

# Cognitive Walkthrough

## Recap: What is design research?

**Design research is about learning from people in the context of their lives. Evaluation is a form of research.**

Find Problems

Understand a Topic

Build Empathy

## Cognitive Walkthrough

# A method for evaluating the learnability of a product, based on a theory of problem solving in unfamiliar situations.

A cognitive walkthrough is intended to help improve how people first encounter a digital product.

- Intended for evaluating how people first think about and use a product.
- Assumes that a system doesn't require training: this method is suitable for "walk up and use" systems, like iPhone apps or websites.
- Is based on a credible story of a hypothetical user, rather than real observations of real users

## Cognitive Walkthrough

# This method is based on an understanding of *how people sense progress is being made.*

When confronted with a unique, new situation, people leverage a problem solving theory based on exploration and progressive behavior refinement.

1. We make a decision to take an action that will move us closer to completing our final goal
2. We determine what controls are available that we can use to take the action
3. We select the best choice (the control we think is most likely to work) and take action
4. We see what happens, determine if we're closer to our final goal, and do it all again.

## Cognitive Walkthrough

# 1. We make a decision to take an action that will move us closer to completing our final goal.

**My goal:**

To project from my laptop to the screen at the front of the room

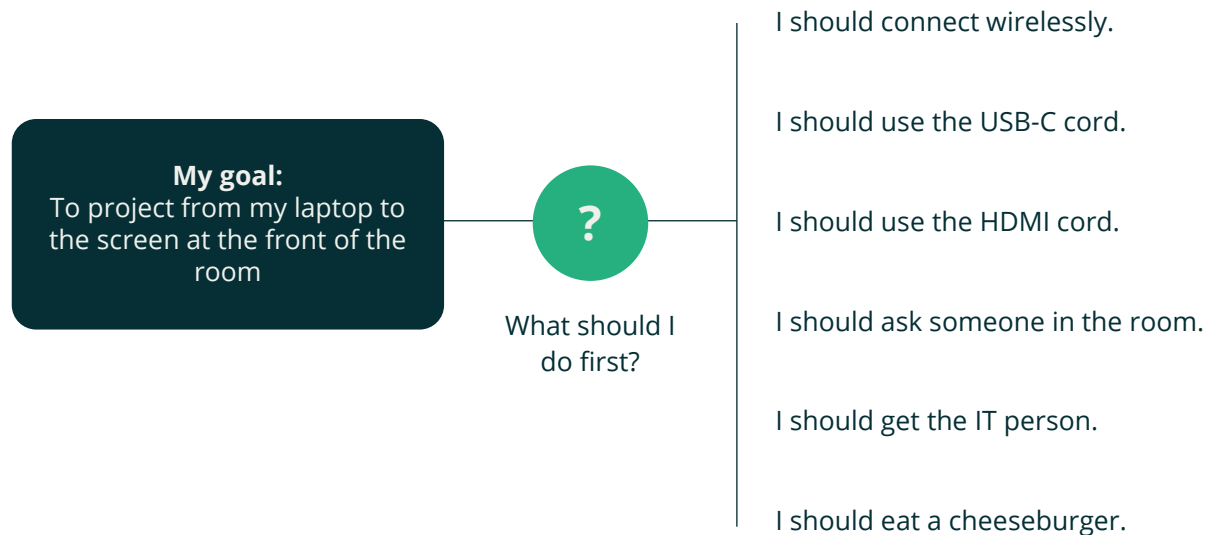


?

What should I do first?

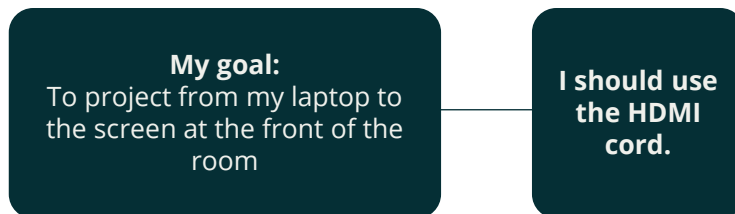
## Cognitive Walkthrough

# 1. We make a decision to take an action that will move us closer to completing our final goal.



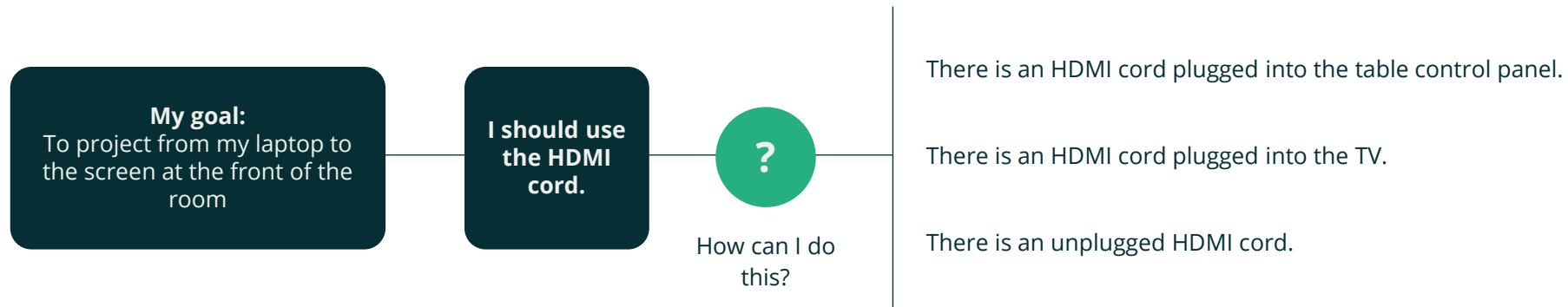
## Cognitive Walkthrough

# 1. We make a decision to take an action that will move us closer to completing our final goal.



## Cognitive Walkthrough

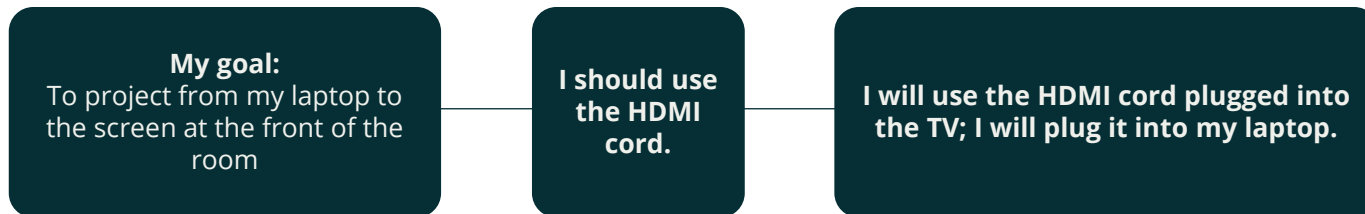
## 2. We determine what controls are available that we can use to take the action.





