

Low-Fi Prototyping

No screens



Prof. Lydia Chilton
COMS 4170
1 April 2019

Say your name



Goal 2

When the needs and abilities of users are unclear,
design systems by **learning from iteration** and experimentation.


Part 3: Editing the Party Planning Committee

The interface to edit the party planning committee (PPC) is a drag and drop direct manipulation interface as described below.

1. The PPC UI needs to display two lists:
 - 1) a list of all the [employees seen here](#), and
 - 2) a list of people on the party planning committee.
2. In its default state, the party planning committee list must have a div at the top of the list to serve as a drop target.
3. Using JQuery Draggable and Droppable, the PPC list to the head of the of the PPC list, and must also be true: names from the PPC list must be implemented in the Module.
4. To cue that an element is draggable, its background turns light yellow, and the background turns light blue when it is being dragged.
5. While the item is being dragged, the background turns light yellow, and the background turns light blue when it is being dragged.
6. While the item is being dragged, it should show a light blue background.
7. While the item is being dragged, the background turns light yellow, and the background turns light blue when it is being dragged.
8. When the item is dragged over the drop target, the background turns light yellow, and the background turns light blue when it is being dragged.
9. If an item is "dropped" anywhere other than the drop target, the background turns light yellow, and the background turns light blue when it is being dragged.

Note:
When the user toggles between the Logging Sales and the Party Planning Committee, the PPC list should be stored in a javascript variable that should be there. However, for this implementation, it should be stored in a javascript variable that should be there. However, for this implementation, it should be stored in a javascript variable that should be there.

Please submit your HTML, CSS, and JS files, a

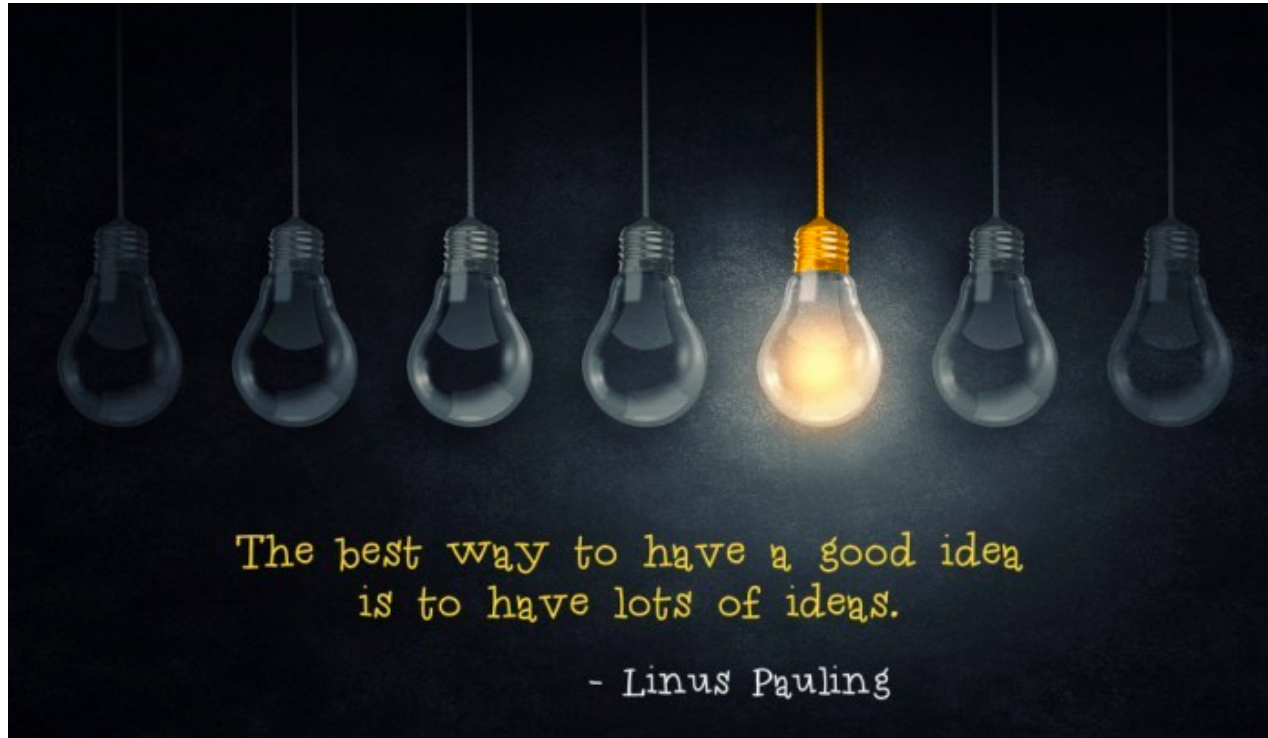


Keep a list of the
party planning committee

Clear needs, abilities, goal

Unclear needs, abilities, goal

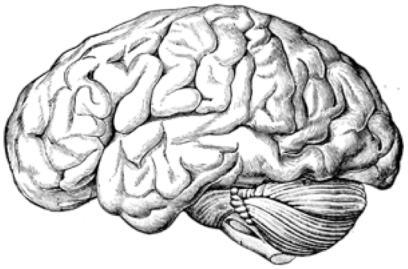
So far, you have brainstormed ideas



Ideas are a good starting point.
But ideas are cheap

Execution is all that matters.

How do get from idea to product?

