

CSE440: Introduction to HCI

Methods for Design, Prototyping and Evaluating User Interaction

Lecture 01:
Introduction

Nigini Oliveira
Abhinav Yadav
Liang He
Angel Vuong
Jeremy Viny

Who we are

Nigini Oliveira

Study and practice CS in Brazil since 2000

PhD in CS in 2017

Postdoc in Social Computing here at UW

Work in cross-cultural collaboration and online experimentation

Likes literature and long distance bike rides



Who we are

Abhinav Yadav

CS Graduate

Designing since 2014:

have worked on the Wall Street to villages in India

Currently in the HCDE Masters Program

Loves designing for complex systems, going to concerts and PS4



Who we are

Liang He

CSE PhD student studying HCI

MS from CMU

Work in novel fabrication techniques for social good

Likes painting, making, tinkering, and cyberpunk stuff



Who we are

Angel Vuong

BFA Studio Art (Printmaking)

1st year MS HCDE student

3 years of industry experience as a UX Designer

Always experimenting with plant-based cooking

Has a dog named Snack



Who we are

Jeremy Viny



Studied Neuro Economics and Art

Pursuing a Masters of Design in the School of Art + Art History + Design.


Research Focus: Design Research. In particular domestic IoT

Hobbies: Woodworking and furniture restoration.

What is this course about?


Once upon a time...

[Our Experiments](#) [Findings & Data Sets](#) [Blog](#) [For Researchers](#) [About Us](#) English ▾



LAB IN THE WILD


232
participating countries



Test your reading speed!

Find out how your reading speed and comprehension compares to others by taking this test! The test takes around 12 minutes.


[Participate now!](#)



What is your privacy profile?

Find out how your data sharing behavior compares to others and learn about the Internet of Things. This study takes around 10 minutes.

[Participate now!](#)



What is your problem solving score?

How well do you solve new problems? Test your problem solving abilities! This study will take around 10 minutes.

[Participate now!](#)

We use personalized results...

Have a look at your results!

How good are you at data analysis?



Professional: You're ready to mentor others.

You are so close to the top! You accurately interpreted most of the tasks. With a little effort, you could surpass the rest of the field.

How do you compare?

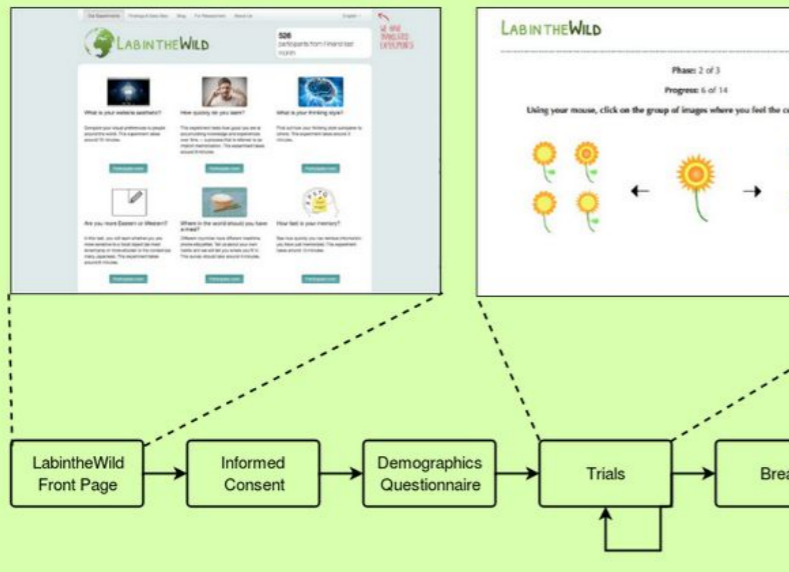
You got a score of 90%. You did better than 100% of test takers.

How can we help researchers?

Study Example Study Template About

What is a common experiment flow for LabintheWild experiments?

LabintheWild experiments can be accessed via the LabintheWild homepage (see left image below) or directly through a link to a specific experiment. All of our experiments start with an informed consent page and end with personalized results. The order of the remaining parts largely depends on the type of experiment. The image below shows a very common order.



litw-template-package

- Source
- Commits
- Branches
- Pull requests
- Pipelines
- Deployments
- Issues
- Downloads
- Boards
- Settings

Lab in the Wild - CORE Team / LITW-CORE

litw-template-package

Clone

Here's where you'll find this repository's source files. To give your users an idea of what they'll find here, [add a description to your repository.](#)

master Filter files

Name	Size	Last commit	Message
docs		2018-09-10	Merge master to retrieve_summary_database branch.
template		2018-09-10	Merge branch 'master' into retrieve_summary_database
.gitignore	100 B	2018-07-12	.gitignore edited online with Bitbucket - added config.php
README.md	2.15 KB	2018-09-10	Merge master to retrieve_summary_database branch.

README.md

LabintheWild Study Templates

This repository bundles together the LabintheWild template study and instructions to guide new developers to create their own online studies.

We then created Digestif...

The screenshot displays the Digestif web application interface. At the top, there are navigation buttons for "Study Example", "Study Template", and "About". The main header includes the "digestif" logo, "Explore", and "Create" buttons, along with a notification that says "You've ♥'d 8 blocks!".