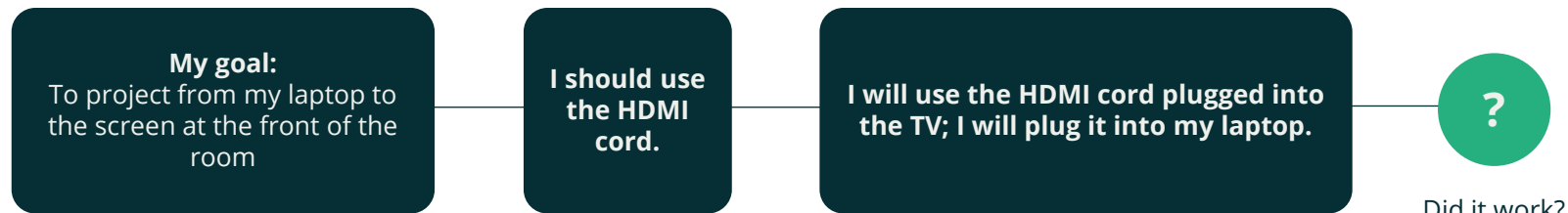
## Cognitive Walkthrough

### 3. We select the best choice (the control we think is most likely to work) and take action.



## Cognitive Walkthrough

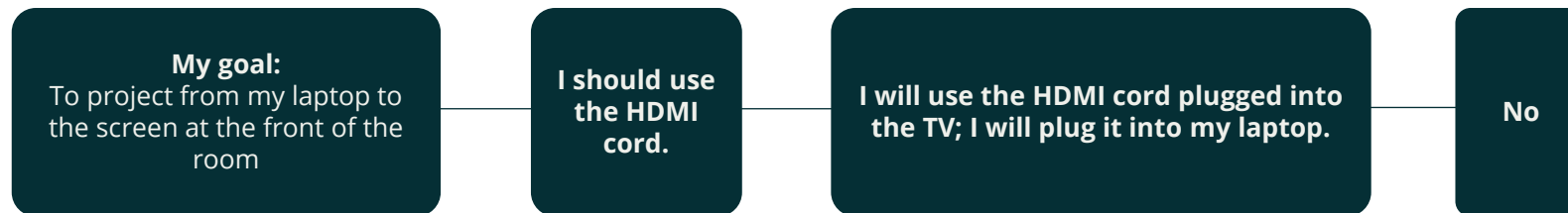
# 4. We see what happens, determine if we're closer to our final goal, and do it all again.



Did it work?

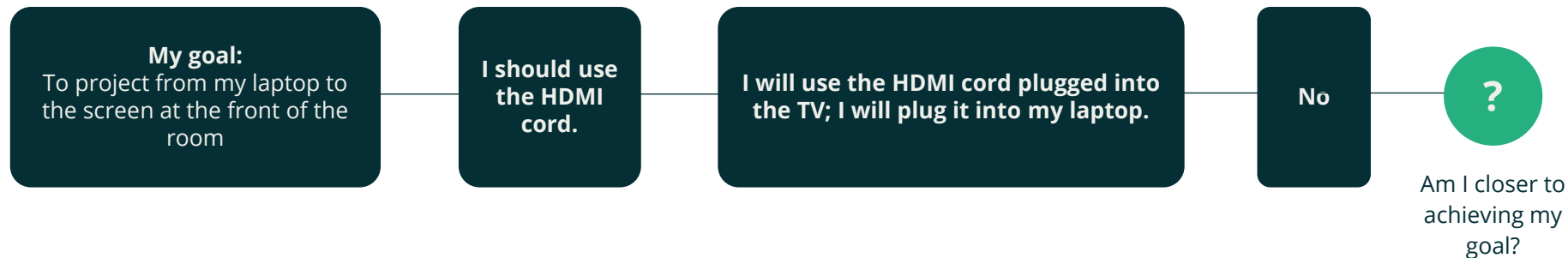
## Cognitive Walkthrough

## 4. We see what happens, determine if we're closer to our final goal, and do it all again.



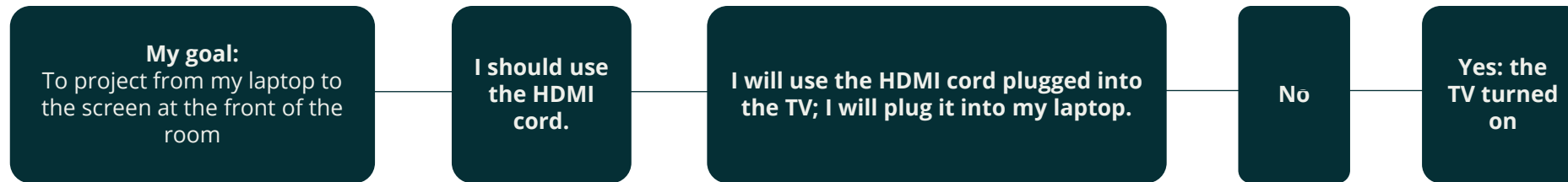
## Cognitive Walkthrough

# 4. We see what happens, determine if we're closer to our final goal, and do it all again.



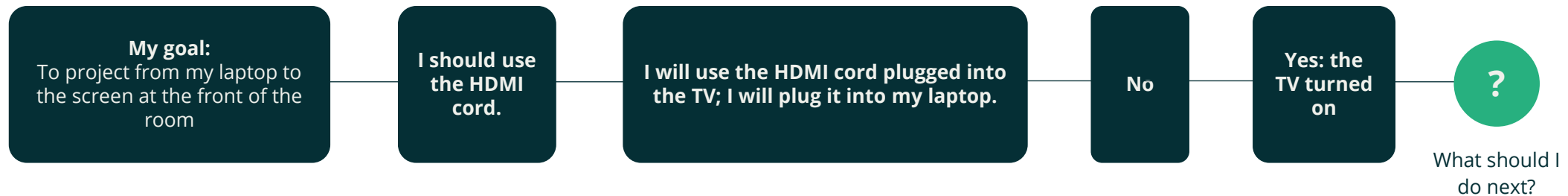
## Cognitive Walkthrough

# 4. We see what happens, determine if we're closer to our final goal, and do it all again.



## Cognitive Walkthrough

# 4. We see what happens, determine if we're closer to our final goal, and do it all again.



## Cognitive Walkthrough

# How to perform a Cognitive Walkthrough:

1. Prepare a prototype of any fidelity
2. Identify your user, and describe the assumptions you are making about their technical abilities and their abilities with the system you are testing
3. Identify the main goals this hypothetical user will try to accomplish with the system
4. Identify and list each step through the product that support the user's main goals (each click, tap, navigation, etc)
5. Walk through the product, following the step by step path, and answer the four questions at each step:
  - Will the user make a decision to take an action that moves them closer to completing their goal?
  - Will the user notice that the control necessary is available?
  - Will the user associate the control with their decision?
  - After taking action, will the user see progress is being made?

