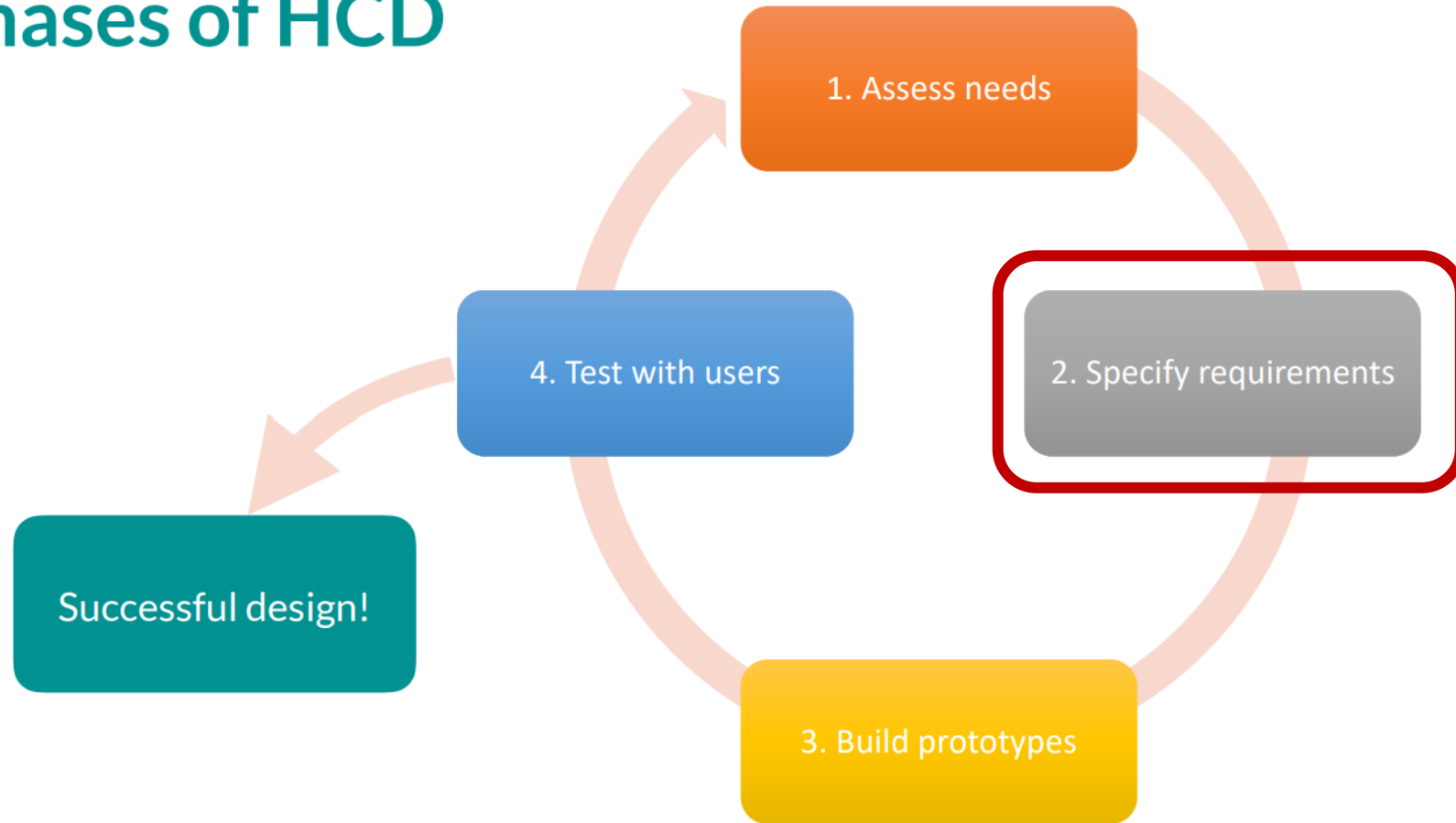


# CSE 4451: HUMAN- COMPUTER INTERACTION

Class 11: Storyboarding and Video  
Prototyping

# Phases of HCD

## Phases of HCD



# Storytelling

**Purpose: to provide context**

- Share information about people, tasks, and goals
  - Who will be using the designed product?
  - Why will they be using it?
  - What are their goals for it?
  - Where will the designed product be used?
  - What do they hope to accomplish?
  - How does the product fit into their lives?
  - How does the product make them feel?
- Giving insight into people who are not like us, convey details that might be lost in generalities
- Put a human face on analytic data
- Spark design concepts and encourage innovation
- Share ideas and persuade on potential value

# Storytelling

- Who are the audiences?
  - Other designers
  - Clients
  - Stakeholders
  - Managers
  - Funding agencies
  - The users
  - Yourself

# Ways of Storytelling

- Written Scenarios
  - Written accounts and narratives of the experience
    - Analogy: Books

## Scenario

Jean is an 81-year-old who lives independently. She calls her daughter Carol to catch up on the day's events. Jean tells Carol that she went to the doctor that morning but is frustrated because she can't remember all the details of her visit. Jean would like to share information from the patient portal with Carol. However, Carol does not have access.



## Paula Private

### Scenario

Paula was recently diagnosed with prediabetes. She was disappointed because she thought she was doing a good job managing her weight and food intake. Paula did not tell her husband, Henry, about the diagnosis. Paula and Henry have been married for over 50 years. They currently live in a private residence and manage their health and health information on their own. Paula admits that Henry has strong opinions especially when it comes to her health. Unlike Henry, Paula has a mild personality and likes to please others. She often does whatever Henry suggests, which is why she is keeping her diagnosis of prediabetes to herself until she can figure out the best way to manage it.

Paula is logging her weight once a week and stores it in a folder in her desk drawer. Now, Paula also wants to track her blood sugar levels. She has difficulty using the patient portal, but still prefers to use it. She is hesitant to ask Henry for help because she's afraid that he would find out more than she wants him to know. She is nervous that he might try taking over by telling her what she should do, if he finds out her new diagnosis. Paula wishes there was a way to track and manage her health information in one place and to also keep it private at times.



