

# Week 6: User Studies

Nicole Meng-Schneider

# Recap Questionnaires

# Questionnaires / Surveys

- Participants answer many questions (usually online)
- Questions are directly related to what you are exploring
  - Evaluation - Related to your system
- Question Types:
  - Open-ended questions
  - single and multiple choice checkboxes
  - Matching / Ranking
  - Rating scales (Likert Scales or Semantic Scales)

# Established Scales

- Set of questions and answer choices regarding an object or concept
- Thoroughly developed, tested, and reviewed by researchers to have desired effect
- Questions and answers should never be changed

Construct	Item	Question
Control (ctrl)	ctrl1	Consumer online privacy is really a matter of consumers' right to exercise control and autonomy over decisions about how their information is collected, used, and shared.
	ctrl2	Consumer control of personal information lies at the heart of consumer privacy.
	[ctrl3]	I believe that online privacy is invaded when control is lost or unwillingly reduced as a result of a marketing transaction.
Awareness (aware)	awa1	Companies seeking information online should disclose the way the data are collected, processed, and used.
	awa2	A good consumer online privacy policy should have a clear and conspicuous disclosure.
	[awa3]	It is very important to me that I am aware and knowledgeable about how my personal information will be used.
Collection (collect)	coll1	It usually bothers me when online companies ask me for personal information.
	coll2	When online companies ask me for personal information, I sometimes think twice before providing it.
	coll3	It bothers me to give personal information to so many online companies.
	coll4	I'm concerned that online companies are collecting too much personal information about me.

Note: The questionnaire is administered with 7-point Likert items, anchored on 1="Strongly Disagree" to 7="Strongly Agree." The items in squared brackets ctrl3 and awa3 are included in IUIPC-10, but not in IUIPC-8.

Groß, Thomas. "Toward valid and reliable privacy concern scales: The example of iuipc-8." Human Factors in Privacy Research. Cham: Springer International Publishing, 2023. 55-81.

# Questionnaires – Example

# Example

**RQ:**

Which differences can we observe between owners, cohabitants, and visitors in their willingness to share smart speakers?

**Short:**

Which features are considered sharable?

Are there differences between user groups?

▶	Consent	1 Question
▶	Screening	3 Questions
▶	Smart Speaker	6 Questions
▶	Feature Questions	4 Questions
▶	Comfort - AO	4 Questions
▶	Comfort-Cohab	4 Questions
▶	Comfort - Guest	4 Questions
▶	Open-ended	1 Question
▶	Scales	1 Question
▶	Demographics	5 Questions
▶	Participation in future studies	2 Questions

# Example

- Different blocks to divide it up
- Not all segments are shown to each participant
- Screening for the right participants
- Tailor questions to a specific user group

A vertical stack of 10 question blocks, each with a right-pointing arrow icon, a title, and a question count.

Block Title	Number of Questions
Consent	1 Question
Screening	3 Questions
Smart Speaker	6 Questions
Feature Questions	4 Questions
Comfort - AO	4 Questions
Comfort-Cohab	4 Questions
Comfort - Guest	4 Questions
Open-ended	1 Question
Scales	1 Question
Demographics	5 Questions
Participation in future studies	2 Questions

[Add Block](#)

# Survey Structure

1. Consent
2. Screening
3. Device Questions
4. General Feature Questions
5. Sharing Features
6. Open-ended
7. Privacy Scales
8. Demographics
9. Advert for future studies

Screening

Encounter Context

How did you encounter smart speakers? Please all options that apply.

☐ I own a smart speaker.

☐ I live in a home, where someone else owns a smart speaker.

☐ I have visited people who have a smart speaker.

☐ I have worked in a place where there is a smart speaker.

☐ None of the above.

☐ Other, please explain.

[Show Discussion \(4\)](#) Last Comment 4 Jul 2024 10:31am by Maria Wolters

+

Add page break

Interaction Context

In which context did you gain experience with a smart speaker?

☐ I interacted with a smart speaker myself.

☐ Someone else interacted with a smart speaker while I was in the room.

☐ The device activated while I was in the room, but no one interacted with it.

☐ I was in a room where there was a smart speaker, but it did not activate.

☐ None of the above.

[Show Discussion \(3\)](#) Last Comment 4 Jul 2024 10:29am by Kami Vaniea

☐ SS Mental Model

Smart speakers are helpful in our everyday life and can perform a large number of services. Please tick all tasks that you think a smart speaker can do.

☐ Make a phone call.

☐ Read out a recipe while you cook.

☐ Suggest which outfit you should wear.

☐ Assemble furniture.

☐ Play a song you want to hear.

☐ Drive a car.

☐ Send a message to all other smart speakers.

[Show Discussion \(2\)](#) Last Comment 4 Jul 2024 10:35am by Nicole Meng

Import from library

+ Add new question

Encounter

Context of encounter

Knowledge check




# Survey Structure

1. Consent
2. Screening
3. Device Questions
4. General Feature Questions
5. Sharing Features
6. Open-ended
7. Privacy Scales
8. Demographics
9. Advert for future studies

Based on previous answers, we determine whether to show or not to show the next question:

ss number

▼  Display this question

If How did you encounter smart speakers? Please all options that apply. I own a smart speaker. Is Selected

Or How did you encounter smart speakers? Please all options that apply. I live in a home, where someone else owns a smart speaker. Is Selected

How many smart speakers do you own or live with?


☐ 1

☐ 2

☐ 3

☐ 4+

ss account

▼  Display this question

If How did you encounter smart speakers? Please all options that apply. I own a smart speaker. Is Selected

Or How did you encounter smart speakers? Please all options that apply. I live in a home, where someone else owns a smart speaker. Is Selected

Whose account is connected to the smart speaker?

☐ My Own Account

☐ Someone else's (State relationship to account owner)

[Show Discussion \(2\)](#) Last Comment 24 Jun 2024 6:50pm by Kami Vaniea

# Survey Structure

- 1. Consent
- 2. Screening
- 3. Device Questions
- 4. General Feature Questions
- 5. Sharing Features
- 6. Open-ended
- 7. Privacy Scales
- 8. Demographics
- 9. Advert for future studies

Comfort - AO

Comfort-AOIn

Your previous answers imply that you are the account owner of your smart speaker.

As the account owner, how would you feel if someone who LIVES IN your household (e.g. partner, family, flatmates) uses each of the features presented below?

Please rate each feature on a scale from "very uncomfortable" (I would hate it if they used this feature) to "very comfortable" (They are very welcome to use this feature.)

	very uncomfortable	somewhat uncomfortable	neutral	somewhat comfortable	very comfortable
Calendar (e.g. "Ok Google, tell me what I have on today" or "Alexa, add a meeting to my calendar")	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calls, emails, messages (e.g. Drop-in feature, making phone calls, checking emails, or receiving notifications)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Purchase (e.g. "Alexa, order dishwasher tablets")	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Smart Device Control (e.g. "Hey Google, turn the lights on" or "Siri, increase the temperature to 19C")	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Timer or Alarms (e.g. "Alexa, set a timer for 5 minutes")	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Entertainment (e.g. playing back music from Spotify or playing a trivia game)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Getting Information (e.g. asking for weather or news updates, recipes or facts)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

com-AOIn

Please feel free to tell us more about your ratings and reasons. (Optional)

Wording of question changes based on their role. Question type is the same.

Show Discussion (1)

Last Comment 9 Jun 2024 3:48am by Maria Wolters

# Survey Structure

1. Consent
2. Screening
3. Device Questions
4. General Feature Questions
5. Sharing Features
- 6. Open-ended**
7. Privacy Scales
8. Demographics
9. Advert for future studies

Optional question: Some might want to say more.



The screenshot shows a survey question interface. At the top, there is a dropdown menu labeled "Open-ended" with a blue circle icon to its right. Below this, the question text reads: "Never-Share" followed by "Are there any features you would NEVER share? Why? (Optional)". Underneath the text is a large, empty rectangular text input area. At the bottom of the interface, there is a link that says "Show Discussion (2)" and a timestamp "Last Comment 26 Jun 2024 5:50am by Nicole Meng".

# Survey Structure

1. Consent
2. Screening
3. Device Questions
4. General Feature Questions
5. Sharing Features
6. Open-ended
7. Privacy Scales
8. Demographics
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## IUIPC-8 in a real survey:

IUIPC-8

Thinking about all technology you use, not just smart speakers, please rate whether you agree or disagree with each of the following statements.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
Consumer online privacy is really a matter of consumers' right to exercise control and autonomy over decisions about how their information is collected, used, and shared.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumer control of personal information lies at the heart of consumer privacy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Companies seeking information online should disclose the way the data are collected, processed, and used.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A good consumer online privacy policy should have a clear and conspicuous disclosure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It usually bothers me when online companies ask me for personal information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When online companies ask me for personal information, I sometimes think twice before providing it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is important that you pay attention to the statements. Please choose strongly agree here.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It bothers me to give personal information to so many online companies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'm concerned that online companies are collecting too much personal information about me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