## Cognitive Walkthrough

# For example...

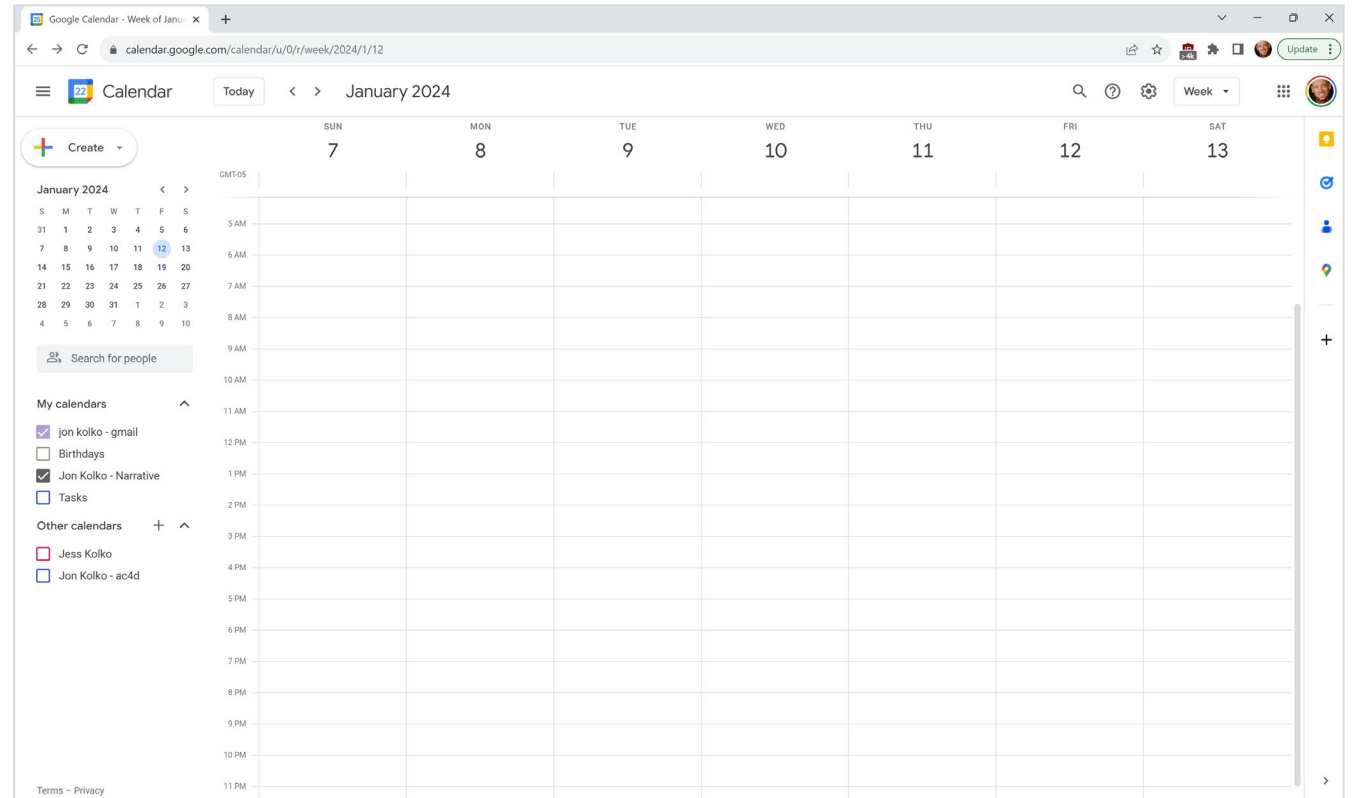
## My goal is to share my calendar with someone.

Will the user make a decision to take an action that moves them closer to completing their goal?

Will the user notice that the control necessary is available?

Will the user associate the control with their decision?

After taking action, will the user see progress is being made?



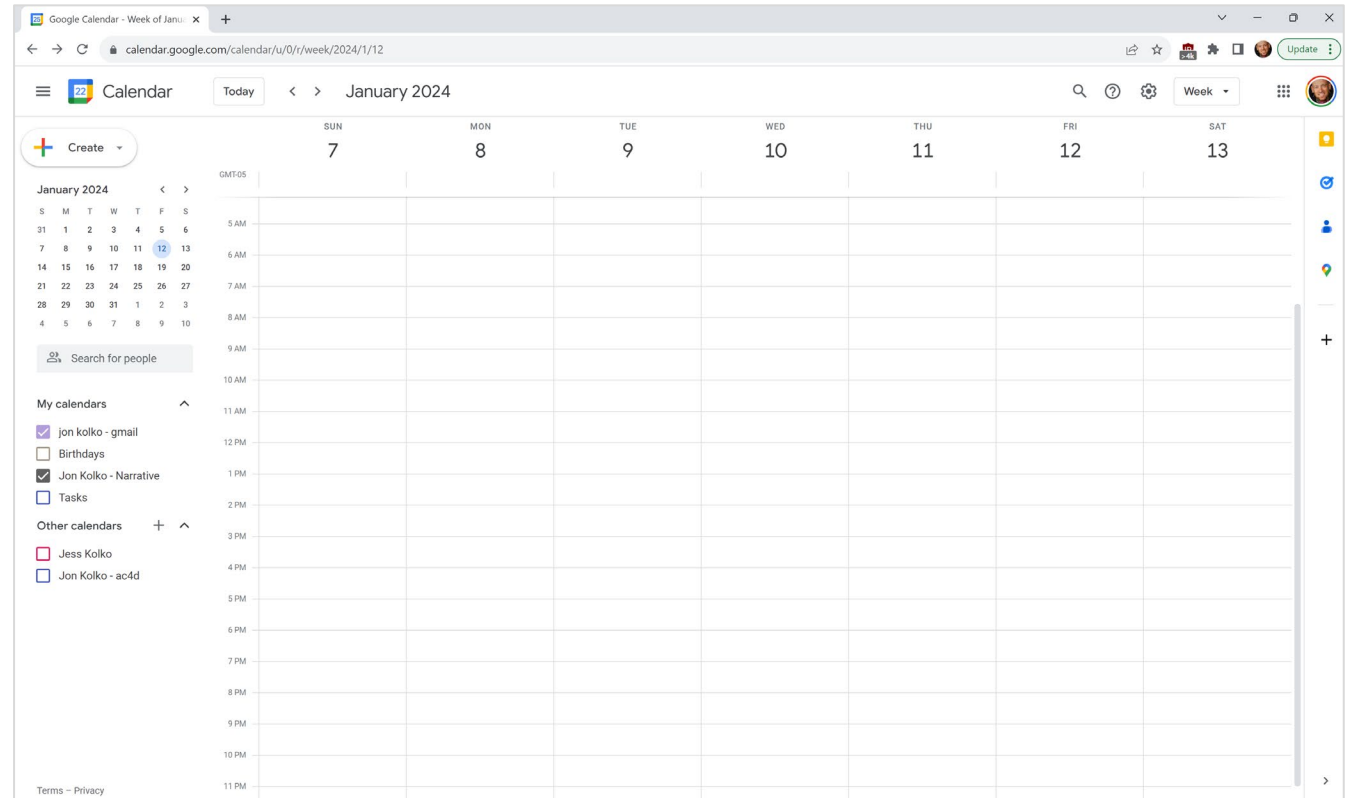


## Cognitive Walkthrough

# For example...

## My goal is to share my calendar with someone.

Will the user make a decision to take an action that moves them closer to completing their goal?



