

# Week 4-3

# Understanding Users

SFWRENG 4HC3/6HC3 Human Computer Interfaces

*\* Slides adapted from previous instructors of COMPSCI/SFWRENG 4HC3/6HC3*



# Quick Review

You want to design a new app that help improve the wayfinding experience for first year students on campus. You want to understand **current needs and challenges** associated with wayfinding for the first years, and you want to be able to **address the needs for most first years**. Which method is more appropriate for eliciting requirements?

slido

Please download and install the  
Slido app on all computers you use



**Which method is more  
appropriate for eliciting  
requirements?**

① Start presenting to display the poll results on this slide.

# Elicitation Methods Overview

## Look

- Observe directly
- Observe indirectly (look for usage pattern)

## Ask

- Ask directly
- Ask indirectly (get people to do stuff)

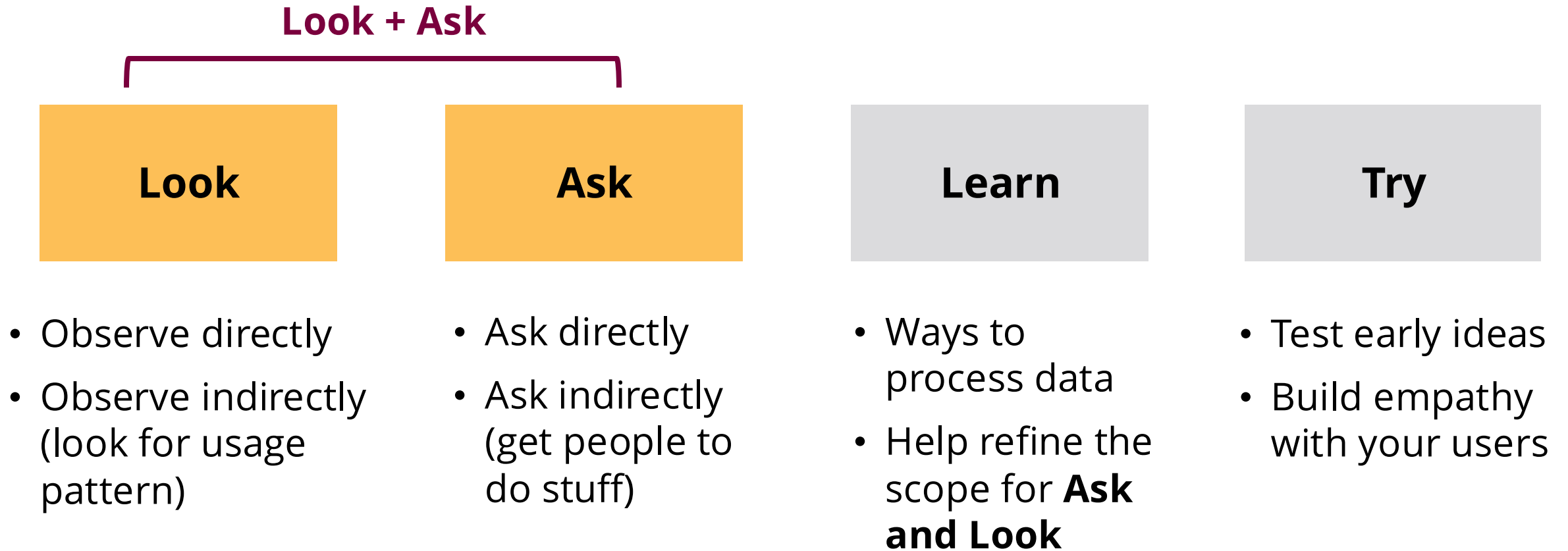
## Learn

- Ways to process data
- Help refine the scope for **Ask and Look**

## Try

- Test early ideas
- Build empathy with your users

# Elicitation Methods Overview



# Week 4 Goals Overview

- ~~Monday~~
  - ~~Understanding Users: Look~~
- ~~Wednesday~~
  - ~~Understanding Users: Ask~~
- **Friday**
  - **Understanding Users: Ask**
  - **Design Principles and Assignment 1**

100

# There are various methods you can use to **ask users for help**



Ask them indirectly: **get them to do stuff, construct a mental model**



# Mental Model

- A mental model is the **user's thought process** or **understanding of how something works**
- **Doesn't necessarily reflect the internal system**, e.g., the fact that a furnace may change blower speeds, has a cool-down or minimum cycle time, etc.



# Ask: Card Sort

## Card Sort

**HOW:** On separate cards, name possible features, functions, or design attributes. Ask people to organize the cards spatially, in ways that make sense to them.