The interface is divided into three main sections:

- ♥'d Blocks:** A list of available blocks to be dragged onto the page. The visible blocks include:
 - Experimental Design (1):** A block for defining the experimental design.
 - Feedback (1):** A block containing a survey form with questions like "Are you already a participant in Cat Tracker?", "How did you find out about this survey?", and "Do you have any other comments?".
 - Personality Survey:** A block titled "Personality Survey".
 - Other Studies:** A block for listing other related studies.
- Your Page!:** A central workspace where blocks are dropped and edited. It features a "Download" button and a "Get an HTML of your page" option. A preview of the page content is visible, showing a "Normal" text block with a rich text editor (bold, italic, underline, link, code) and a paragraph: "This is an empty block. Fill it in however you'd like!". Below this is another "Normal" text block with the text: "Thank you for completing this survey! Your answers will help us to understand domestic cats in the United States.".
- Right Sidebar:** A sidebar with a "Clone" button and a "..." menu. It also contains a "Description" field with the text: "ea of what they'll find here, add a description to".

At the bottom of the page, there is a "README.md" section titled "LabintheWild Study Templates" with the text: "This repository bundles together the LabintheWild template study and instructions to guide new developers to create their own online studies.".

We created Digestif...

The screenshot displays the Digestif web application interface. At the top, there are navigation buttons for "Study Example", "Study Template", and "About". The main heading reads "What is a course experiment flow for LabintheWild?". Below this, a diagram shows the flow from "LabintheWild Front Page" to "Informed Consent".

The central part of the interface is a drag-and-drop editor. On the left, under "♥'d Blocks", there are several pre-made blocks: "Experimental Design (1)", "Feedback (1)", and "Personality Survey". The "Feedback (1)" block is expanded, showing a form with questions like "Are you already a participant in Cat Tracker?", "How did you find out about this survey?", and "Do you have any other comments?".

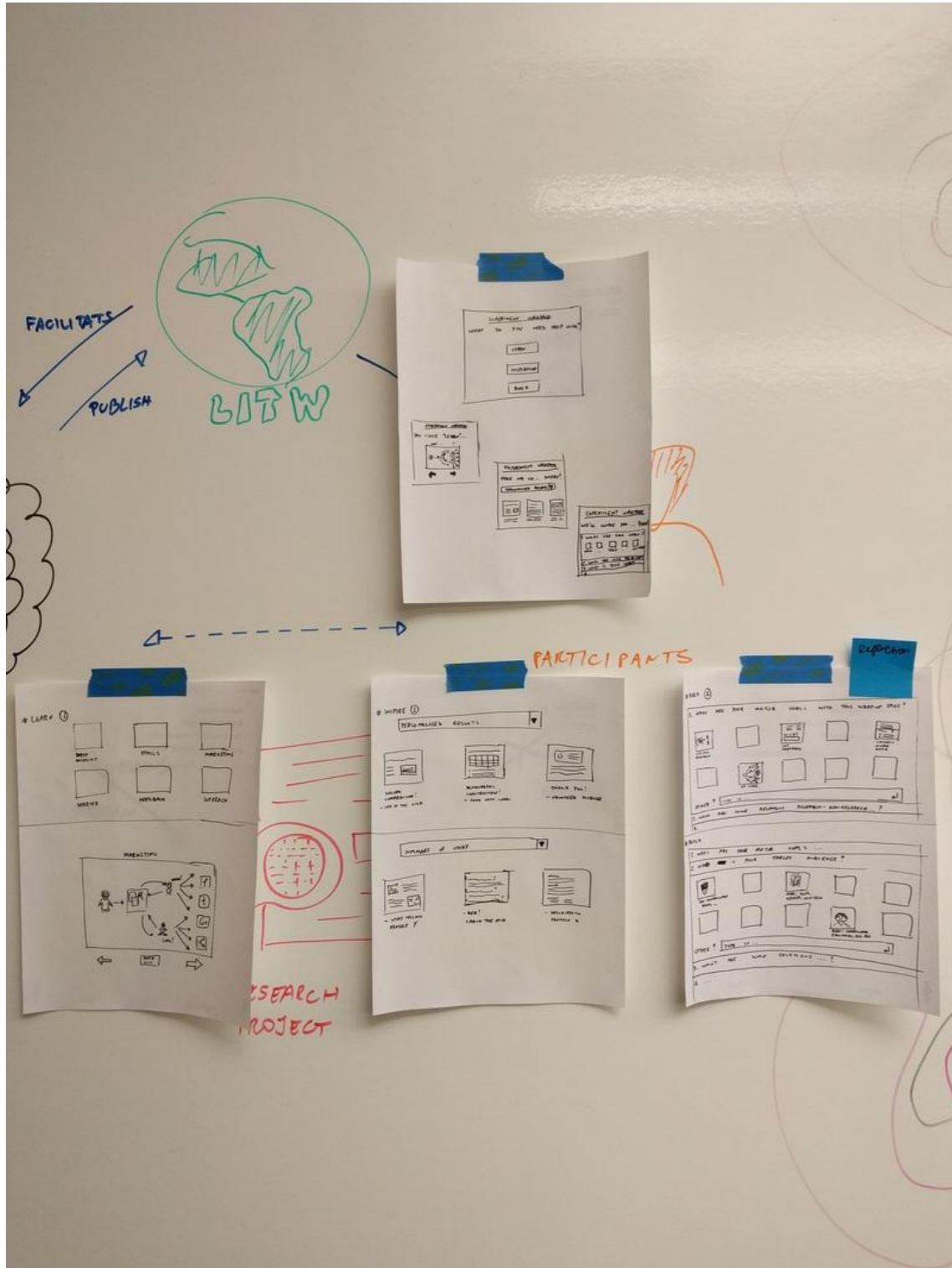
In the center, "Your Page!" is a workspace where blocks are dropped. It contains a rich text editor with a toolbar (Normal, Bold, Italic, Underline, Link, Code) and a text area with the text: "Thank you for completing this survey! Your answers will help us to understand domestic cats in the United States." A large "NOV" watermark is overlaid on this area.

