

CS 147 Project Expo

Design Thinking for User Experience Design, Prototyping & Evaluation

Prof. James A. Landay
Computer Science Department
Stanford University

Autumn 2023

December 8, 2023

Outline

Course overview	6:00-6:25
Team pitches	6:25-6:55
Posters/demos/judging	6:55-8:45
Awards	8:45-9:00



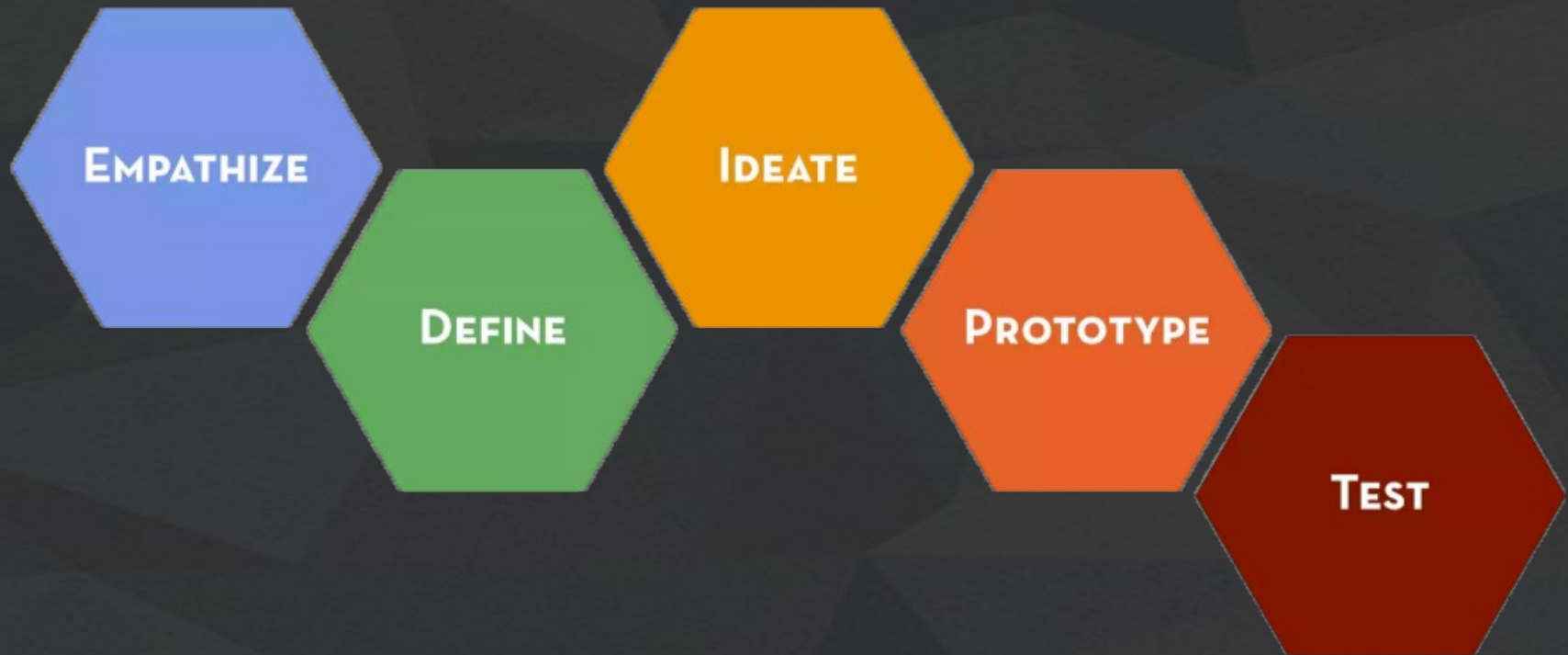
Balance

DESIGN

TECHNOLOGY



Design Thinking Process



Goal of CS 147

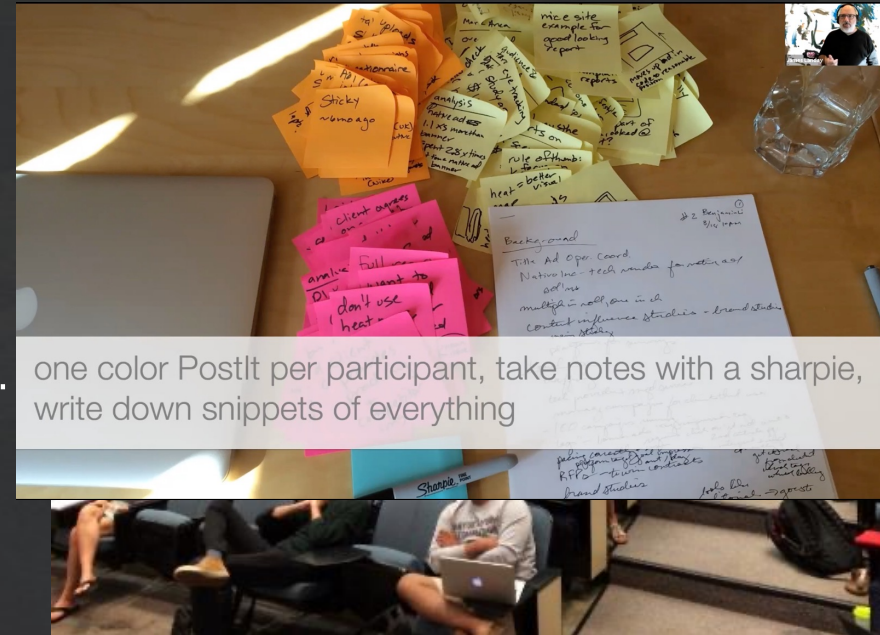
Learn to design, prototype, & evaluate UIs