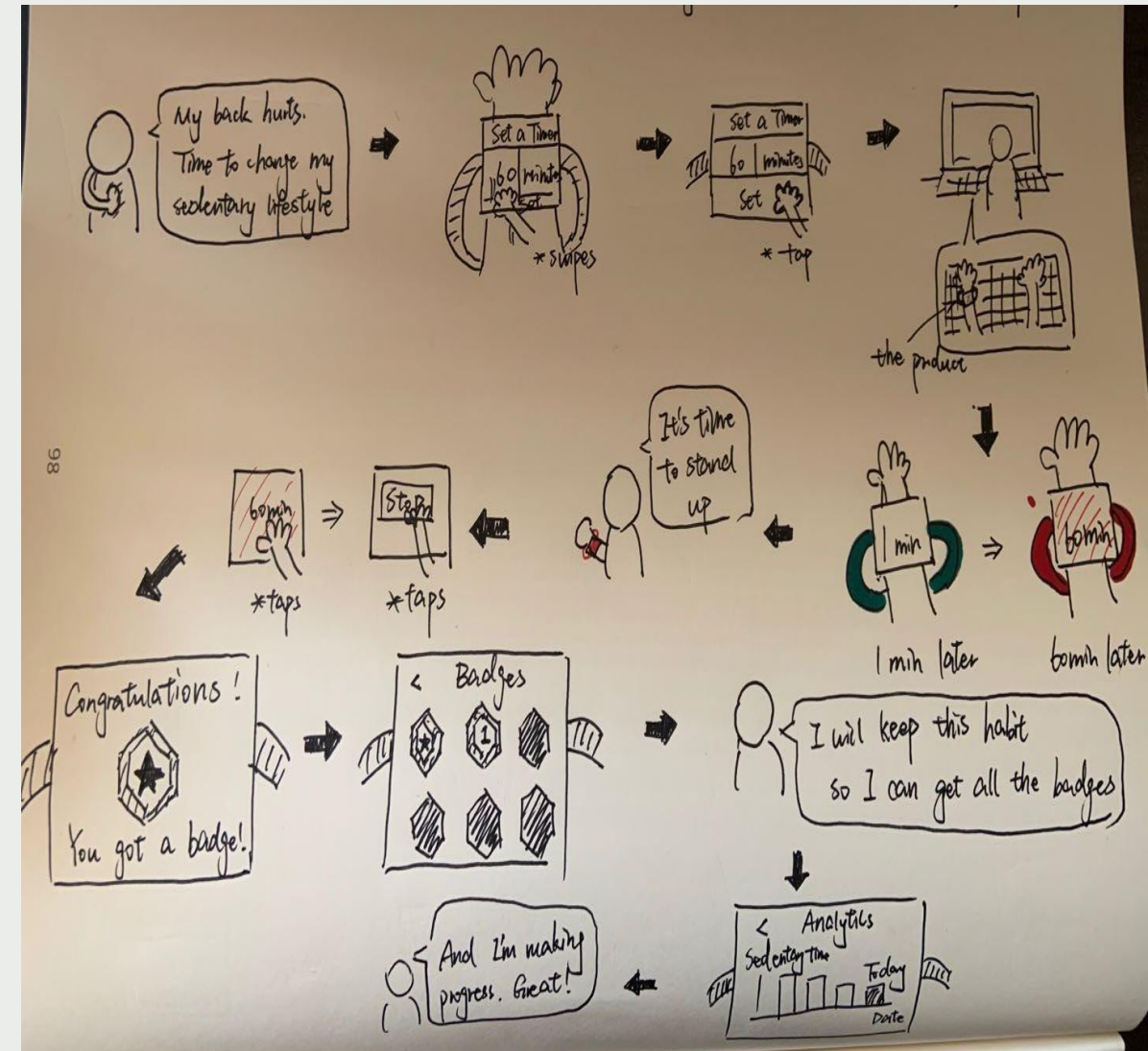
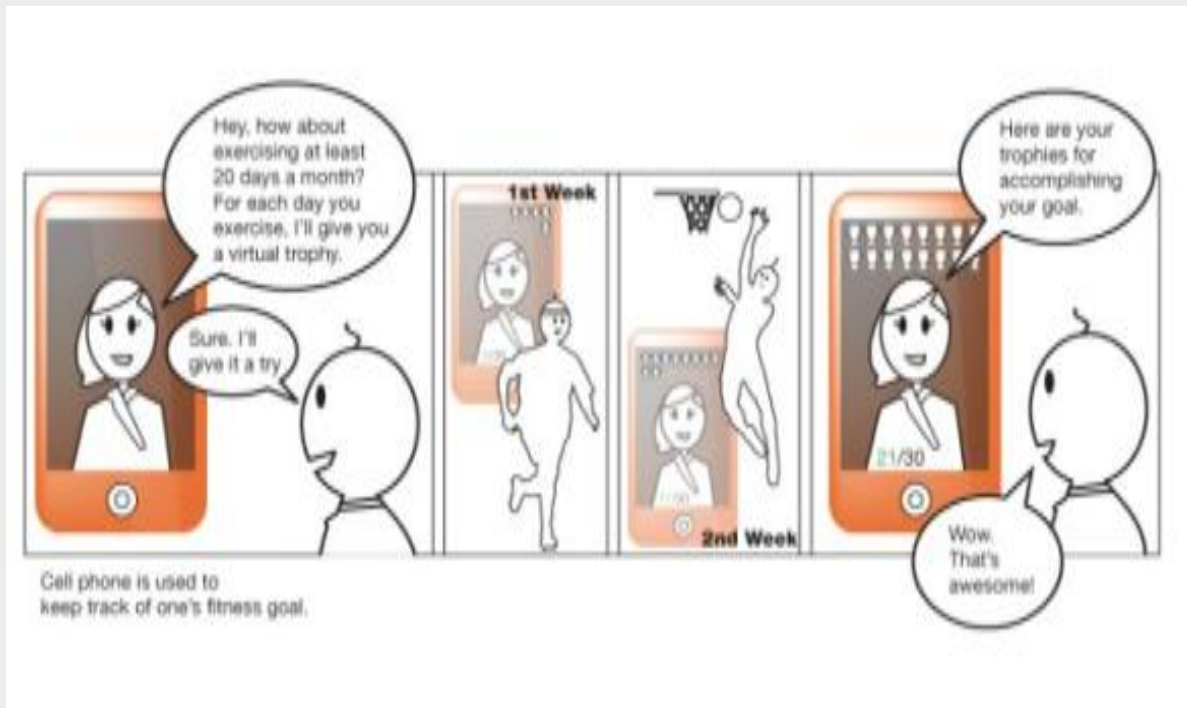
Paula's desk drawer



Paula's old weight log

# Ways of Storytelling

- Storyboards
  - Visual storytelling with rough sketches/cartoons
  - Analogy: Comics, Picture books