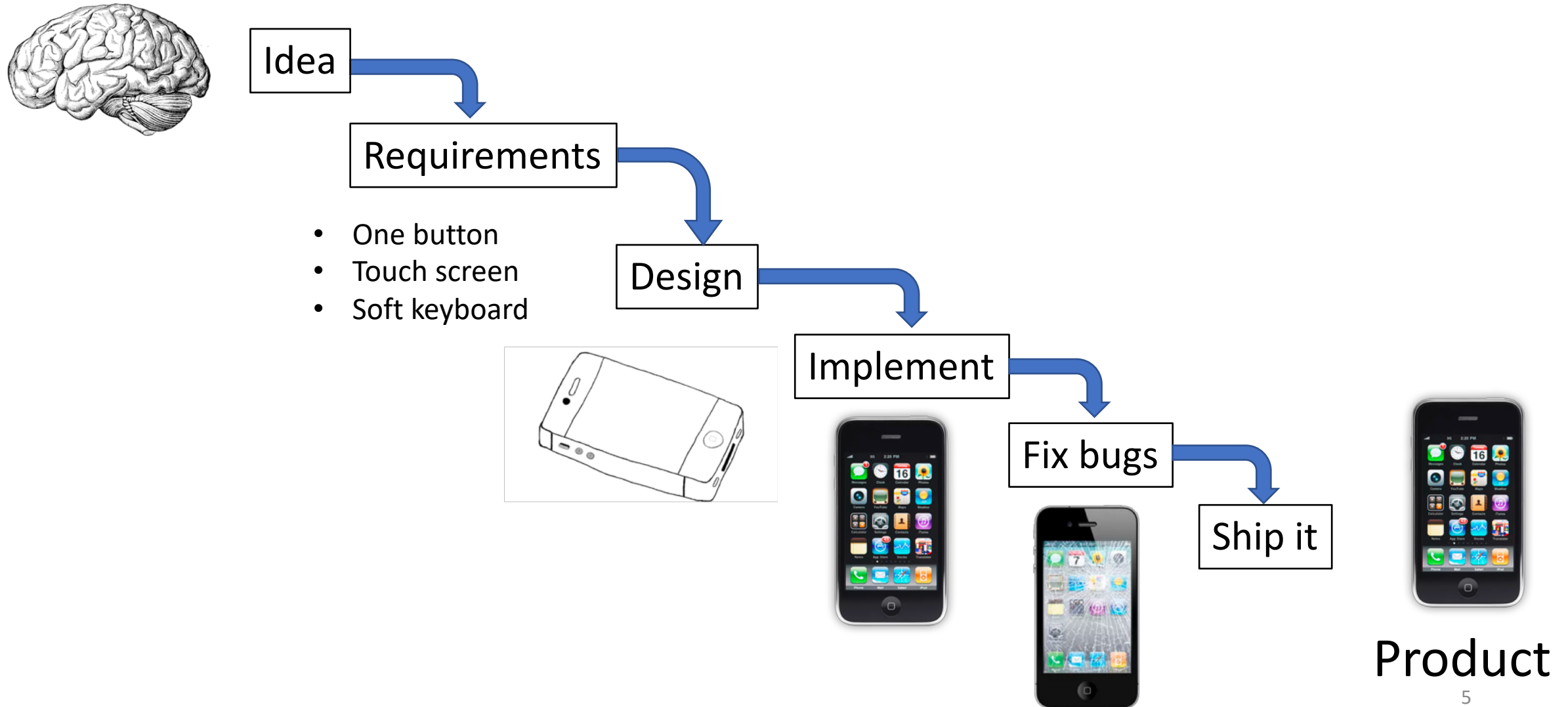


Idea

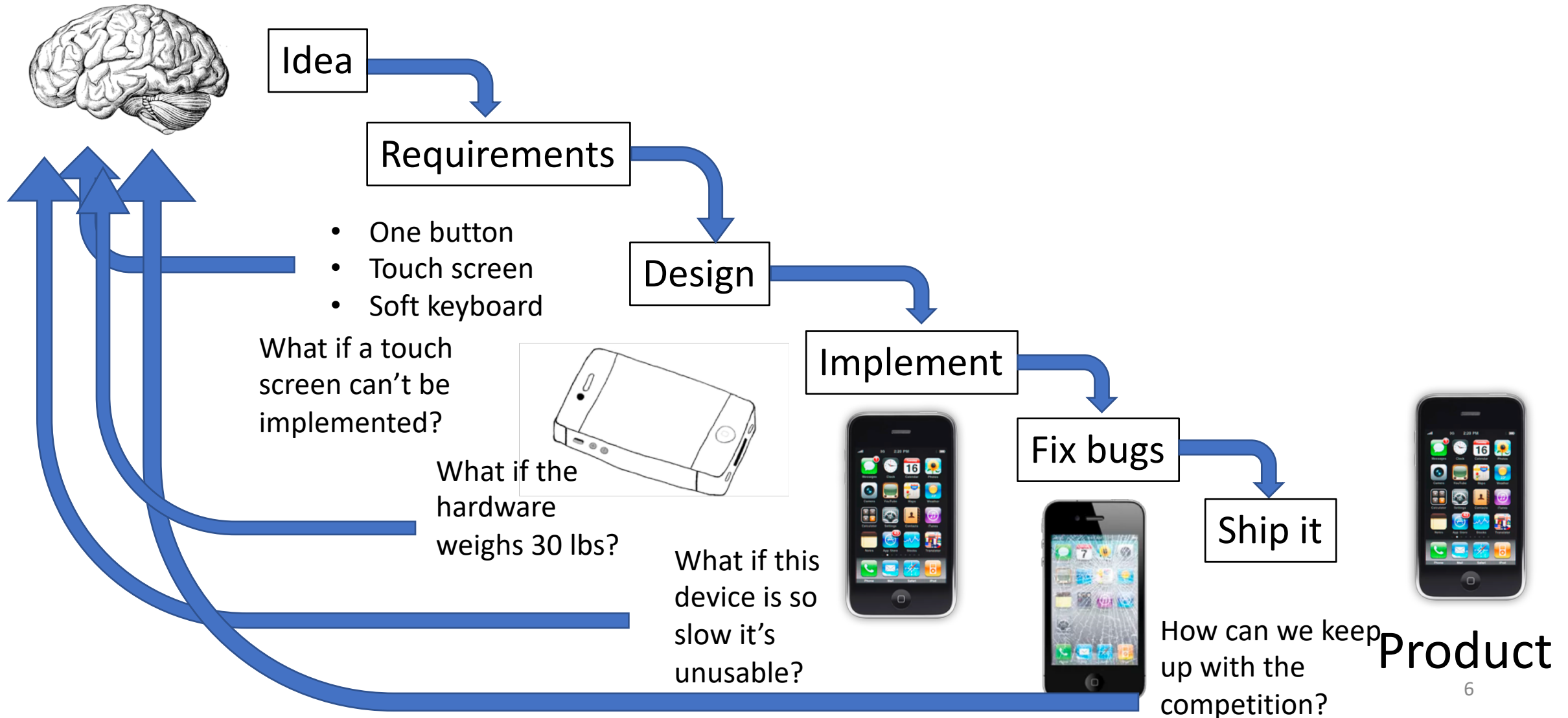


Product

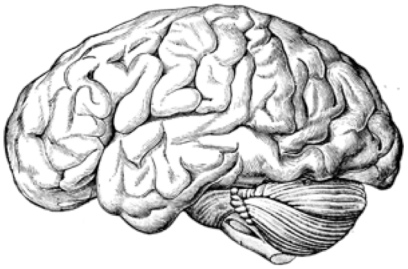
The Waterfall Model



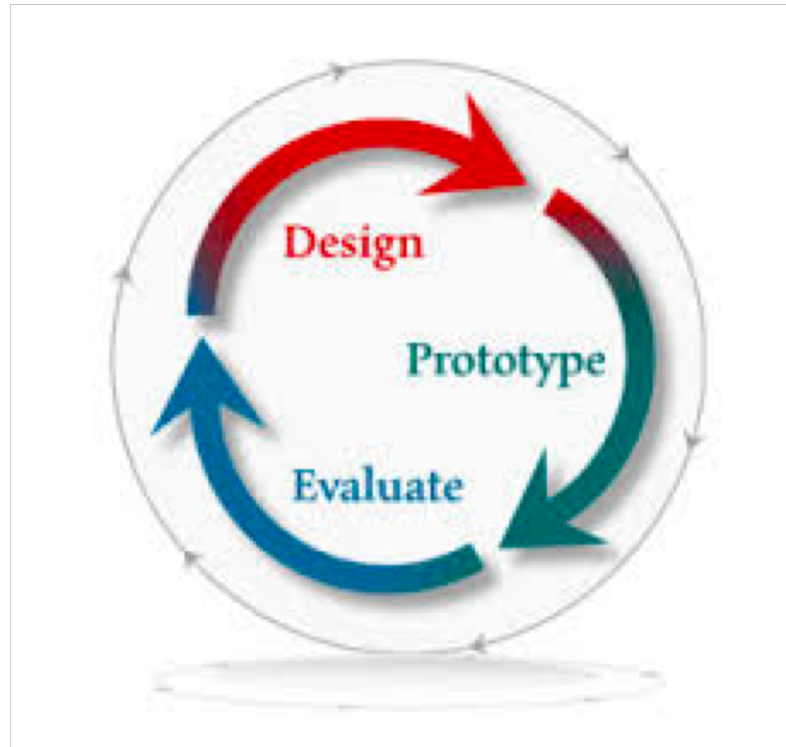
The Waterfall Model **is too rigid.**



Iterative Design

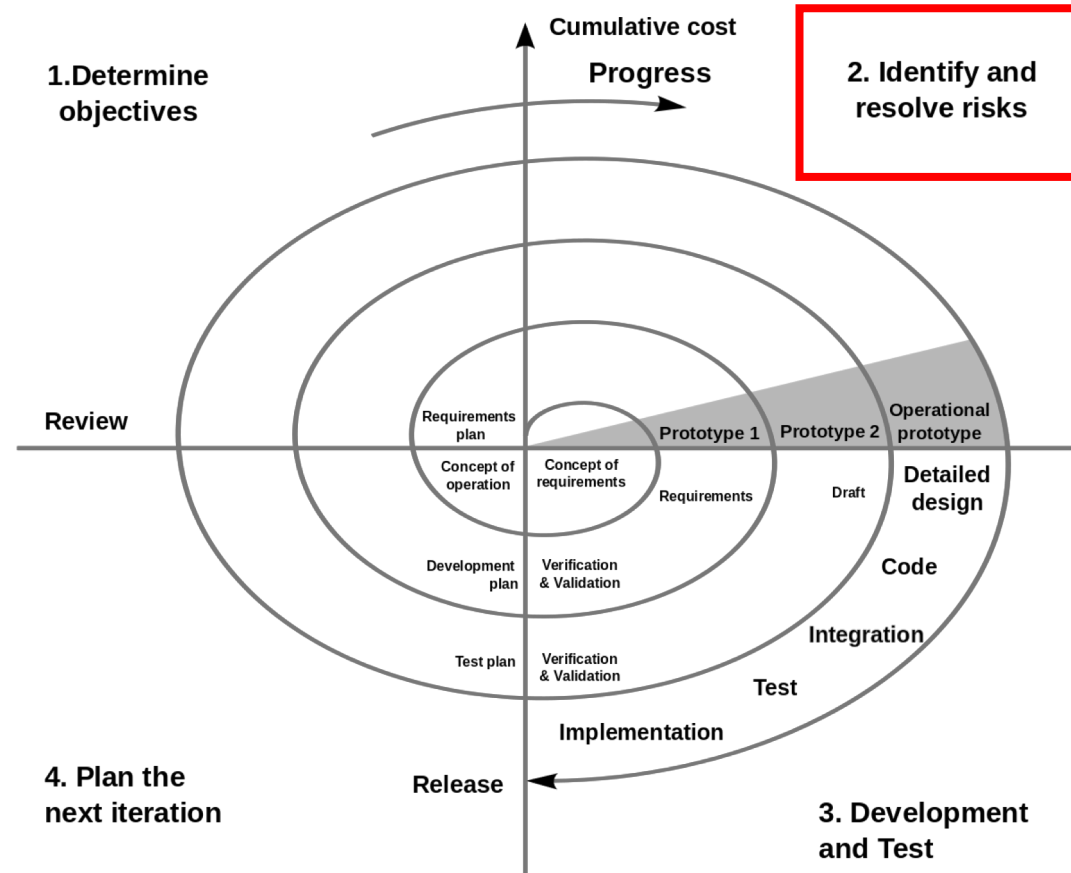


Idea



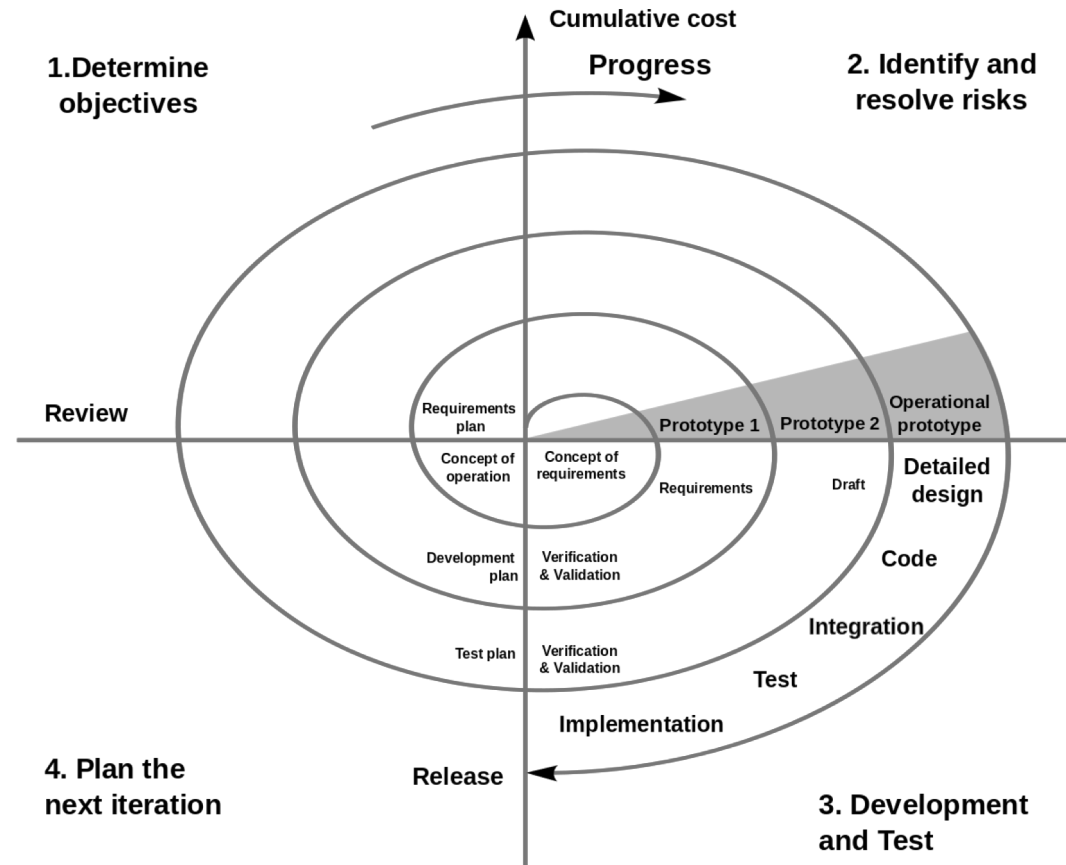
Product

Iterative Design is good because it minimizes risk



Low-Fidelity Prototypes

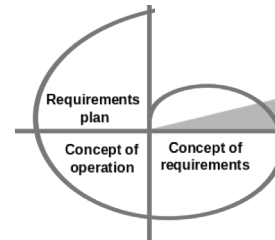
In Iterative Design, Prototypes get increasingly high-fidelity



The first iteration should be as **low-fidelity** as possible

1. Determine objectives

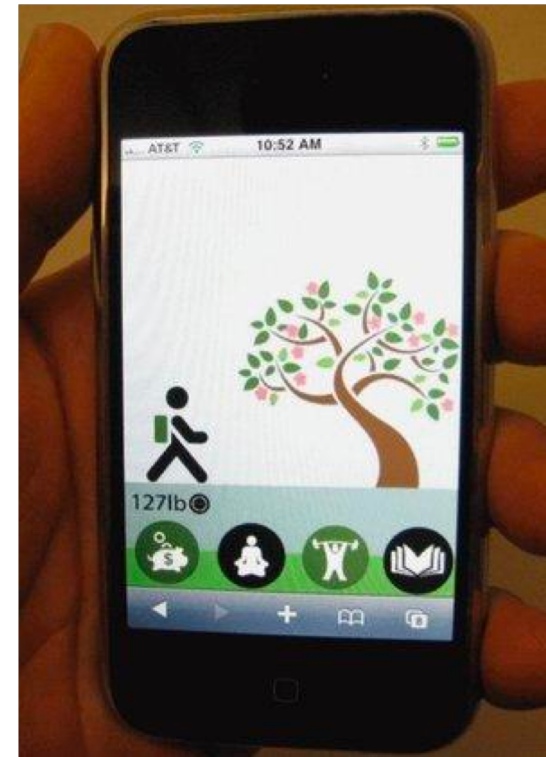
2. Identify and resolve risks



4. Plan the next iteration

3. Development and Test

Start with a paper prototype



Paper? Are you kidding me?

Hand-drawn sketches of a fitness app interface.

ACTIVITIES (add)

JAN	FEB	MAR
APR	MAY	JUN
JUL	AUG	SEP
OCT	NOV	DEC

today

GOALS (add)

quick add

ADD GOAL

CATEGORY _____

SUB CATEGORY _____

ACTIVITY _____

DURATION _____

SESSIONS _____

REPEAT _____

add goal

EDIT GOAL

CATEGORY _____

SUB CATEGORY _____

ACTIVITY _____

DURATION _____

SESSIONS _____

REPEAT _____

save changes

Hand-drawn sketches of a fitness app interface.

Main + narrative

LAST ACTIVITY

WALK 40 min 10:00pm

PROGRESS

quick add

Main + narrative

LAST ACTIVITY

BIKE 20 min 1:30pm

PROGRESS

quick add

Main + narrative

LAST ACTIVITY

RUN 50 yards 4:35pm

PROGRESS

x 2 before & after asm quick add

No.

Hand-drawn sketches of a fitness app interface.

FITBIT ON >

TAEKWONDO 30 min 2:30pm

quick add

NEW ACTIVITY

CATEGORY _____

SUB CATEGORY _____

CUSTOM ACTIVITY _____

DATE _____

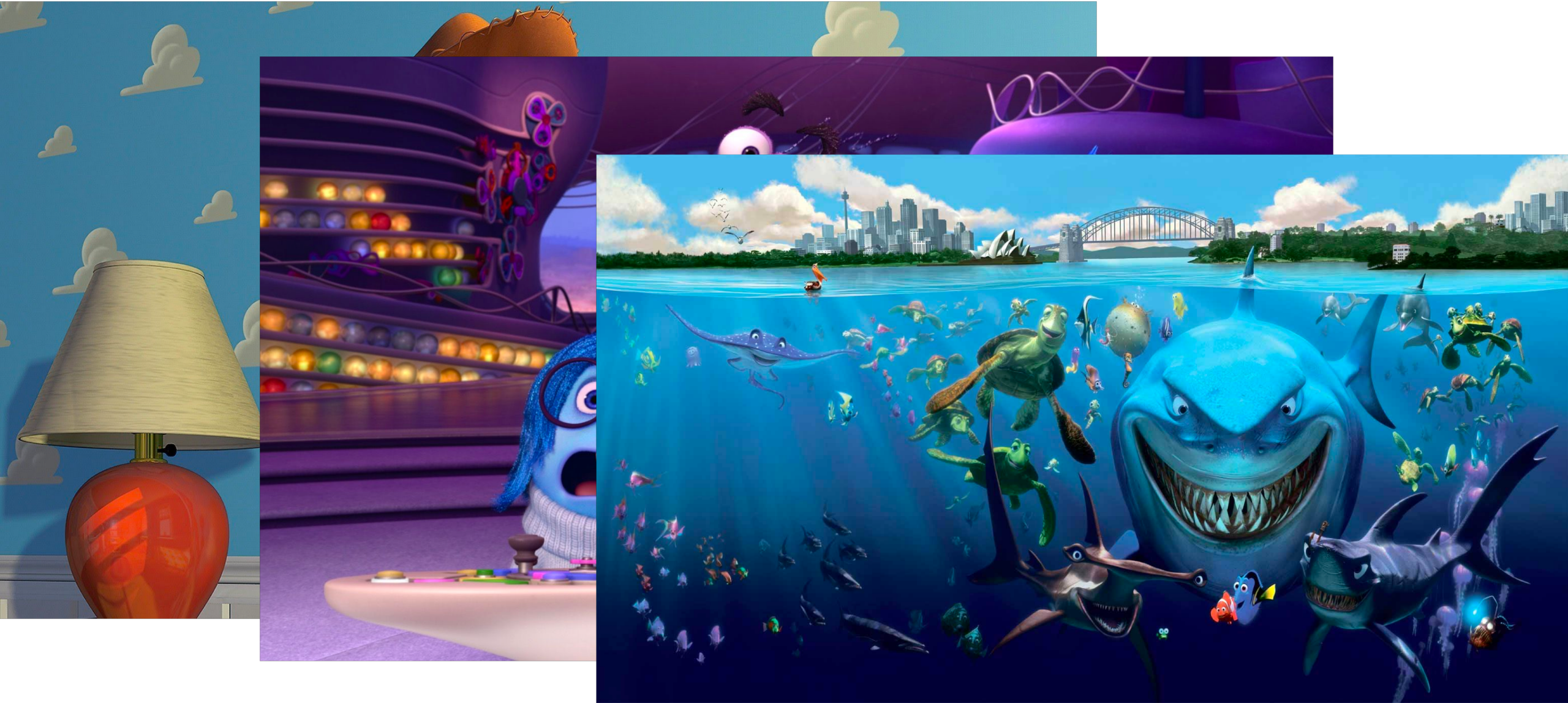
TIME _____

DURATION _____

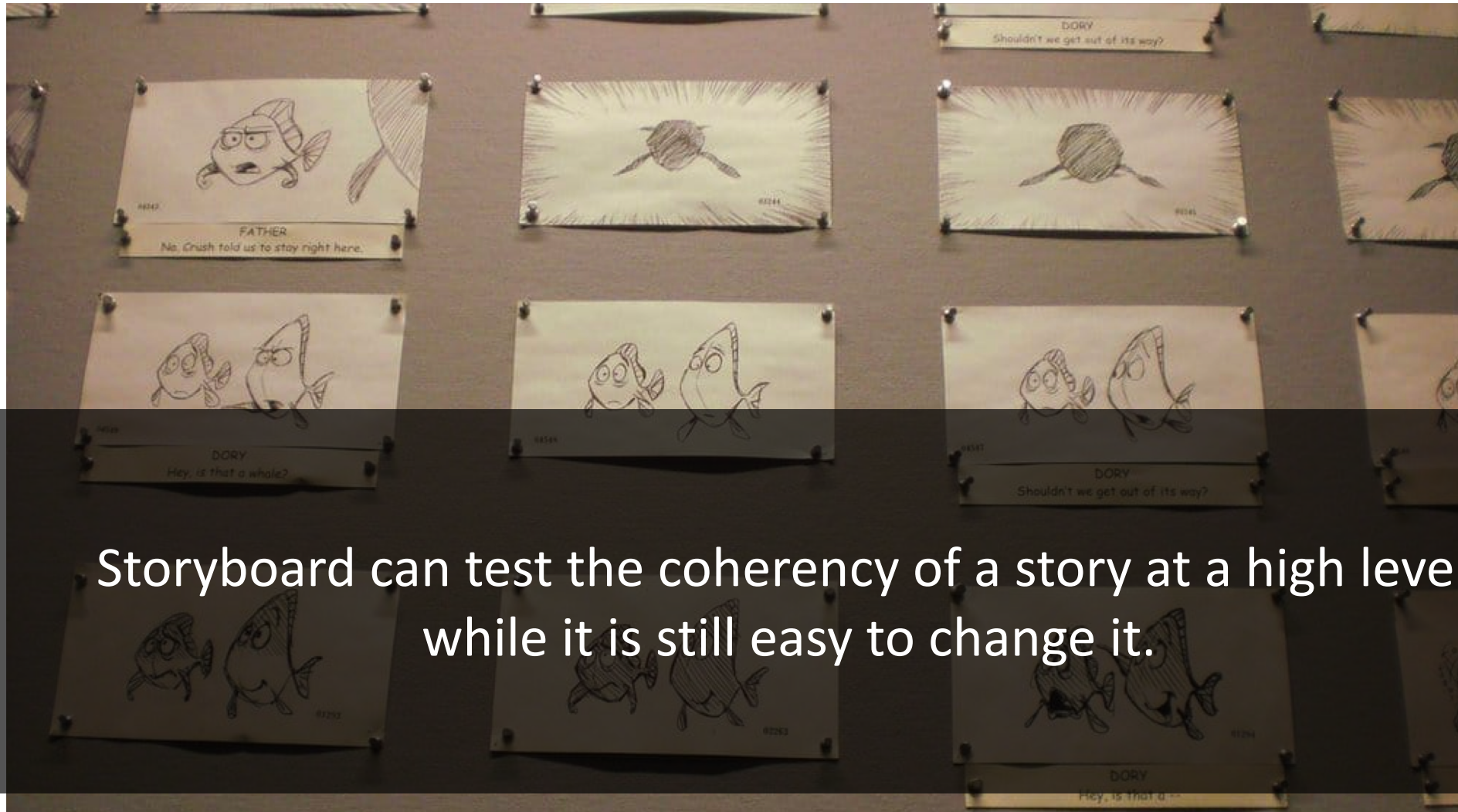
add activity

after selecting custom form

Pixar makes detailed and beautiful films

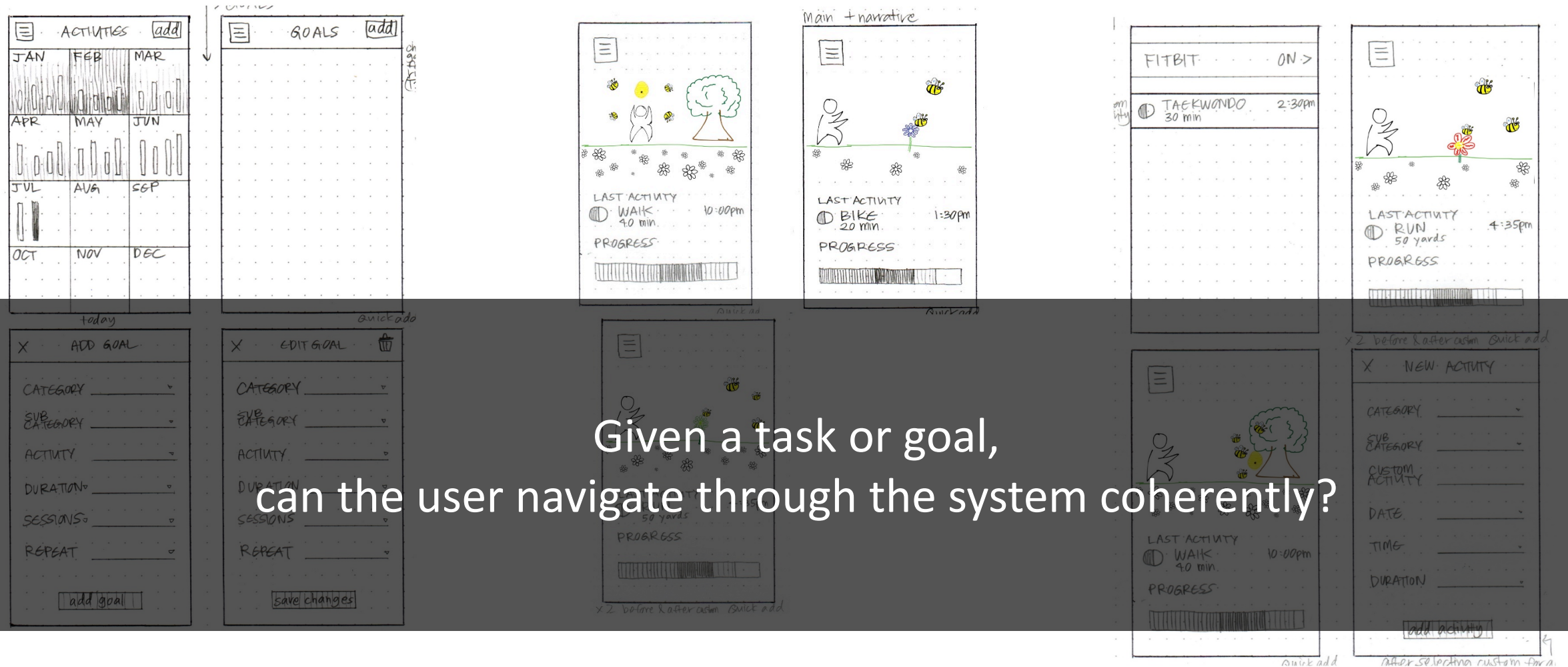


They always start with a **storyboard**. Why?