**WHY:** This helps to expose people's mental models of a device or system. Their organization reveals expectations and priorities about the intended functions.

In a project to design a new digital phone service, a card-sorting exercise enabled potential users to influence the final menu structure and naming.



# Ask: **Example #1**

Understand users' **priority** when seeking information in the system:

- Ask ICU doctors what are the most important information to them in plan of the day



# Ask: Draw the Experience

## Draw the Experience

HOW: Ask participants to visualize an experience through drawings and diagrams.

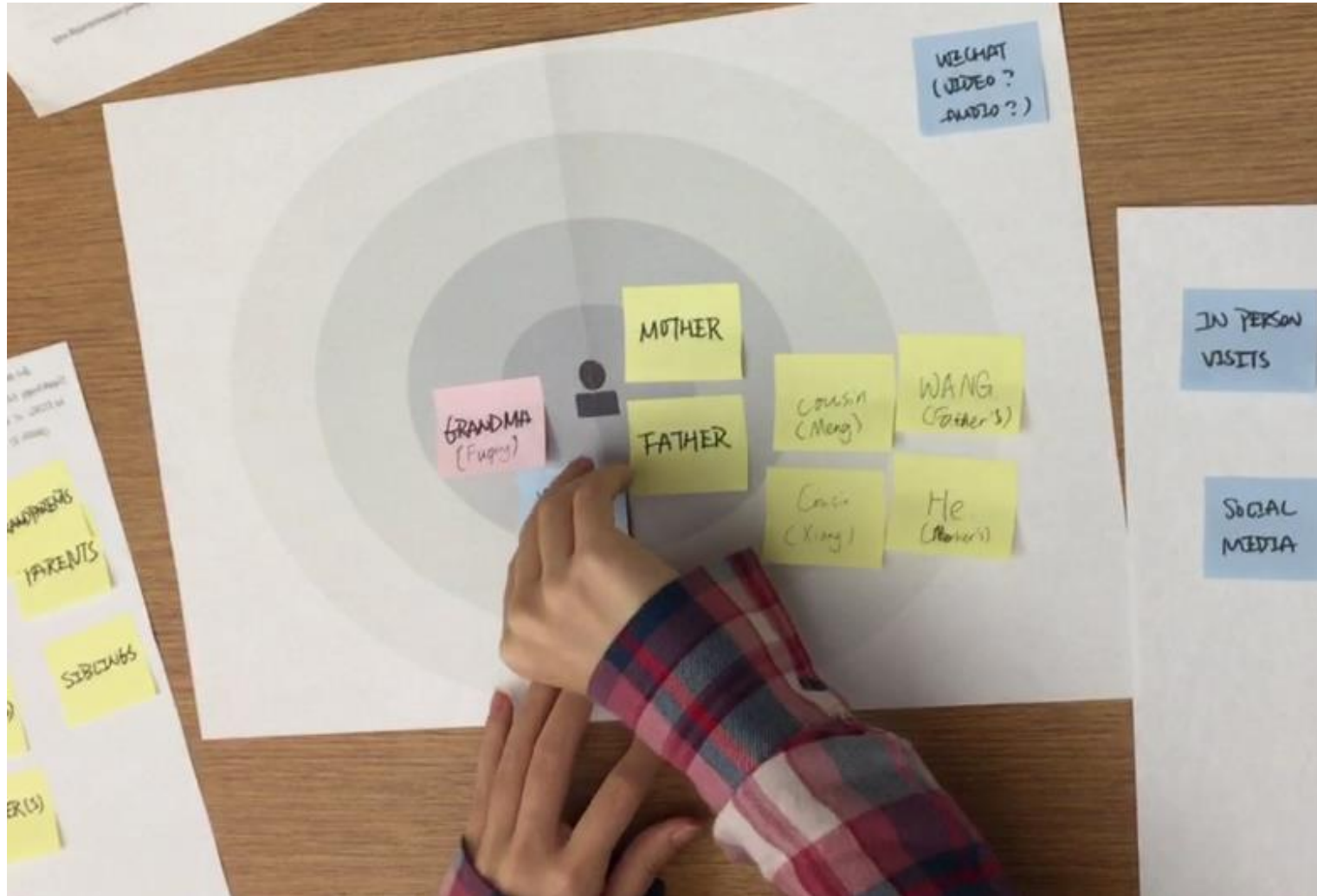
WHY: This can be a good way to debunk assumptions and reveal how people conceive of and order their experiences or activities.

By asking people to “draw your money,” the IDEO team designing an online bank was able to discern people’s attitudes towards their finances.