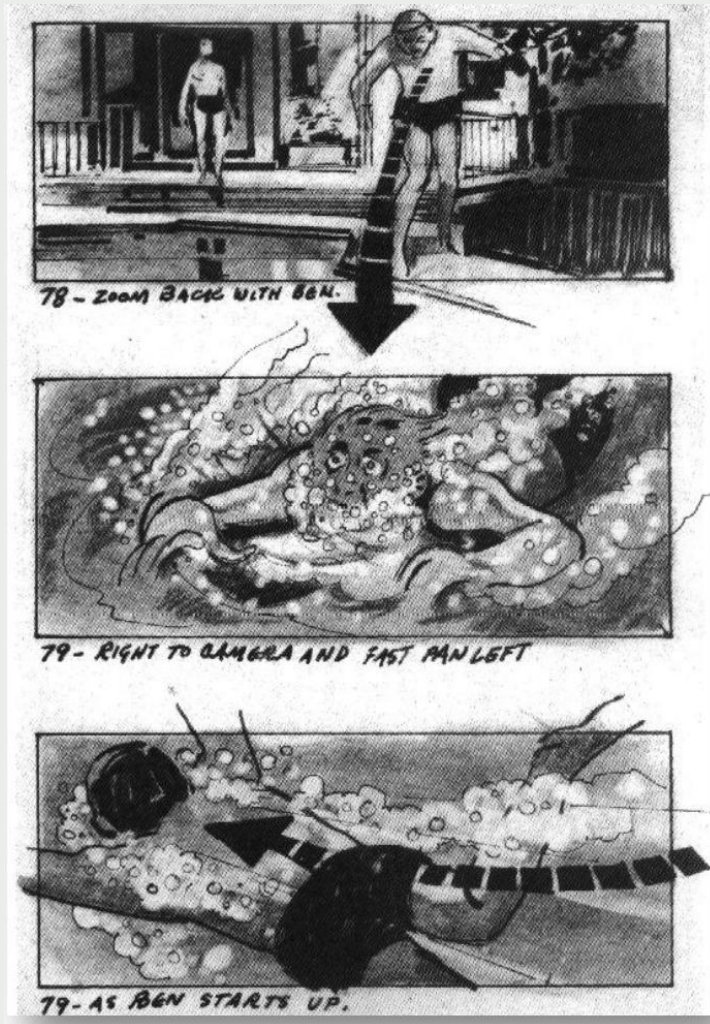


# Storyboarding

- Storyboards come from film and animation
  - Give a “script” of important events
  - Leave out the details
  - Concentrate on the important interactions



# Storyboarding



- Can be used to explore
- Again, much faster and less expensive to produce
- Can therefore explore more potential approaches
- Notes help fill in missing pieces of the proposal



# Storyboarding

- Can be used to convey
- Effective storyboards can quickly convey information that would be difficult to understand in text

# Storyboarding

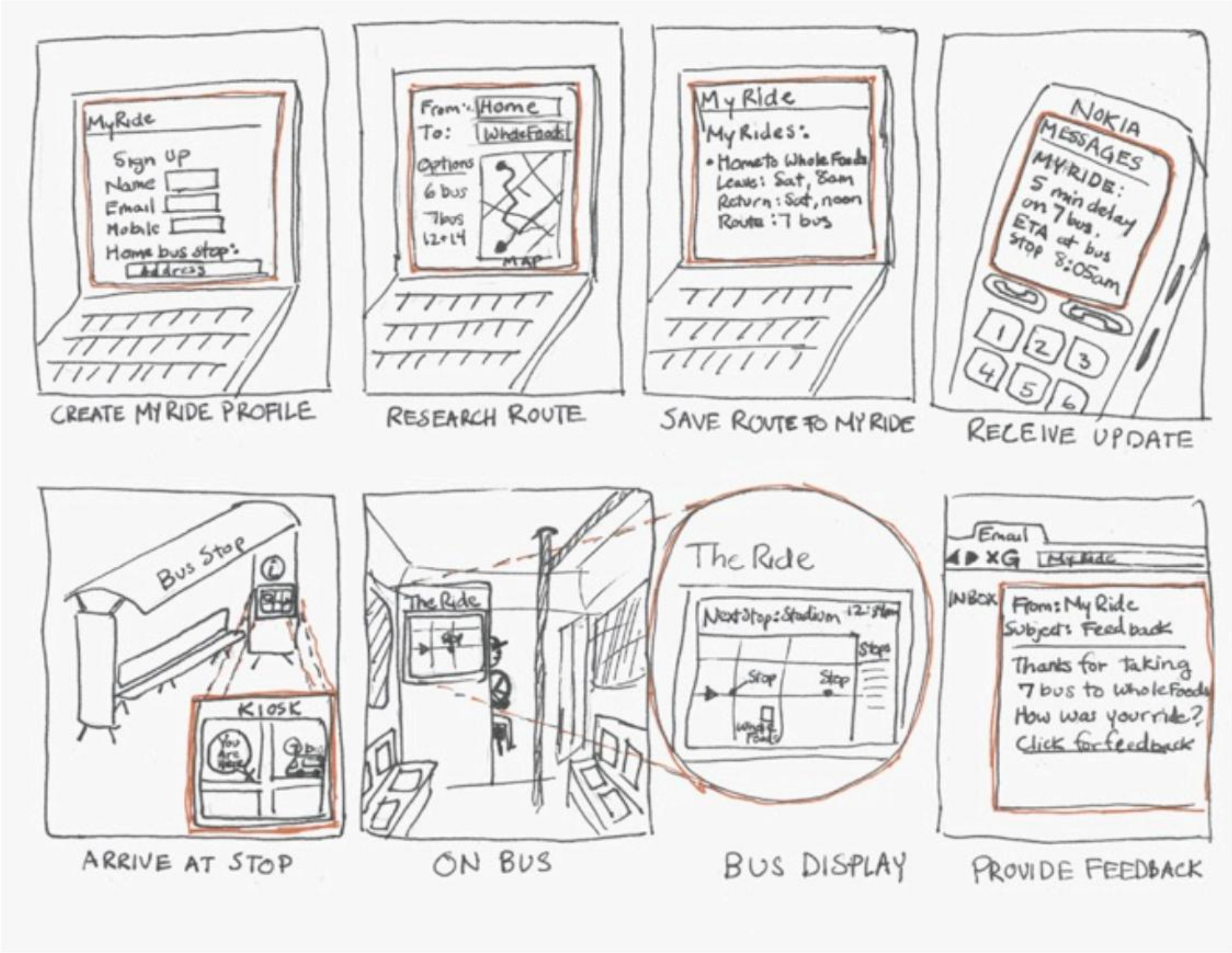
- Imagine explaining this in text, for various audiences