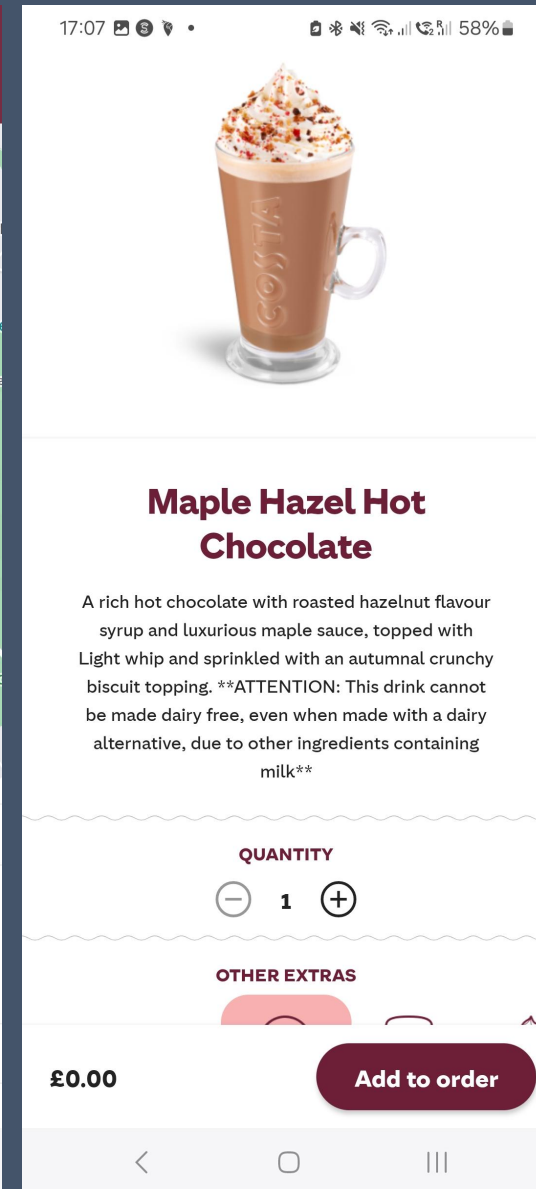
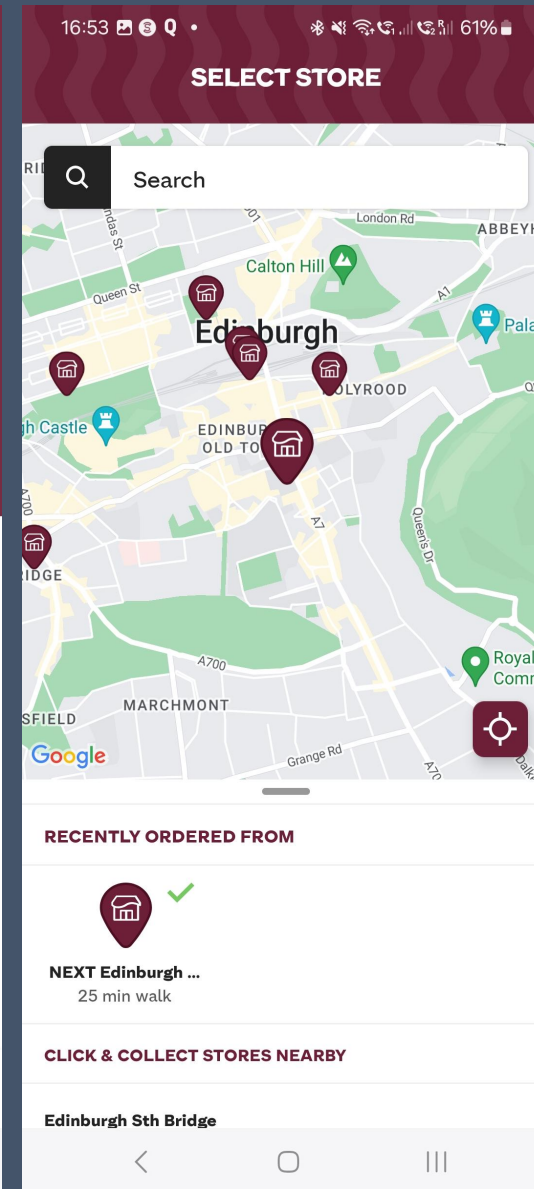
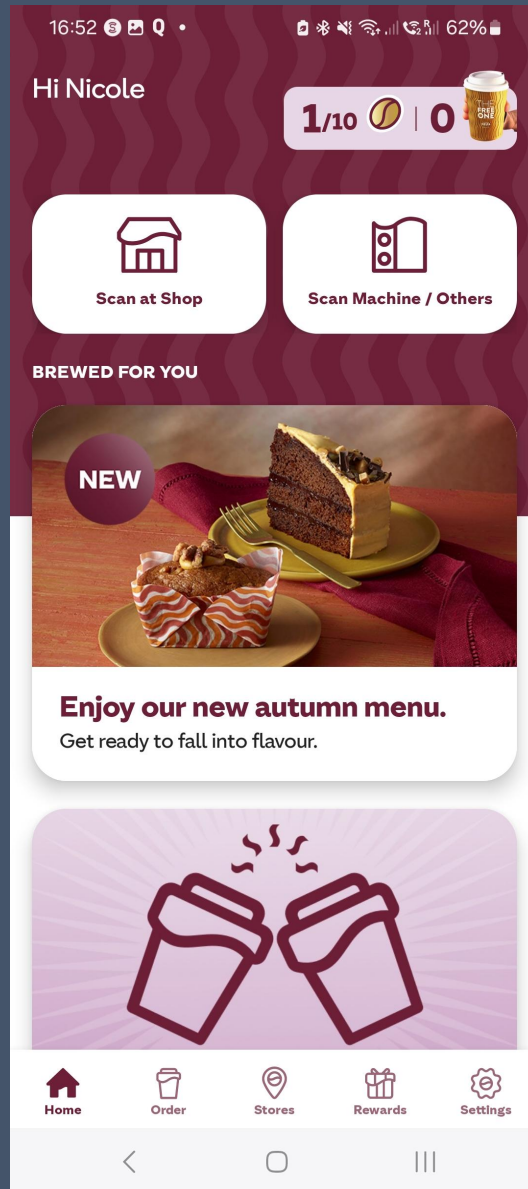
[Show Discussion \(1\)](#) Last Comment 18 Jul 2024 10:08am by Nicole Meng

# Recap Think Aloud

# Think Aloud

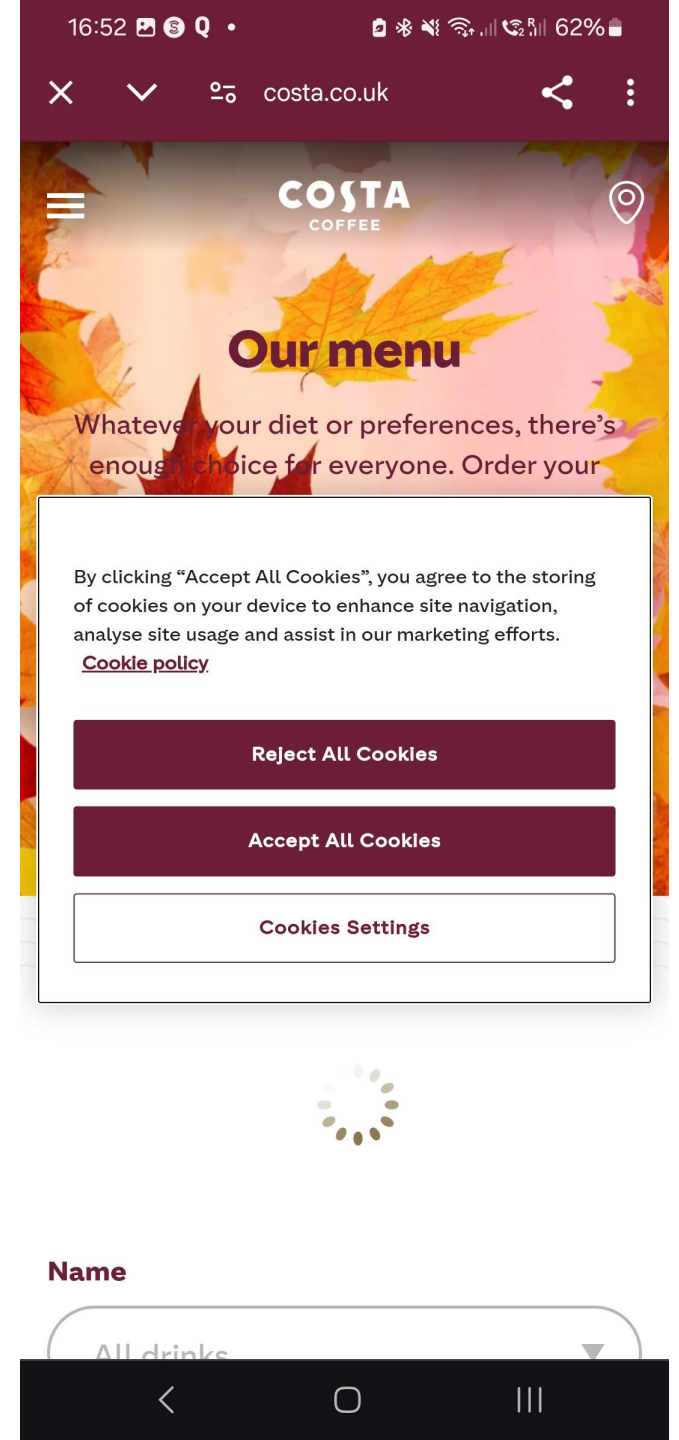
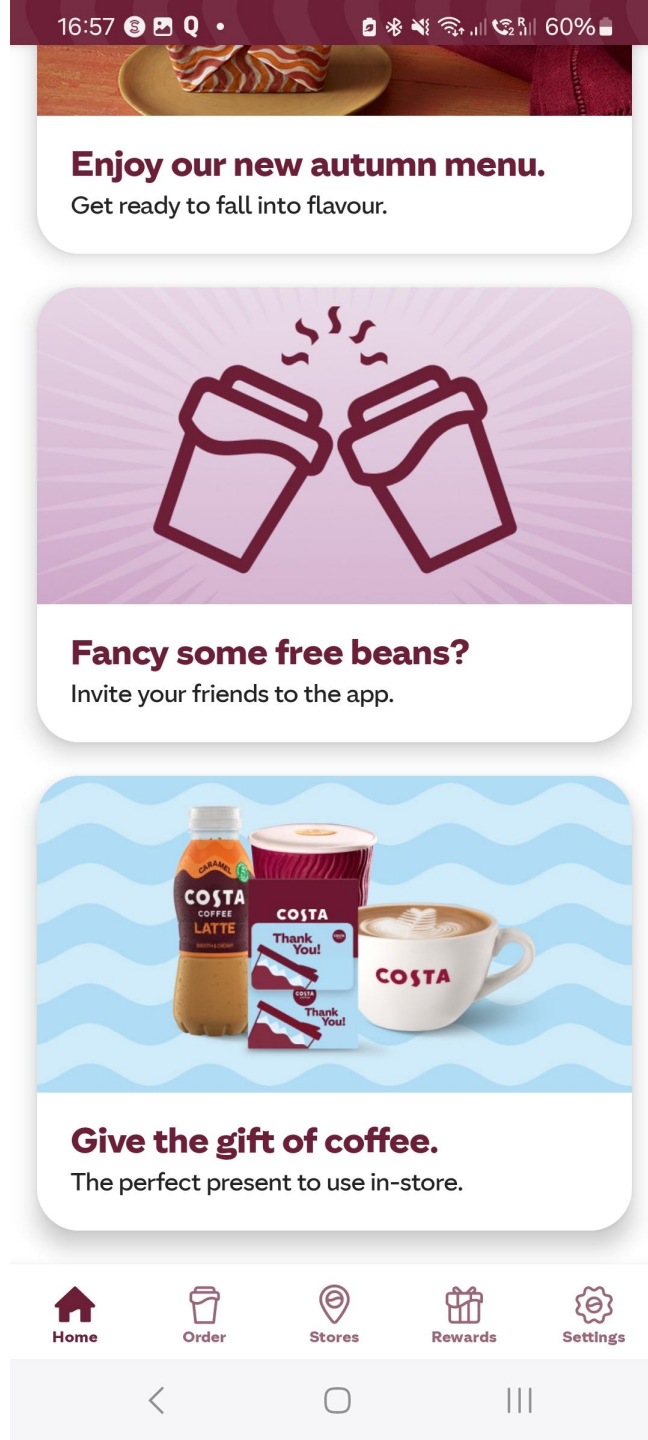
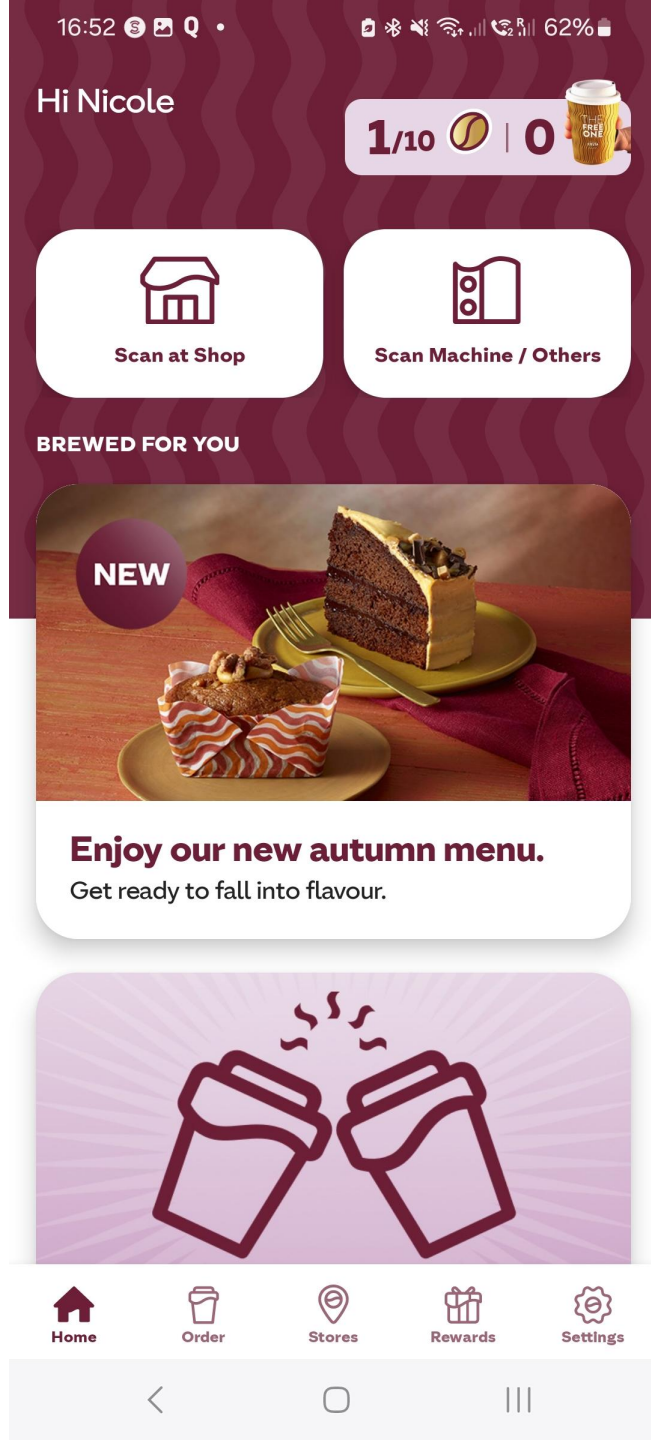
- Have participant talk while interacting with interface
- Provide a set of tasks
- Only the participant talks. Debrief happens later.
- Pros:
  - Understand reasoning for user's actions
  - detailed data
  - only 5 participants needed to find most major issues
- Cons:
  - Bias user behaviour as in a lab
  - Small sample size