Storyboard can test the coherency of a story at a high level, while it is still easy to change it.

Storyboards are also good for prototyping software interactions



Menus and Navigation

No screens

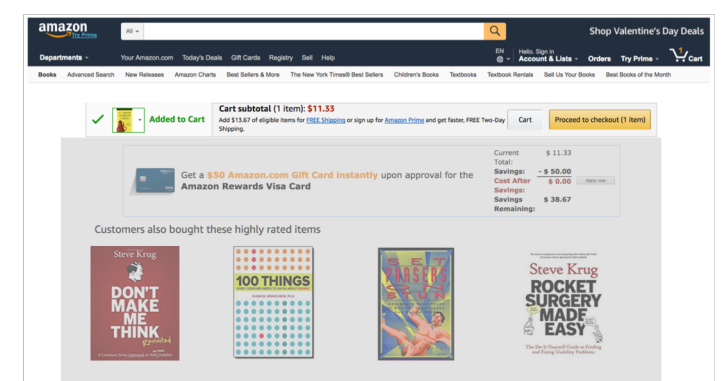
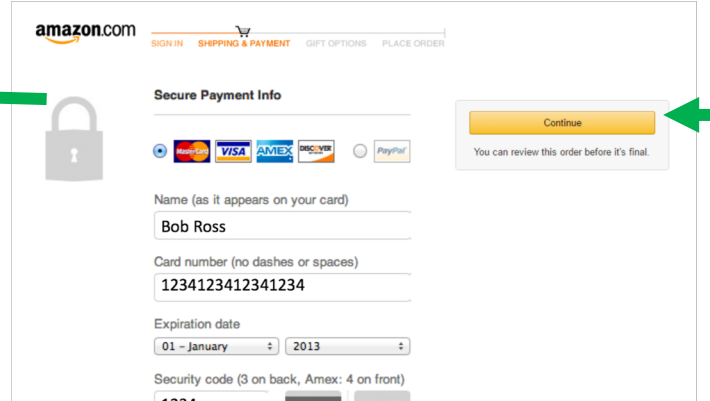
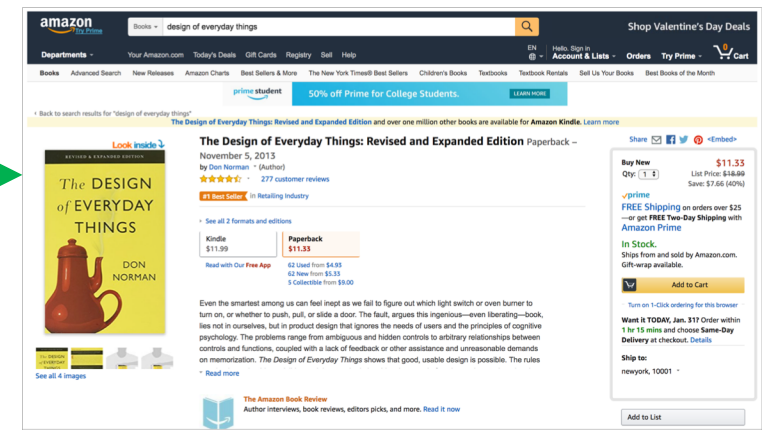
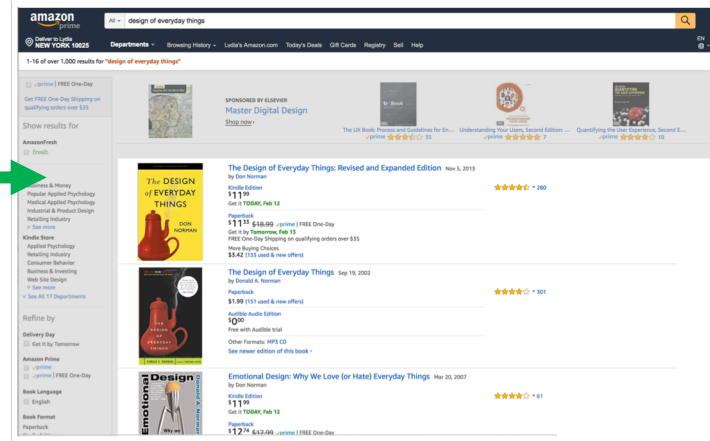
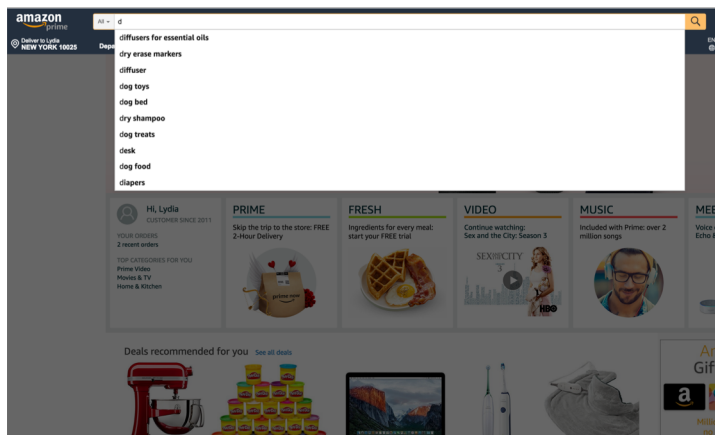


Prof. Lydia Chilton
COMS 4170
25 February 2019

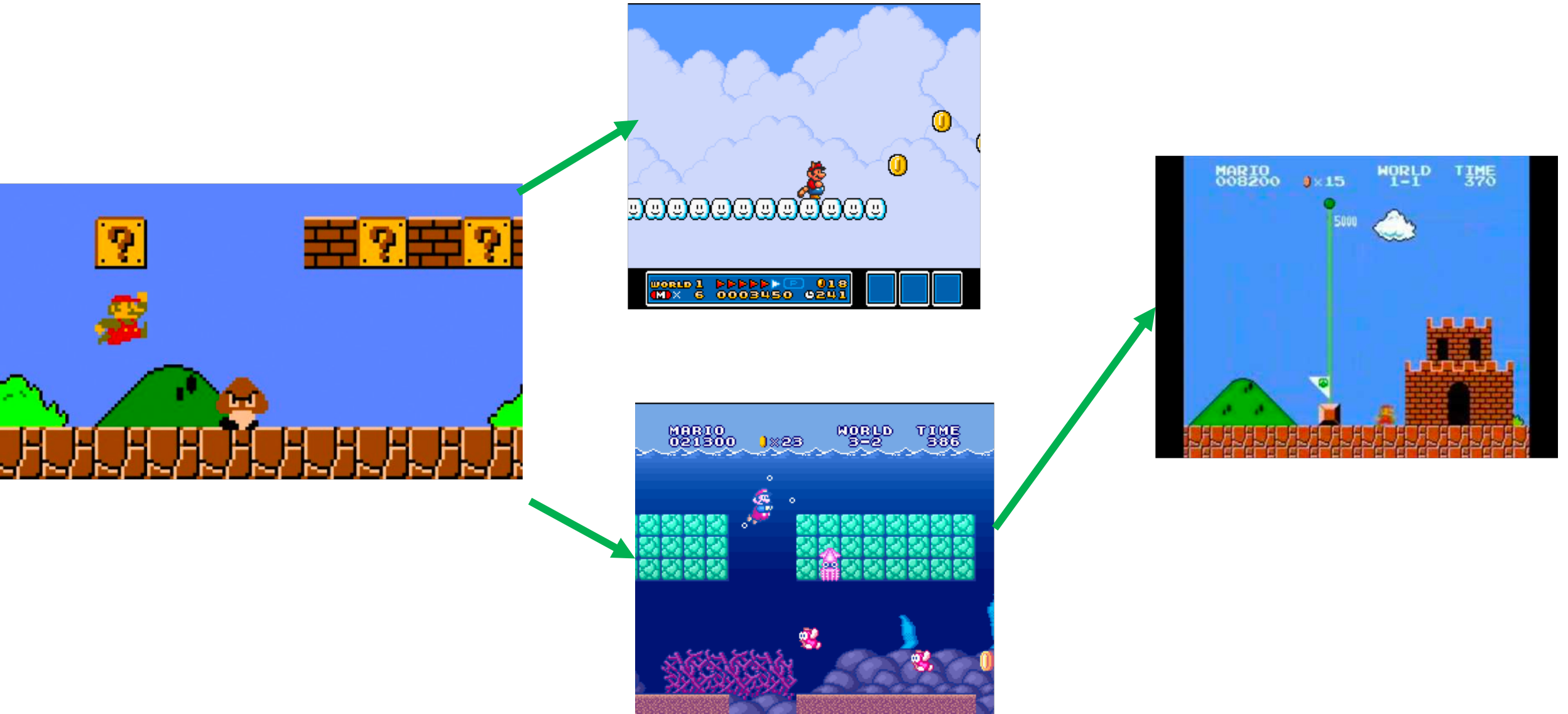
Say your name



For complex goals, break the task into states, options, and transitions to new states.

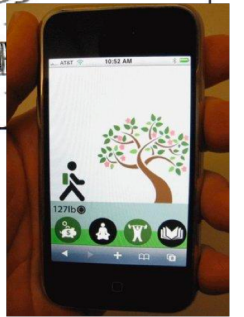
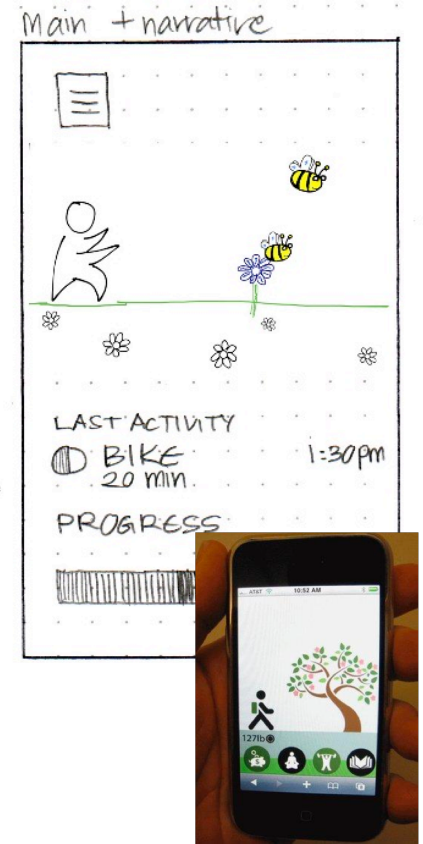
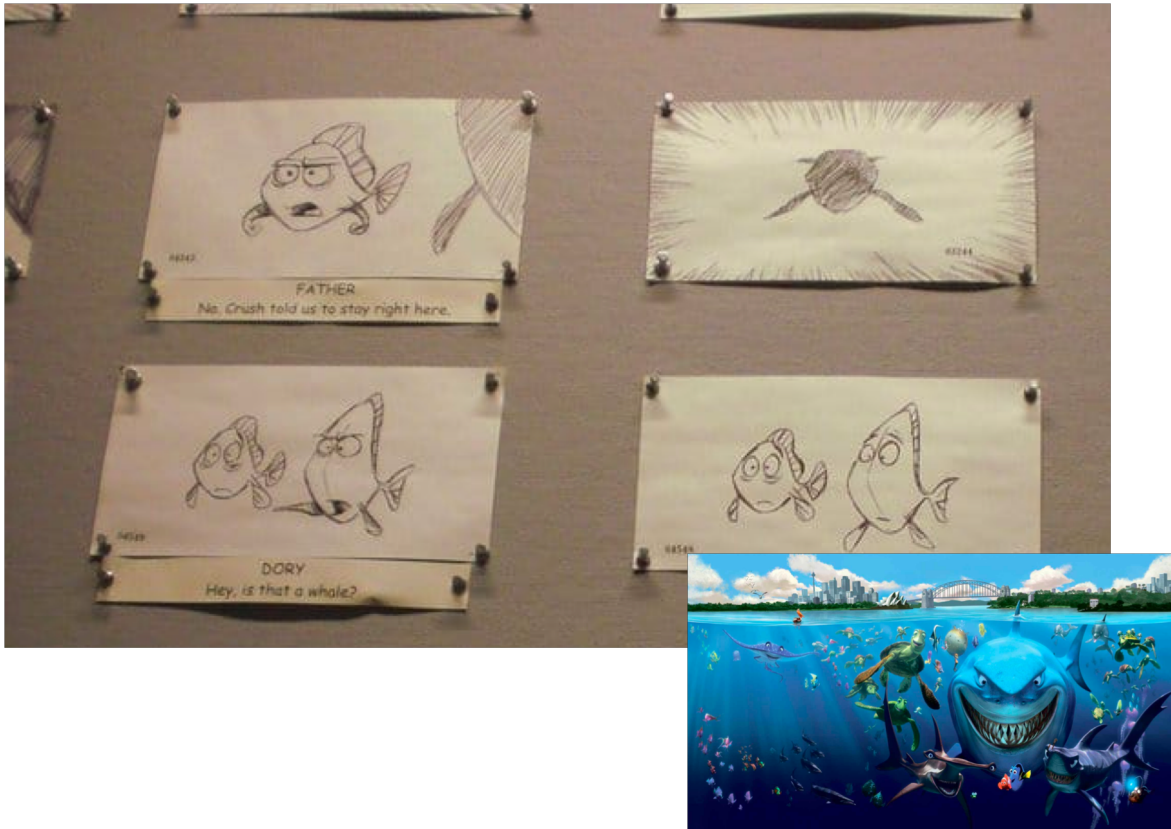


Think of it like a video game and
You are designing the experience of your user



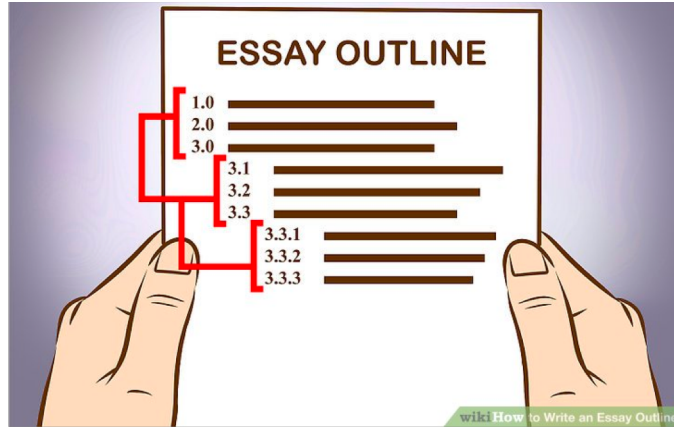
Pixar starts with storyboards.

Software starts with paper prototypes.