# Storyboarding

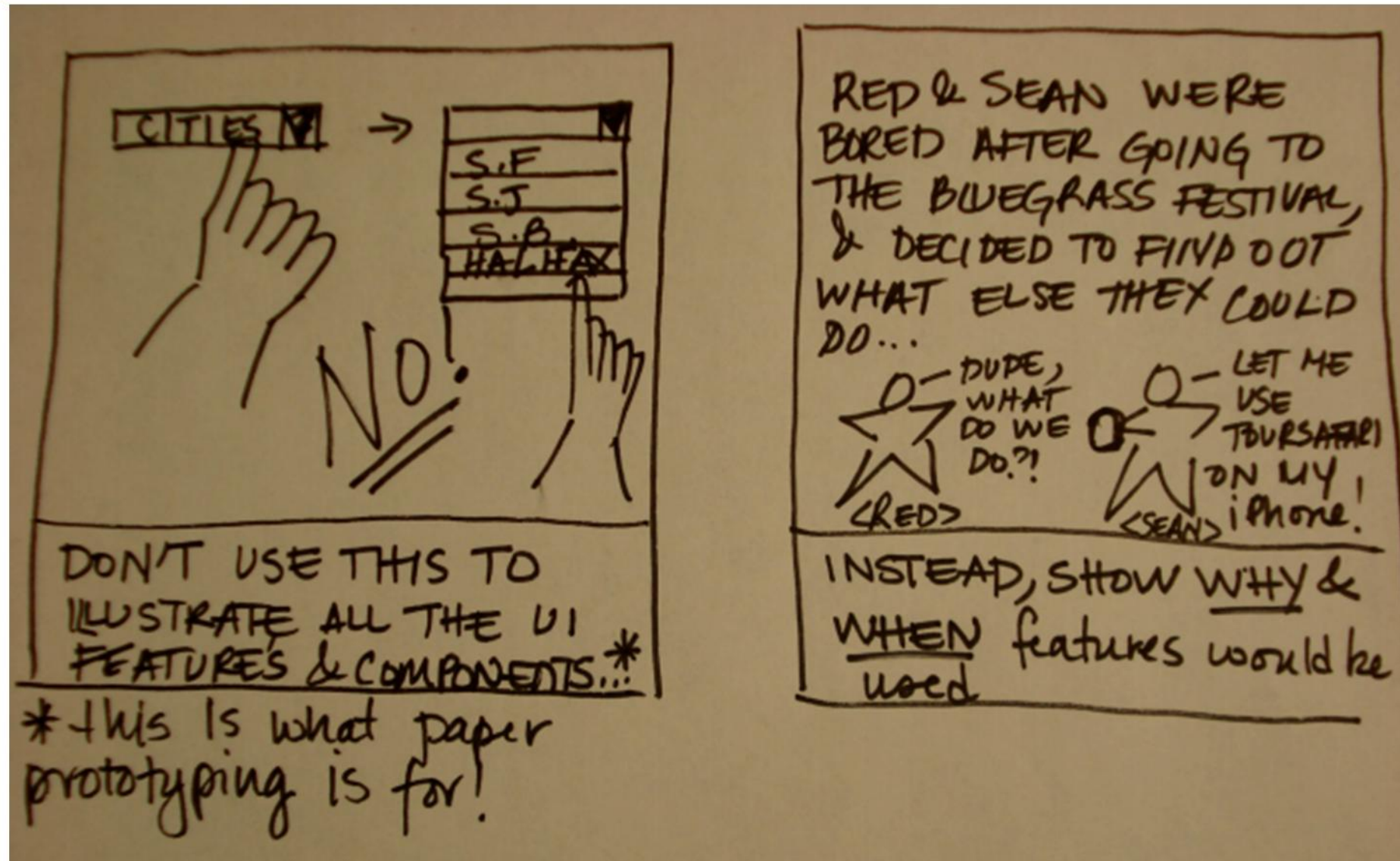
- Can illustrate key requirements and leave open less important details of design