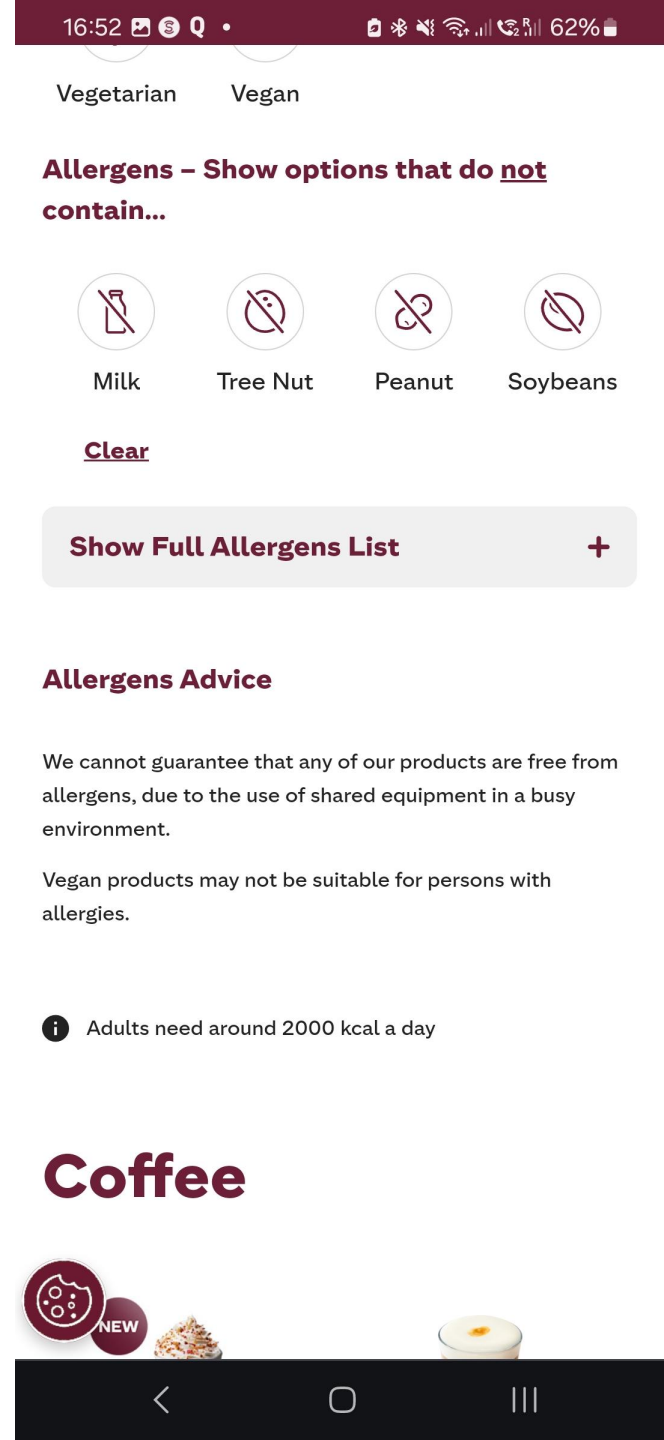
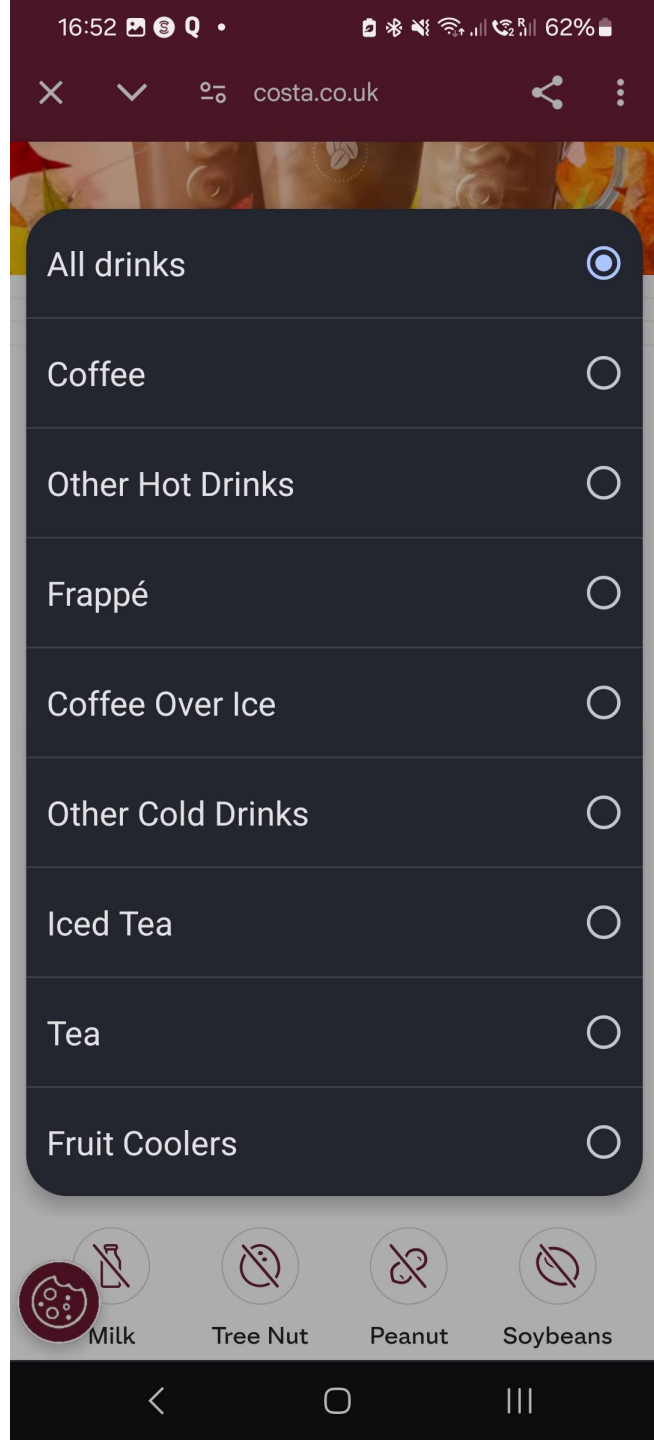
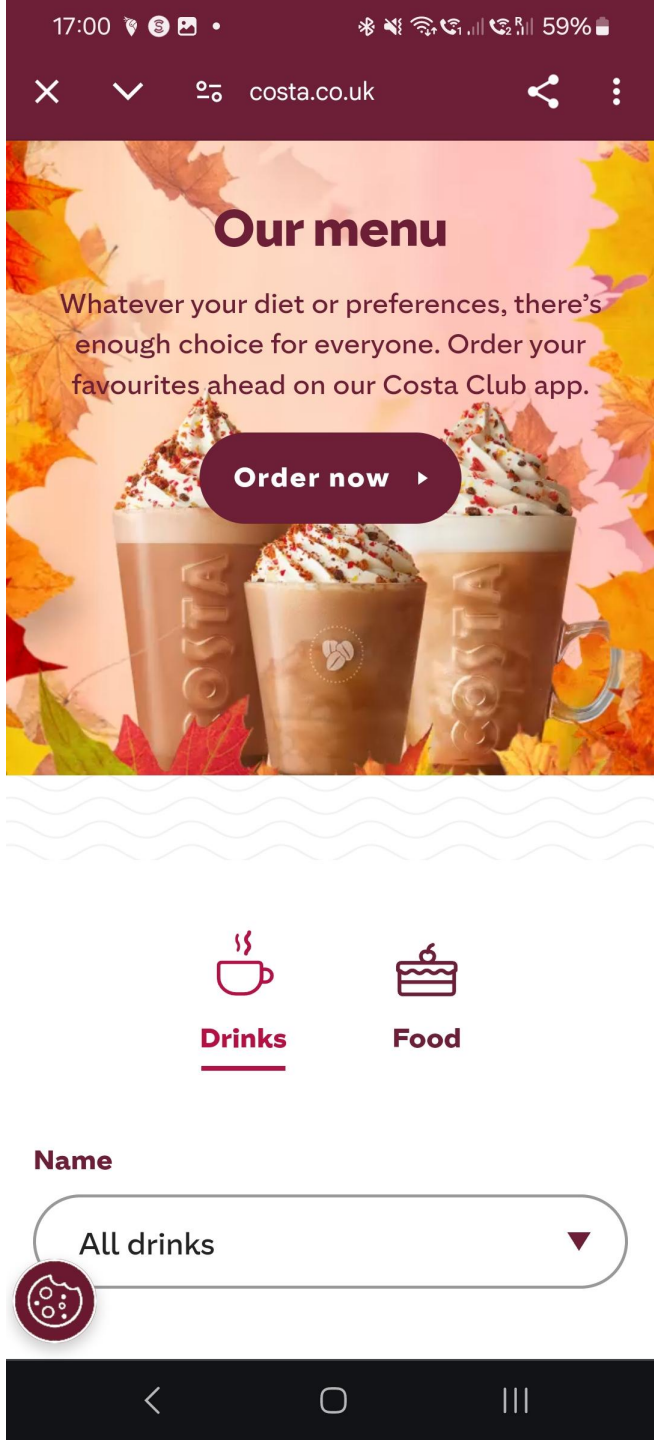
# Think Aloud Example