On the right, there is a "Download" button and a notification: "You've ♥'d 8 blocks!". Below the editor, there are "Clone" and "..." buttons. At the bottom, a "README.md" section is visible, titled "LabintheWild Study Templates", with a description: "This repository bundles together the LabintheWild template study and instructions to guide new developers to create their own online studies."

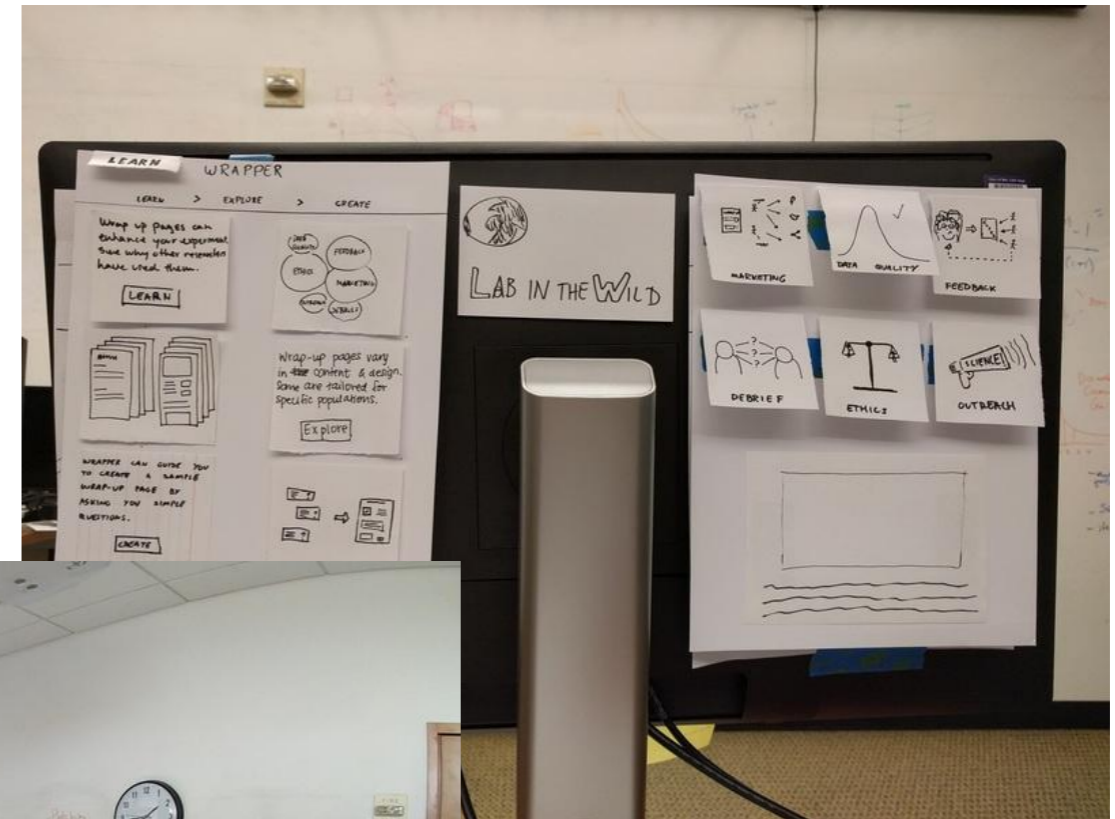
Learn about the problem.



Inventing (many, many) solutions...



Prototyping and testing...



Not easy to get here!

The image displays four overlapping screenshots of the Digestif web application interface, illustrating the process of creating and editing content.

- Top-left screenshot:** Shows the Digestif homepage with the logo, navigation links (Explore, Create), and a red notification badge stating "You've ♥'d 0 blocks!".
- Middle-left screenshot:** Shows a page titled "digestif" with a definition: "[dee-zhe-steef] (noun) a tool that supports scientific learning in online experiments". It includes text about researchers using the tool and a "Movie Recommendation Study" block. Navigation buttons "Explore" and "Create" are visible at the bottom.
- Middle-right screenshot:** Shows a "digestif" page with a red notification badge "You've ♥'d 8 blocks!". It features a "♥'d Blocks" section with a list of blocks: "Experimental Design (1)", "Feedback (1)", and "Other Studies". A "Personality Survey" block is highlighted.
- Bottom-right screenshot:** Shows a "Your Page!" editor with a red notification badge "You've ♥'d 8 blocks!". It includes a "Download" button, a "Drop and edit your blocks here" area, and a "Get an HTML of your page" button. A text block contains the message: "I'm your curious participant! Can I understand you?" with a green profile icon.

What is this course about?

It is about reading, discussing, examining, and practicing techniques that build this design process.

Activity (10 minutes)

In groups of 2...

Redesign bulky headphones:

- What problems do you want to solve?
- How does your design solve them?