# Ask: Example #2



Ask participants to draw the map for their **closeness** with family members and **communication frequencies**

# Ask: Narration

## Narration

HOW: As they perform a process or execute a specific task, ask participants to describe aloud what they are thinking.

WHY: This is a useful way to reach users' motivations, concerns, perceptions, and reasoning.

In order to understand how food is incorporated into people's daily routines, the IDEO team asked people to describe what they were thinking while eating.



# Look & Ask Summary

Method	Approaches	Benefits	Drawbacks
<b>Look</b>	<ul style="list-style-type: none"><li>• Get into people's spaces and watch them</li><li>• Investigate how people use their spaces and artifacts</li></ul>	<ul style="list-style-type: none"><li>• Able to see organic interactions</li><li>• Less filtered by person's memory / biases</li><li>• Able to see in-context</li></ul>	<ul style="list-style-type: none"><li>• Reasons can be unclear</li><li>• Difficult to tell how person is feeling, what they are thinking</li></ul>
<b>Ask</b>	<ul style="list-style-type: none"><li>• Ask them directly</li><li>• Ask them indirectly</li><li>• Get them to do things</li></ul>	<ul style="list-style-type: none"><li>• Get direct insight into person's thoughts</li><li>• Can tell how a person is feeling</li><li>• Can get descriptions that would be unclear otherwise</li></ul>	<ul style="list-style-type: none"><li>• People lie</li><li>• People have bad memory</li><li>• Out of context / filtered</li></ul>

# Practices vs. Processes

## Work Processes

- Formal articulation of how to get something done

Expect people to tell you about processes **when “asking”**

## Work Practices

- Informal ways in which people get something done in the context

Expect to get practices by **“looking” or probing deeper when “asking”**



# Look & Ask: **Contextual Inquiry**

Sometimes it is enough to simply **observe** the mechanics of the task

Other times you also need to **know what the user is thinking**



# Look & Ask: **Contextual Inquiry**

During the observation:

- If **anything is unclear**, ask why participants are doing something
- If **they seem to be doubting how to do something**, ask them what options they are considering

Ask about the importance of subtasks

- Is order important?
- Is the manner in which they are conducted important?

# **In-Class Exercise 3: Review Questions**

# Week 4 Goals Overview

- ~~Monday~~
  - ~~Understanding Users: Look~~
- ~~Wednesday~~
  - ~~Understanding Users: Ask~~
- **Friday**
  - **Understanding Users: Ask**
  - **Design Principles Practice and Review**

# Good / Bad Designs



Tickets Vending Machine

# Good / Bad Designs



- What **design principles** are reflected in the example?
- What are some **usability/UX goals** they are aiming for with the design?
- Is this a good design or bad design?



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- Is this a good design or bad design?