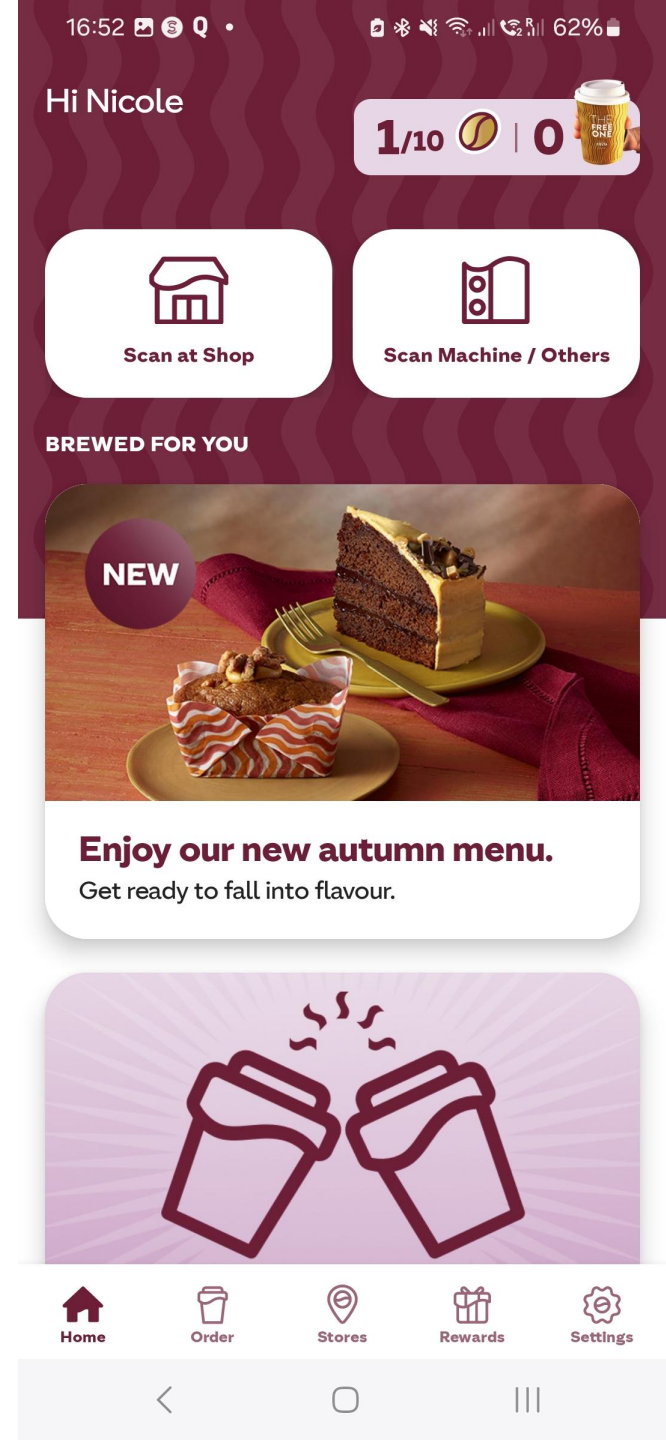
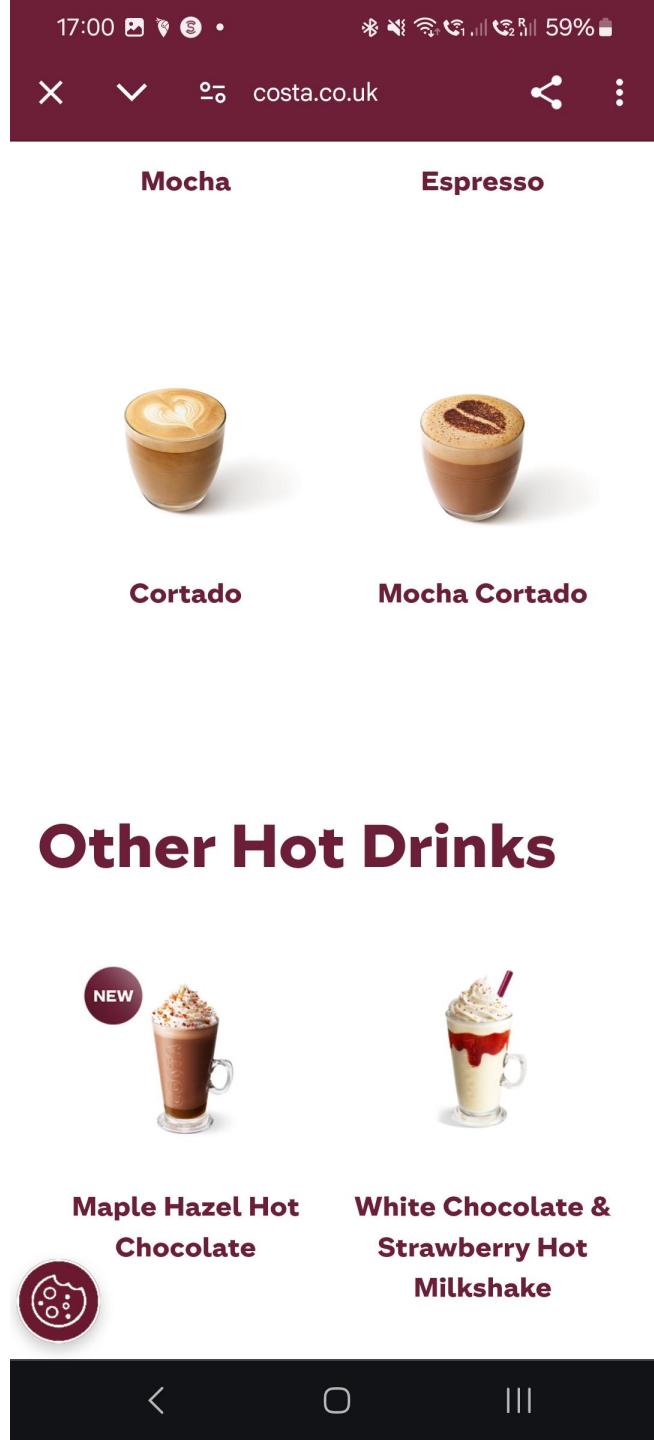
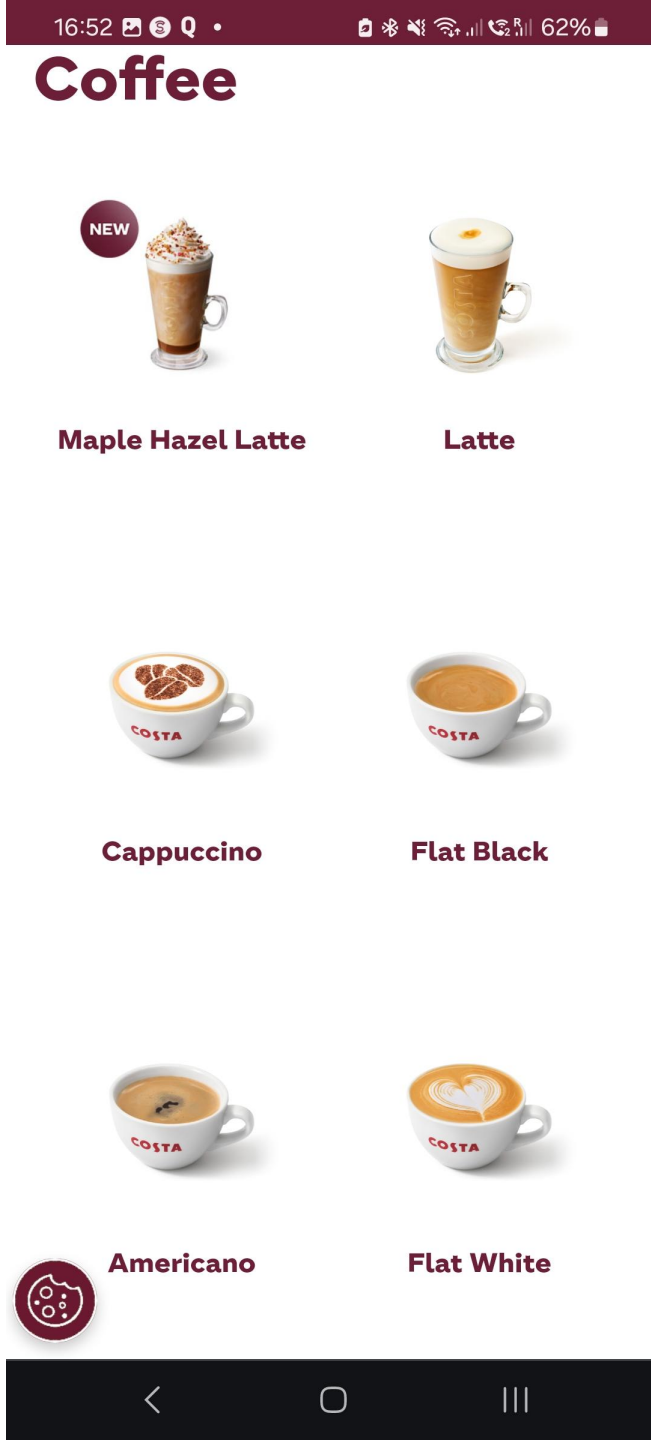