- Tasks, activities & practices of prospective users
- Cognitive/perceptual constraints affecting design
- Techniques for brainstorming, ideation & prototyping
- Methods for evaluating UI designs
- Importance of iterative design for usability
- Technology used to prototype UIs

- *How to work together as a team*
- *Communicating results to a group*

Project Based Course

- Iterative design of a real UI
- Theme: mobile
- Quarter long projects
- Students
 - ~160 across CS, Symbolic Systems ...
- 40 Teams
 - 3-4 members
- 10 major group assignments
 - group work is ~60% of course grade
- Four presentations
 - every team member presents



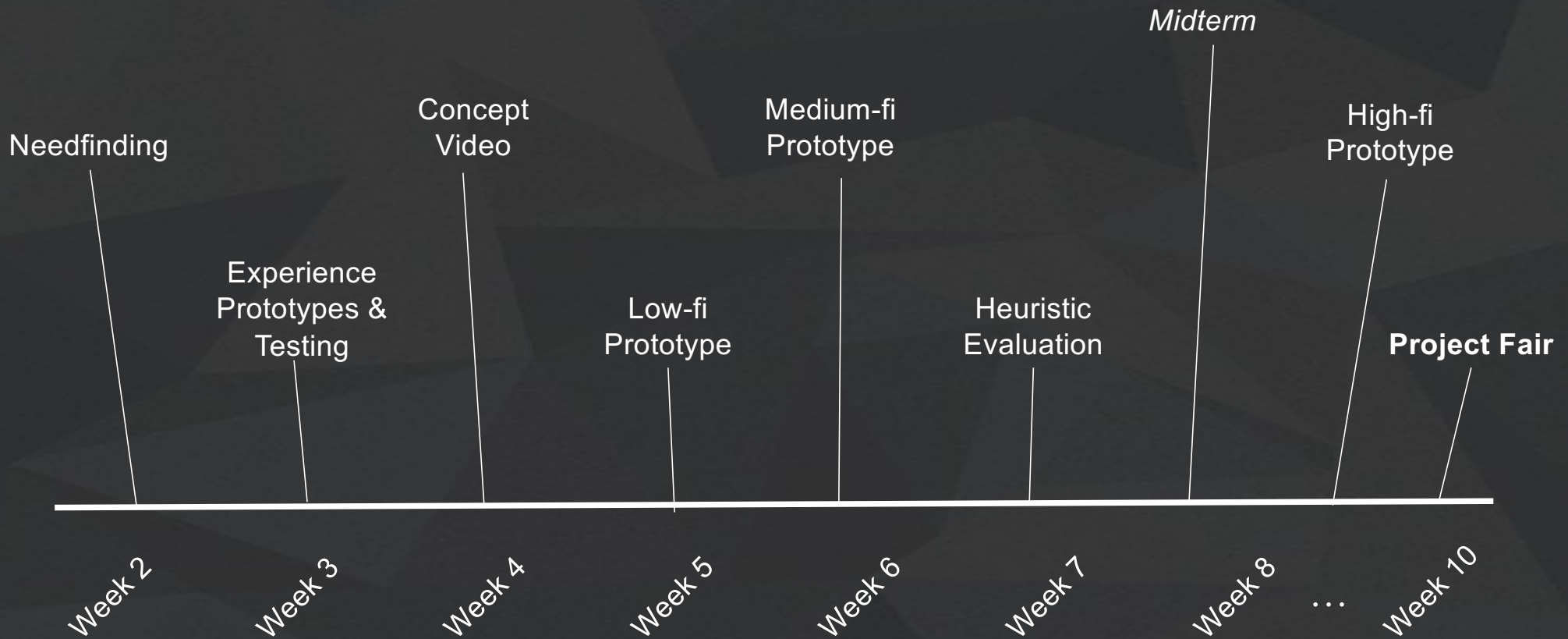
one color PostIt per participant, take notes with a sharpie, write down snippets of everything

Design Studios

Teams attend small weekly studio (9-16 students)
-critique/feedback in more intimate environment



Project Process Timeline



User-centered Design: Needfinding

- Observe existing practices for inspiration
- Make sure key questions answered
- Ethical questions in design w/ underserved communities

MemReprise



Unpacking the Needfinding



RendezViewz

Develop Point of Views (Person + Insight + Challenge) Brainstorm on How Might We Solve

WE WERE AMAZED TO REALIZE ...
(what did you learn that's new?)

THAT THANKS TO THE BOAT OWNER'S MENTORSHIP, TRUST, AND DEPENDENCE UP
THE FISHING LIFESTYLE AND CONNECTION TO NATURE, HE HAD TURNED HIS LIFE
AROUND FROM DRUG ADDICT W/OUT A JOB TO SOMEONE WITH SKILLS & CHILDREN

IT WOULD BE GAME-CHANGING TO ...
(frame up an inspired challenge for yourself
don't dictate the solution)

ALL OF US COULD TAKE A RISK TO SEE A SPARK IN OTHERS AND
NURTURE IT INTO A PURPOSEFUL TRANSFORMATION.