# Good / Bad Designs



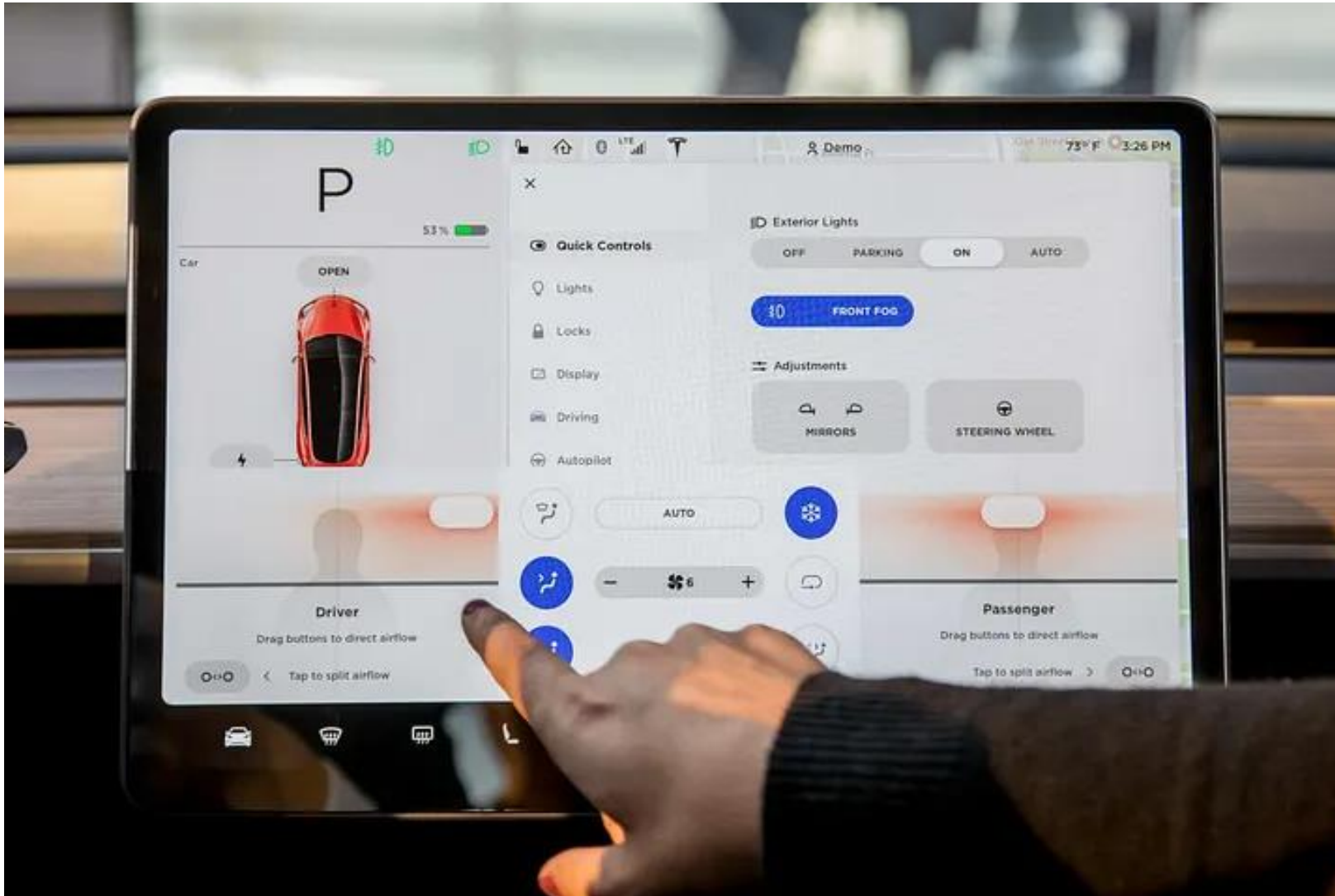
Which one is better?