**Task: View the hot drinks menu on the costa app.**



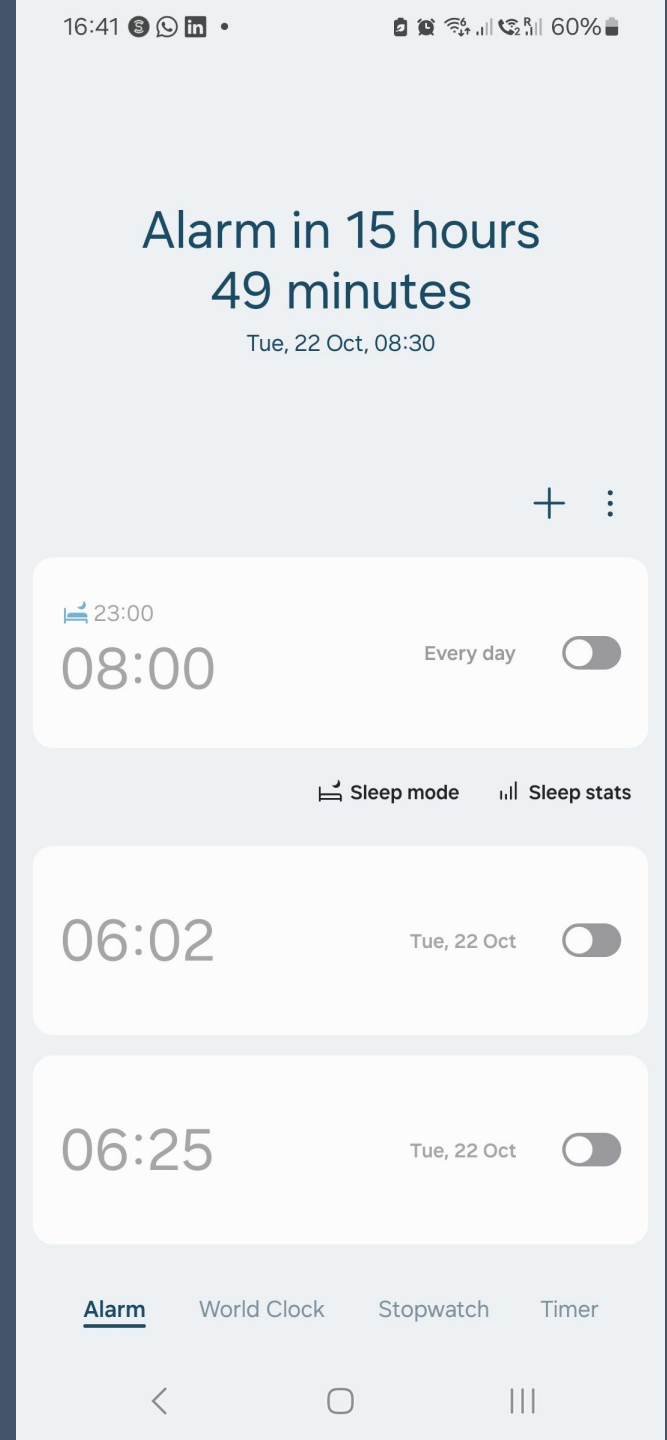
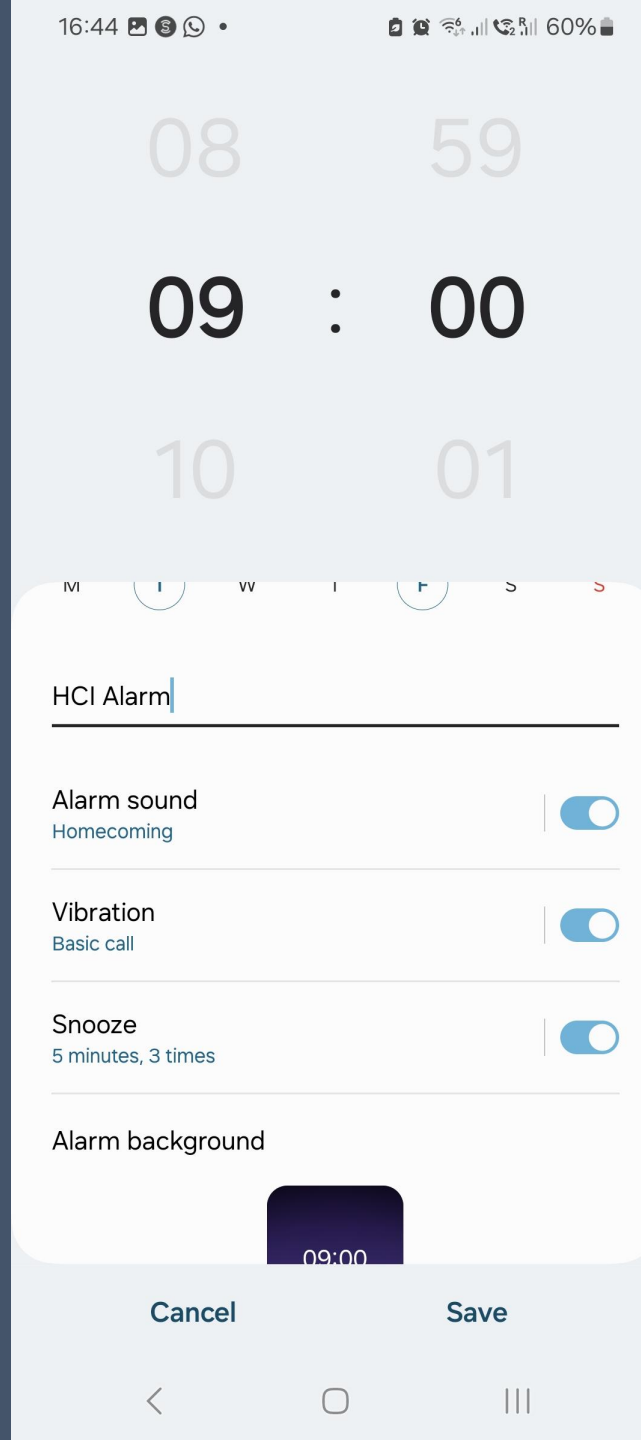