Other domains with low-fi prototypes

Essays: outlines



Acting: Table reads



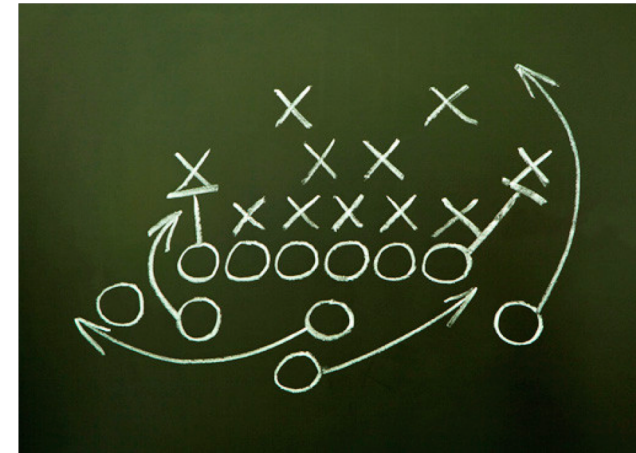
Painting: Sketches



Fashion: Sketches



Sports: Diagram "plays"



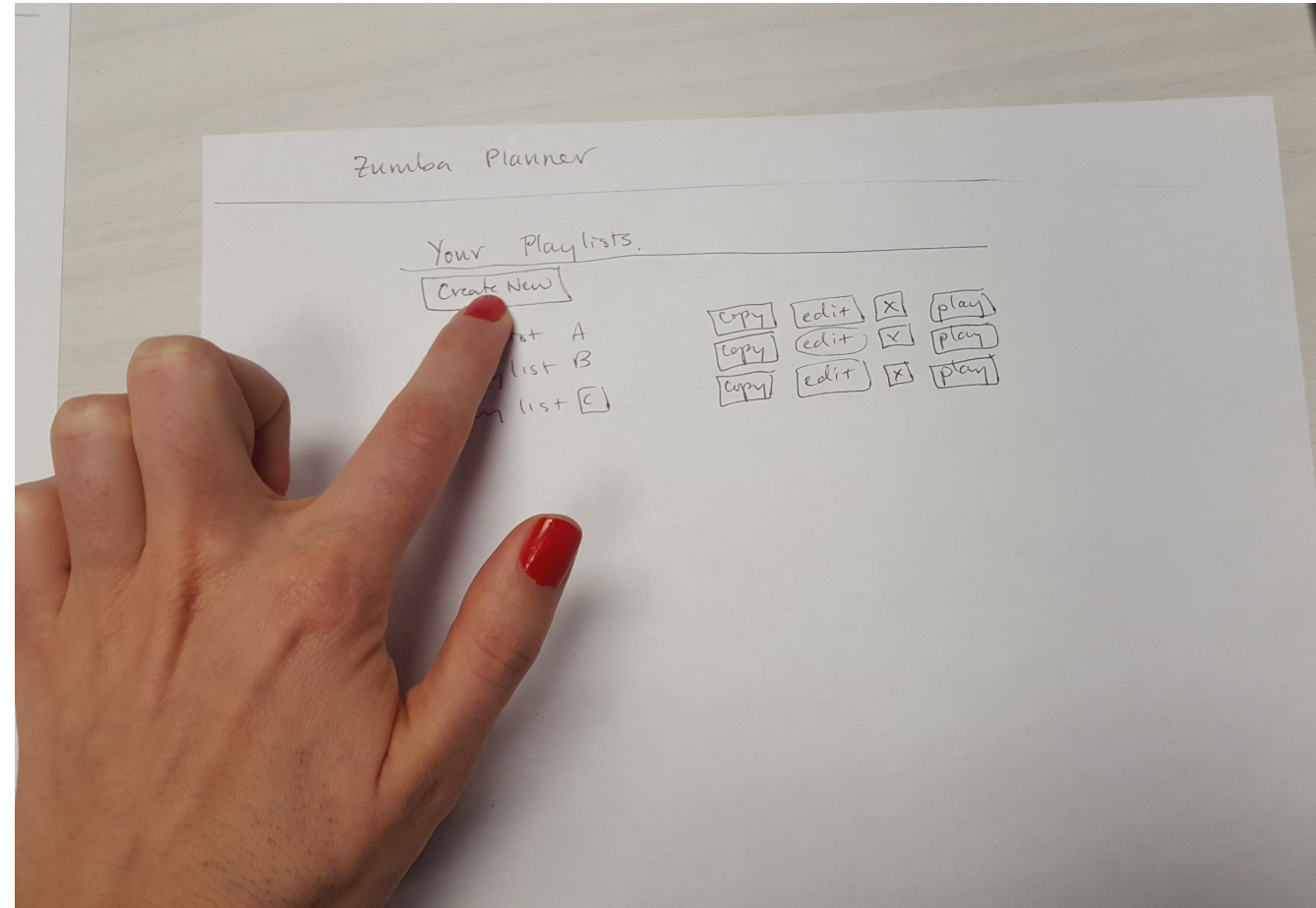
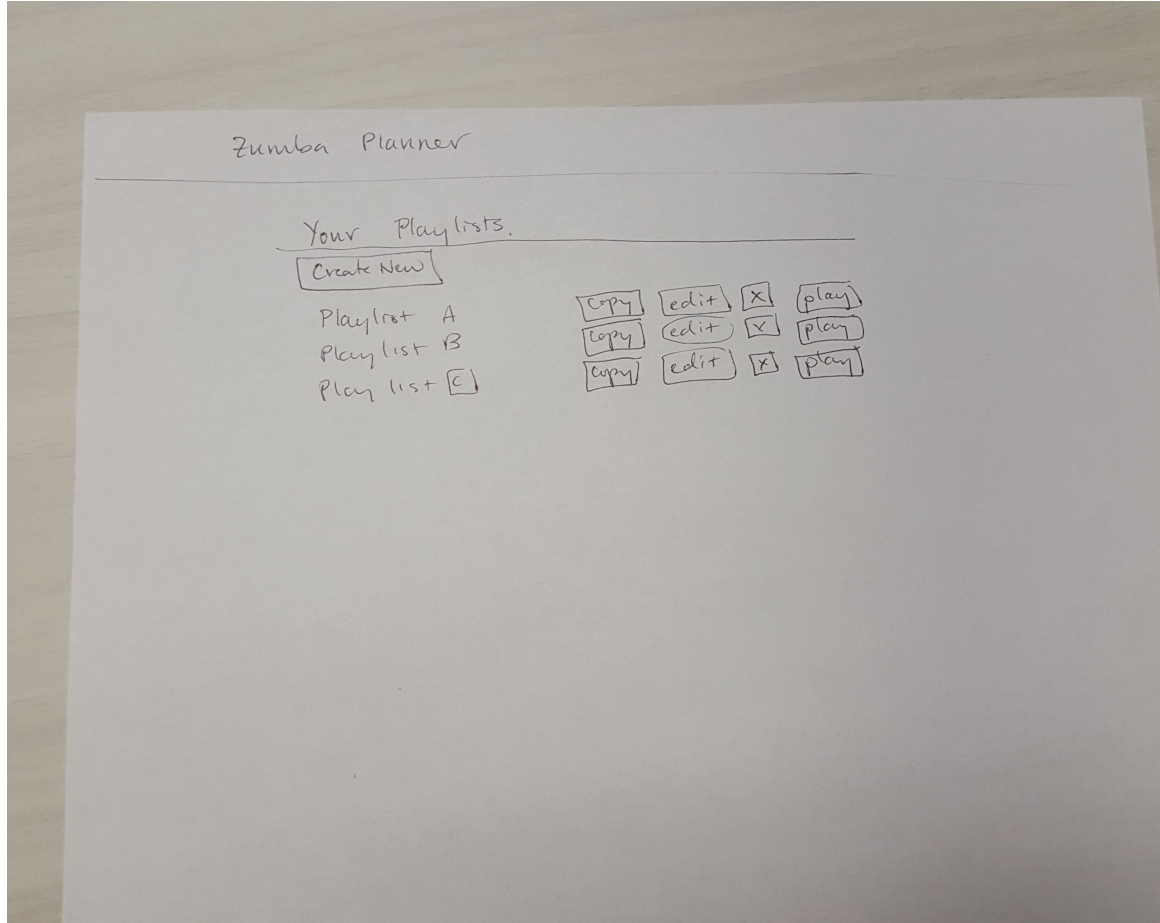
Paper Prototype Example

Write down a **Persona:** **Person**, a high level **Goal**, 4 or 5 subgoals

- **Idea:** Zumba playlist maker
 - **Person:**
 - You are Katie - a Zumba instructor in New York City.
 - **Goal**
 - Your goal is make a playlist of dance songs that last 20 minutes (at least 19 minutes and at most 21 minutes)
 - **Subgoals:**
 - 1. Create a new playlist
 - 2. Add a song to the playlist
 - 3. Add songs to the playlist until the play list is at least 20 minutes long
 - 4. If the playlist is too long, remove a song
 - 5. Play the playlist

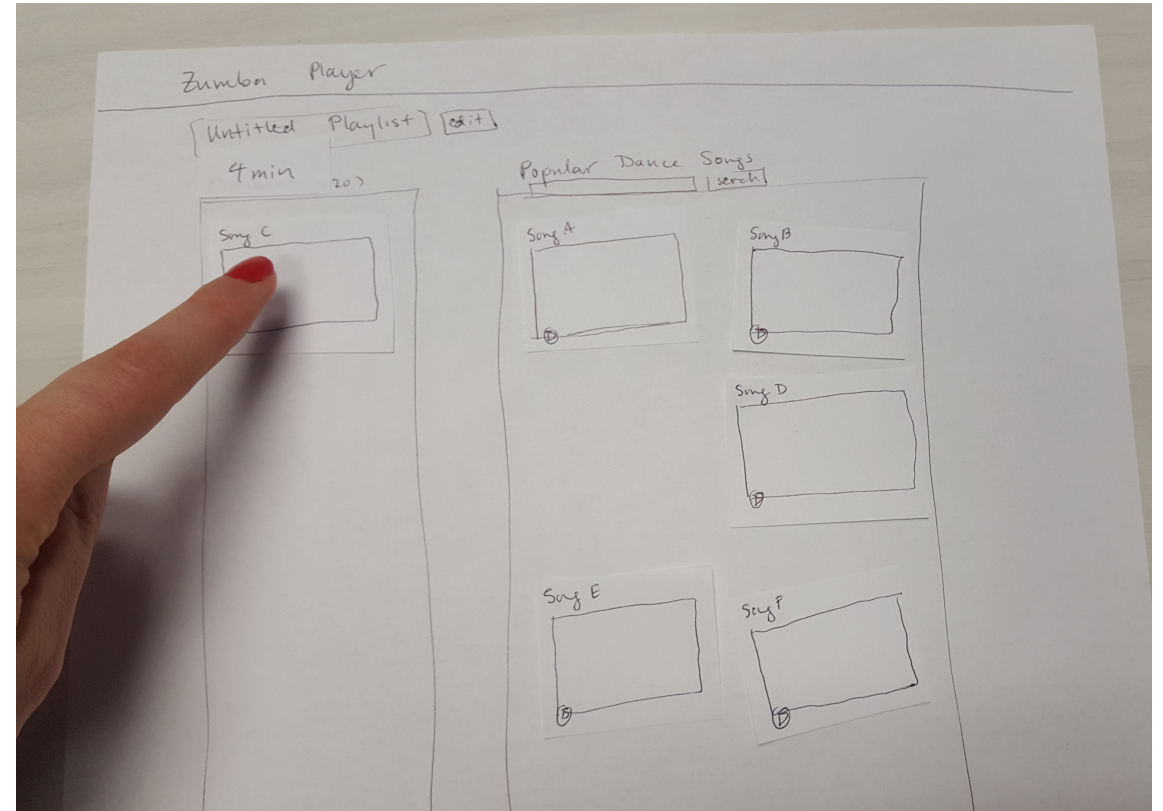
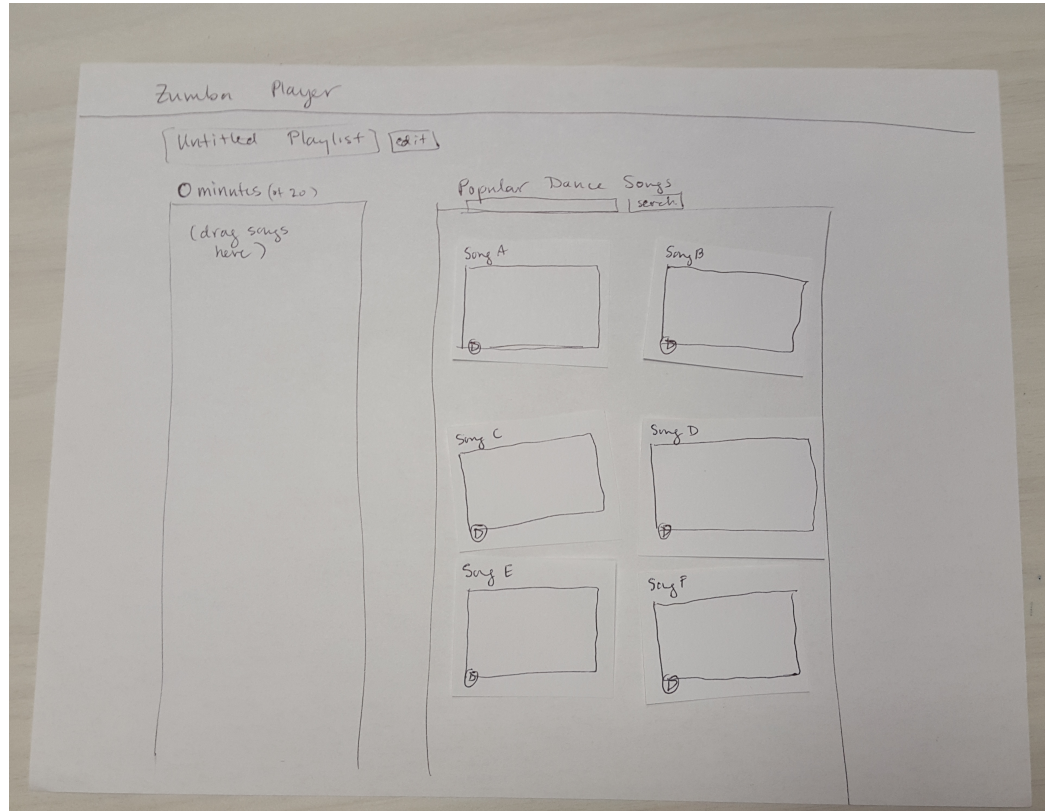
Subgoal 1:

Create a new playlist



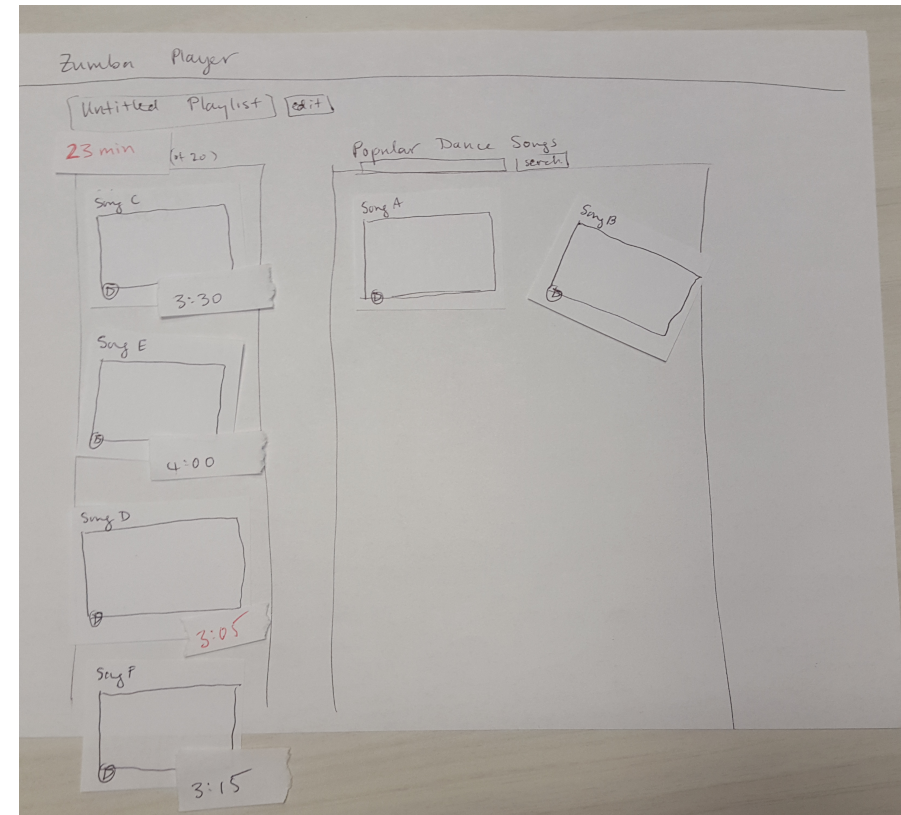
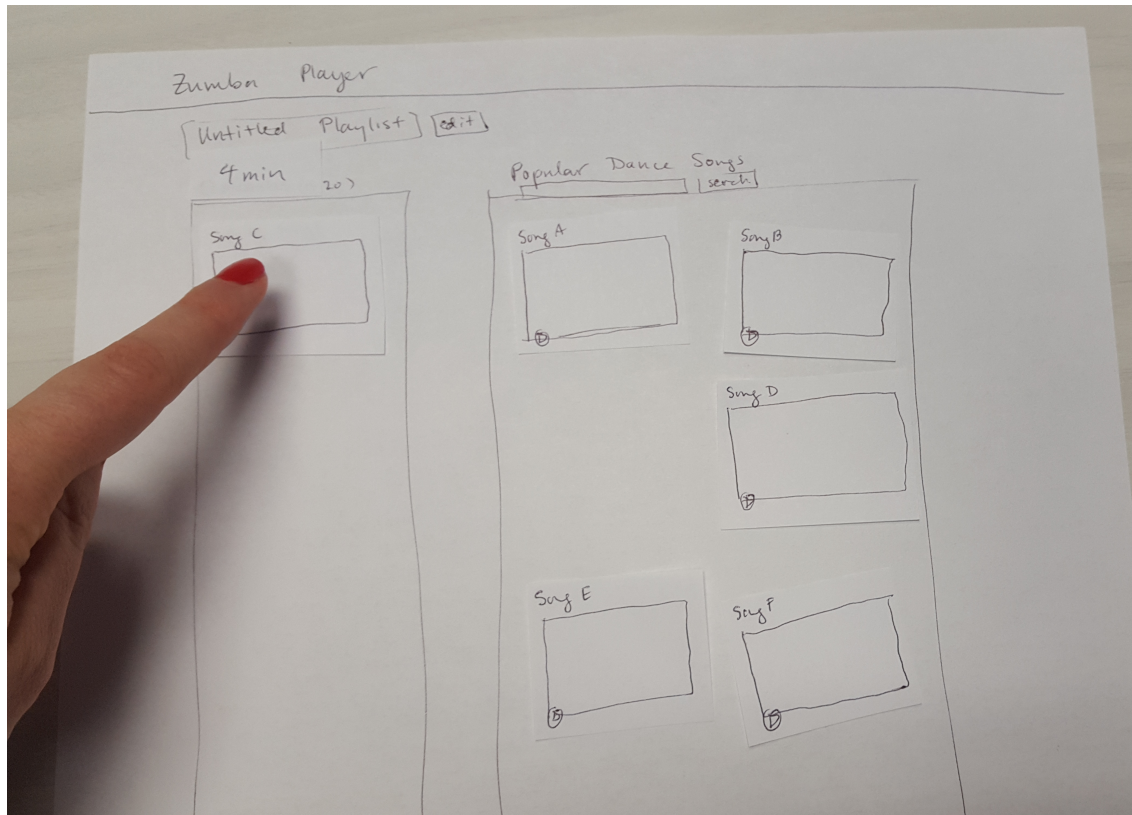
Subgoal 2:

Add the first song to the playlist



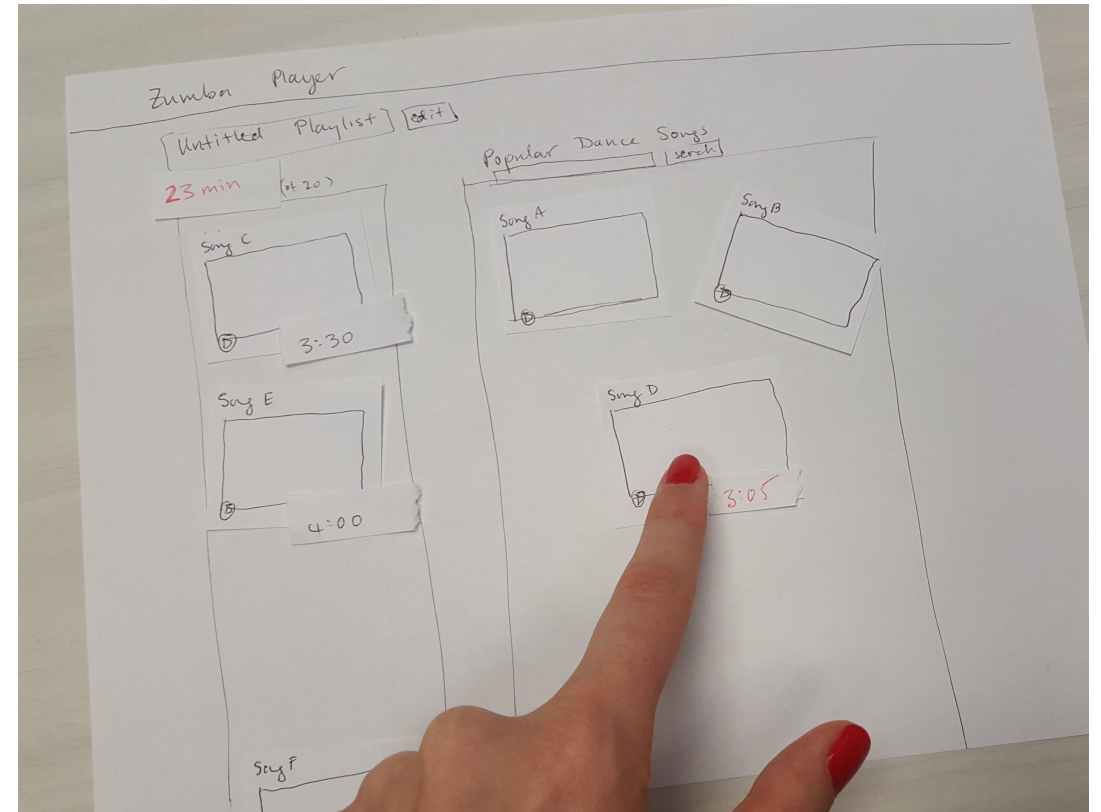
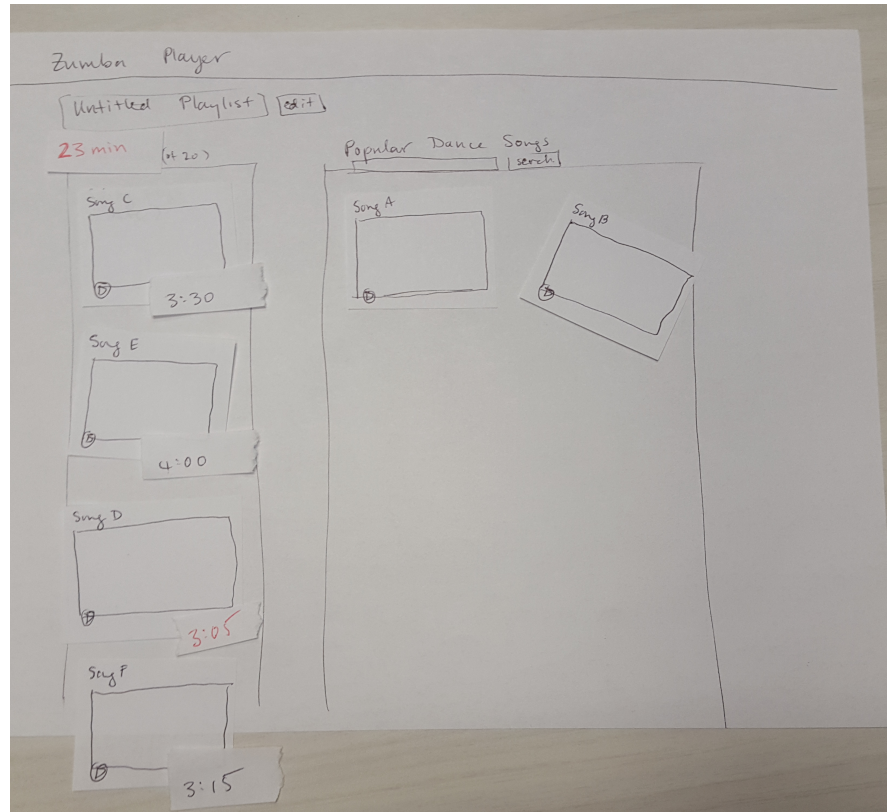
Subgoal 3:

Add songs until the playlist is at least 20 minutes.



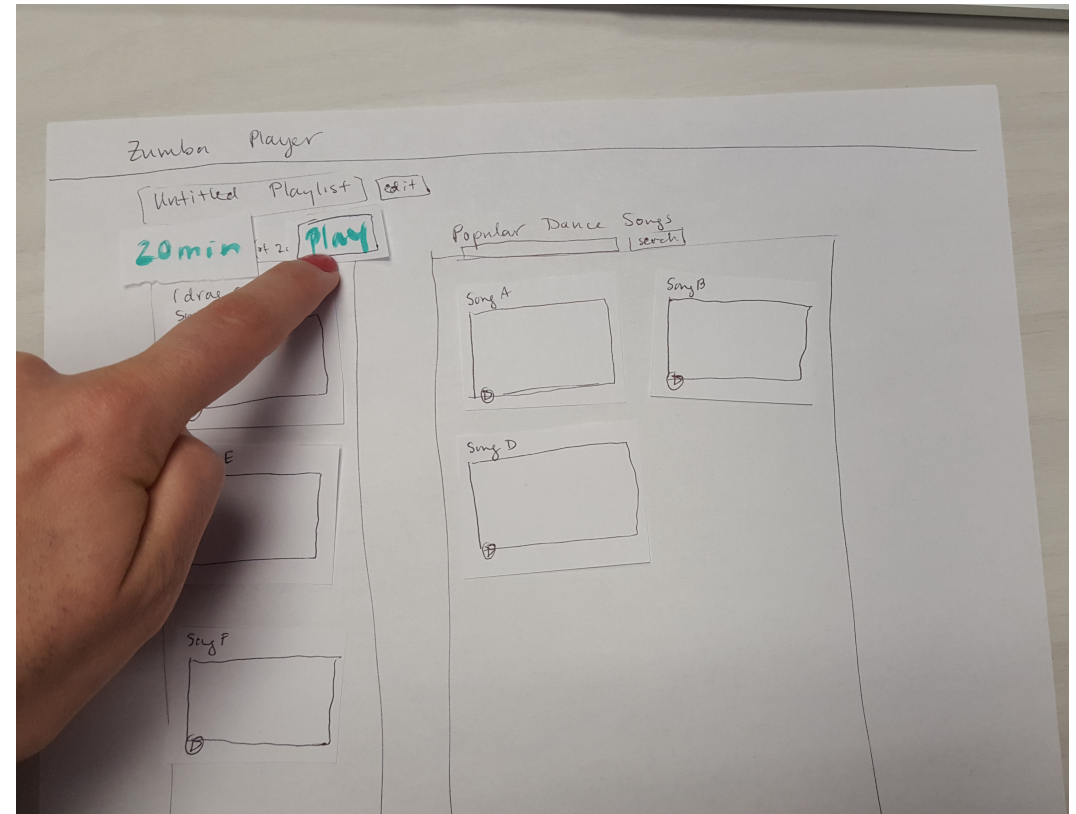
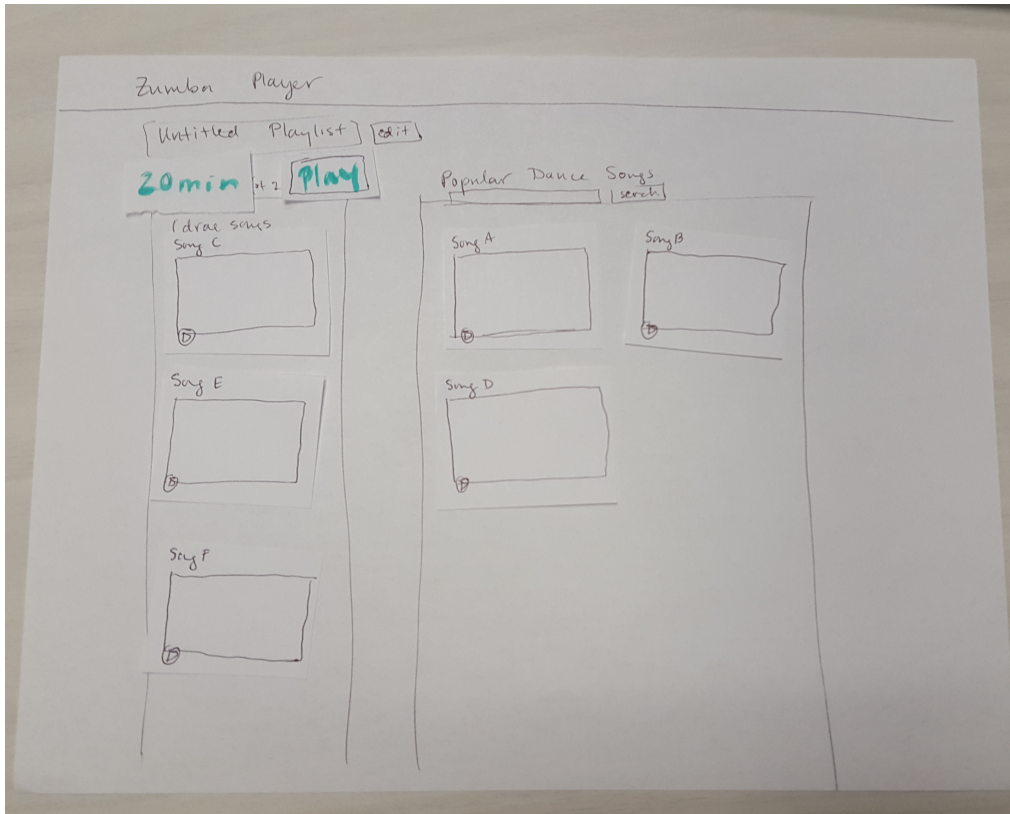
Subgoal 3:

Remove songs until the playlist is 19-21 min



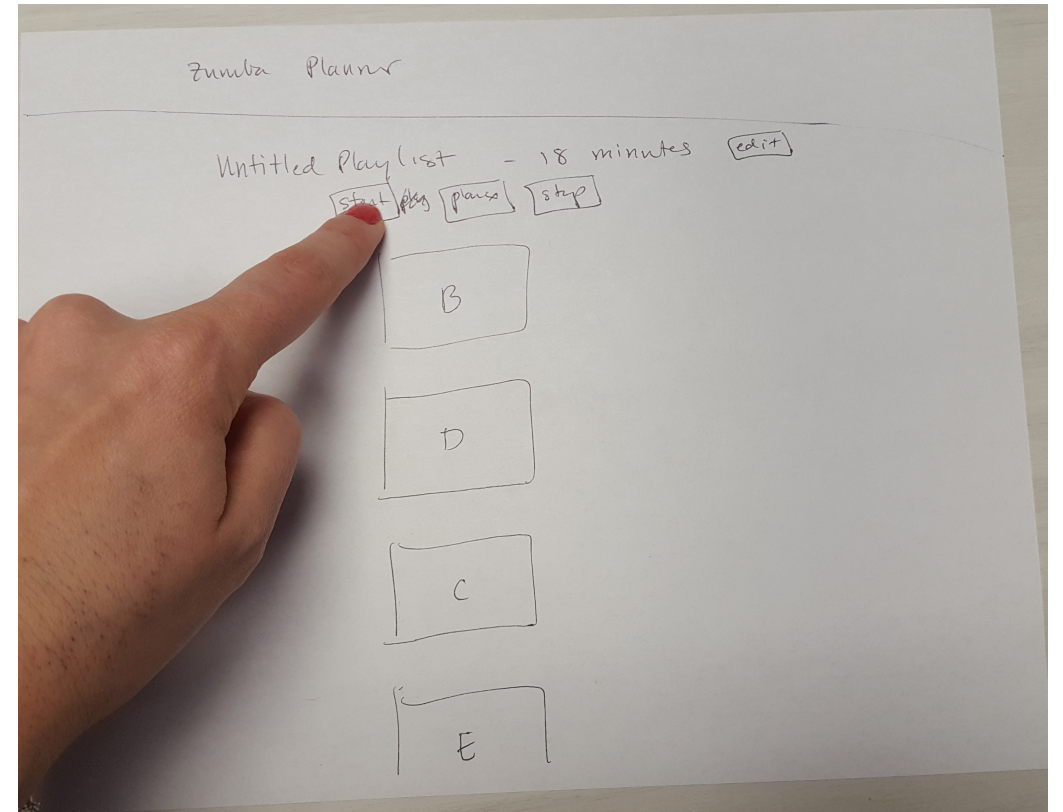
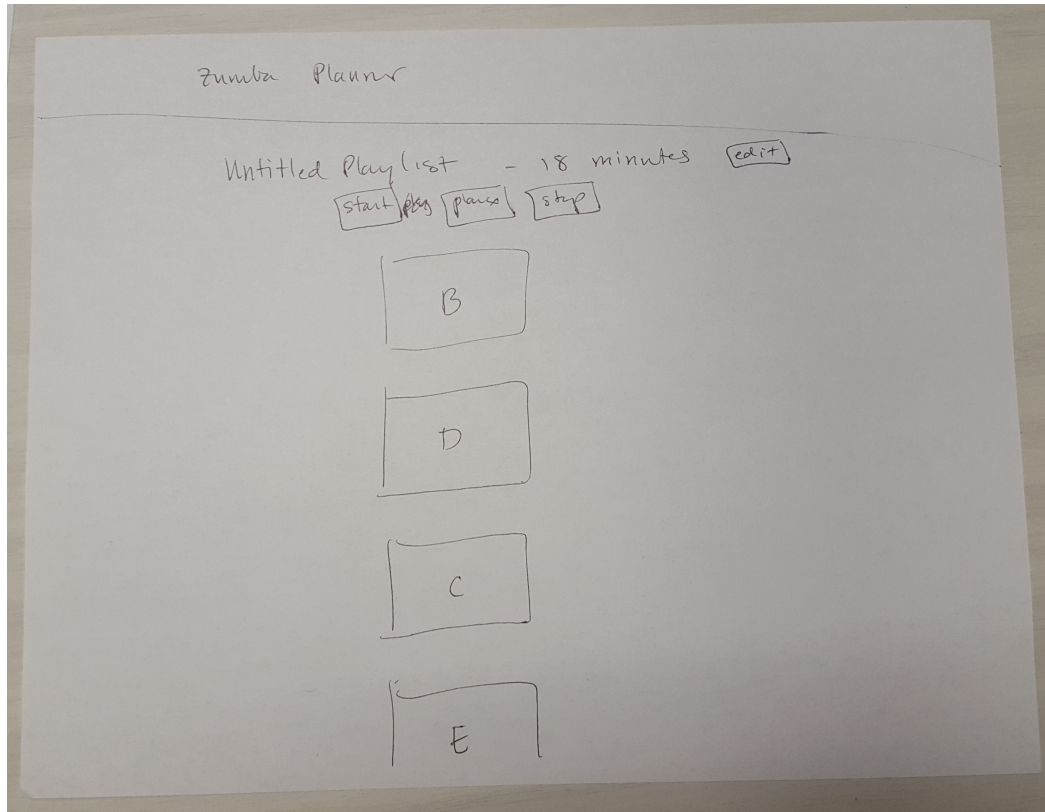
Subgoal 5:

Play the playlist (part 1)



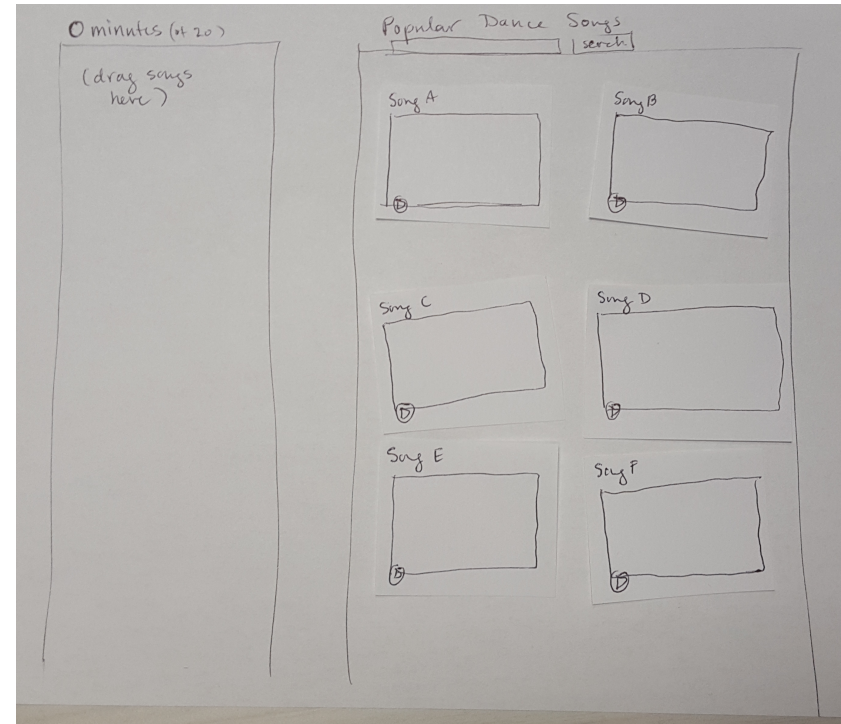
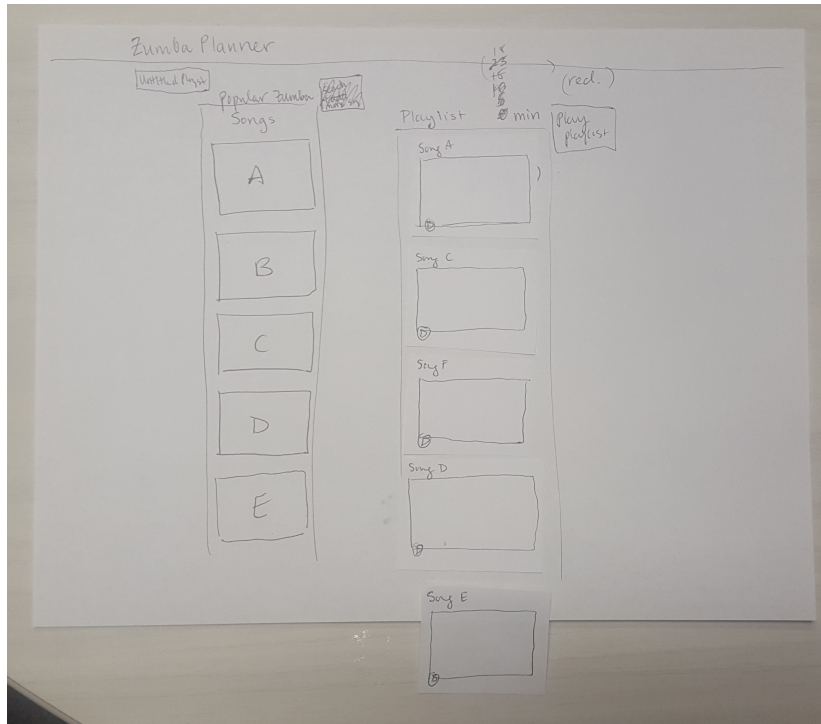
Subgoal 5:

Play the playlist (part 2)



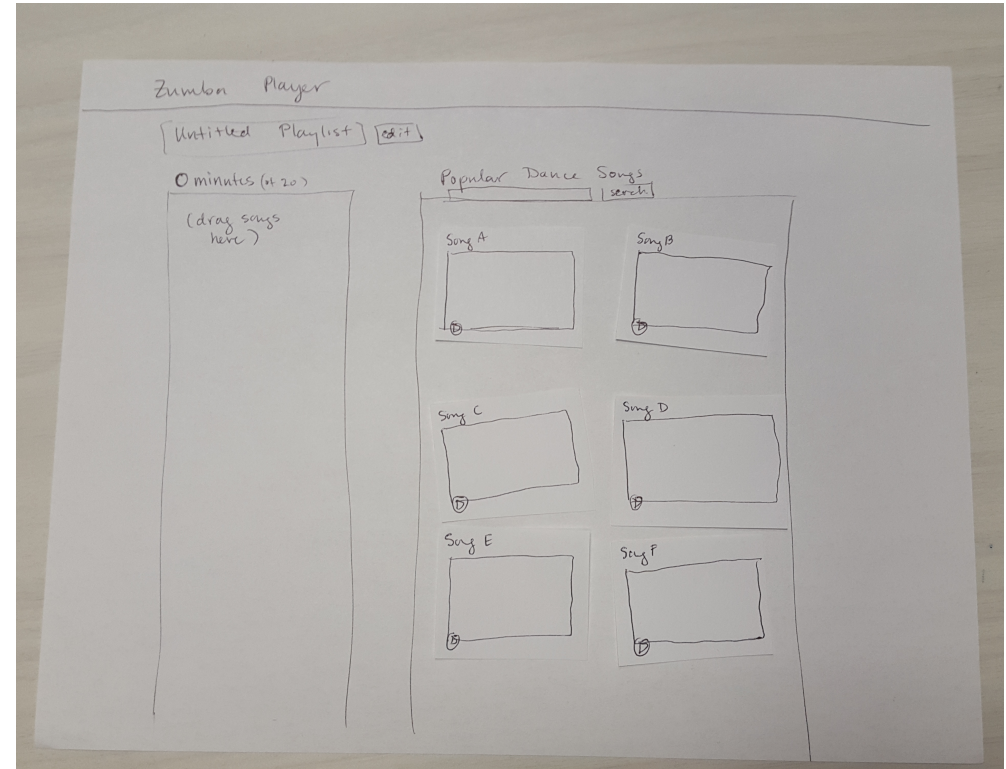
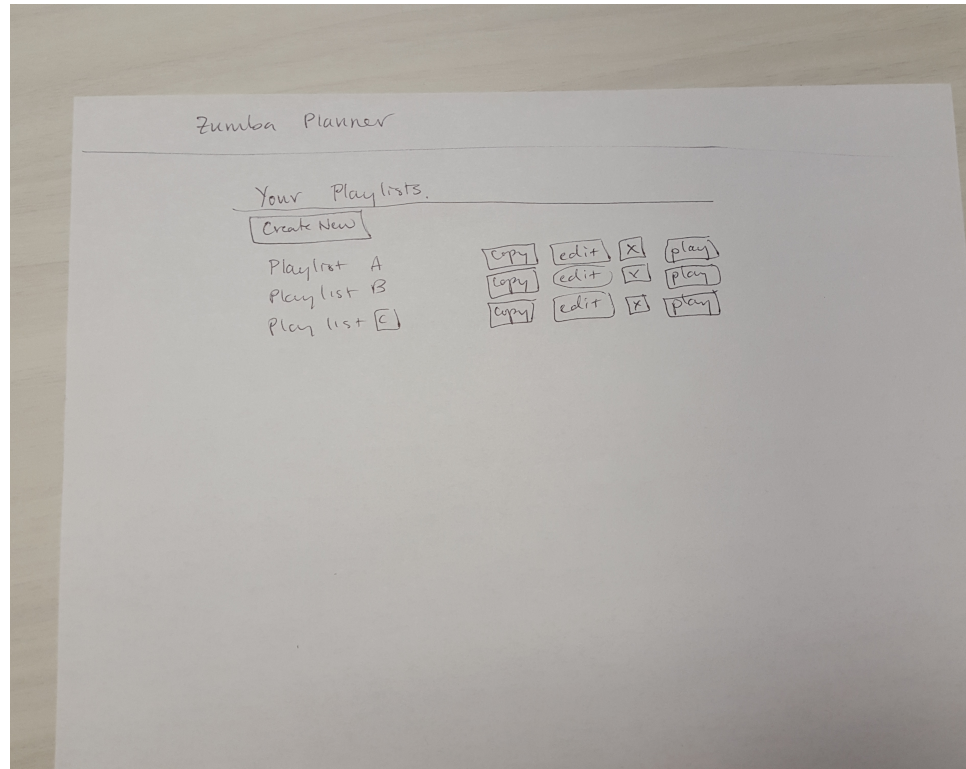
You will probably learn as much from
making the prototype,
as you will from **running** it.

I started with the the playlist drag interface...

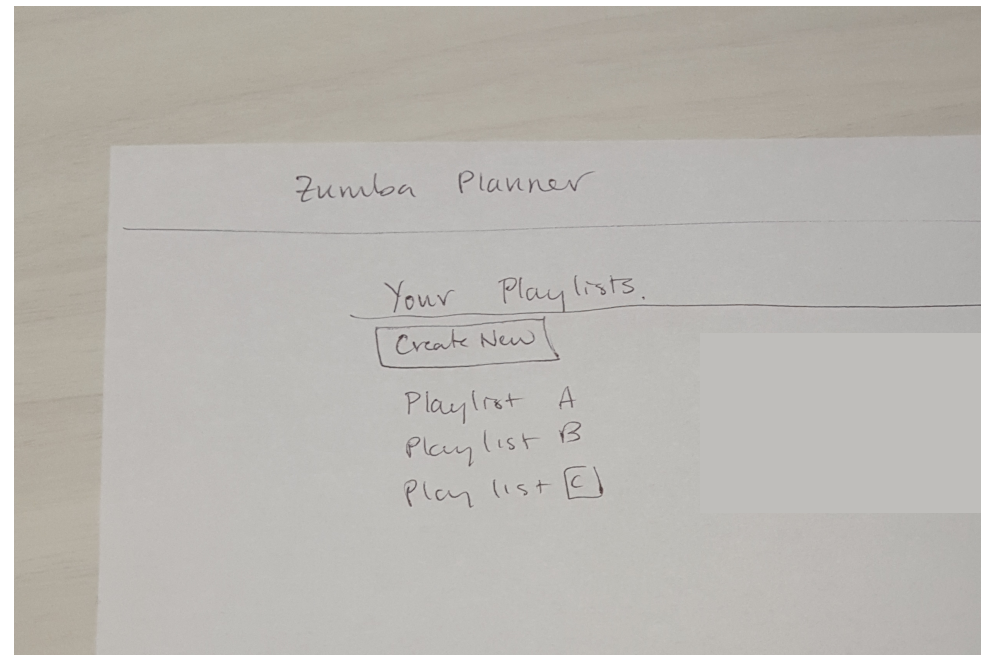


And I realized I needed more songs to pick from, so I made the songs to pick from 2 columns.

I learned that playlists need names



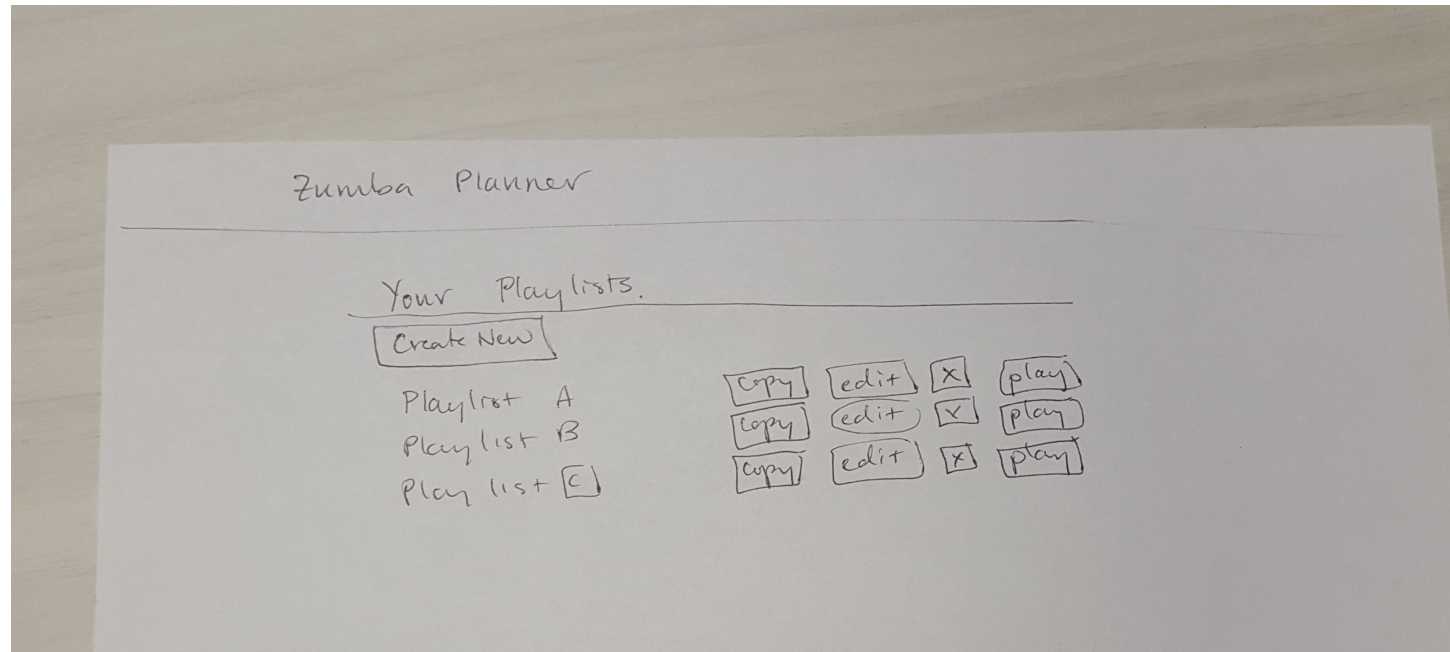
I realized I needed a homepage to create playlists from....
And also probably list the previous ones.