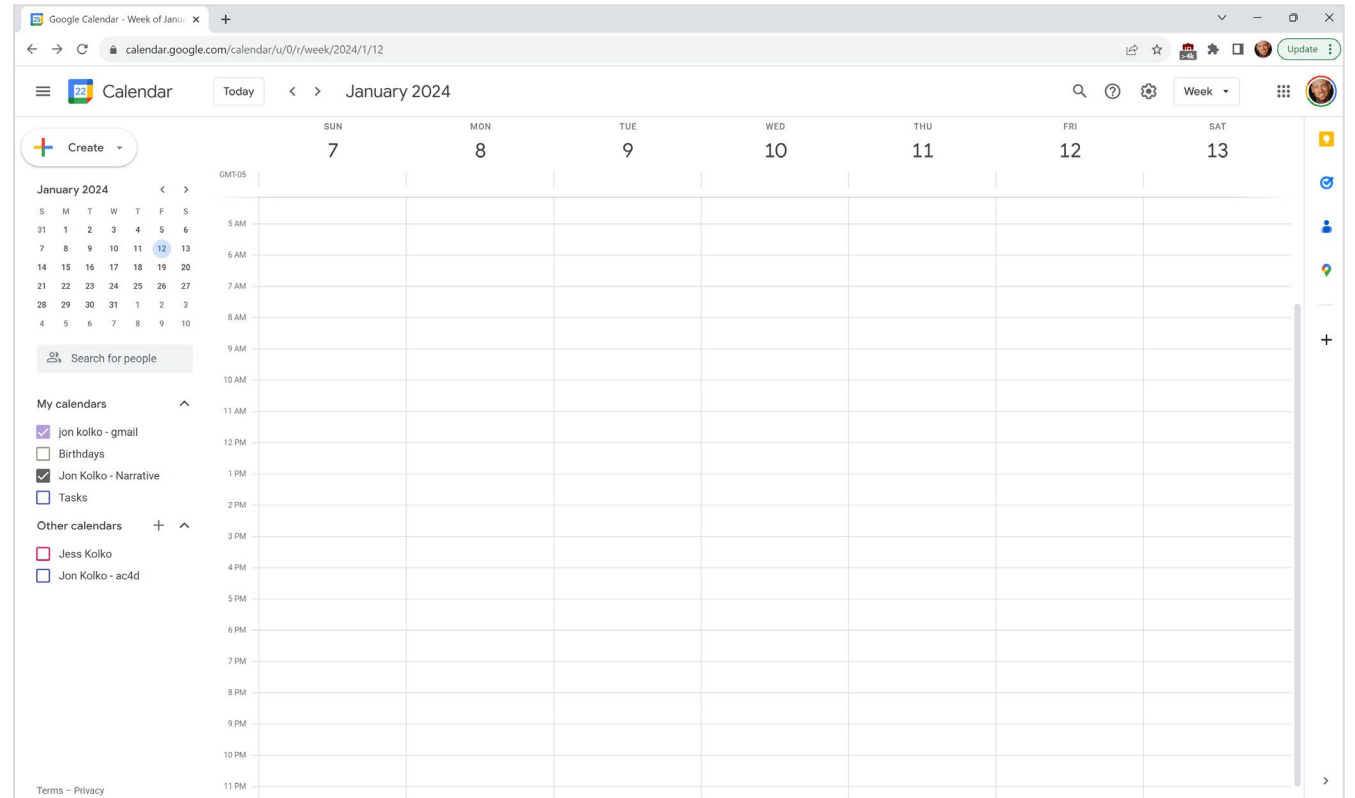
## Cognitive Walkthrough

# For example...

## My goal is to share my calendar with someone.

Will the user make a decision to take an action that moves them closer to completing their goal?

- ✓ • I should start by selecting my calendar.
- ✓ • I should start by selecting settings.
- ✗ • I should start by finding the person I want to share with.
- ✗ • I should start by asking the person to request access.
- ✗ • I should start by reaching out to Google for help.