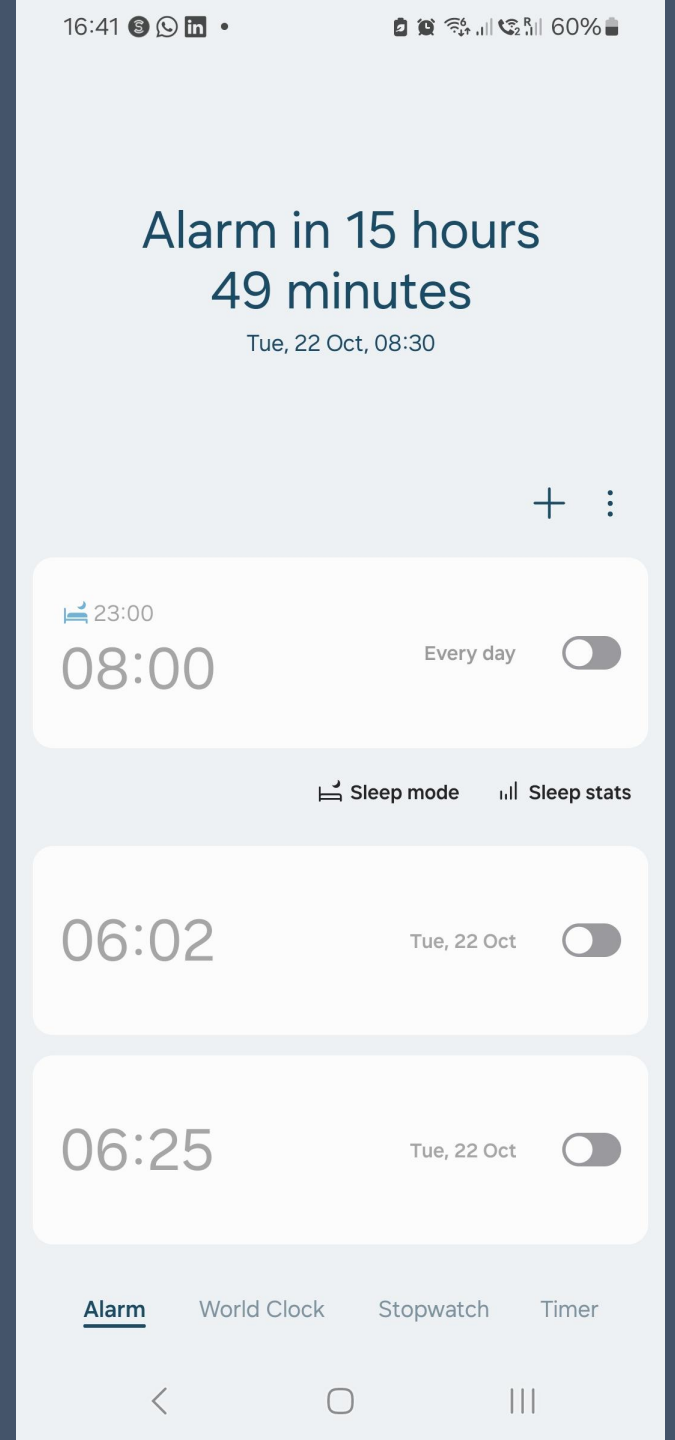


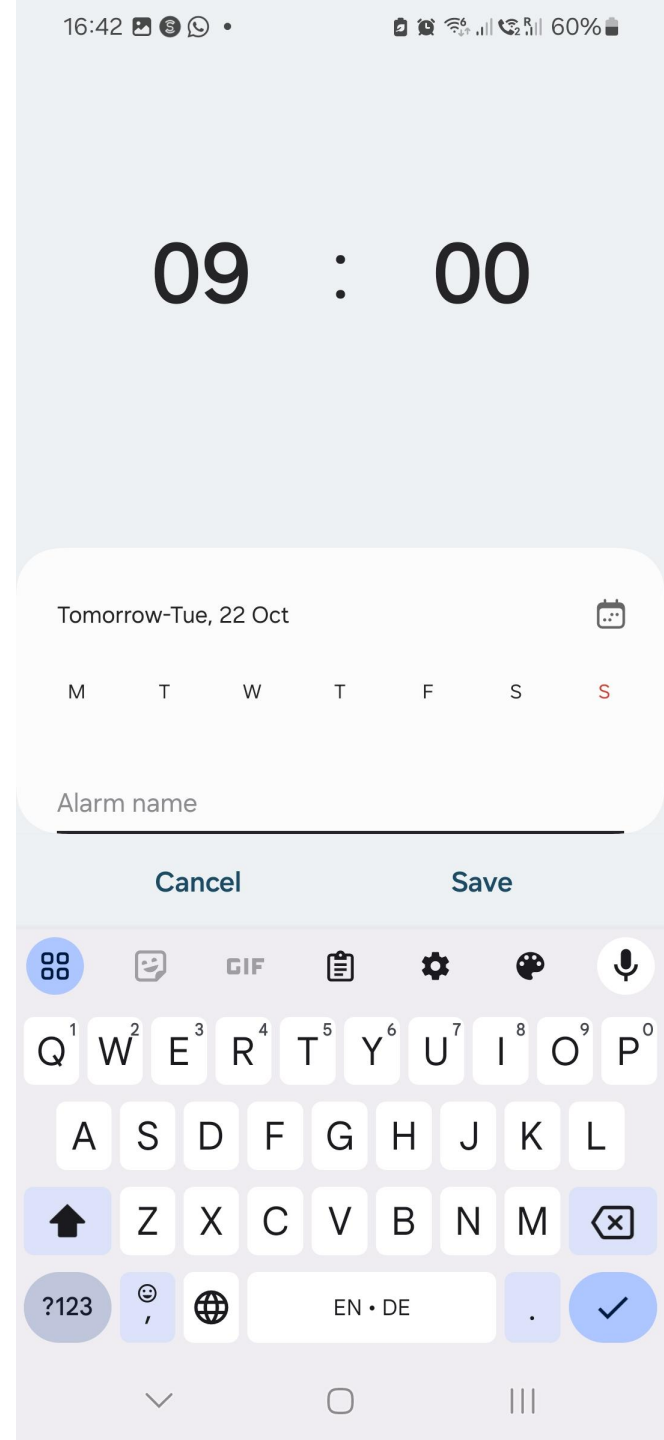
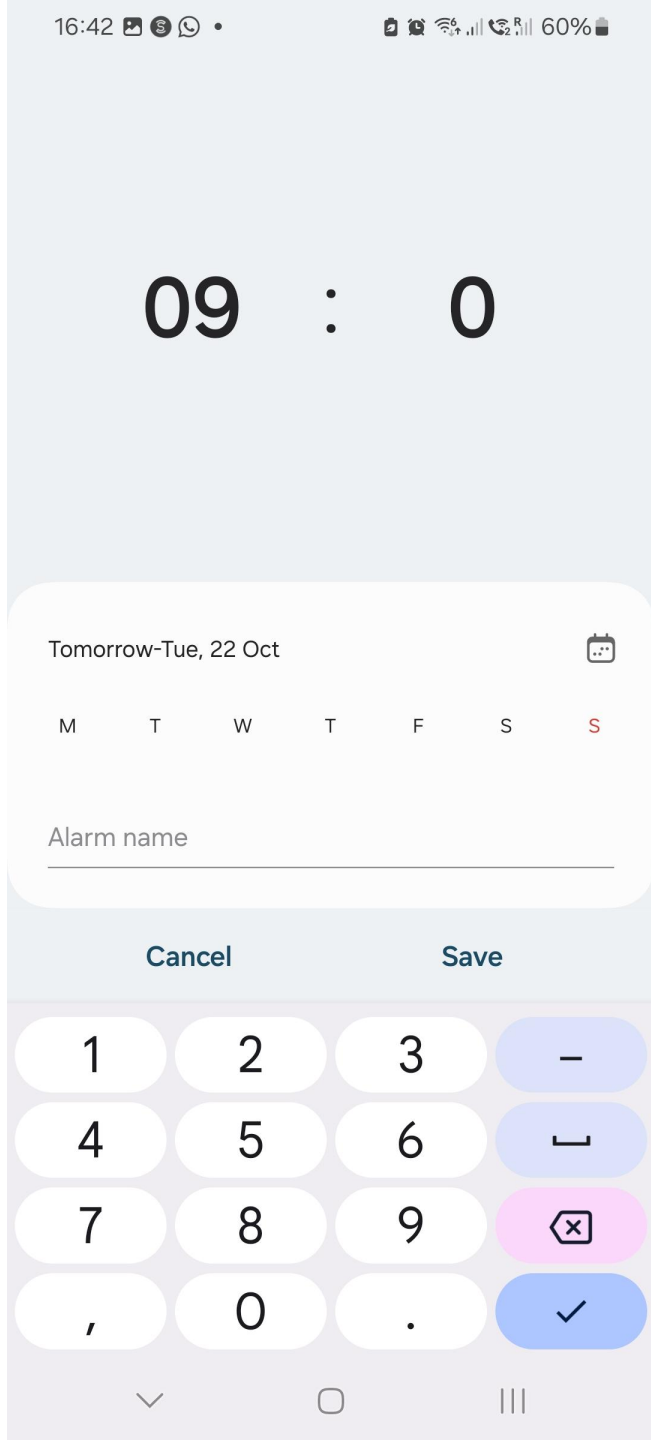
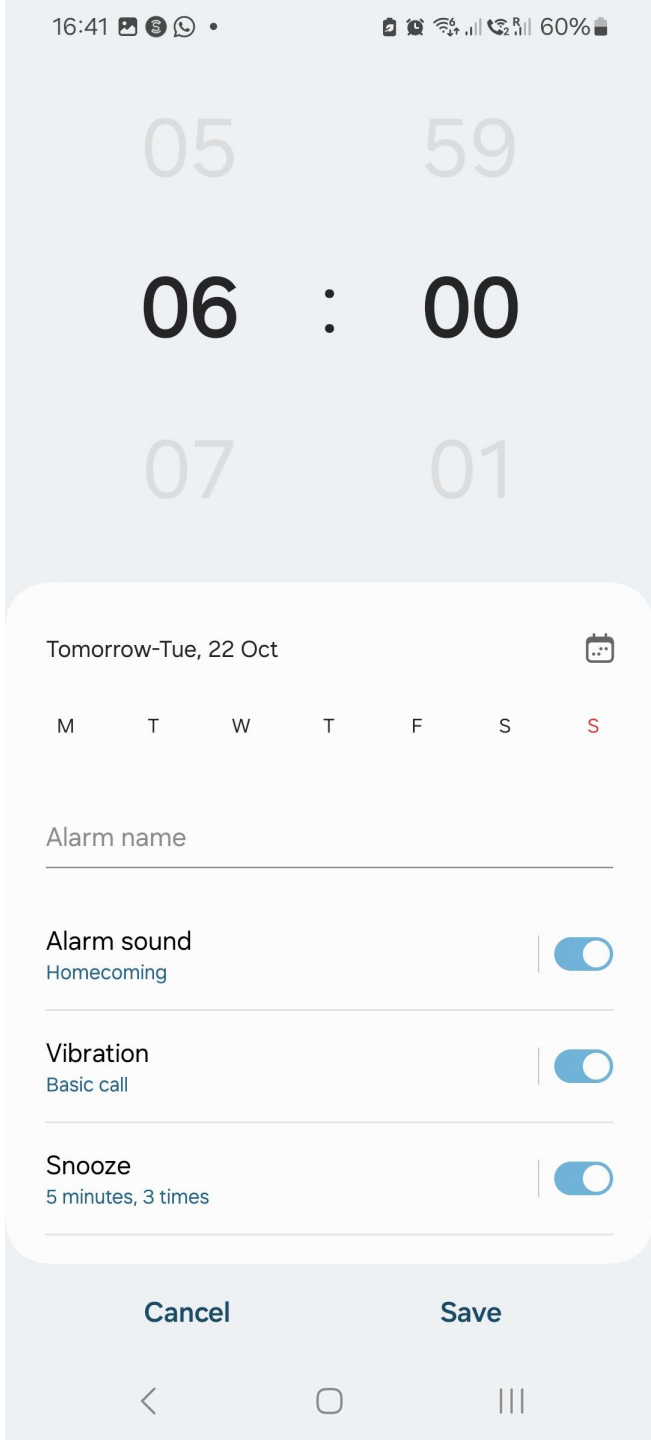