I realized I'd need CRUD operations

(create, read, update and delete)

on the list of playlists



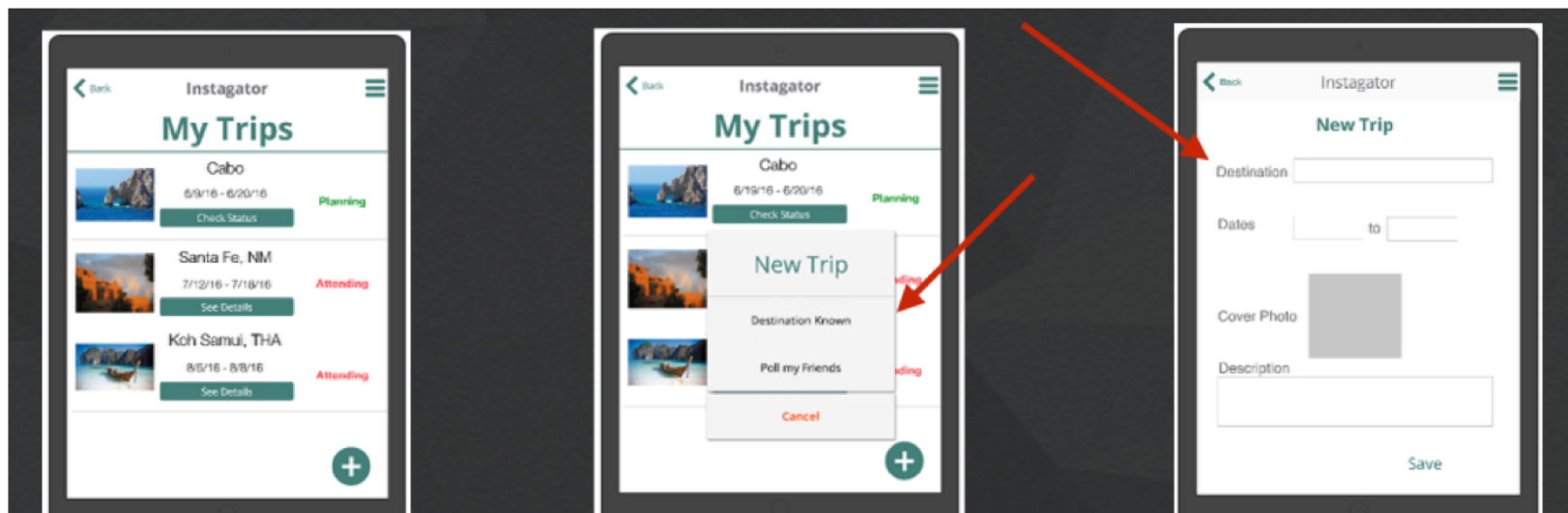
Why paper?

What if the prototype is too polished?



1. It takes too long to make.

2. Designers become attached to designs they spent too much time on.



3. You get feedback on the wrong thing:

- color,
- Images
- fonts,
- wording

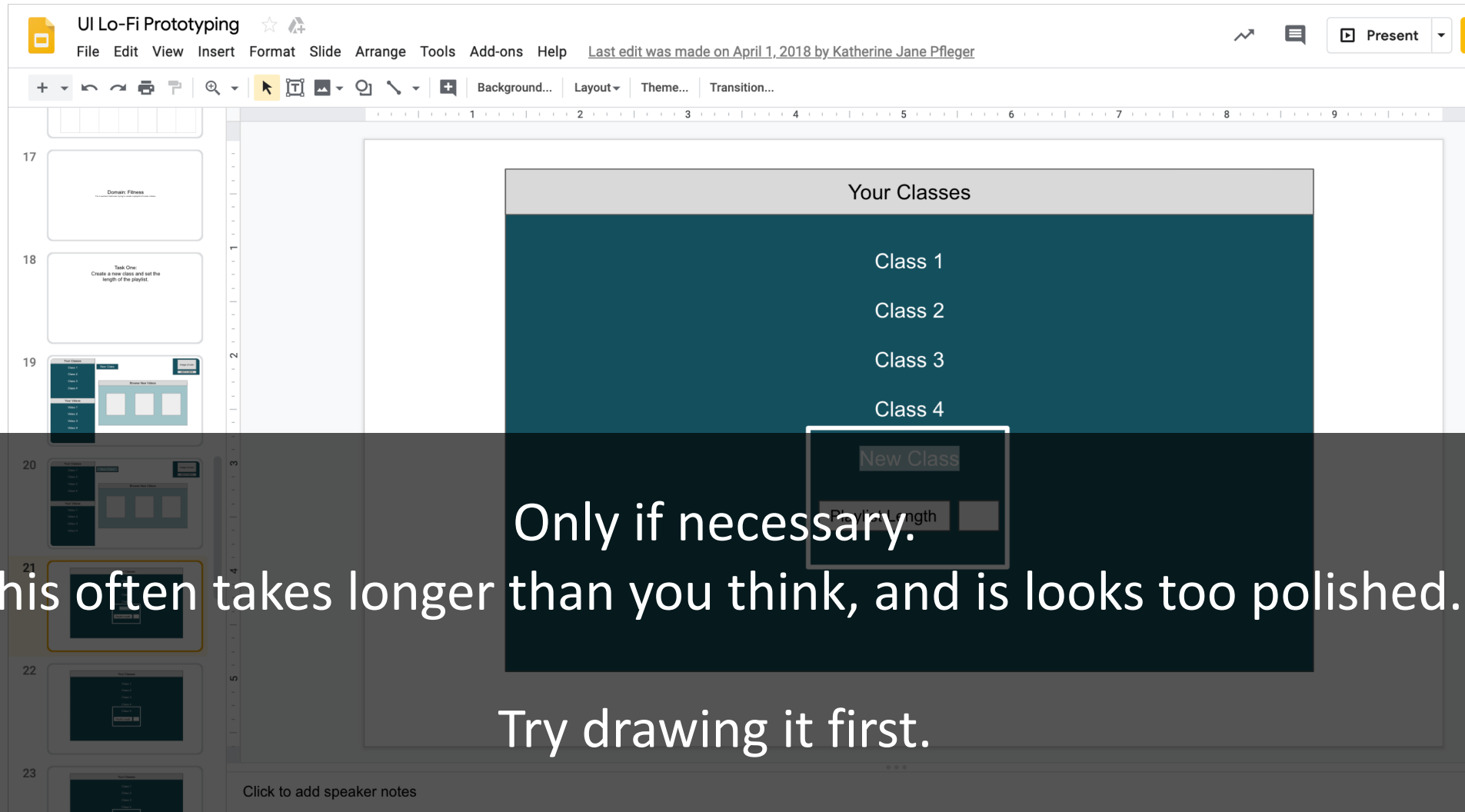
Can my prototype involve printed media?



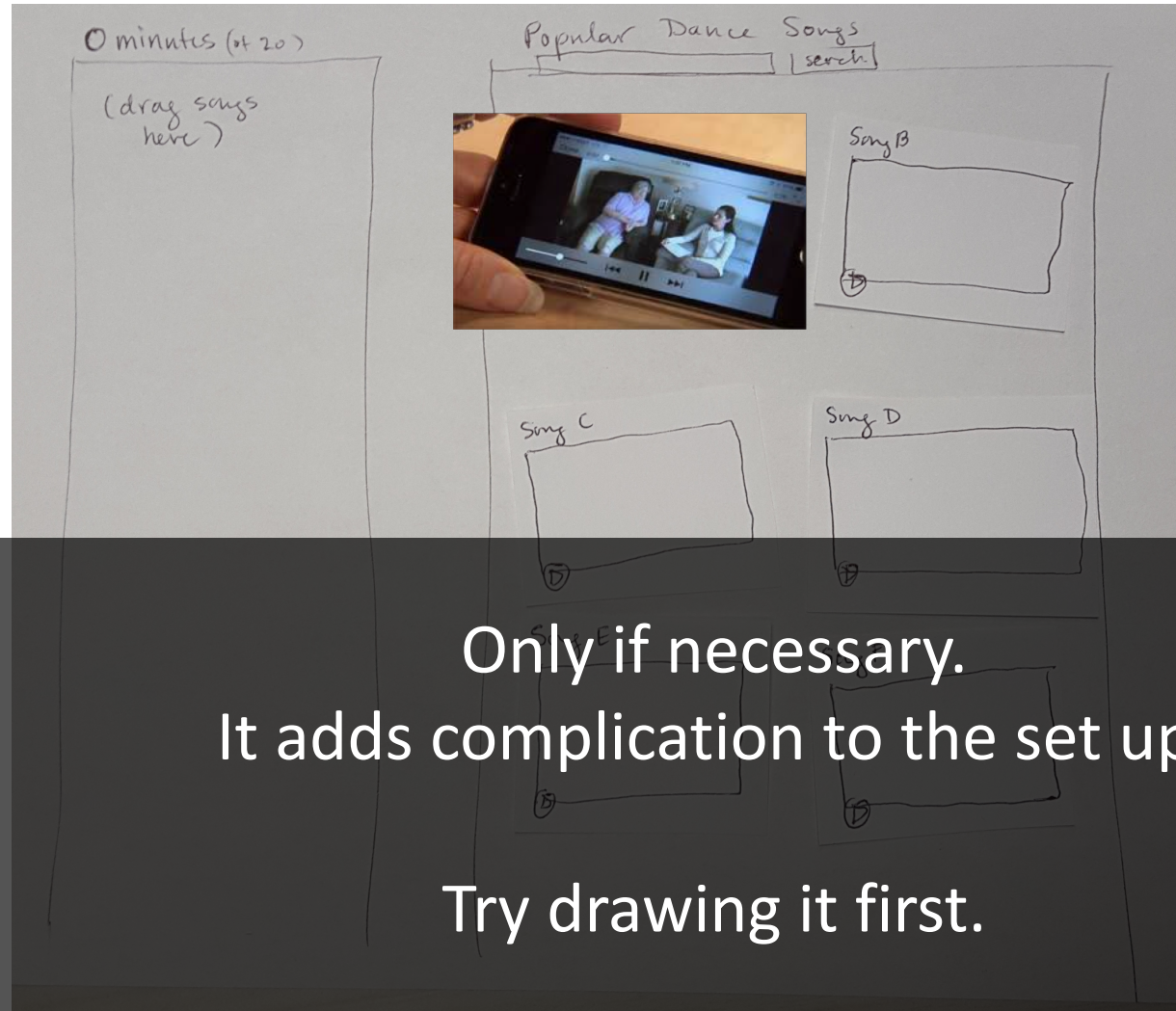
Only if necessary.
Media takes time to find and print.

Try drawing it first.

Can my prototype be made on a computer?



Can my prototype contain a video?



Running a Prototype

Running Prototypes (Wednesday)



- Put your low-fi prototype in front of users.
- Read them the persona, goal and subtasks (one at a time).
- Ask them to think out loud as they do the task
- Don't interrupt them.
- Don't lead them.
- Observe “critical incidents”
 - Times they are unsure
 - Times they did the wrong thing
- Write it down, possible take photos.

You get the best feedback when you are observing and listening. Not instructing:

- Give the user a **subgoal**:
 - “Log into the system and post on somebody’s wall”
 - “Search for tweets using the most popular hashtag”
 - “Add a new slide with two column template”
 - “Edit a post”
- **Observe** what they do
 - Encourage people to think-aloud
 - Look for “critical incidents.”
 - Times where users are unsure what to do, do the wrong thing
 - Resist the temptation to “rescue” them or tell them what to do.

Which subgoal is better for getting feedback?

Subgoal A

“Click on the
‘create playlist’
button”

Subgoal B

“Create a playlist”

Make sure to tell users the goal, not the answer.
We’re trying to learn whether users can derive the actions from the goal.
Knowing if they can find buttons is less important.

Homework 9: Brainstorming

Review

Help CU Tour guides memorize trivia

7. Tour guide learning information and trivia about different parts of the tour

a. Description

- i. Allows a Columbia University tour guide to review trivia that they want to mention at different parts of their tour.

b. Who is the person this will benefit?

- i. This will benefit a new Columbia tour guide who forgets information that they're supposed to mention on their tour.

c. What media will they interact with?

- i. Map, images, audio
- ii. They'll use a map to determine where to deliver the information.
- iii. They can use images to help identify where on campus they should say certain things.
- iv. They can use audio to hear other tour guides delivering the information.

d. What interaction will they have?

- i. They will be looking at a map that has images and notes pinned on it

e. What goal will they achieve? (This goal must be more than just searching data)

- i. They will achieve the goal of associating certain tour notes with a location and image on campus.

f. What will they see in order to know that their goal is achieved within in the app?

- i. They will see the percentage of pins that they clearly associate with their notes.

Score predictions for “Love Island” Contestants

4. Love island contestants

Major reality show guilty pleasure! No one wants to admit it, but shows like Love Island really hook you in. With this website, you can keep up with what the contestants are up to on the show, make predictions of who you think will be in the top and who will be leaving the show.

- a. Love island fans
- b. Images, videos, predictions game
- c. Browse through the contestants to see what they're up to on the show. Then be able to add your predictions and score points if you're right
- d. Play along with the tv show
- e. You'll score points if you make good predictions

Learn what to recycle

Idea 5: Learn what is supposed to go into each of the different recycling bins

i. Who is the person this will benefit?

Someone who doesn't know what goes into which recycling bin (this gets confusing for a lot of people)

ii. What media will they interact with?

Images

iii. What interaction will they have?

Person will click on the image of a specific recycling bin, and what is supposed to go in that particular bin will be displayed

iv. What goal will they achieve? (This goal must be more than just searching data)

Learn what goes into which recycling bin

v. What will they see in order to know that their goal is achieved within in app?

Quiz

Visual dog walker schedule

03 Dog walker schedule

- a. A dog walker who receives a daily list of dogs to walk and has to decide what order and direction to walk the dogs most efficiently everyday
- b. Maps, Images
- c. They will have made a work schedule for that day given a list of dogs and the time frame which the walk has to happen within (large time frames such as walking Buster once between 11 and 1) and where the dogs are all located for that day (somewhere between 96th and 110th street)
- d. They will save time in the morning by not hand organizing the schedule and trying to fit a variety of time frames within a single work day (11-3)
- e. An organized order to walk the dogs and a visual representation of their dog order path (via google images or something)

Comparing NYC sublets

08 Sort & Compare Sublets

- a. A new Yorker looking to sublet and is viewing apartments in a row or many at once and is unsure how to compare options and decide
- b. Photos and Quiz
- c. Photos they took or photos online of apartments they view can be added to each apartments listing in the list of contenders and contenders will be evaluated in an interaction
- d. Holistically compare housing options / look at many data points at once in an organized way of only rooms they viewed in person
- e. Ranking of their sublet options in an order which fits their custom criteria

Make a Ranked list of Horror Films

i. Who is the person this will benefit?

A young individual looking to get a fright for the whole night.

ii. What media will they interact with?

The user will interact with poster images and movie trailers, offering a short presentation of the movie series.

iii. What interaction will they have?

By selecting on a movie series, all the movie trailers will be pieced together so the user can get an idea of what the series is about. For instance, if the horror film is a trilogy, movie trailers 1-3 (one for each of the three films) will be pieced together to form one continuous trailer.

iv. What goal will they achieve? (This goal must be more than just searching data)

The user will determine which scary movie series they would like to watch for the night.

v. What will they see in order to know that their goal is achieved within in app?