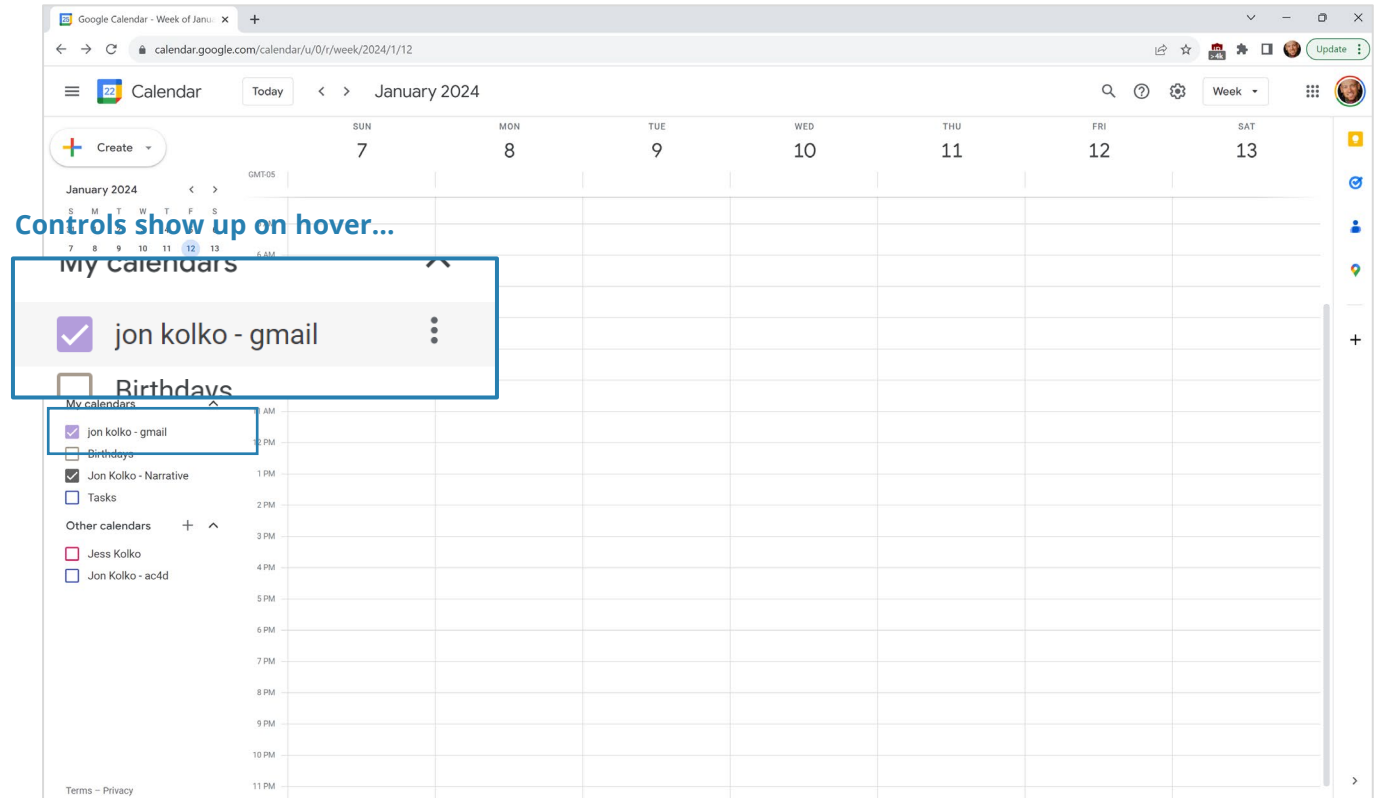


## Cognitive Walkthrough

# For example...

# I will start by selecting my calendar.

Will the user notice that the control necessary is available?

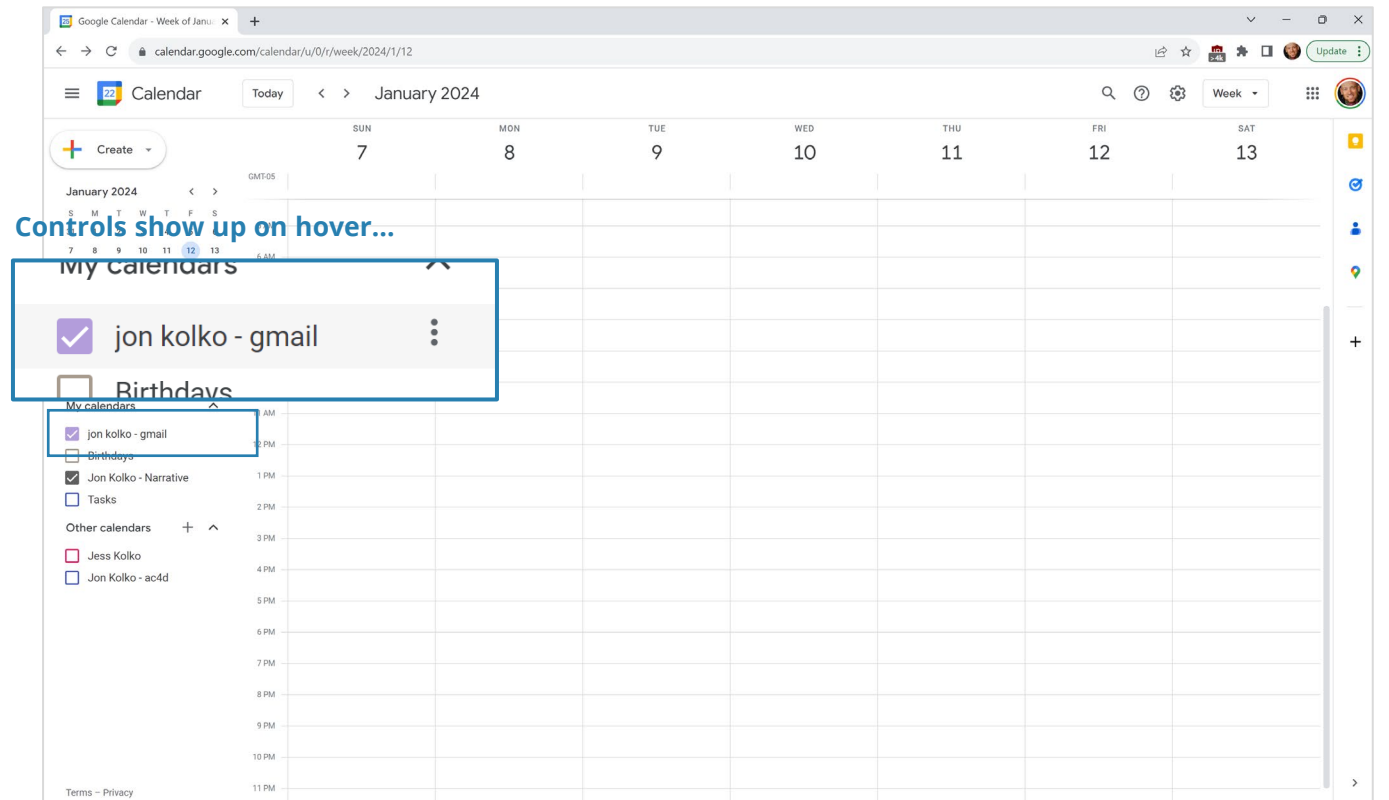


## Cognitive Walkthrough

# For example...

# I don't think to hover on the label.

✗ Will the user notice that the control necessary is available?