Make sure you are either addressing a **novel problem** (something nobody has tackled before) or you are contributing a **novel solution!**

Sketch out your design on a piece of paper and be prepared to show it off to the class!



What problems did you choose to solve?

What problems did you choose not to solve?

What's your solution to those problems?



How many sketches you used?

What steps did you use to get to the solution?

What was hard and what was easy?

Anything you would do differently if you were to do this again?



“[Design is] a plan for arranging elements
in such a way as to best accomplish a
particular purpose.” Charles Eames



Core design skills

To **synthesize** a solution from all the relevant constraints

To **frame**, or reframe, the problem and objective

To create and **envision** alternatives

To **select** from those alternatives

To visualize and **prototype** the intended solution

Bill Moggridge

Learning Objectives

Understand what **HCI** and **interaction design** are

Develop skills on using design **methods**

Learn how to create design **artifacts**: scenarios, storyboards, prototypes

Think critically about design solutions

Learn how to do user **testing**

Communicate effective design critiques and defense

Iterative Human-Centered Design

This is a course about this **PROCESS!**

This is **not** an implementation course!

This is also **not** a course about “good” interfaces
nor hard rules that you should follow in design

This is a course about rapid **iteration and
exploration!**

Course structure

(All details: courses.cs.washington.edu/courses/cse440/19sp/)

Much more than **theory**

- But still some lectures and readings

Many in-class **exercises**

- Participation is a critical component of the course

Friday Section is primarily studio time with the TAs

- You will work on your project within section
- Participation is a critical component of the course

This course is designed around **rapid feedback!**

Project Overview

The core of this course is a group project

Propose and do an intense end-to-end design

First step: Getting the Right Design

Second step: Getting the Design Right

Third step: Communicating the Design



Project Overview

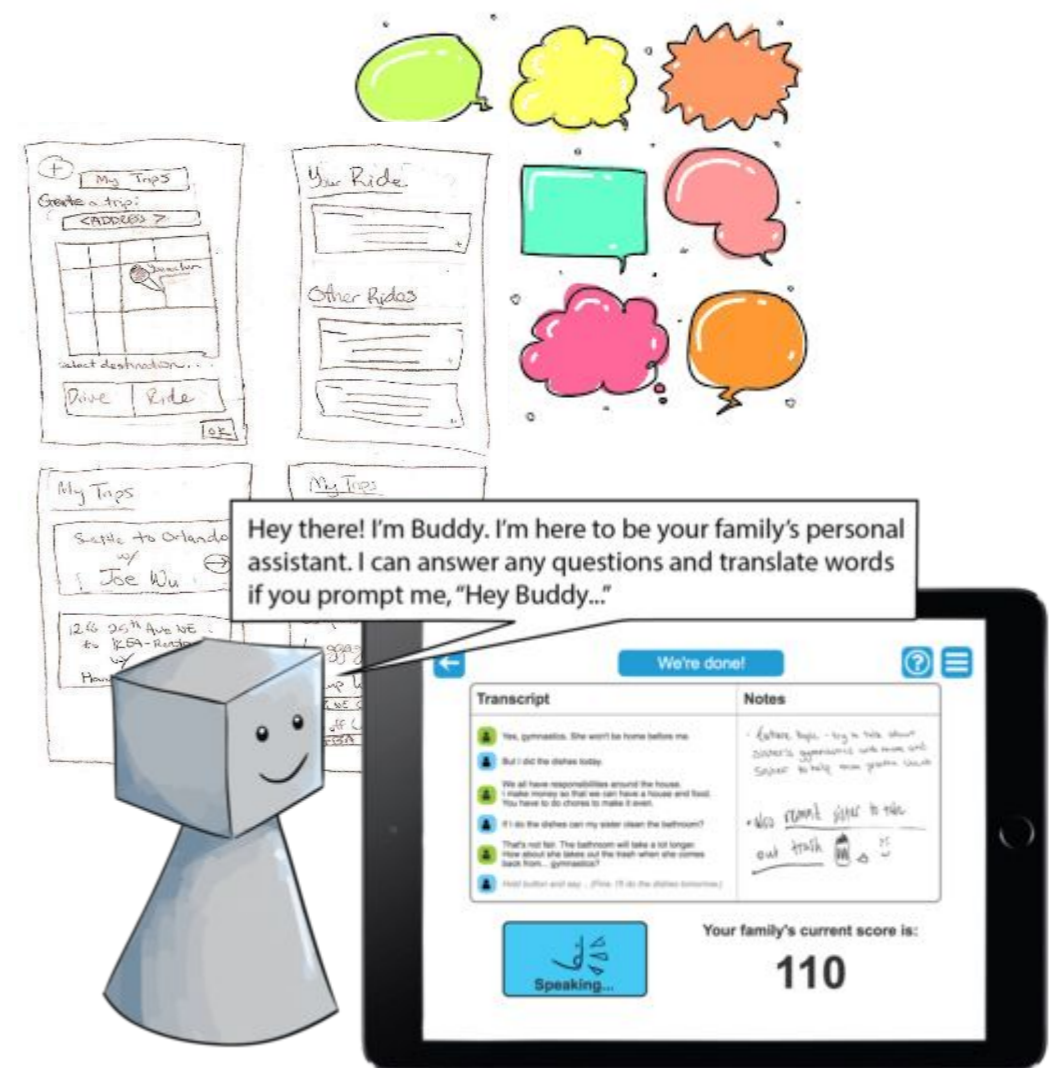
Talk to people, investigate problems

Sketching and Storyboarding

Low-fidelity Prototyping

Digital Mockup

Presentation & Communication



Projects from two previous quarters

<https://.../courses/cse440/17au/projects.html>

<https://.../courses/cse440/18au/projects.html>

Project Theme:
Improve something out there!