# Think Aloud Example #2



**Task: Set an alarm for 9am for Tuesday and Friday which will snooze for 10 min. Name it “HCl Alarm”.**





09 : 00

Tomorrow-Tue, 22 Oct

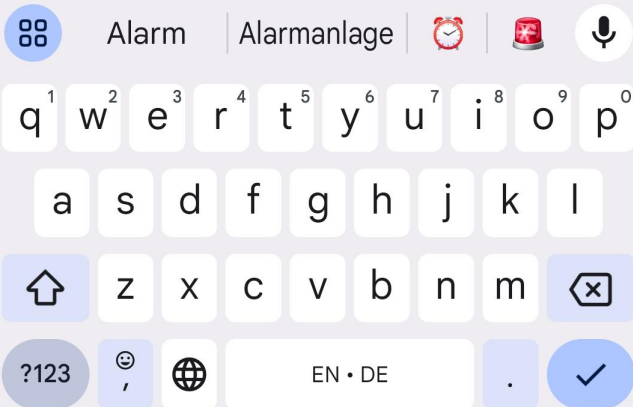


M T W T F S S

HCI Alarm

Cancel

Save



08 59

09 : 00

10 01

Every Tue, Fri



M T W T F S S

HCI Alarm

Alarm sound

Homecoming



Vibration

Basic call



Snooze

5 minutes, 3 times



Cancel

Save



08 59

09 : 00

10 01

Vibration

Basic call



Snooze

5 minutes, 3 times



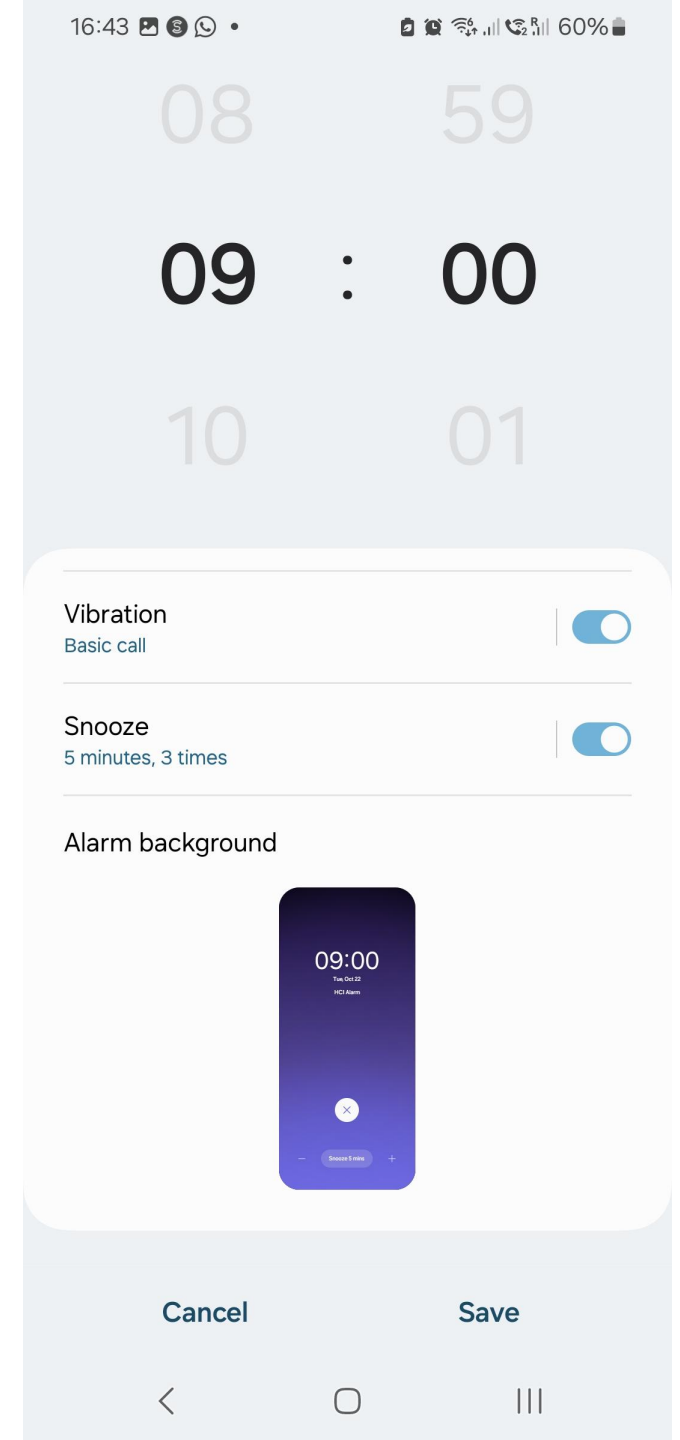
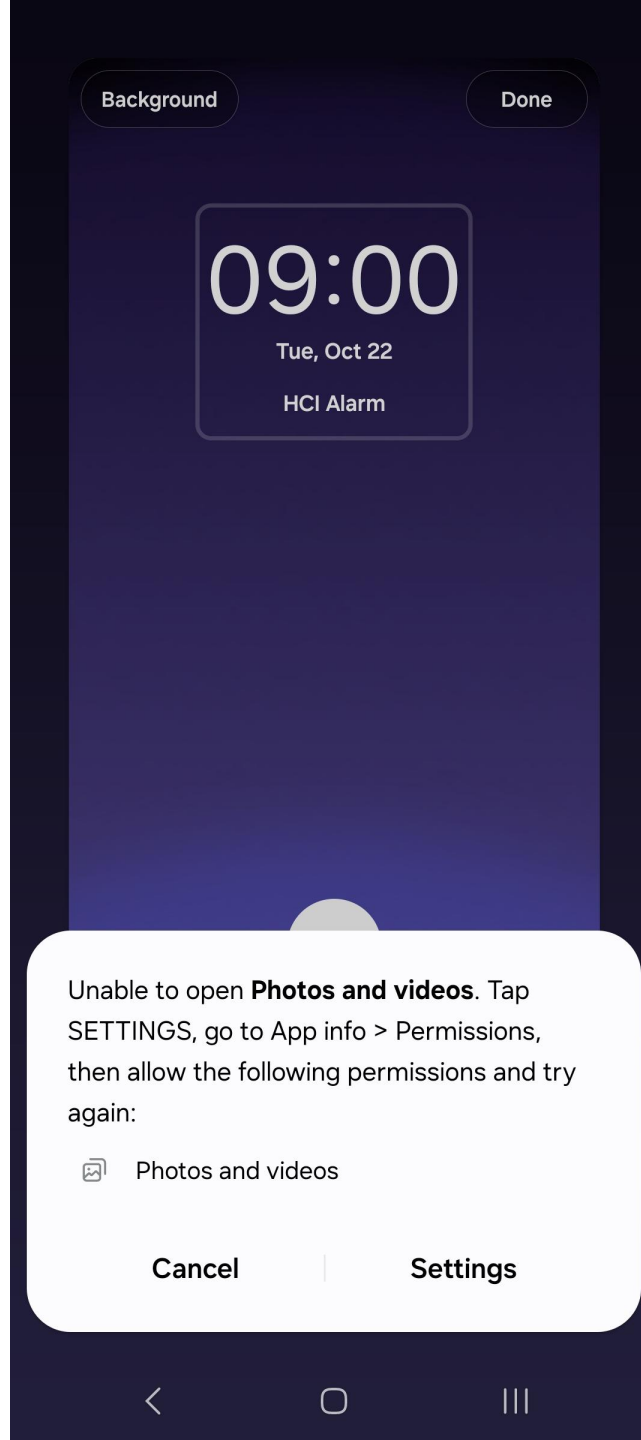
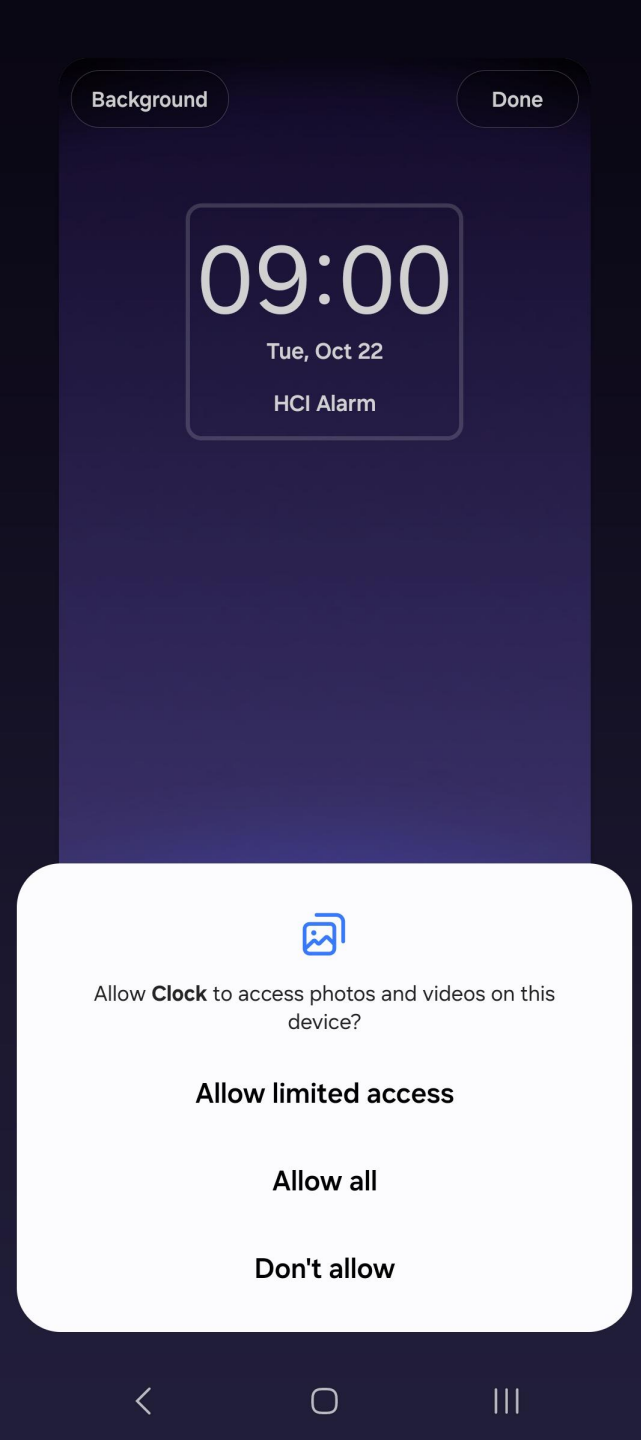
Alarm background