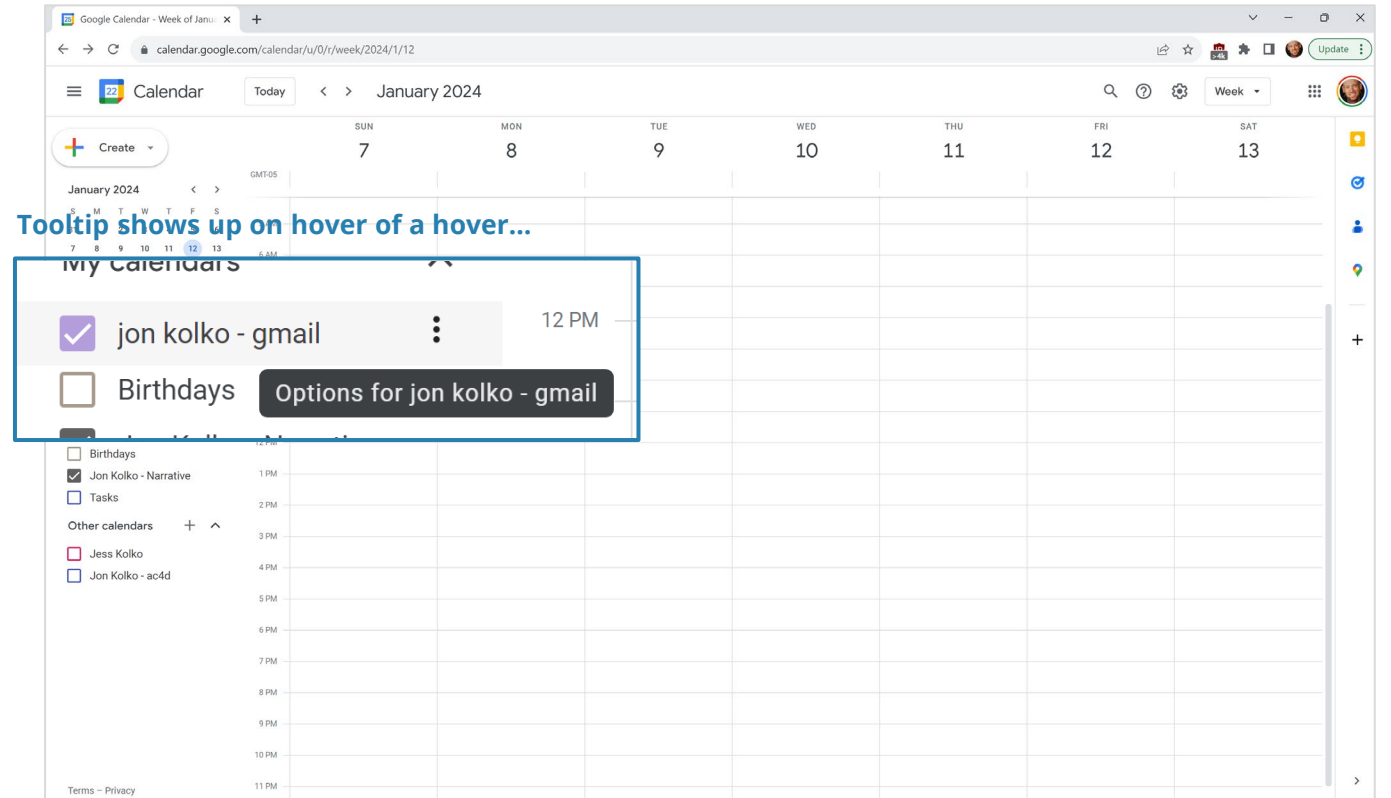


## Cognitive Walkthrough

# For example...

## If I *do* hover on the label, I see helper text...

Will the user associate the control with their decision?

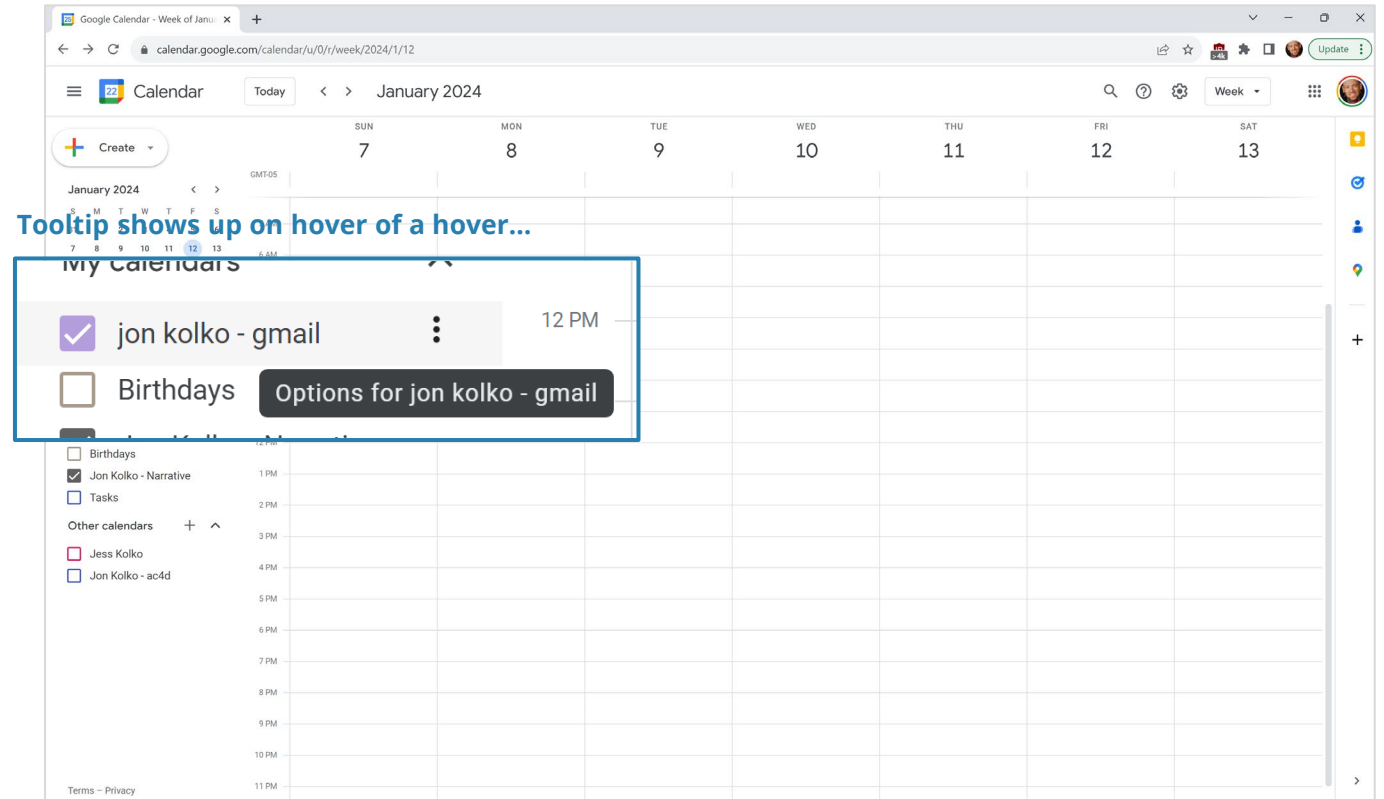


Cognitive Walkthrough

For example...

But that text is about options, not sharing.

✗ Will the user associate the control with their decision?