# Basic Storyboards



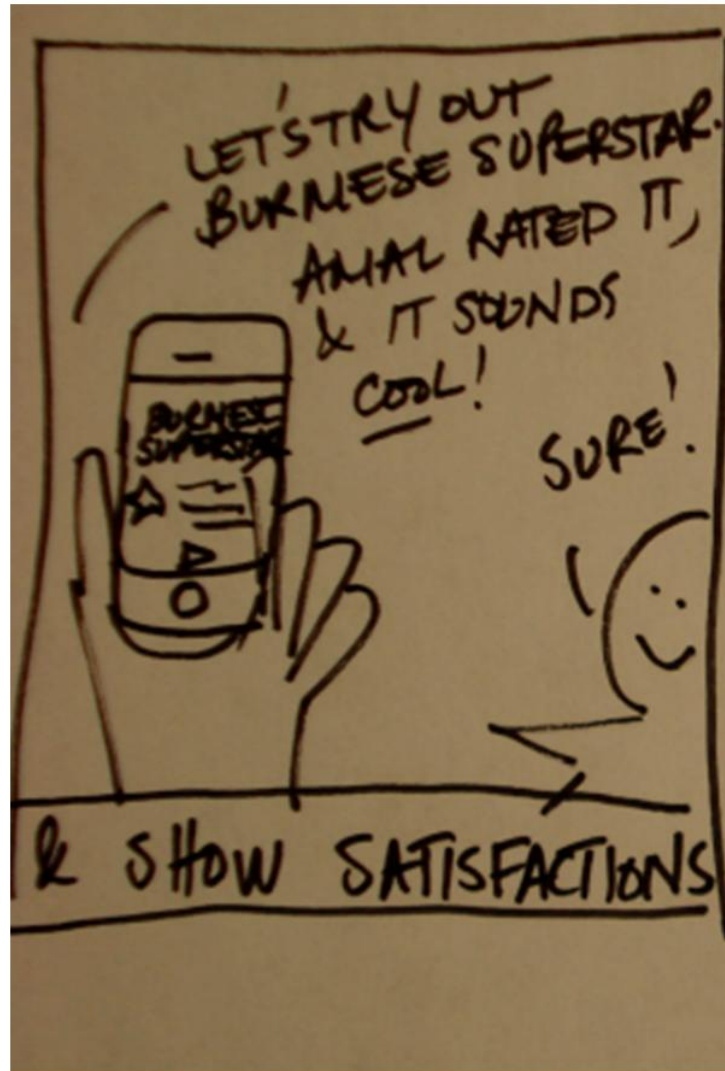


# Amal Dar Aziz's guide to storyboarding

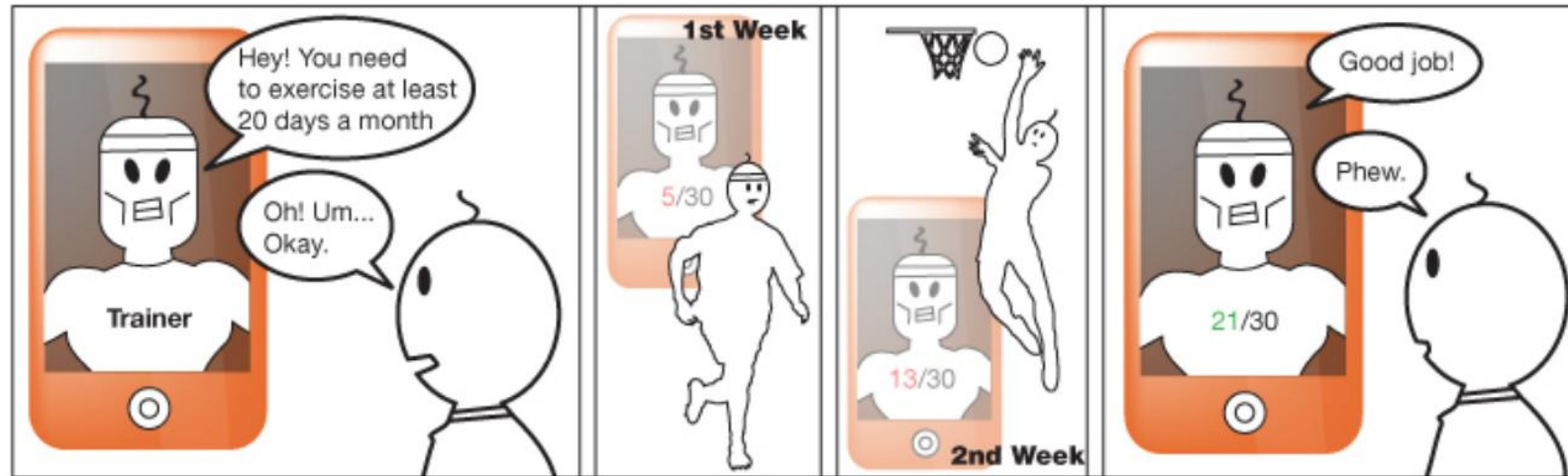




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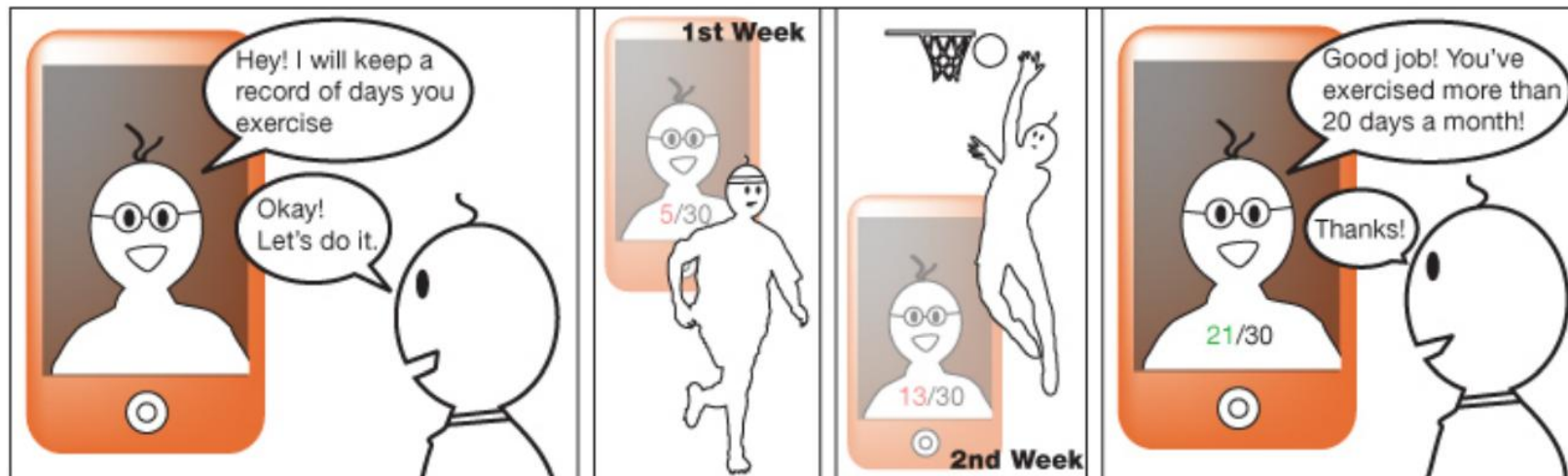


# Storyboards for comparing ideas



Cell phone is used to keep track of one's fitness goal.

Authoritative

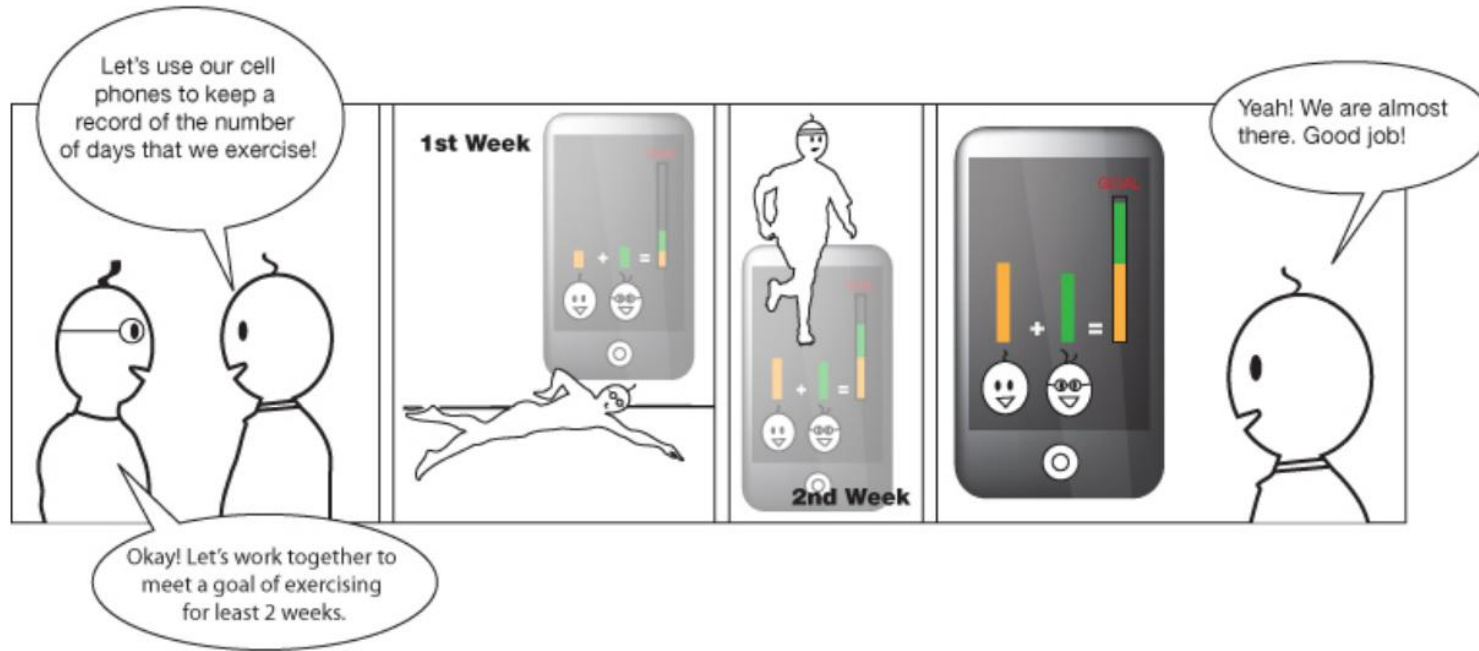


Cell phone is used to keep track of one's fitness goal.