After watching the movie trailer, the user can then select what position they want to rank the series in their priority queue. When they're done, they will have a saved ranking of which horror series they liked best.

Patterns of ideas that **won't work**

“What will they see in order to know if their goal was achieved within the app?”

Fitness: People will know their goal is achieved when they are fit

Fitness: People will know their goal is achieved when they love their body.

Education: People will know their goal is achieved whenthey learn more about the domain

Products: People will know their goal is achieved when they purchase the item

Patterns of ideas that **do work**

“What will they see in order to know if their goal was achieved within the app?”

Movies: Create a ranked list based on criteria

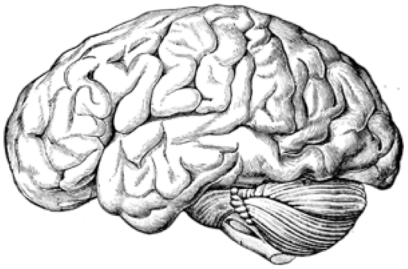
Deciding on things: Compare two options across N dimensions

Learning: A quiz

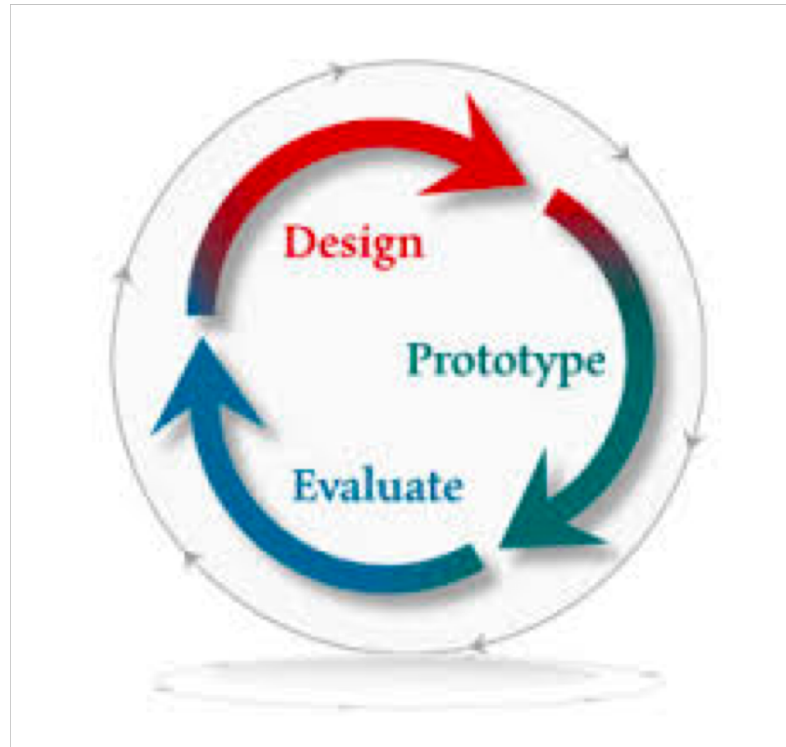
Travel planning: A map/calendar with a path/plan to all the things on it

Summary

Iterative Design

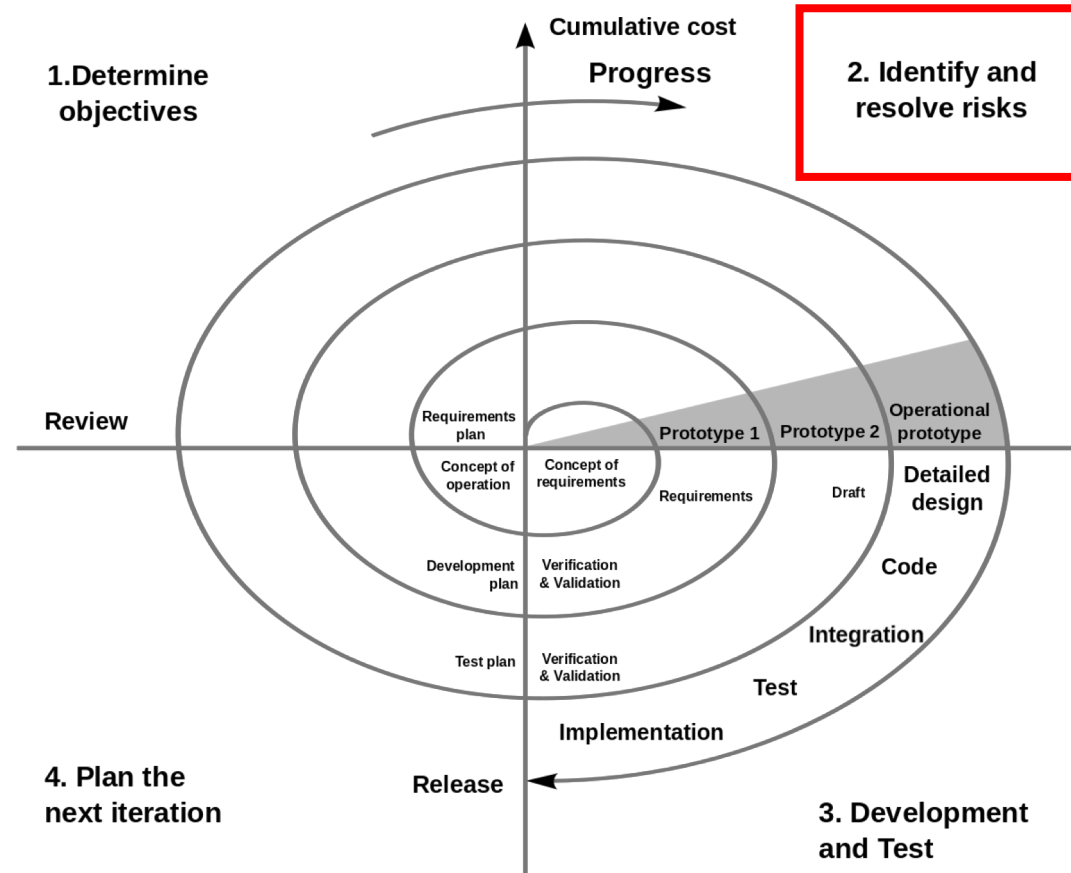


Idea

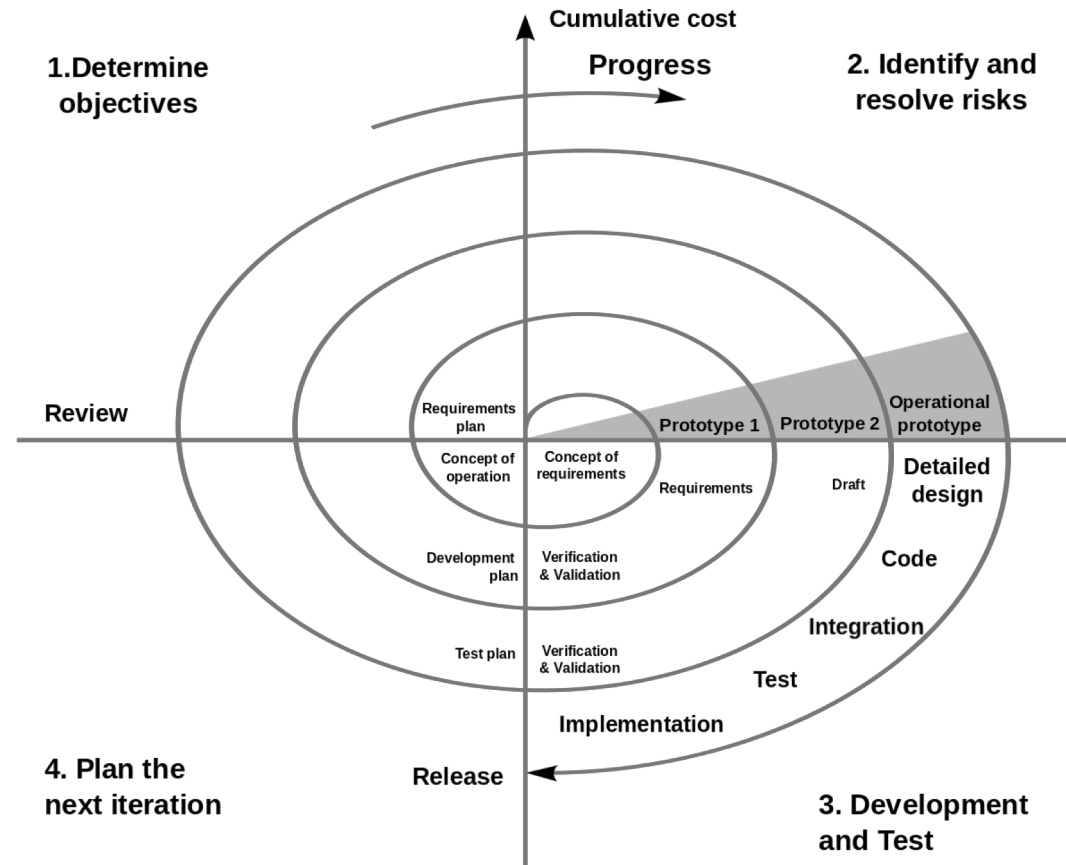


Product

Iterative Design is good because it minimizes risk



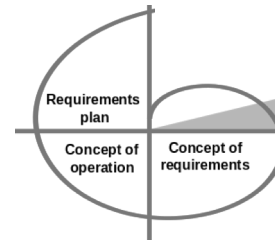
In Iterative Design, Prototypes get increasingly high-fidelity



The first iteration should be as **low-fidelity** as possible

1. Determine objectives

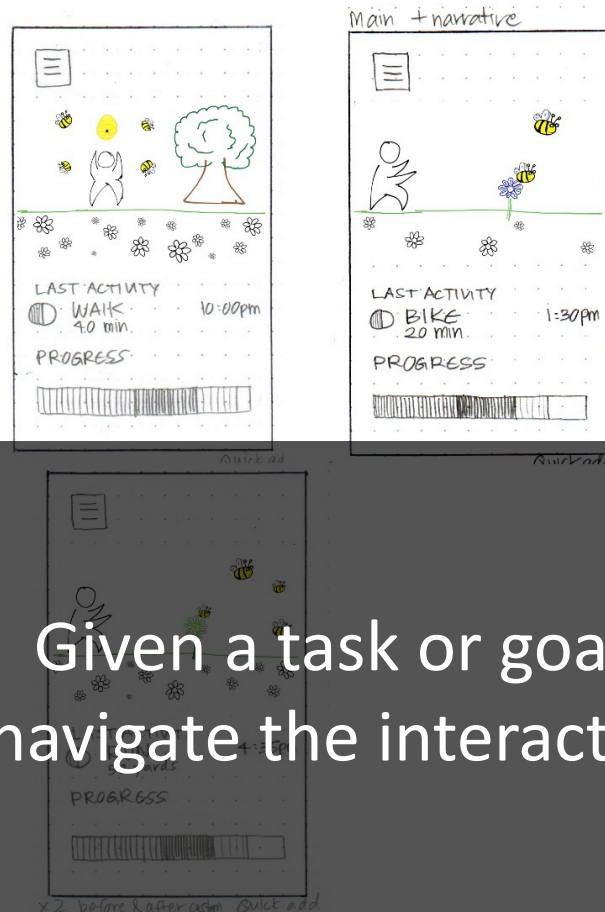
2. Identify and resolve risks



4. Plan the next iteration

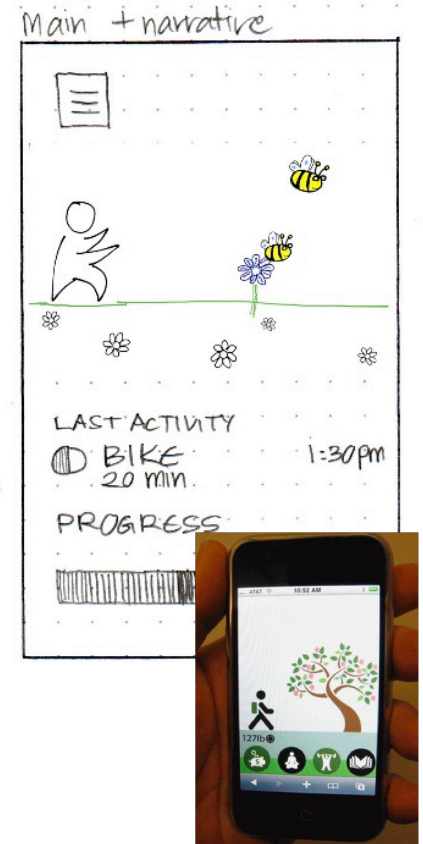
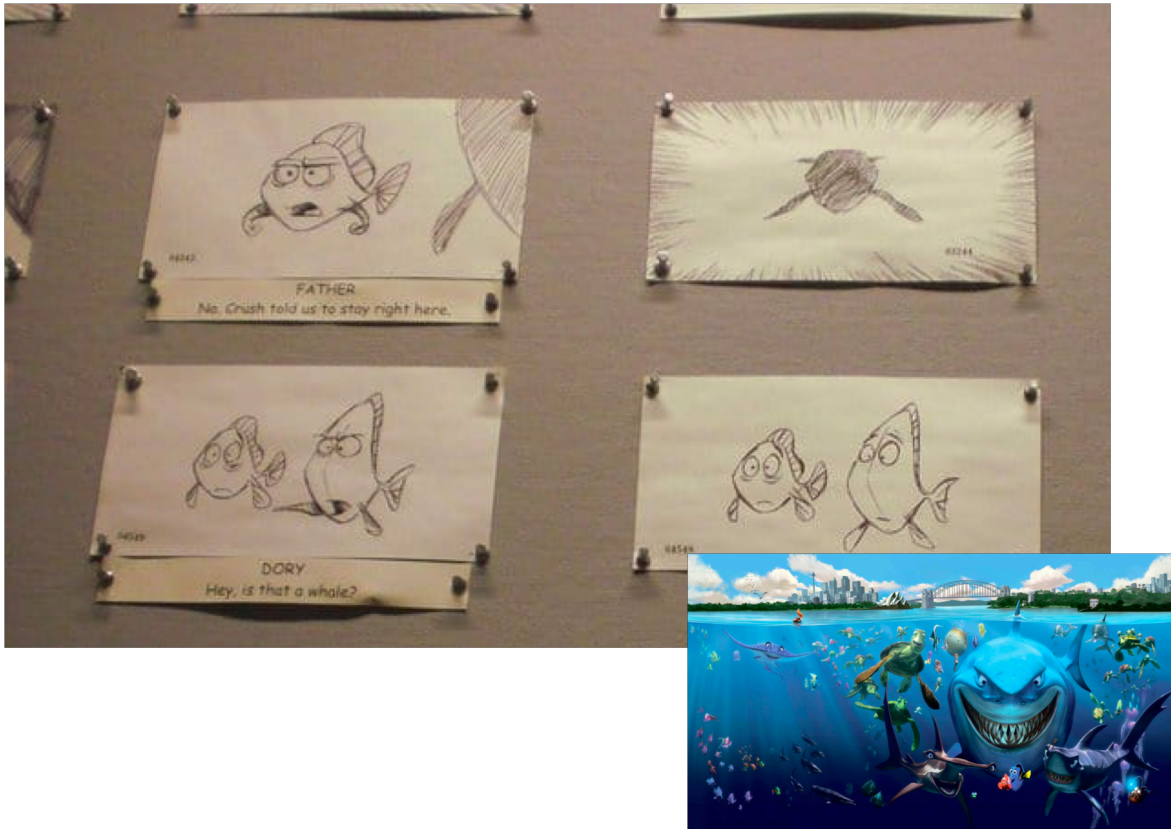
3. Development and Test

Low-Fi Prototypes mitigate risk by getting feedback on the most fundamental aspects of the design first



Given a task or goal,
can the user navigate the interaction coherently?

Pixar starts with storyboards.
Software starts with paper prototypes.



Homework 10: Paper Prototypes

Choose two of your ideas.

Create a paper prototype of both of them.

Test them and write up what you learn

In class Wednesday: Running Paper Prototype

Bring one of your **prototypes to class** (or both if you have them)

- Persona, Goal, subgoals, and the prototype.

You will get to **test it on a classmate**.

Class time will be divided into half

Section 1: 4:10-4:45 (35 min)

Section 2: 4:50- 5:25 (35 min)

Please come only to the section you are assigned

We will post it on **Piazza**.

Now:
Run your ideas by me