Cancel

Save







08 59

09 : 00

10 01

M T W T F S S

HCI Alarm

Alarm sound

Homecoming



Vibration

Basic call

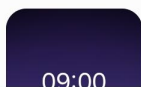


Snooze

Off



Alarm background



Cancel

Save



08 59

09 : 00

10 01

M T W T F S S

HCI Alarm

Alarm sound

Homecoming



Vibration

Basic call

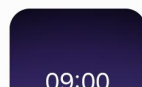


Snooze

5 minutes, 3 times



Alarm background



Cancel

Save



&lt; Snooze

On

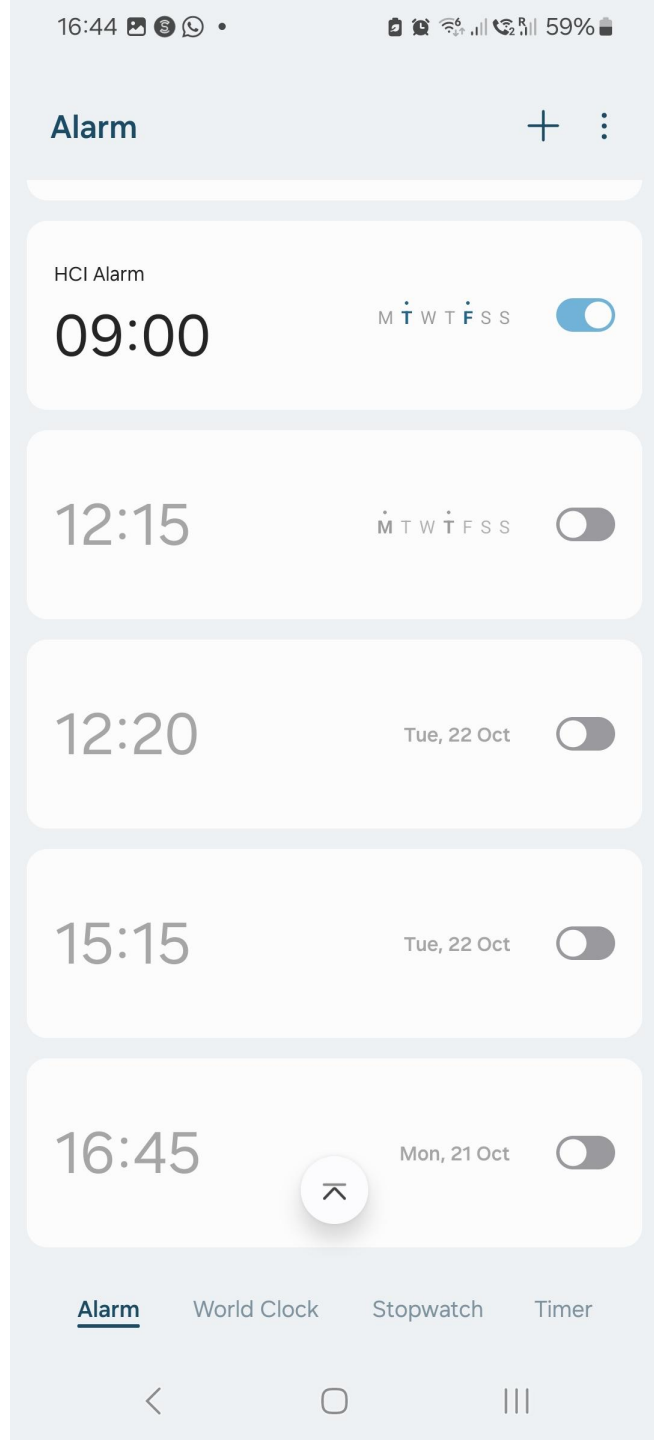
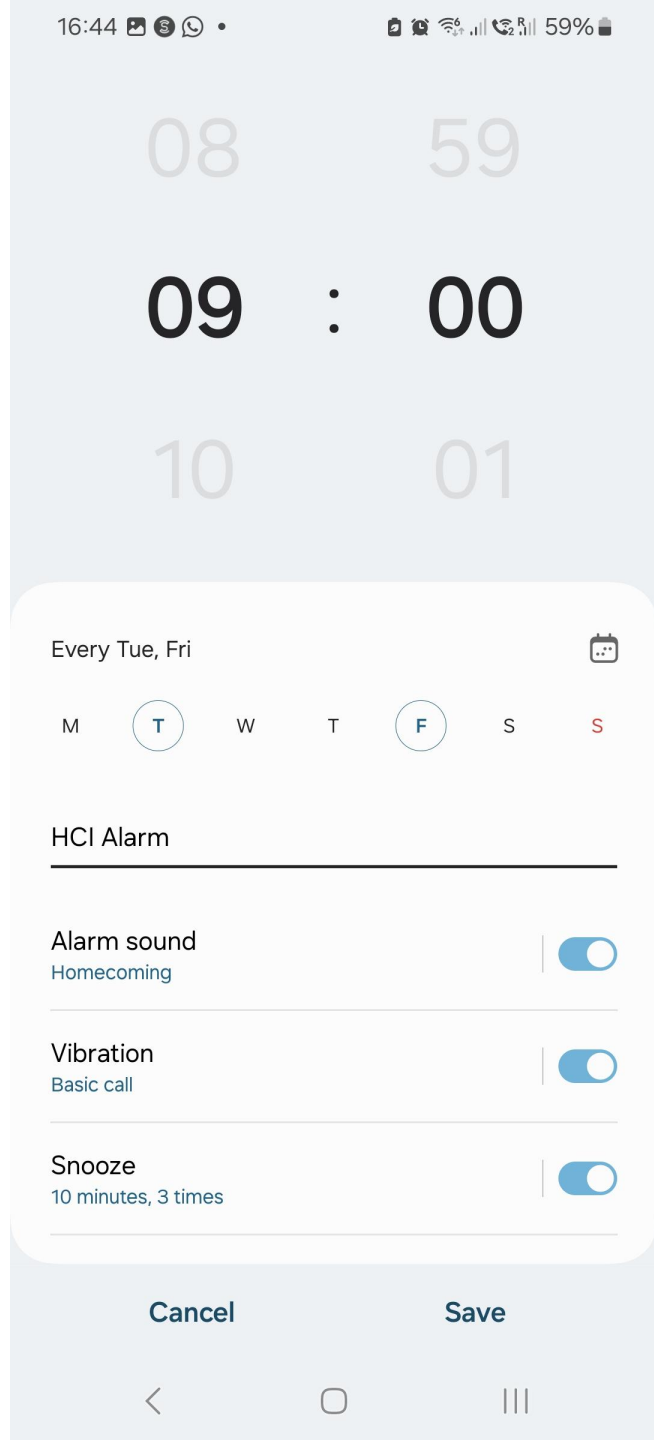
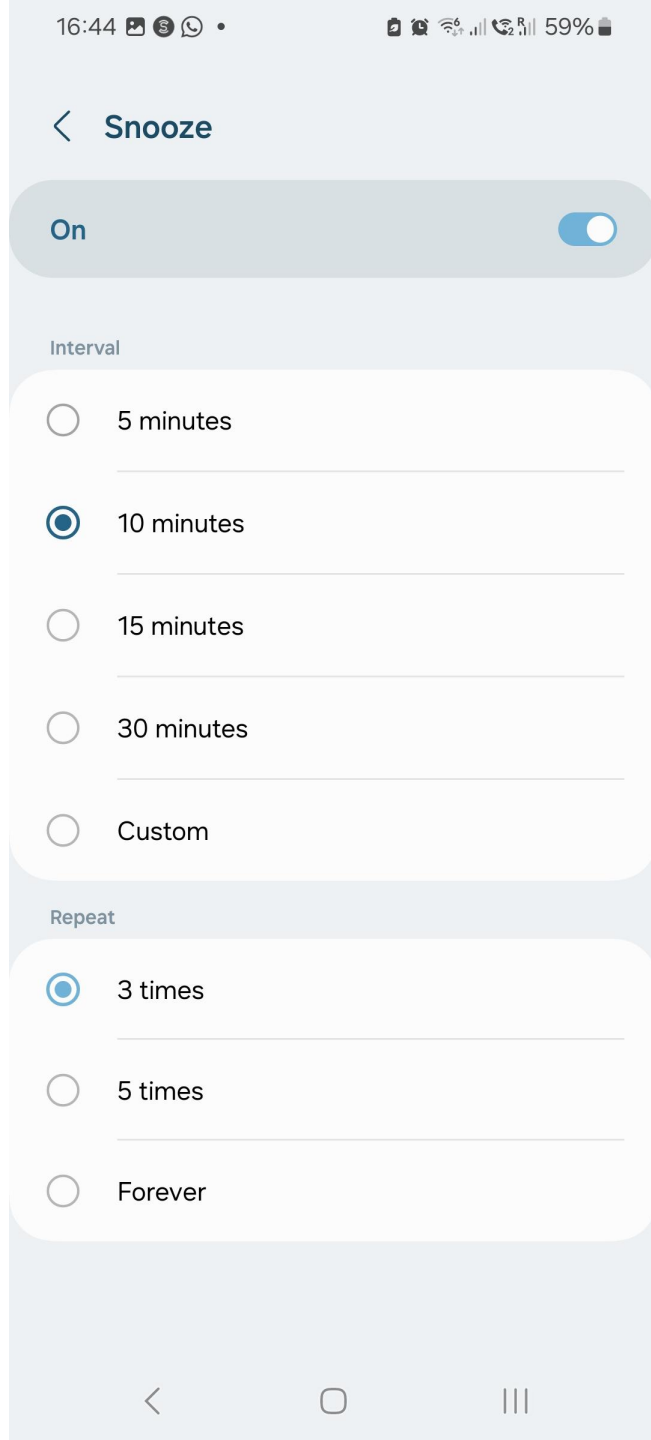


Interval

☒ 5 minutes☐ 10 minutes☐ 15 minutes☐ 30 minutes☐ Custom

Repeat

☒ 3 times☐ 5 times☐ Forever



# Activity



Link to tutorial

## Practice Think Aloud

Pair up and open the Think Aloud Tutorial.

1. Assign Roles.
2. Go through the tutorial. (5min)
3. Swap Roles.
4. Go through second round. (5min)
5. Discuss: (5min)
  - a. What was hard?
  - b. What was easy?
6. Share with class (5min)



LNER  
Website

**Any questions?**



# Week 6: User Studies

Nicole Meng-Schneider