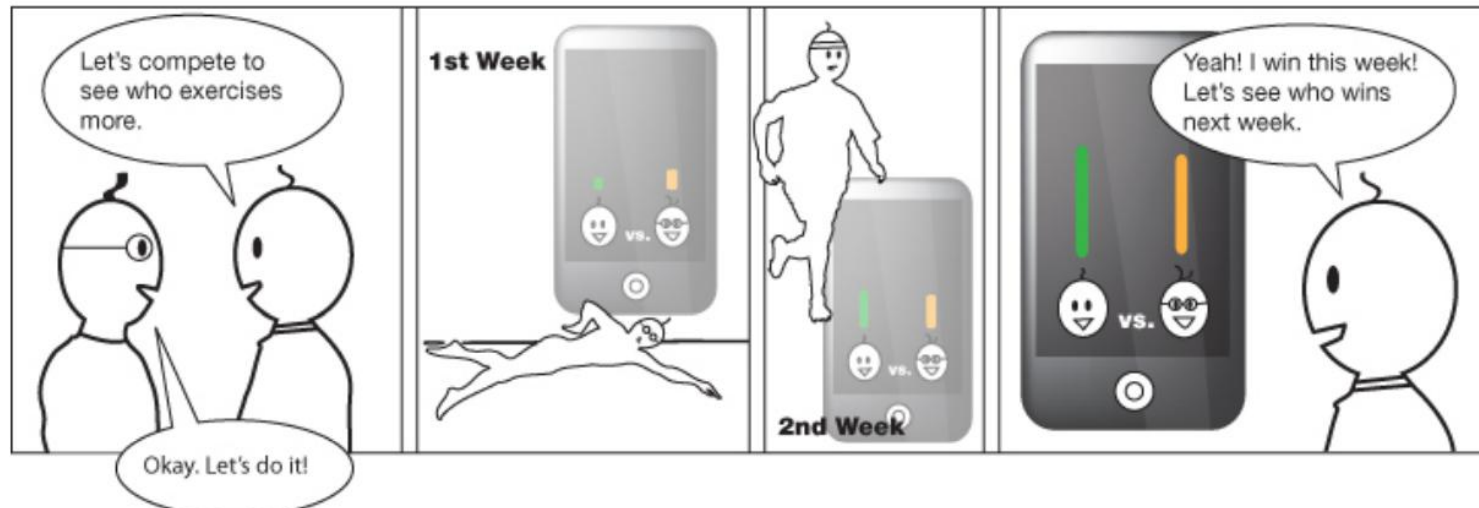
Supportive

# Storyboards for comparing ideas

## Cooperative



## Competitive





# Drawing is Hard...

It doesn't have to be drawings..



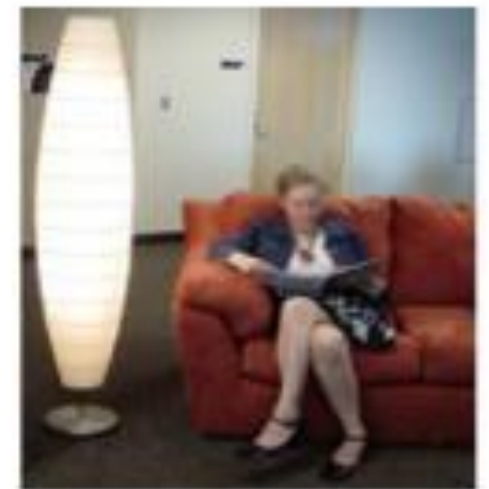
IT IS SO DARK JANE CAN  
HARDLY READ HER BOOK



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

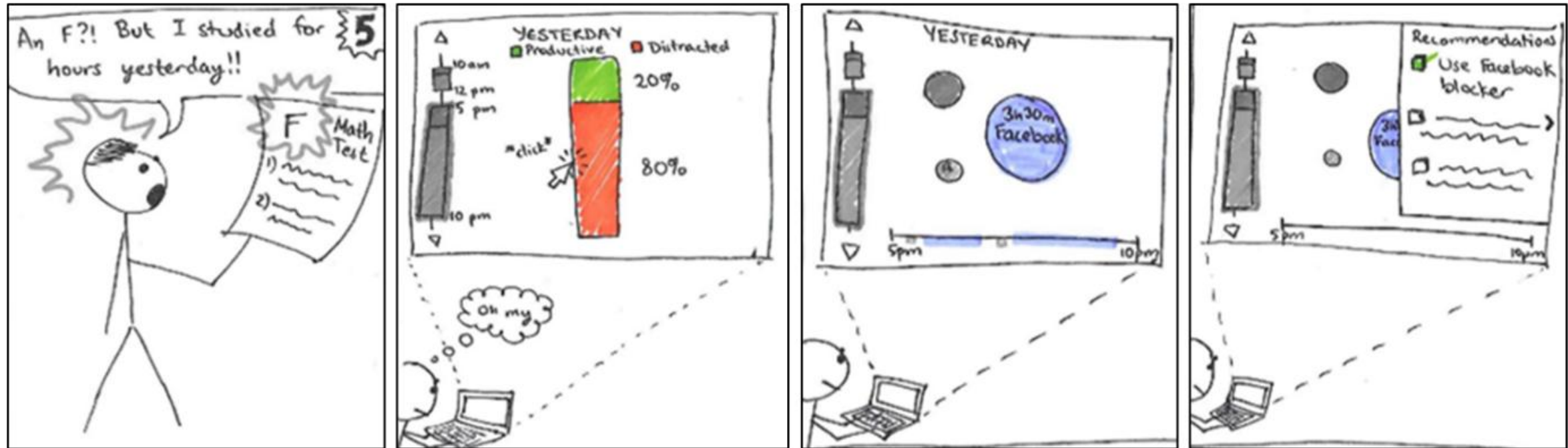


THE LIGHTS TURN ON!



FINALLY, SHE CAN  
READ HAPPILY.