HMW bring
routine (and
discipline)
less

Experience Prototype to Test Assumptions

User Experiences

Critical assumption tested
People feel comfortable gardening in public.

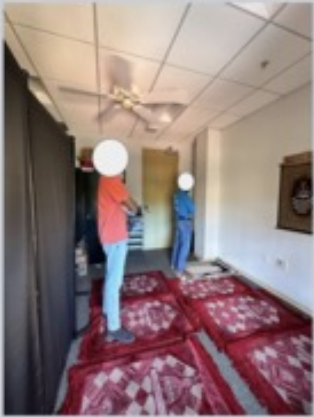
Participant
4 strangers at the park.
Diversity in sex, age (25 - 96!), and experience with gardening.

Experience prototype
Gave participants a free plant and a spade and told them that they could plant it wherever they wanted.



Sage

Experience Prototype to Test Assumptions



What lightweight test can we do to validate that critical assumption?

Setup + Prototype in Action



ASSUMPTION

Our experienced users, people who are very familiar or native in a specific language & culture, would be willing and enthusiastic to host someone for a specific period of time.

EXPERIENCE PROTOTYPE

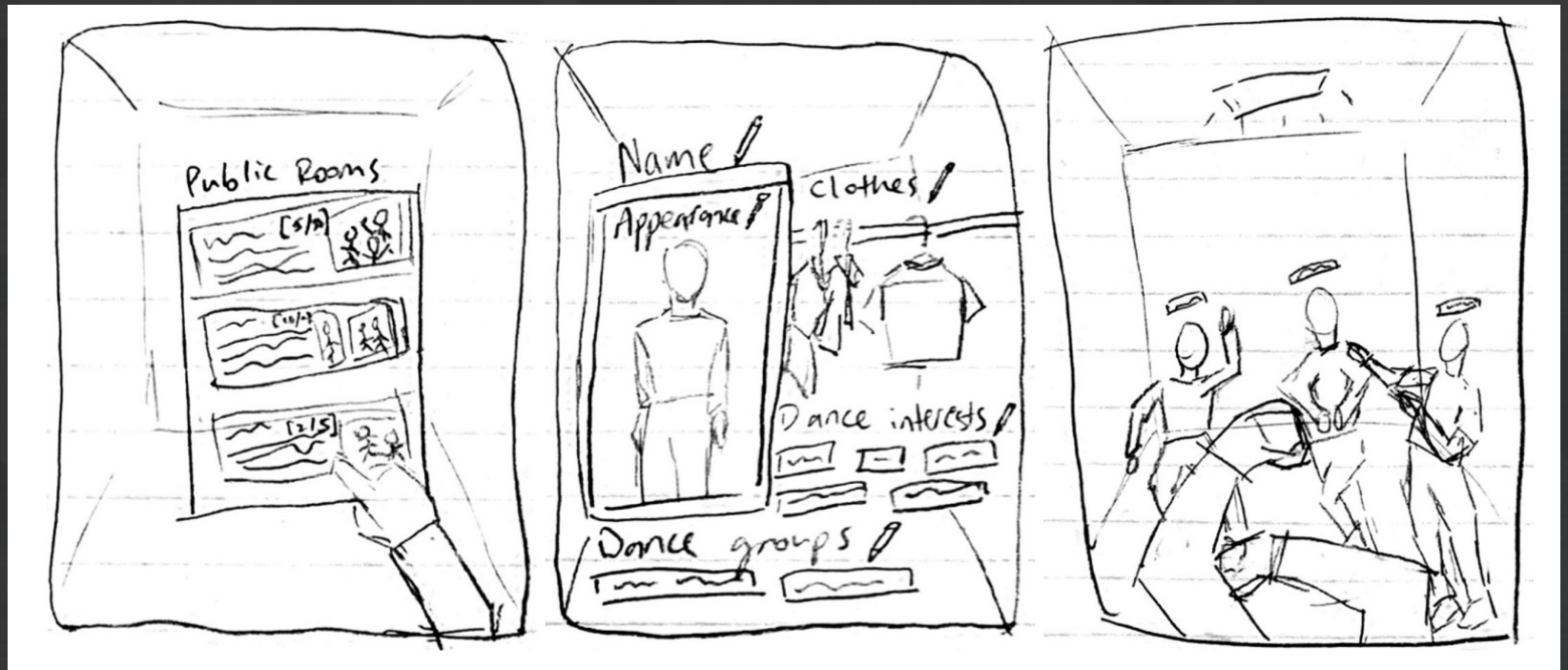
Props: The Musalla (prayer room) at Old Union, pre & post-survey asking both host & user about their experience

Actors: Find someone who is interested in learning about Middle Eastern & Islamic Culture + is learning Arabic. Find another person who is a native Arabic speaker and passionate about speaking about culture & Islam. Have the person interested in learning shadow an Islamic prayer and halaqa discussion with their host.