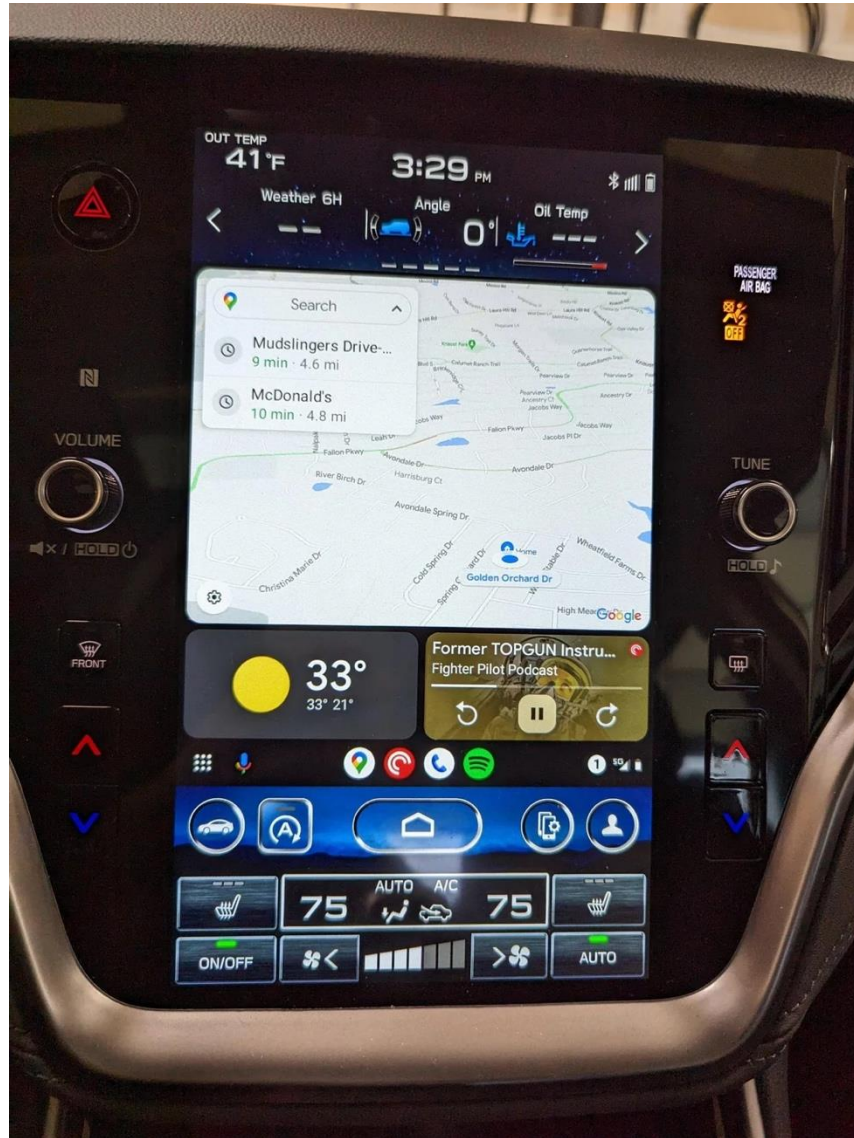
# Instructions

- What **design principles** are reflected in the example?
- What are some **usability/UX goals** they are aiming for with the design?