What to improve?

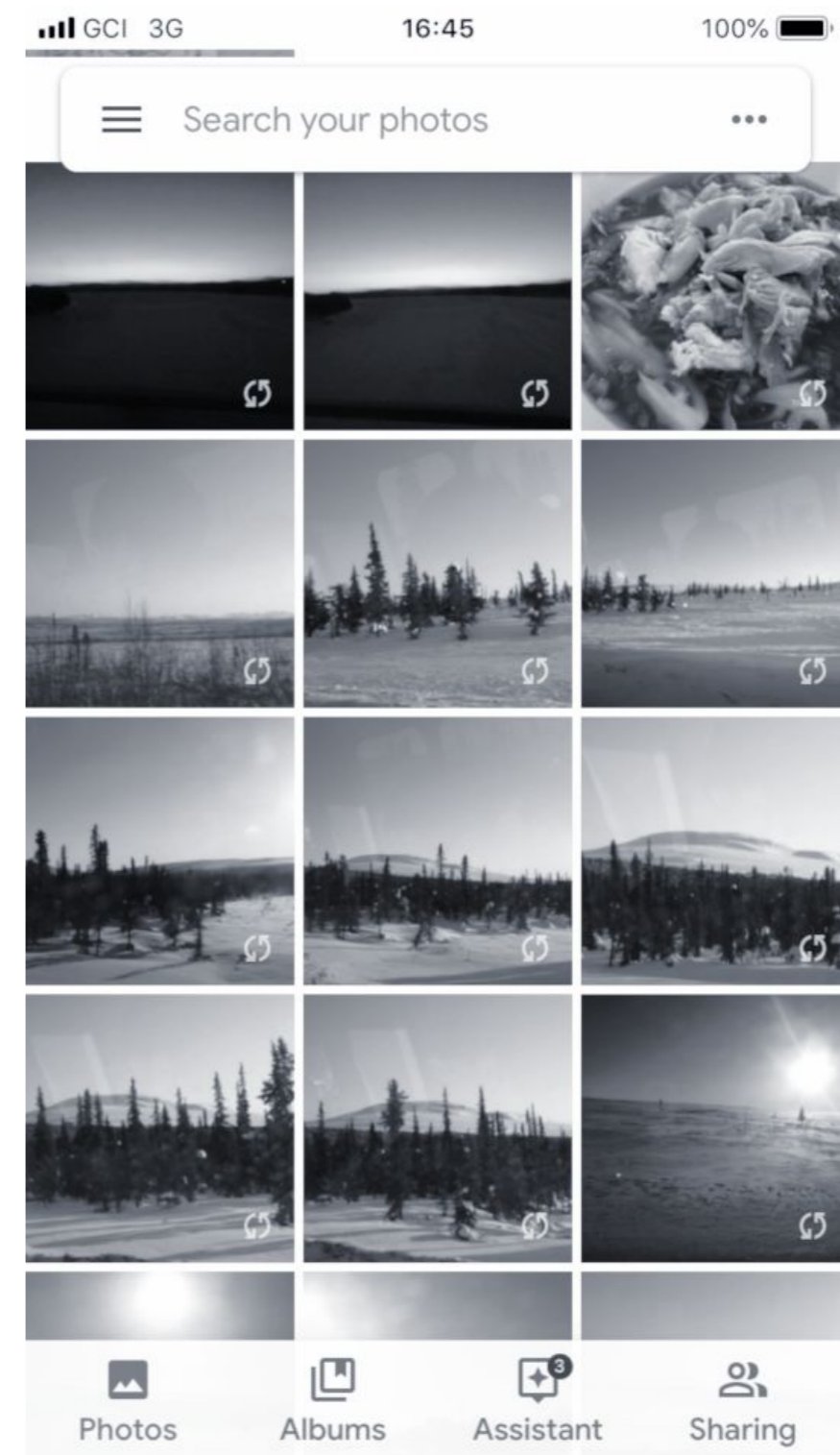
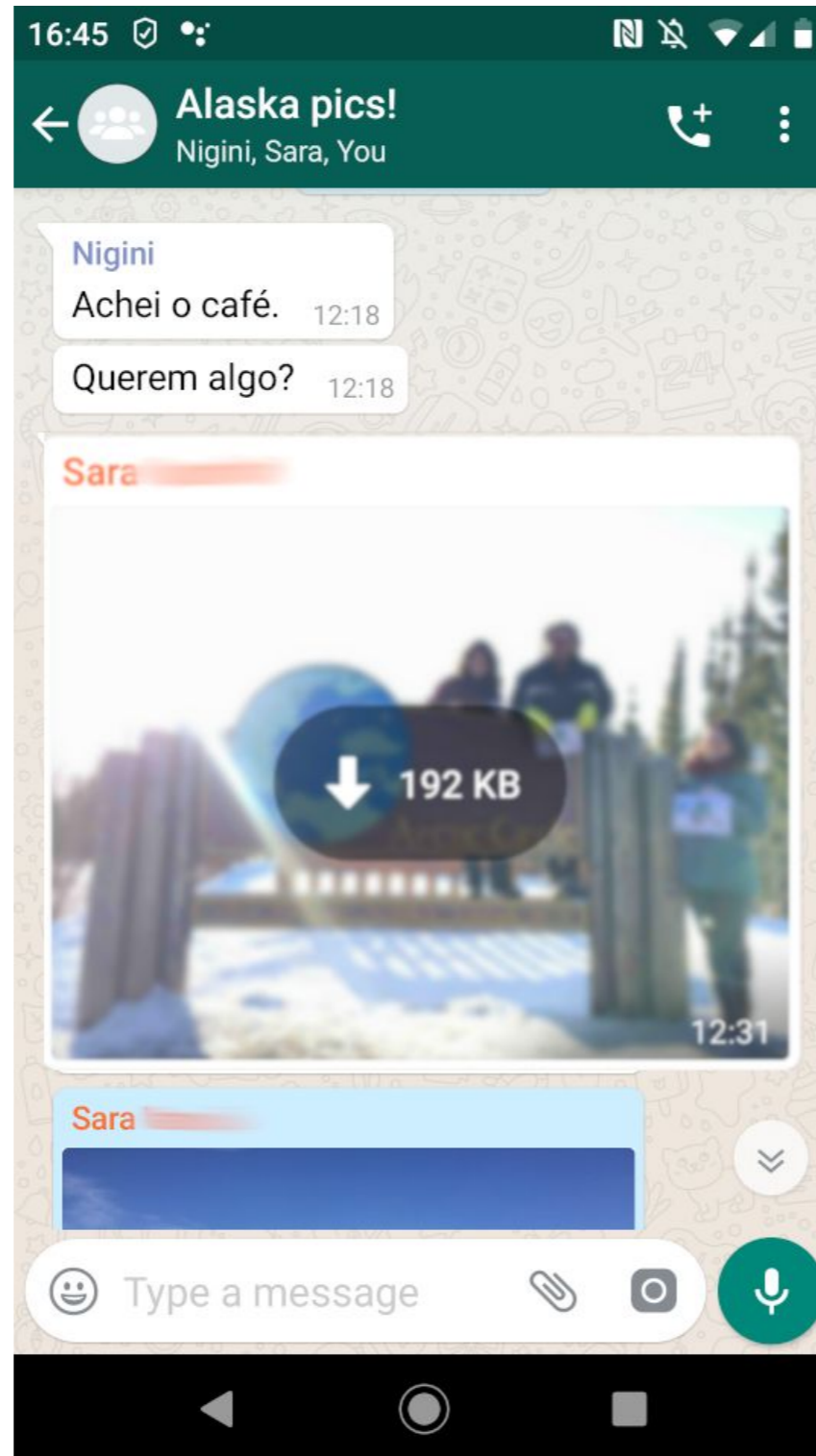
What are the problems people face when:

- Traveling
- Shopping
- Gaming
- Health care
- Working

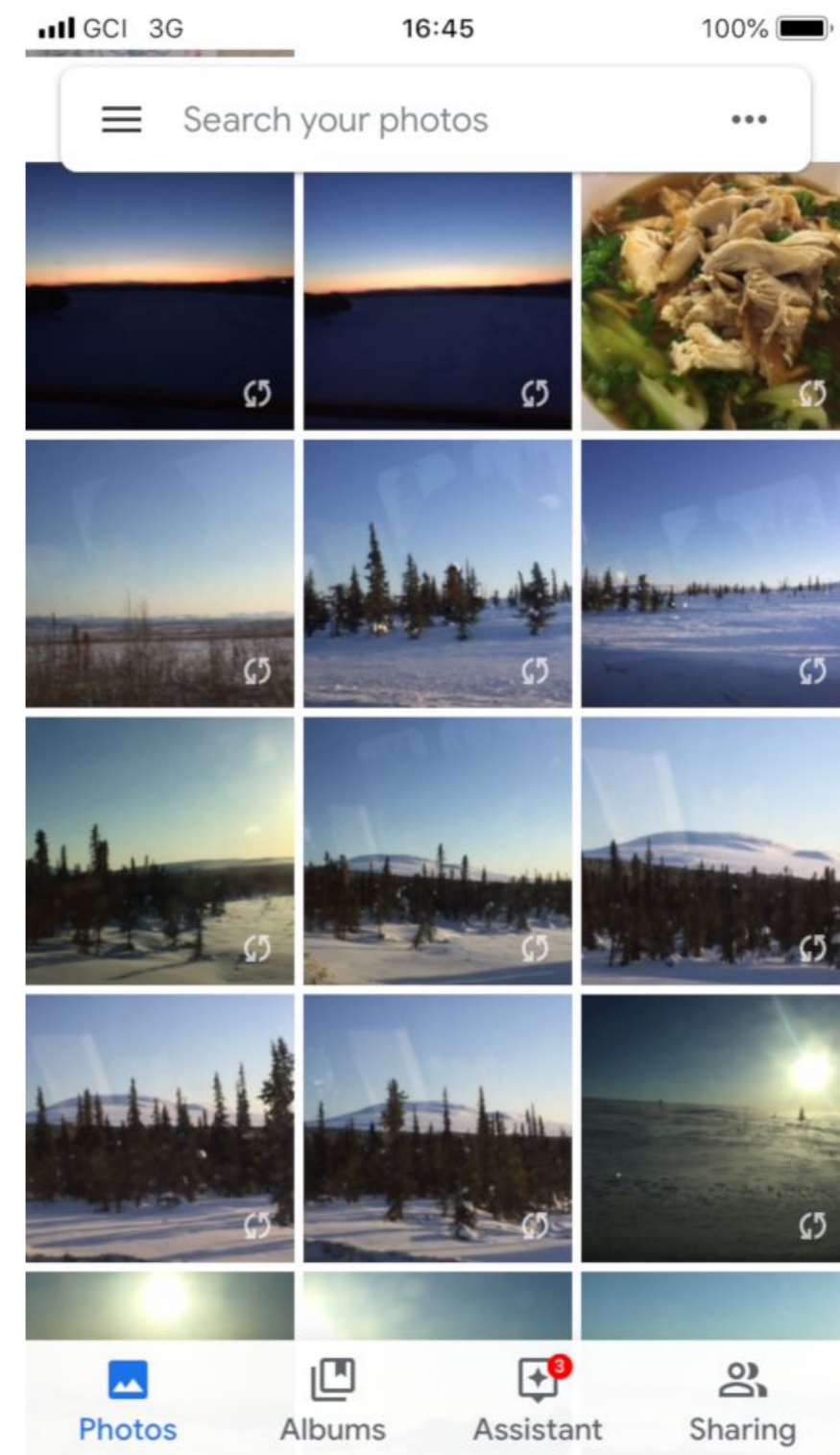
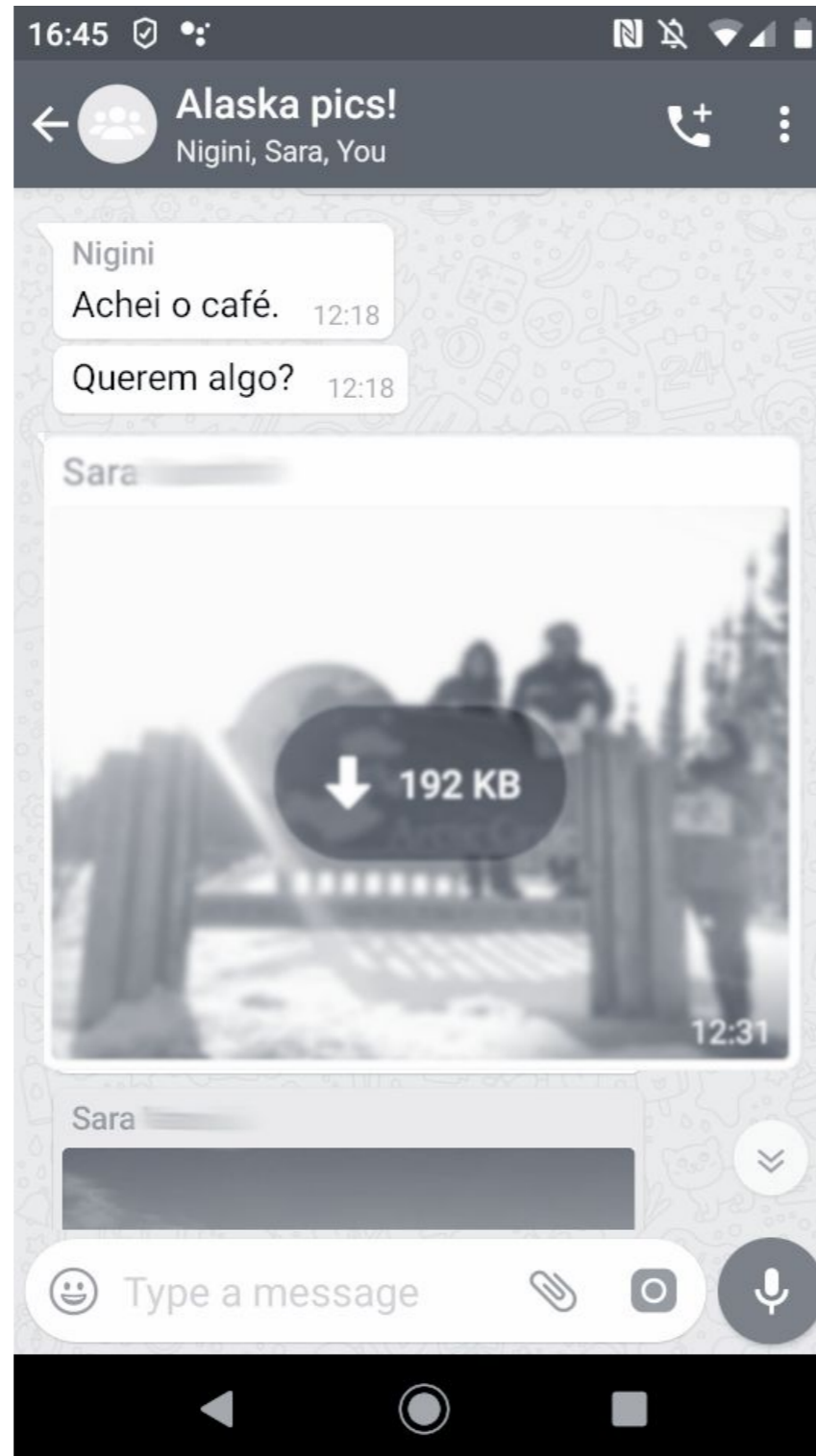
Can be any aspect of daily life!

Design to support one particular kind of activity or relationship that is **important to you** but which is not sufficiently well supported by current tools.