Data: Have participants complete a questionnaire before and after asking them how they felt, their overall relationship and understanding with the specific language and culture, and how engaging the experience was.

mersiv

Sketching & Storyboarding



house

Concept Videos: Planning Storyboards

Task #1: "Reading" an inherited memory Sound: A Party

17. Ham bites fruit
 (fade to flashback)
 18. A cake is placed in front of Ham. He smiles
 Background: childhood kitchen
 (fade to present)
 19. slowly opens eyes (open)
 looks down at fruit, smiles
 20. Ham picks three more fruits
 21. (pick)
 22. (pick)
 23. (pick)
 (close up) (rapid succession)
 (cut to flashbacks)

CPov)
 24. (slides onto screen)
 project
 (table) A+!
 25. Kiss on cheek
 26. Petting dogs
 (cut to present)
 27. Ham looks around farm
 (fade)
 28. ham smiles
 (fade to white)
 29.

Task #2: Showing a memory (ringing stops)

30. (fade to black)
 (fade-in)
 31. (close-up)
 (table) Sound: ringing sound returns
 32. Sen, looking stressed
 Set: Grey room
 33. Ham places fruit in front of Sen. She picks it up and takes a bite.
 34.

Concept Videos



FitBud

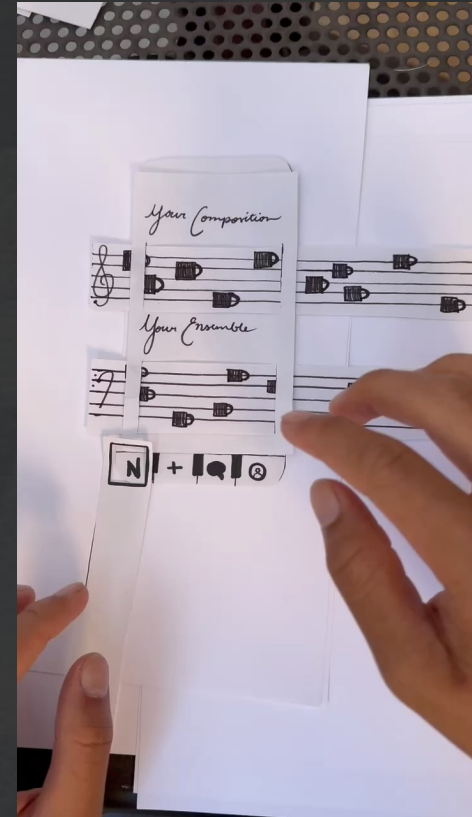
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dt+UX: Design Thinking for User Experience Design, Prototyping & Evaluation