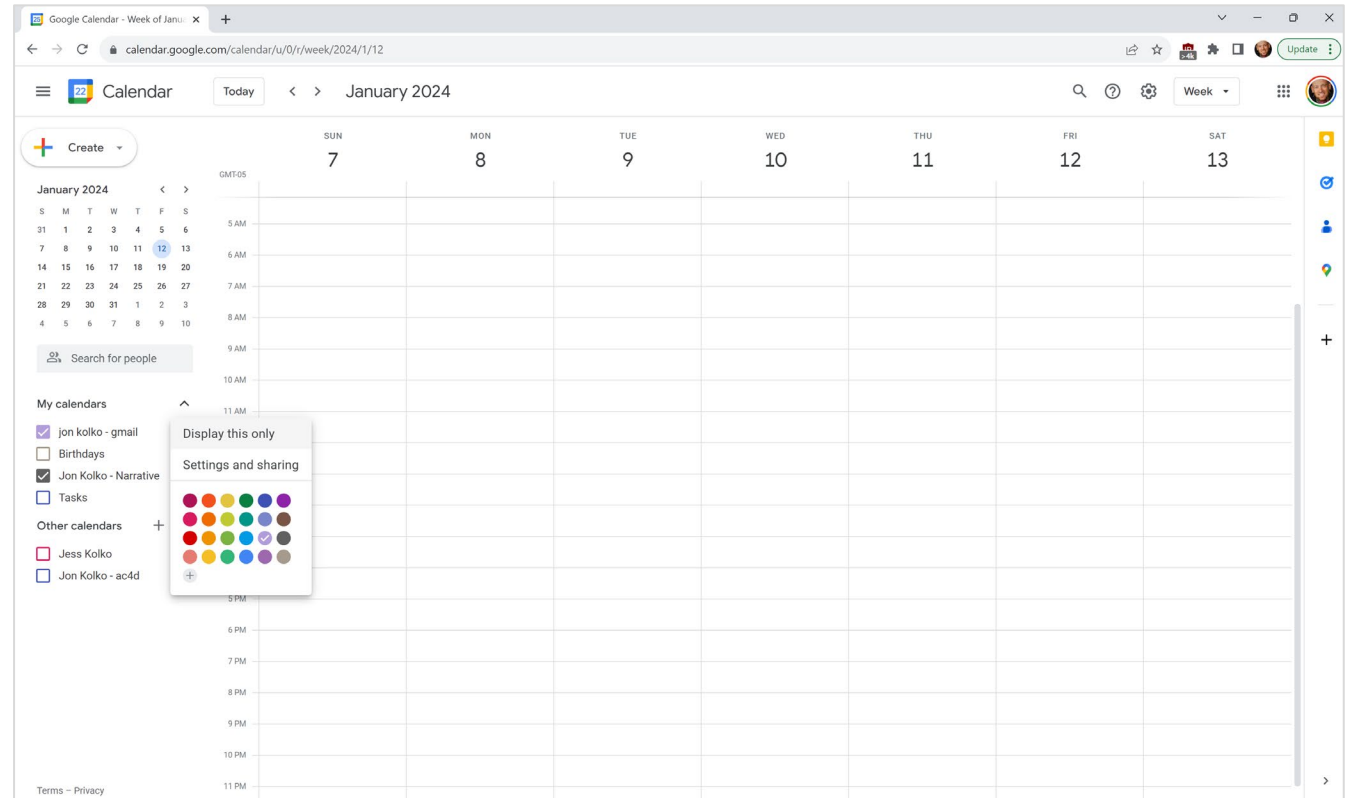


## Cognitive Walkthrough

# For example...

# But if I click, I see a menu with the word "sharing."

✓ After taking action, will the user see progress is being made?



## Cognitive Walkthrough

# For example...

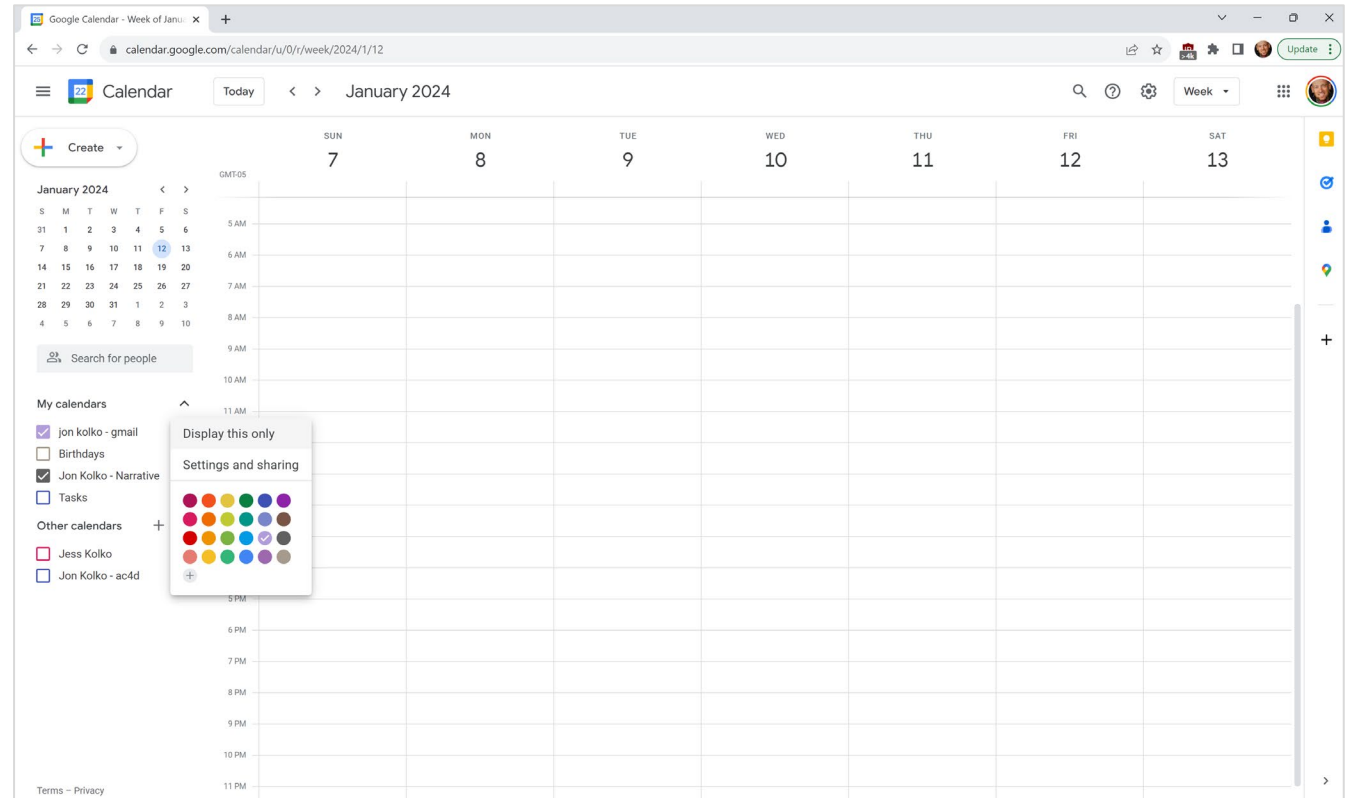
## My goal is to share my calendar with someone.

Will the user make a decision to take an action that moves them closer to completing their goal?

Will the user notice that the control necessary is available?

Will the user associate the control with their decision?

After taking action, will the user see progress is being made?