- Is this a good design or bad design?

# Example 1: Automobile UI

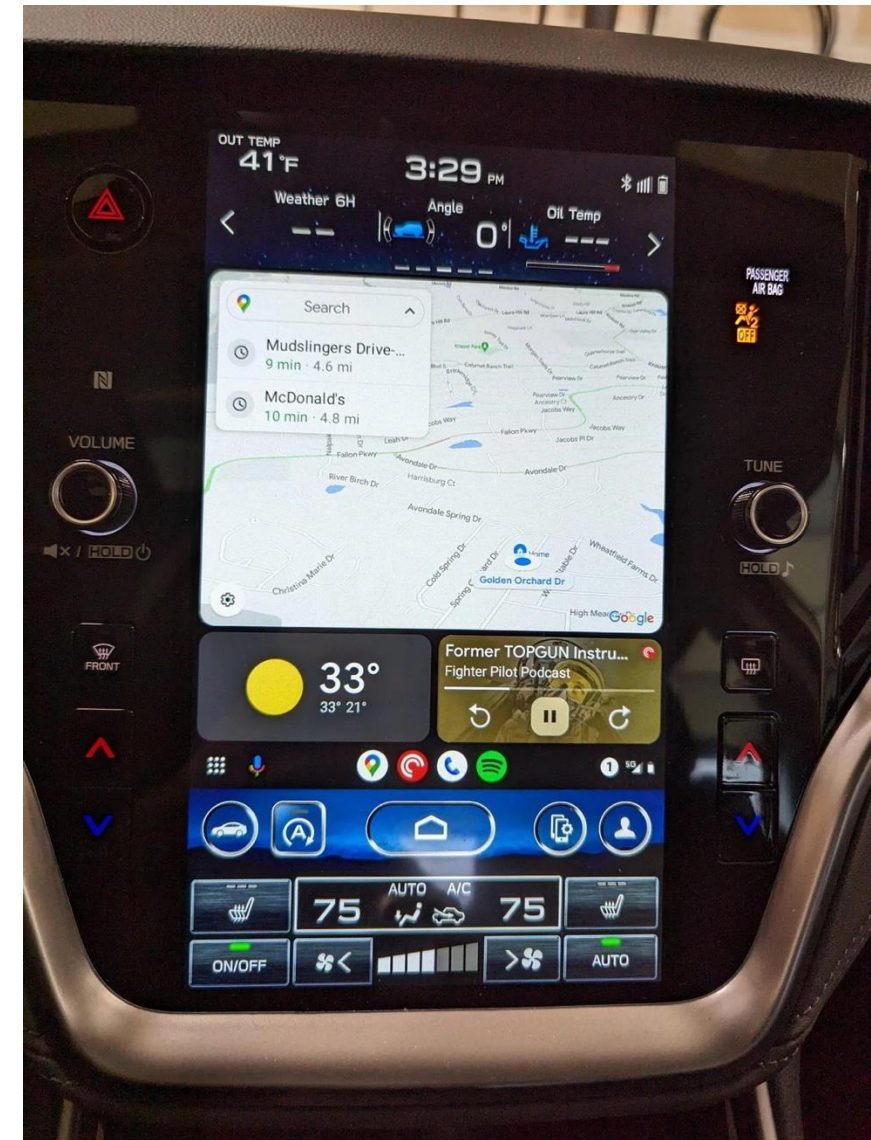
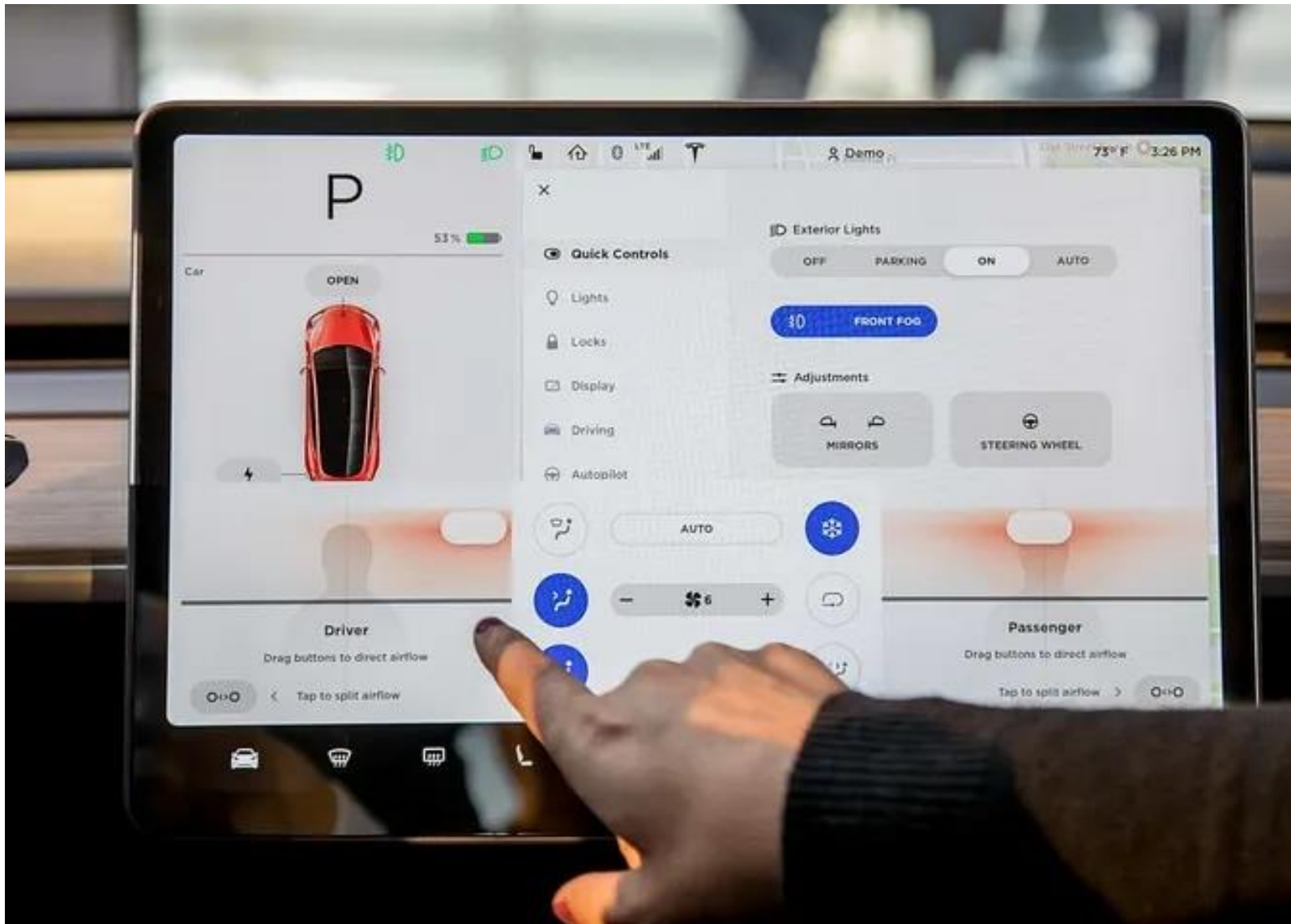