Low-fi Prototyping & Testing

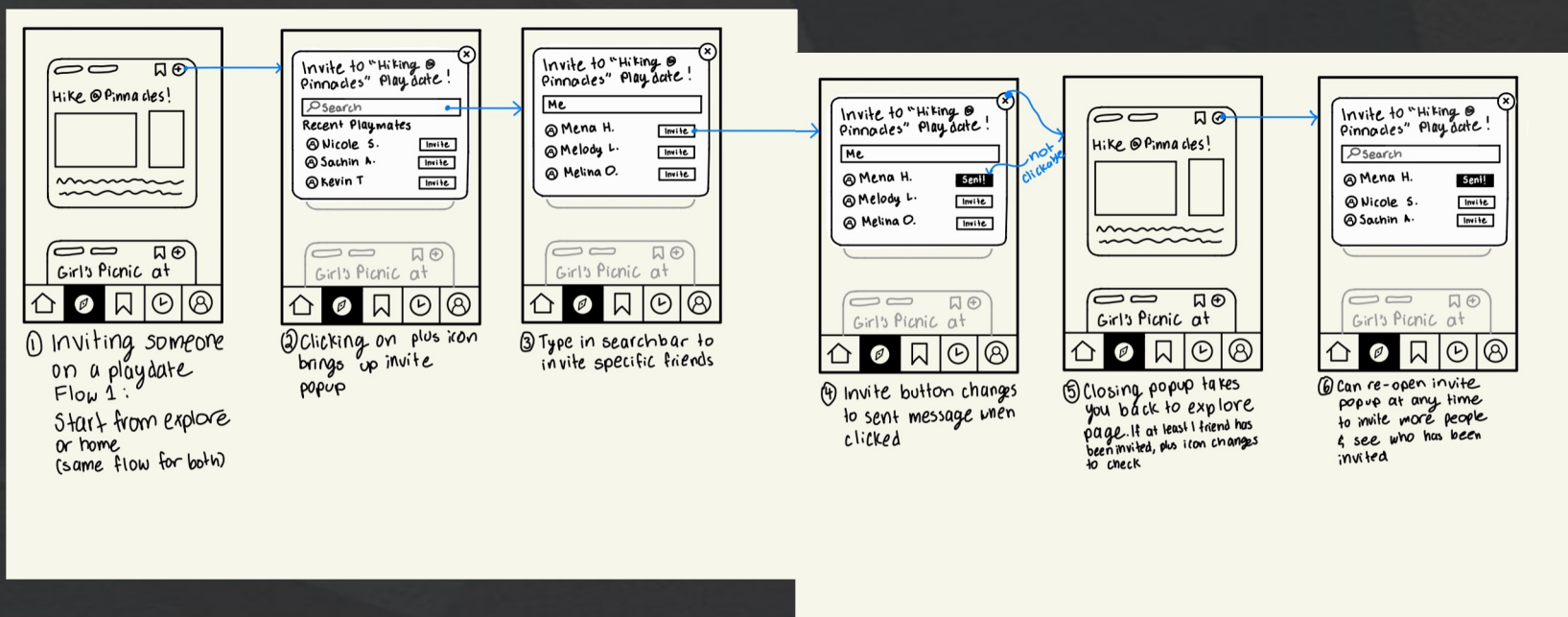


Grapevine



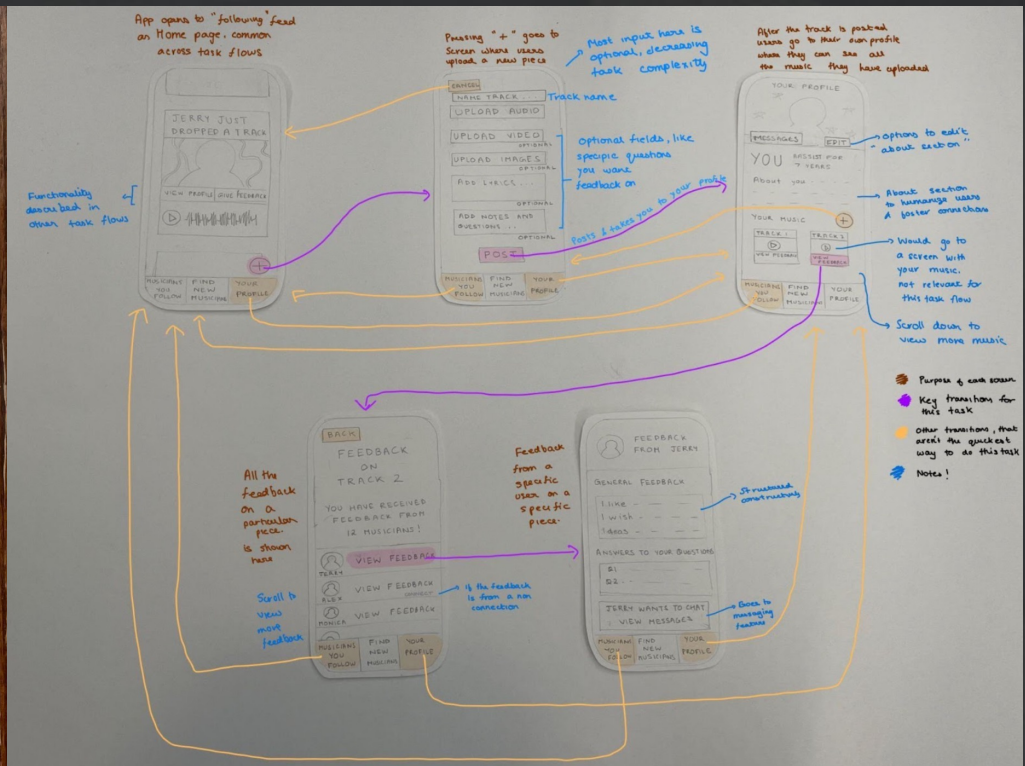
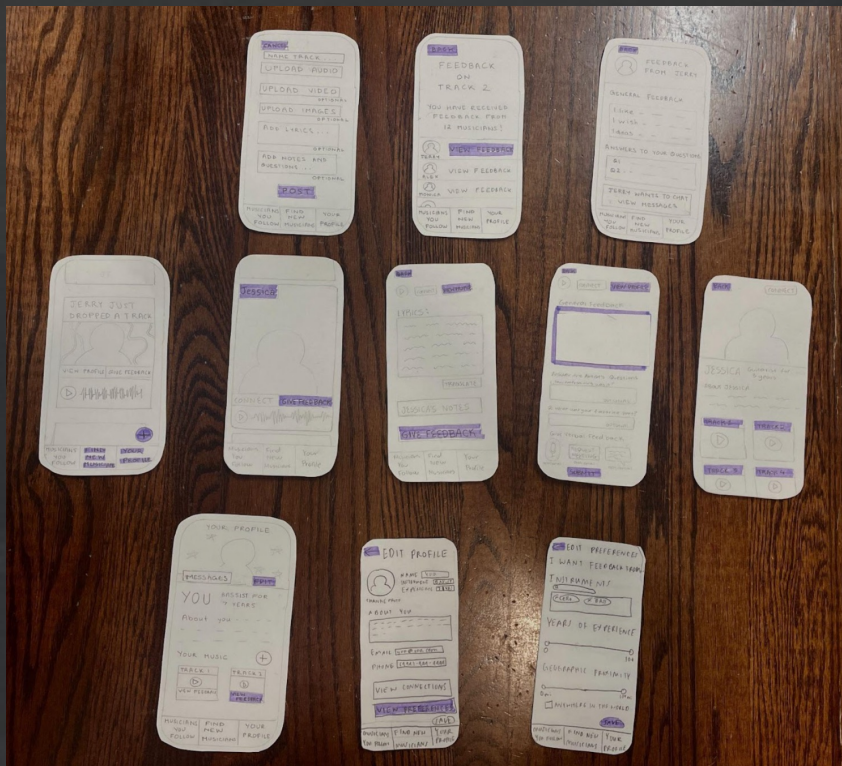
Noted