# Selective use of colors





# Storyboarding:

## Example

- Sketch a storyboard for the following scenario:
  - Mary Jo is using AutoAuto, an app to help people keep track of their car maintenance records and expenses
  - On her way to work, Mary Jo stops at a gas station to fill up. The app reminds her to take a photo of the odometer and the gas pump
  - The app tells her to an oil change is due and calls her favorite car place to schedule an appointment

# Storyboarding:

## Example

- Sketch a storyboard for the following scenario:
  - Mary Jo is **using AutoAuto, an app** to help people keep track of their car maintenance records and expenses
  - On her way to work, Mary Jo **stops at a gas station** to fill up. The app reminds **her to take a photo** of the odometer and the gas pump
  - The app **tells her to an oil change** is due and **calls her favorite** car place to **schedule an appointment**

# Storyboarding: Example



## Video prototyping (the name is a poor fit)

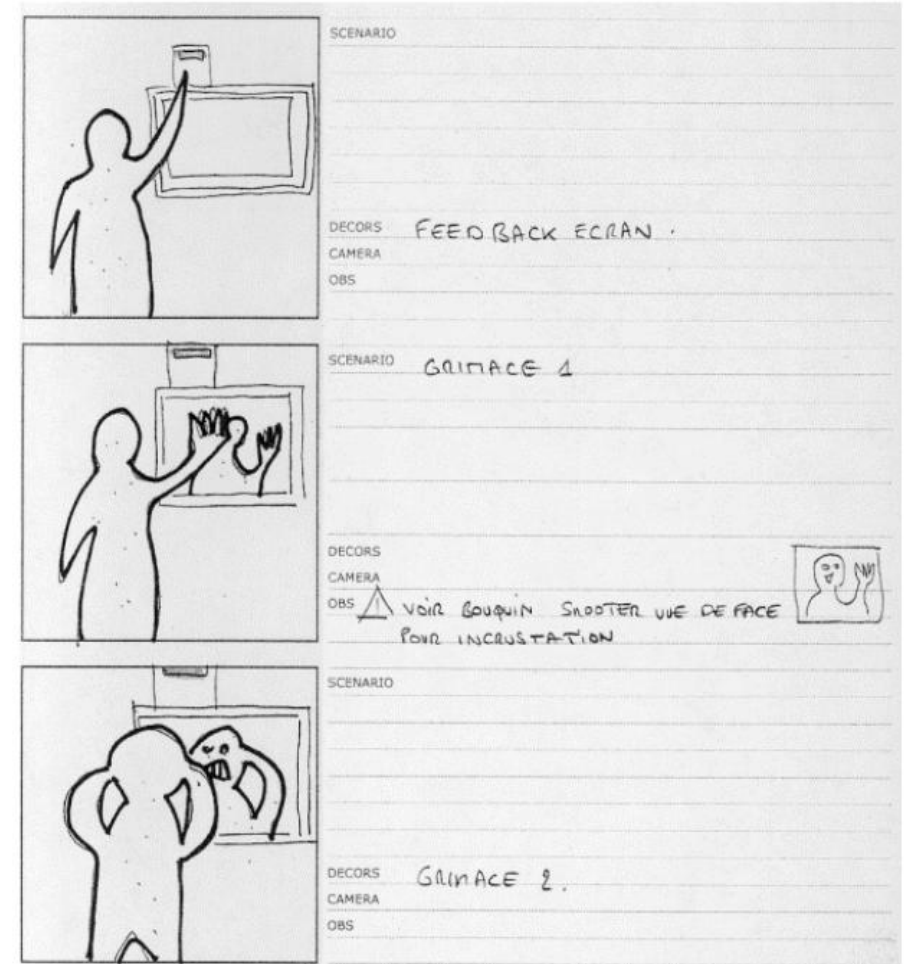
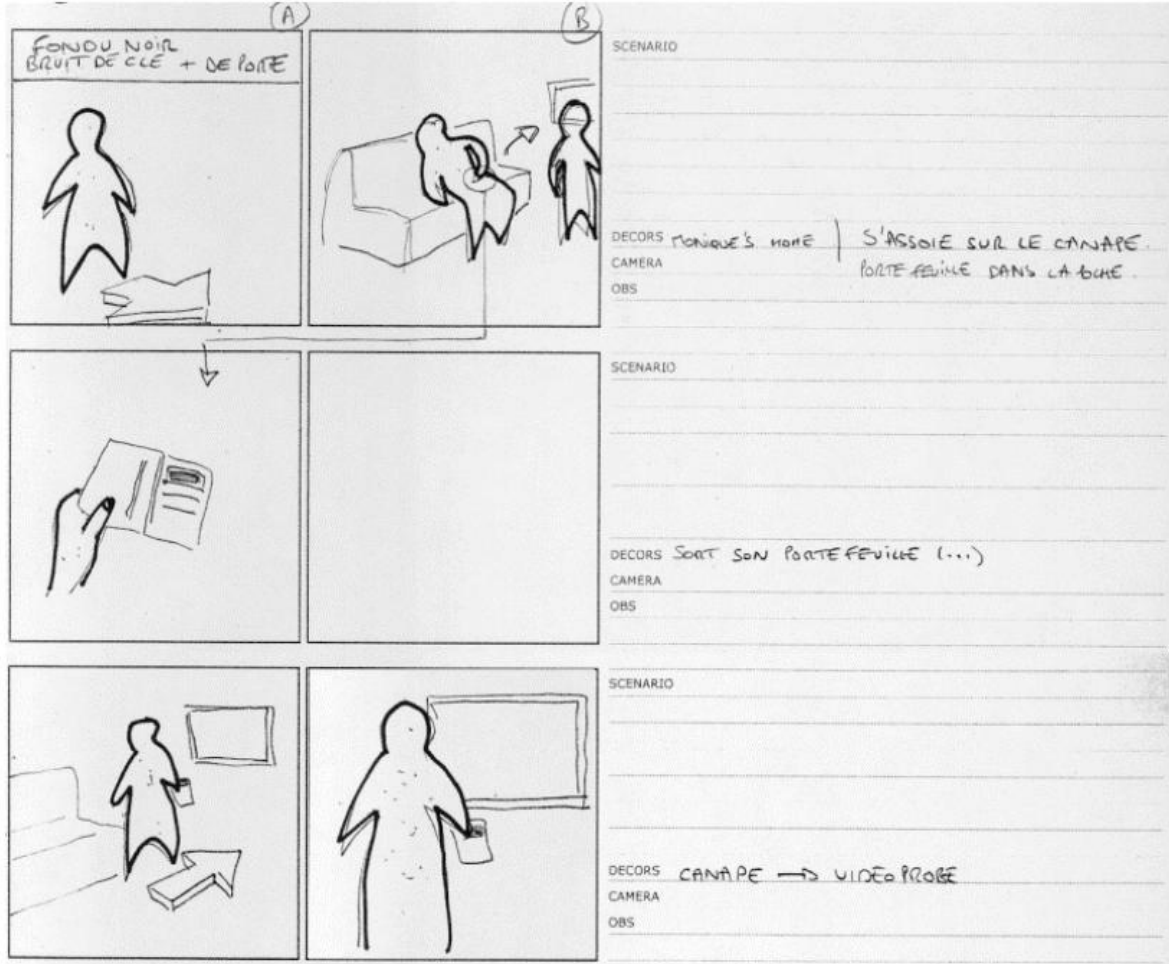
- Value of animation or video
  - Can illustrate critical timing
  - Can be more engaging than written or storyboard
  - Can help convey emotion (e.g., voice, music)
  - Can show interactive elements more clearly
  - Can be self-explanatory
  - If done well, can be an effective pitch
  - But, you need to keep it quick and effective