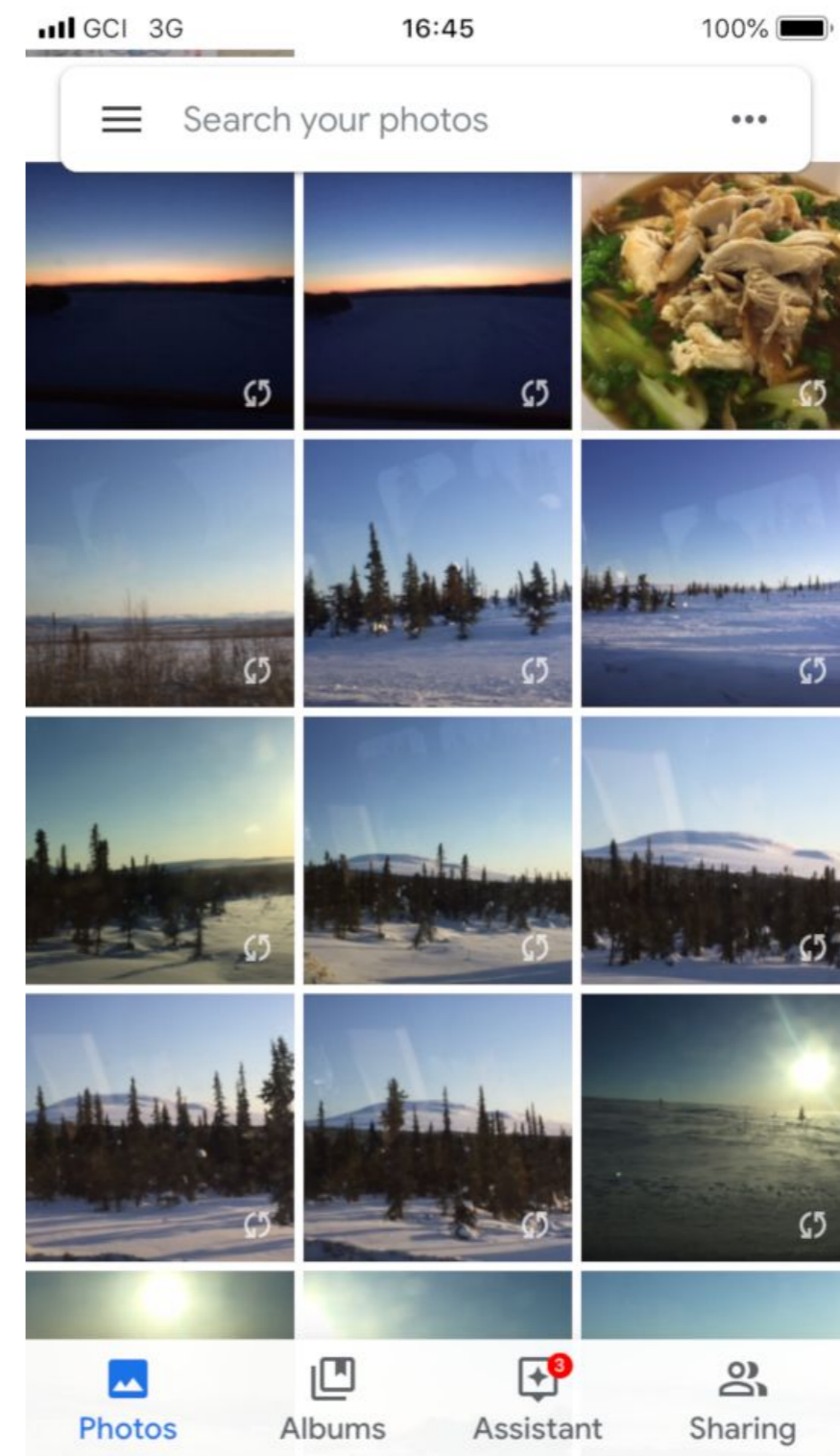
Example



Example



Example



Characteristics of a good project

You are passionate about it

The problem itself is clear: your prototype will fulfill a clear goal

It is novel

It needs to be well scoped

It is not another app! :)

Characteristics of a good team



Grading

Design is subjective, and so is this course.

- We can't really run a unit test and grade your design =)
- Wow us with your work, not with complaining

The entire process is designed **around feedback**

- Milestone grades mean you did the milestone
- You must act on feedback (does not mean saying yes!)

Focus on putting effort on assignments and searching for feedback!

Staying in Touch

<https://courses.cs.washington.edu/courses/cse440/19sp/>

Calendar: You are responsible to keep track of the calendar

Canvas: To upload assignments etc.

Email us: cse440-staff [at] cs.washington.edu

News: Canvas announcements! Are you been notified?

Adding and Dropping

This is going to be a challenging course.
But rewarding.

Attempting to Add

Say something to me after class

Considering Dropping

Do it ASAP! Please, communicate it

Be considerate, and do not drop after we assign groups next week
(But don't drop, it will be fun!) ;)

Section switch availability

We may need to move people to balance sections

Expectations

We are all learners here, let's make this a fruitful experience

Be professional

- Respect above all
- Helpful criticism (we'll learn more about this)
- Peer learning & support
- Show up on time, don't plagiarize, and all that!

Gadgets

- In general no, maybe for note taking (not recommended)
- (Gadget use lowers grades of all around you)
- Prefer paper here... It will be your friend in design

Ask me something!