Low-fi Prototyping & Testing



playdate

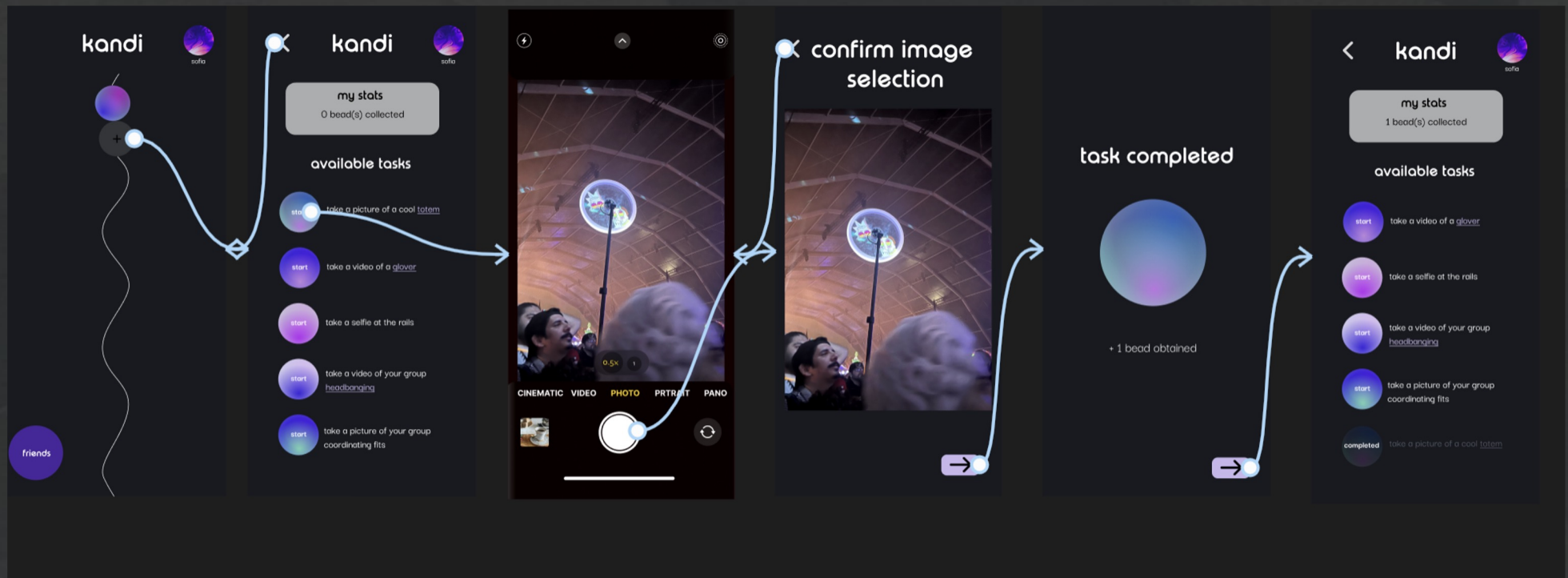
Low-fi Prototyping & Testing



Keynotes

Interactive Prototypes

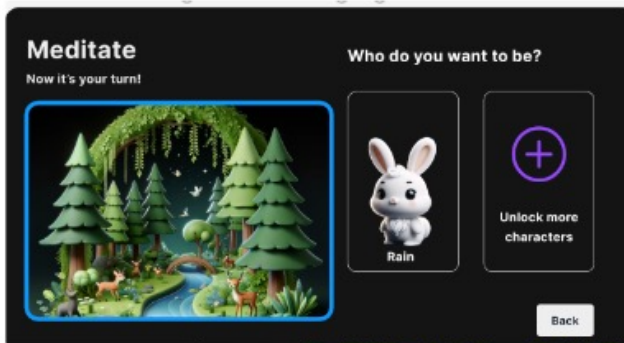
Medium Fidelity



kandi

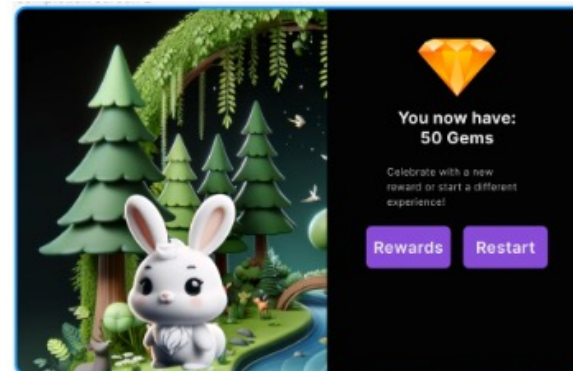
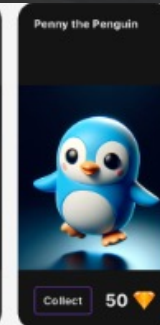
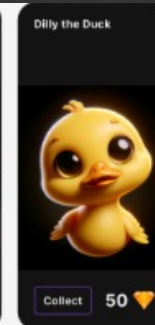
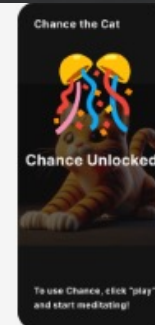
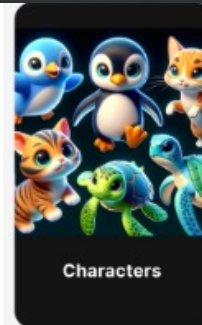
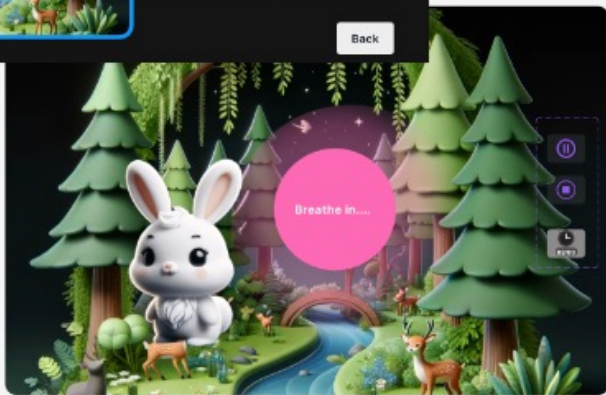
Interactive Prototypes