# Example 1: Automobile UI





# Example 1: Automobile UI



# Example 2: Survey Creator

You're on a free account.

XM

Test Project

?

Survey

Distributions

Data & Analysis

Results

Reports

Edit question

Question type

Multiple choice

Answer type

Allow one answer

Allow multiple answers

Choices

Number of choices

-

3

+

Edit multiple

Use suggested choices

Format

List

Alignment

Vertical

Add choice group

Response requirements

Add requirements

Tools

Saved at 12:29 PM

Draft

Preview

Publish

Test Project

ExpertReview score

Great

Default Question Block

Q1

Click to write the question text

Click to write Choice 1

Click to write Choice 2

Click to write Choice 3

Import from library

Add new question

Add Block

End of Survey

We thank you for your time spent taking this survey.

Your response has been recorded.

Trash

0 Questions

Empty trash

1

30 | McMaster University

# Example 2: Survey Creator

My workspace > My new form

Content Workflow Connect

Share View plans ? IY

Universal mode

+ Add content Design

1

1 → Your question here. Recall information with @  
Description (optional)

A Choice 1  
B Choice 2  
[Add choice](#)

Question

Text Video

Answer

Multiple Choice

Required

Multiple selection

Randomize

"Other" option

Vertical alignment

Image or video

Endings

A

# Example 2: Survey Creator

XM Test Project

Survey Distributions Data & Analysis Results Reports

Tools Saved at 12:29 PM Draft

Preview Publish

Question type

Multiple choice

Answer type

Allow one answer

Allow multiple answers

Choices

Number of choices

3

Edit multiple

Use suggested choices

Format

List

Alignment

Vertical

Add choice group

Response requirements

Add requirements

Start Free Trial

Test Project

ExpertReview score Great

Default Question Block

Q1

Click to write the question text

Click to write Choice 1

Click to write Choice 2

Click to write Choice 3

Import from library

Add new question

Add Block

End of Survey

We thank you for your time spent taking this survey.

Your response has been recorded.

Trash 0 Questions

Empty trash

My workspace > My new form

Content Workflow Connect

Share View plans

Universal mode

Add content Design

1

1 → Your question here. Recall information with @

Description (optional)

