○	○	○	○	○	○	○
Offers content suggestions for integrating existing materials with new content	○	○	○	○	○	○	○
Allows users to make notes on existing materials	●	○	○	○	○	○	○
Offers highlighting on materials	●	○	○	○	○	○	○
Offers ability to save useful articles	●	○	○	○	○	○	○
Offers abilities to archive	○	○	○	○	○	○	○
Offers ability to purchase and purchase materials	○	○	○	○	○	○	○
Offers ability to purchase and purchase materials	○	○	○	○	○	○	○
Cost (Price/Type)	Free (openly)	Free	Free	Free	Free	Free (openly)	Free
Free or paid (with free trial)	Free (openly)	Free	Free	Free	Free	Free (openly)	Free
Free or paid (with free trial)	Free (openly)	Free	Free	Free	Free	Free (openly)	Free

Key:
 ● Yes
 ○ Occasionally (it depends)
 ○ No

COMPARATIVE ANALYSIS 2 (Aesthetics/Purchasing)

Competitor Type	Client	Direct							Indirect
Product Name	DUO	Symantec	Okta	RSA/Actlon	Azure	Deepnet	Checkpoint	SMS Passcode	Google
Product Logo									
URL	www.duo.com	www.symantec.com	www.okta.com	www.rsa.com	www.azure.com	www.deepnet.com	www.checkpoint.com	www.smpasscode.com	www.google.com
Aesthetics									
1. User Interface	A	B	B	C	B	B	C	B	N/A
2. Graphics	A	C	B	C	B	C	C	B	N/A
3. Typography	A	A	A	B	A	A	A	B	N/A
4. Font Family	Helvetica	Arial	Proxima-Nova	Arial	Segoe	Montserrat	DIN / Helvetica Neue	Helvetica Neue	N/A
5. Consistency across pages	A	A	A	B	A	B	A	A	N/A
6. Instances of Images	Medium	High	Low	High	Medium	Medium	Extremely Low	Helvetica Neue	N/A
7. Custom Graphic Design (e.g. infographics, ebook covers, etc.)	Yes	Yes	No	No	Yes	No	No	No	N/A
8. Icons	A	B	B	C	A	C	C	C	N/A
9. Positive framing (techno-optimism)	A	B	A	F	A	B	B	B	N/A
10. Scroll Effect	No	No	Yes	No	No	No	No	No	N/A
11. Stock / Generic Photos	No	Yes	No	Yes	No	No	Yes	Yes	N/A
Purchasing									
1. Live Chat Option	No	No	No	Yes	No	No	Yes	No	N/A
2. Contact Form	Yes	No	Yes	No	Yes	Yes	No	Yes	N/A