Medium Fidelity



Choose character guide

Collect new rewards

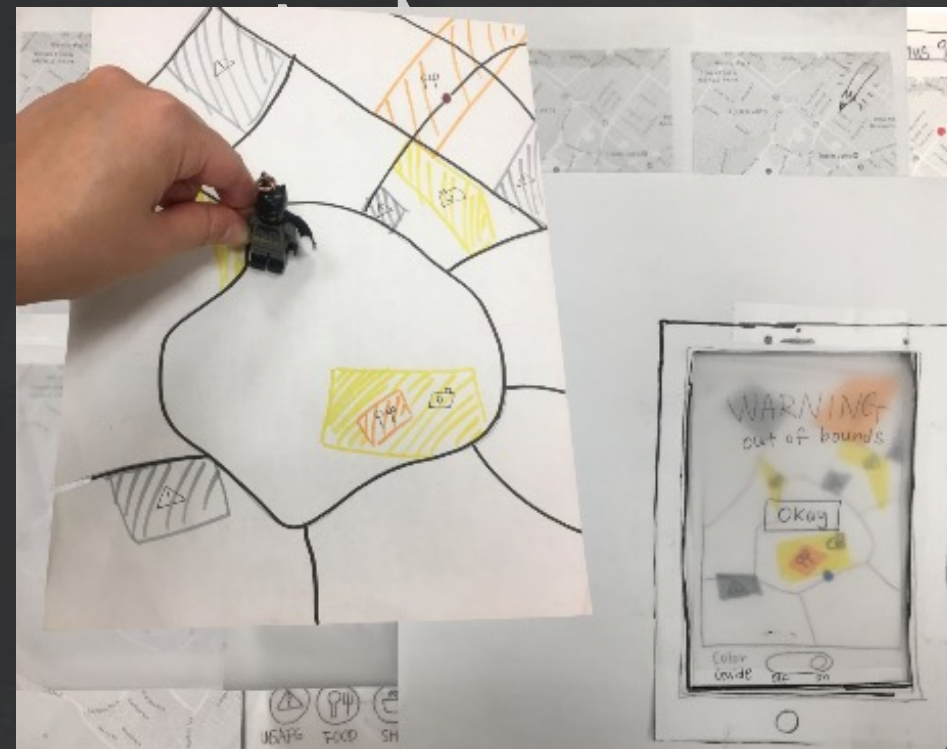


Earn gems for exercise completion

MindCompass

Evaluation

- Test with real customers (participants)
 - w/ interactive prototype
 - low-fi with paper “computer”
- Low-cost techniques
 - expert evaluation (Heuristic Evaluation)
 - online testing