## Steps to create a video prototype

- Review needfinding data
- Review ideas from design brainstorm
- Create text for usage scenarios
- Develop storyboard, with each scene on a card, illustrating each action/event
- with annotations explaining what is happening



# Steps to create a video prototype



## Steps to create a video prototype

- Shoot a video clip for each storyboard card
  - Avoid editing in the camera, just shoot scenes
- Use titles to separate clips
  - Like a silent movie
- Digital changes these tradeoffs, but respect the spirit of doing this quickly to get the point across
  - If you make an error, just reshoot it

## Lessons from other video prototypes

- Narration, pace, and flair

FRED IS  
PACKING UP  
TO LEAVE FOR  
THE DAY...



## Lessons from other video prototypes

- Using projectors and simple props

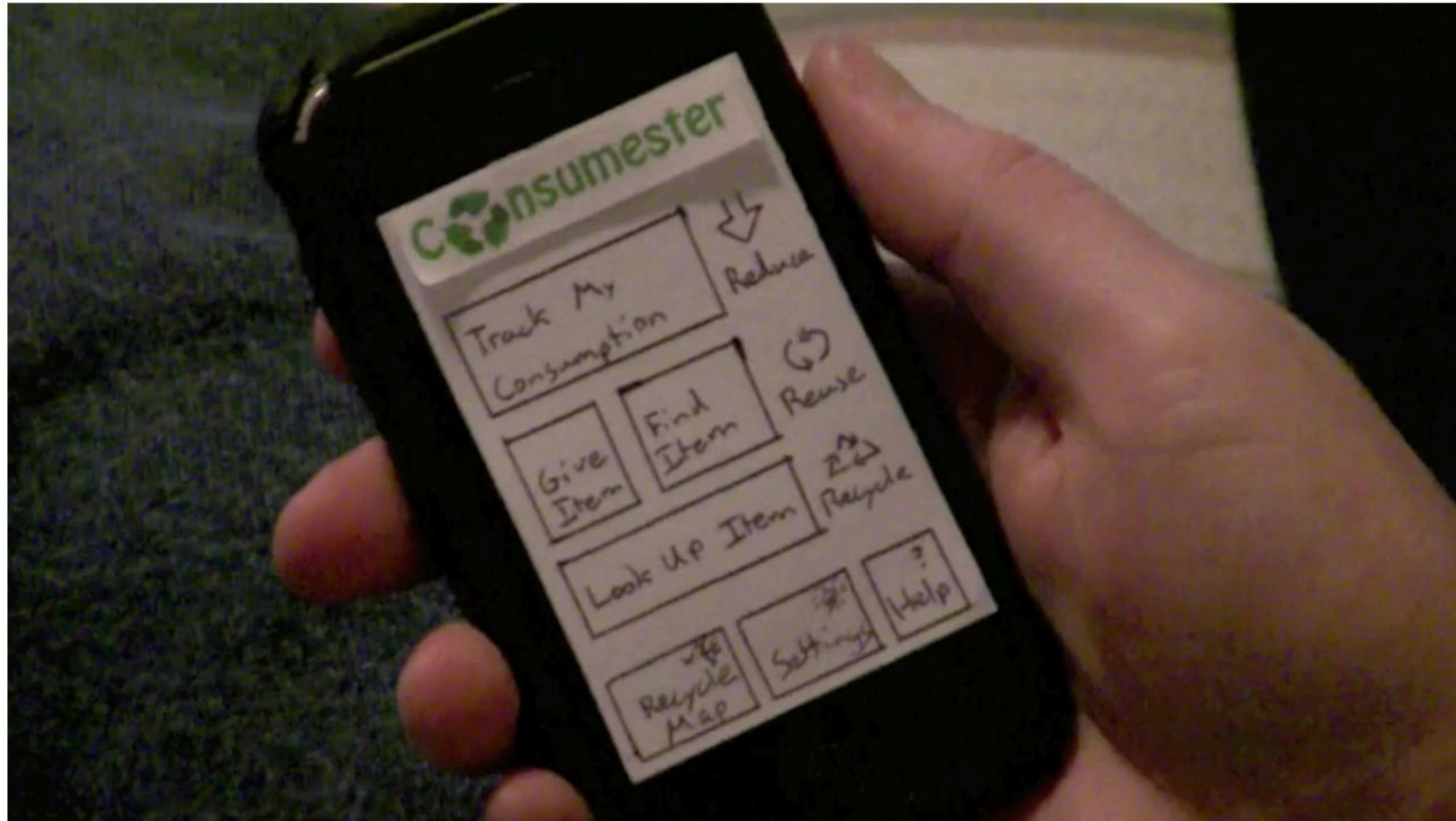


You got your Buddy Map on?



## Lessons from other video prototypes

- Watch for pace and scene relevance





## Lessons from other video prototypes

- Can be playful while keeping pace



# Lessons from other video prototypes

- Choose appropriate fidelity



FLUIDUM



FLUIDUM

**Fidelity takes  
time: stay low  
fidelity**

- If you need a video,
  - do you really need footage?
- If you need an animation,
  - do you really need Flash?
- If you need a photo,
  - do you really need to shoot?

# **Video Prototyping: Purposes**

- Illustrating low-level interaction techniques
- Illustrate designs in context, convey satisfactions
- High-level visions

# Corning's "A day made of glass" (2011)

[https://www.youtube.com/watch?v=6Cf7IL\\_eZ38](https://www.youtube.com/watch?v=6Cf7IL_eZ38)



# In-class Activity (15 mins)

## Practice sketching

- There are many apps and devices to help people monitor their sleep. Some of them are journals, others use sensors to automatically record.
- Sketch 10 potential **ways a person could keep a record of their sleep.**

# In-class Activity (10 mins)

## Practice critique

- Pick one of your sleep sketches and pair up to give each other feedback
- Aim to follow one of the three methods discussed:
  - Hamburger method
  - I like, I wish, what if
  - Socratic method