Choice 1

Choice 2

Add choice

Endings

A

Question

Text Video

Answer

Multiple Choice

Required

Multiple selection

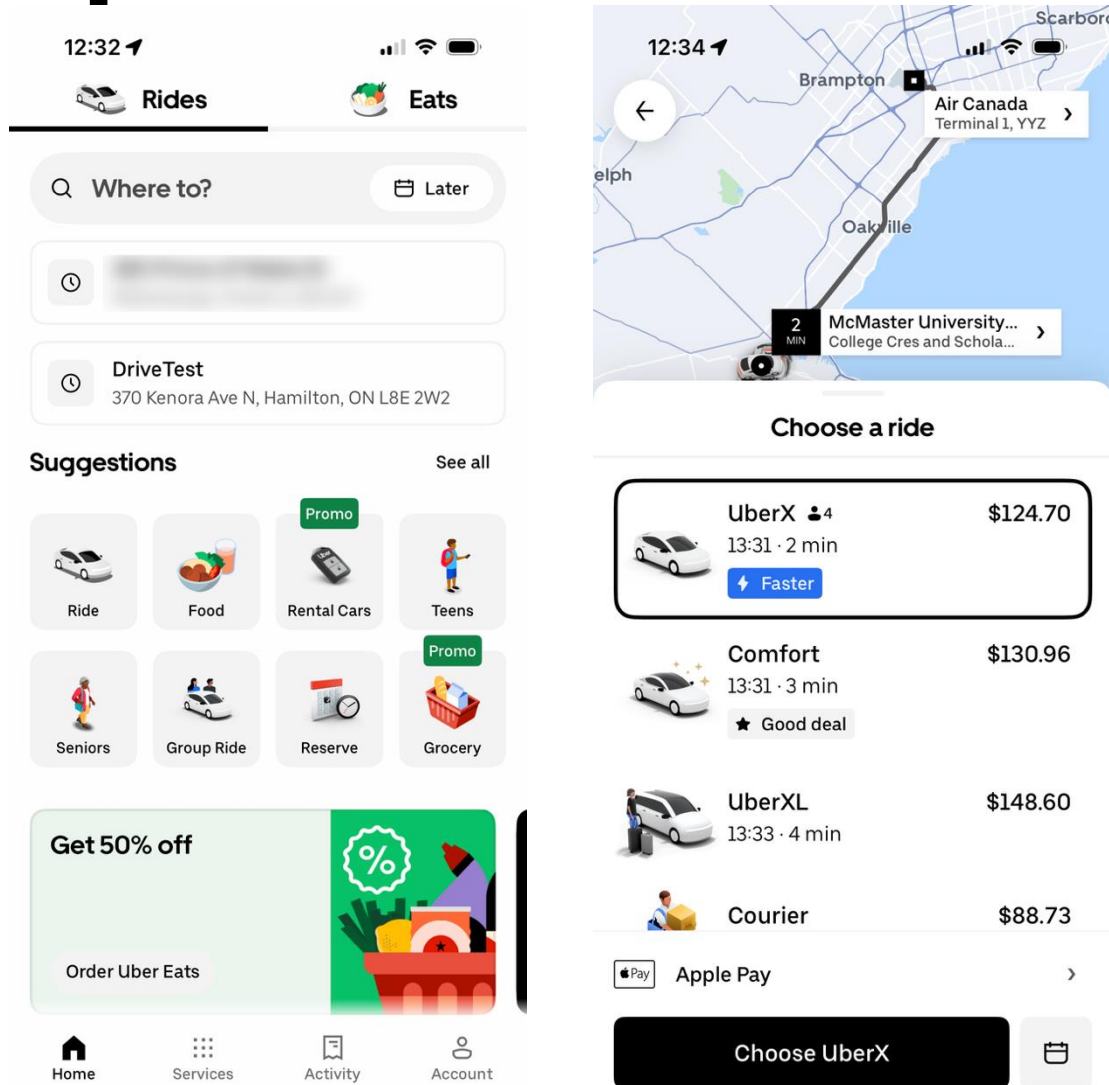
Randomize

"Other" option

Vertical alignment

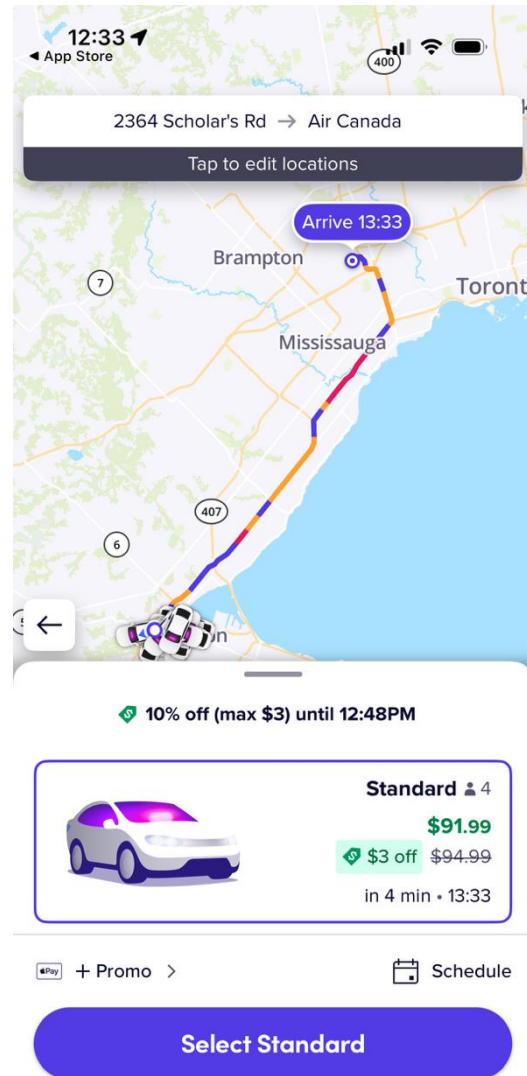
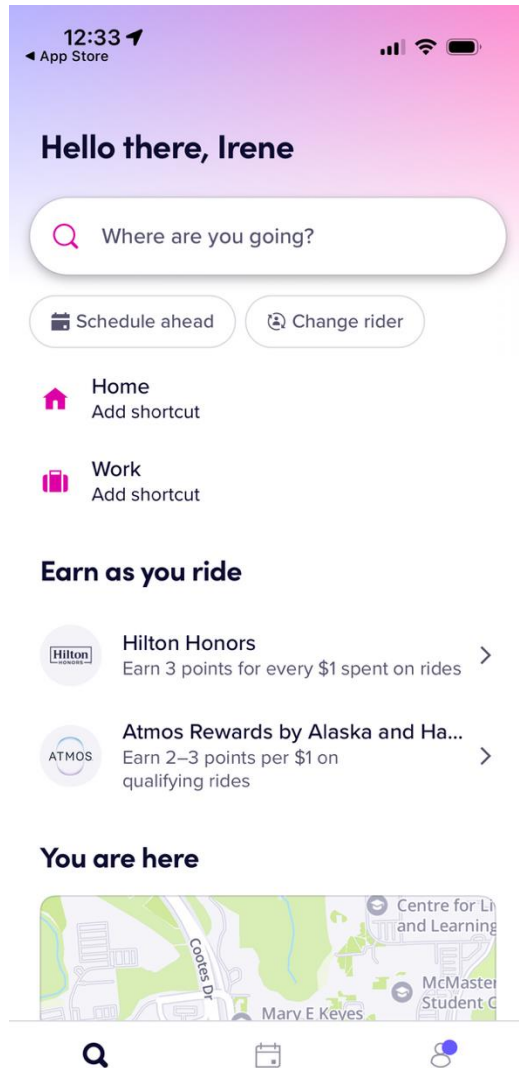
Image or video

# Example 3: Rideshare App





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