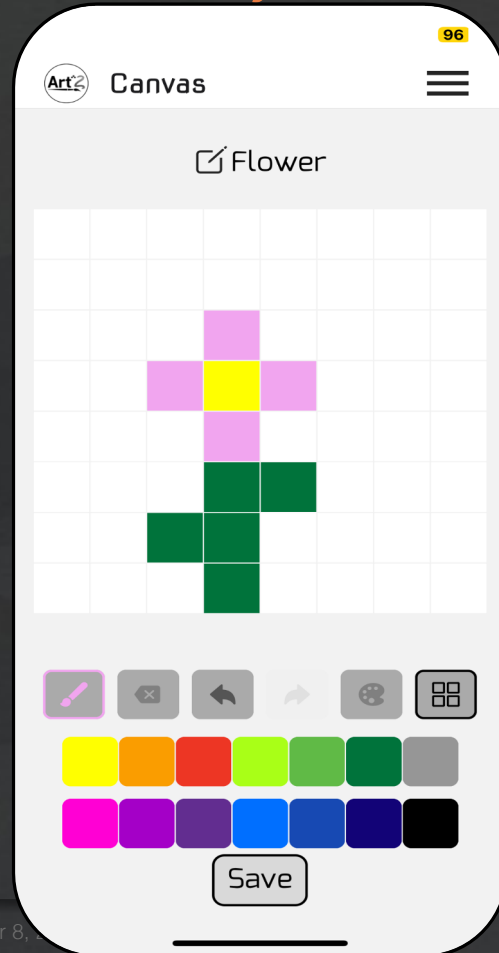


Wanderlust

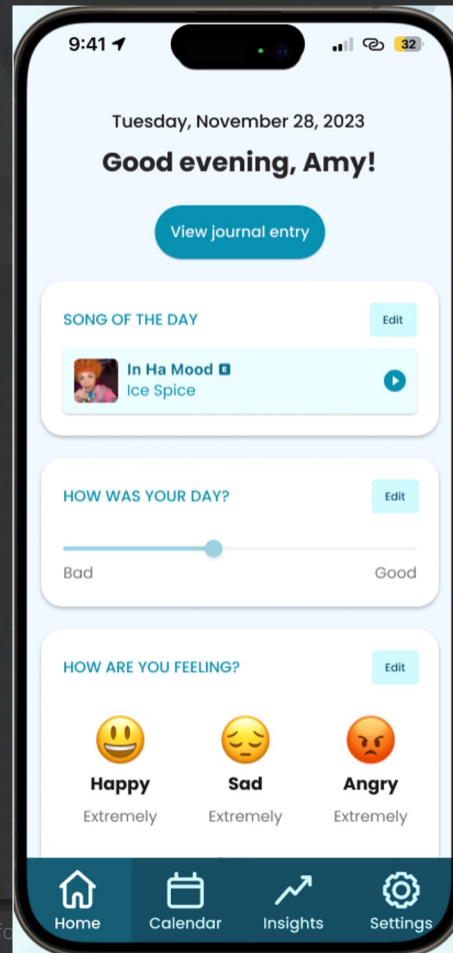
Interactive Prototypes

Hi-Fidelity

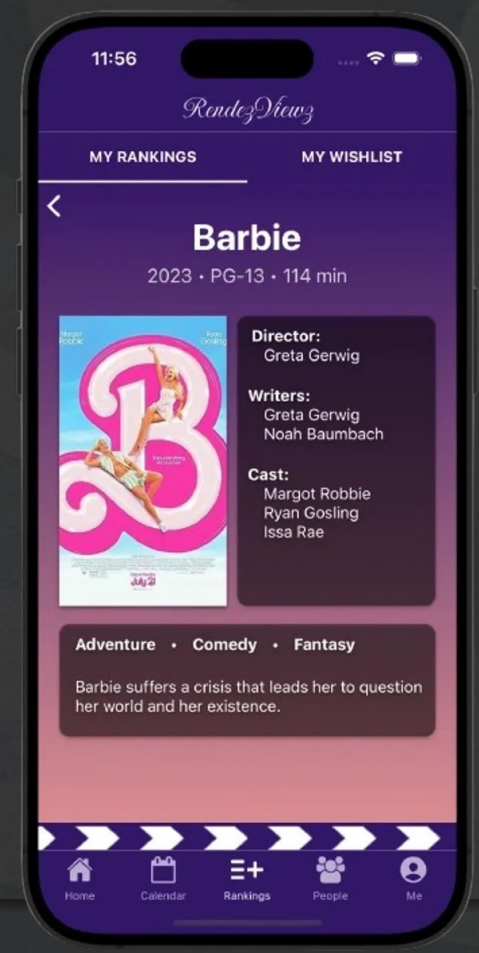
Art2



record



RendezViewz



<http://cs147.stanford.edu>

- Project web sites w/ all materials

HOME TEAM DELIVERABLES HIGH-FI PROTOTYPE TESTIMONIALS FAQ

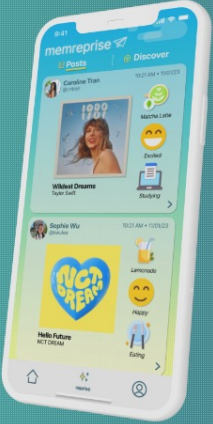
memreprise

Where Music and Memories Meet!

Join a community where music and memories come as one. Without any extra effort, users incrementally build an archive of their favorite music, and all of the past emotions, activities, and memories associated with it.

Download on the App Store

Get it on Google play



<http://cs147.stanford.edu>

- Project web sites w/ all materials
- Lecture topics, slides, & video
- Homework assignments

The Projects

- 13 Judges will be picking the best projects (announced 8:45-9 PM)
- Students will have a say by voting for *The Students' Choice Award*

<http://bit.ly/cs147-au23-best-pitch>



Thanks! Get Involved!

- Mentor teams in CS 194H (next quarter)
- Hire students and interns
- Support this project fair financially & HCI+Design research at Stanford

The Judges

- Siamak (Ash) Ashrafi
- Guadalupe Babio
- Jane E
- Paul Harrison
- Katya Lavrenova
- Kevin Liang
- Millie Lin
- Edmund Macaluso
- Shrinivas Mohan
- Joy Mountford
- Jack Russo
- Ted Selker
- Leigh Soutter
- Chengchao Zhu

THANK YOU!

FLORENCE
VENTURE PARTNERS



Computerlaw
Group
LLP

THANK YOU!

FOUNDATION FOR
CREATIVITY
IN DISPUTE RESOLUTION

The Projects

The Students' Choice Award

<http://bit.ly/cs147-au23-best-pitch>



We are checking your attendance based on this and on Bingo!

The Judges

- Siamak (Ash) Ashrafi
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THANK YOU!

FLORENCE
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THANK YOU!

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CREATIVITY
IN DISPUTE RESOLUTION

AUTUMN 2023
CS 147 – dt+UX
AWARDS

Students' Choice / Best Pitch

DiarWe

kin

F*this

Best Poster

MemReprise

FitBud

Arbor

Greatest Societal Impact

Thyme

TrainGone

QueerX

Greatest Personal Impact

DiarWe

Thyme

F*This

Most Novel Product

Arbor & Mersiv

MindCompass

Best Website

Sage

Playdate

FitBud

Best Concept (3)

Bottle

FitCast

DiarWe

Best Demo (3)

FitBud

enosi

MemReprise

Best Visual Design (3)

kandi

Sage

Thyme

Bingo Raffle Winner

Winnie Chen

Pedro Civita

Georgia Limcaoco

Best Overall Project

DiarWe

Sage

MindCompass