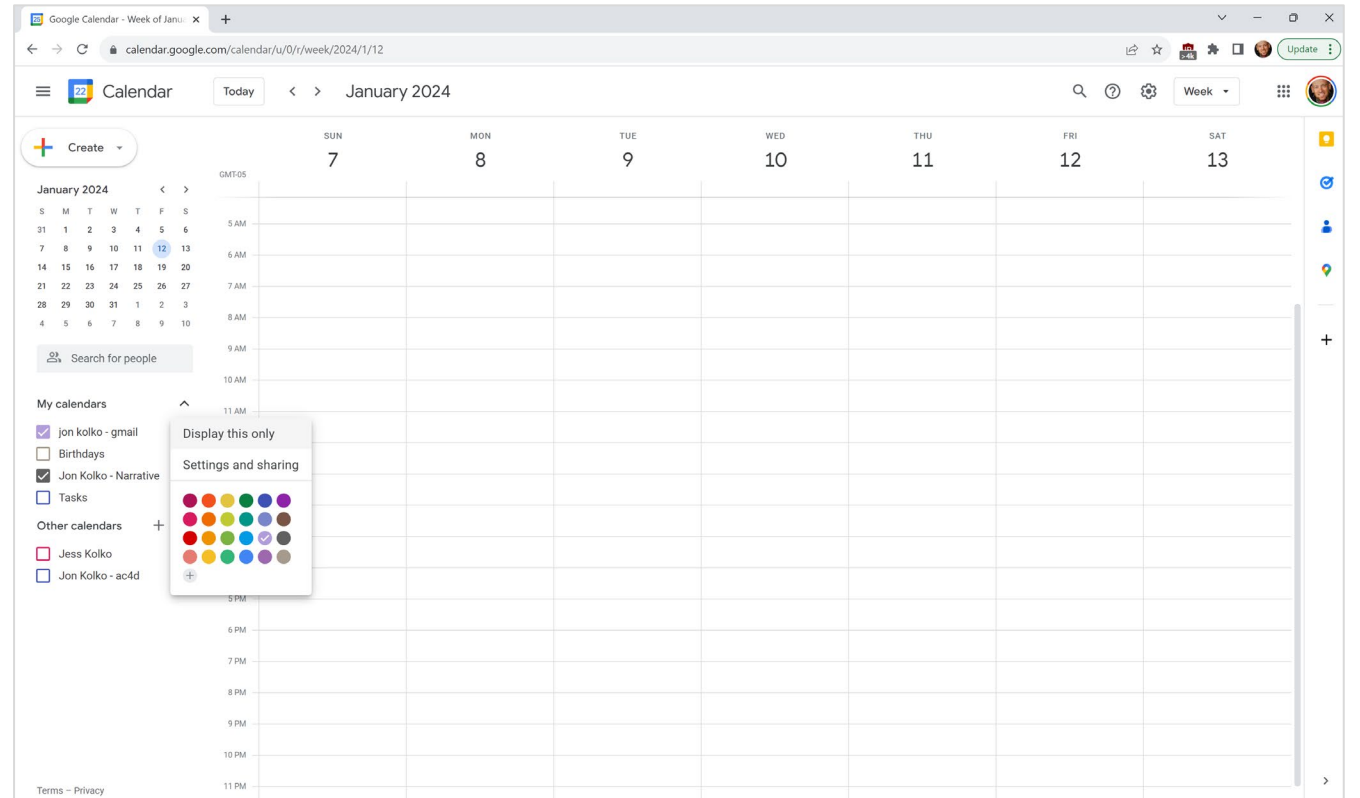
## Cognitive Walkthrough

# For example...

## I will click settings and sharing.

- ✓ Will the user make a decision to take an action that moves them closer to completing their goal?
- ✓ Will the user notice that the control necessary is available?
- ✓ Will the user associate the control with their decision?

After taking action, will the user see progress is being made?

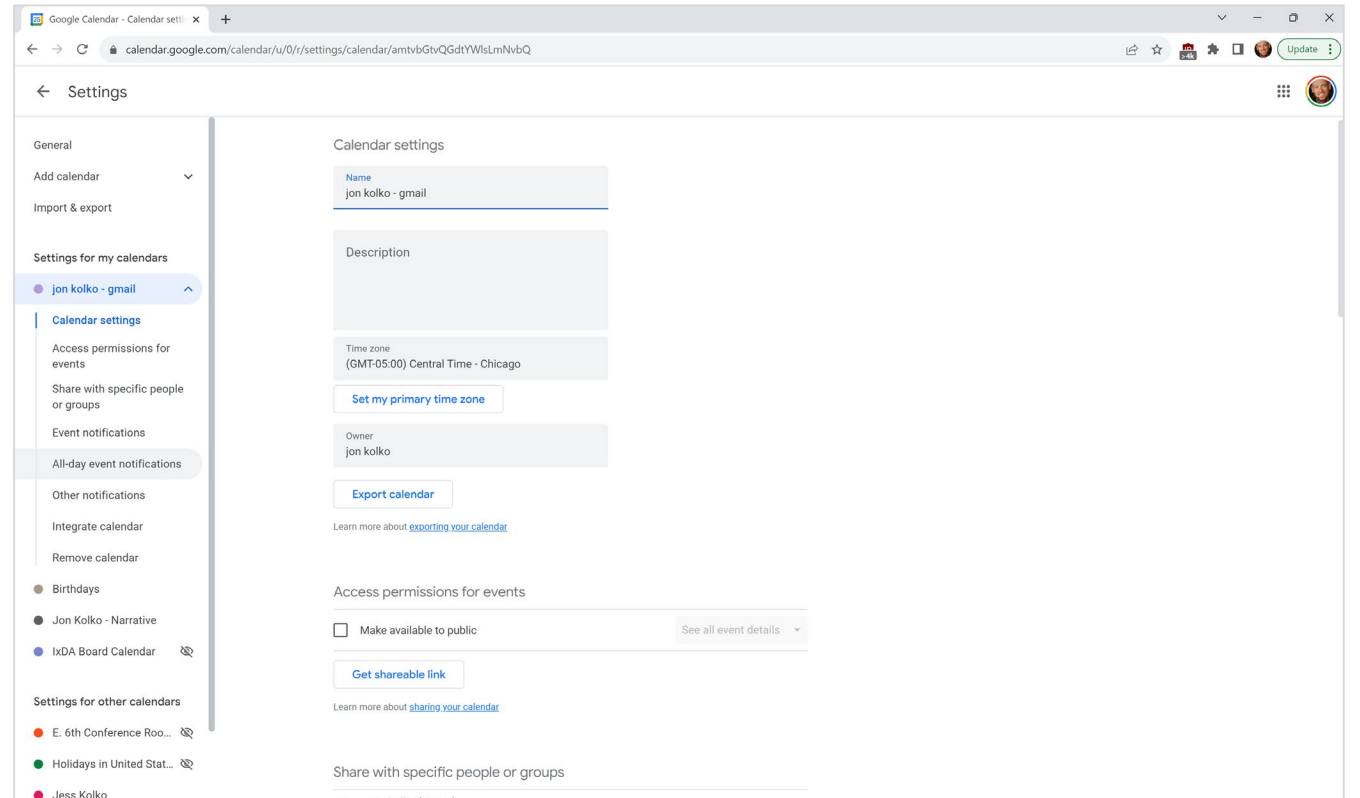


## Cognitive Walkthrough

# For example...

## I see a screen that looks sharing-ish.

- ✓ Will the user make a decision to take an action that moves them closer to completing their goal?
- ✓ Will the user notice that the control necessary is available?
- ✓ Will the user associate the control with their decision?
- ✓ After taking action, will the user see progress is being made?



## Cognitive Walkthrough

# For example...

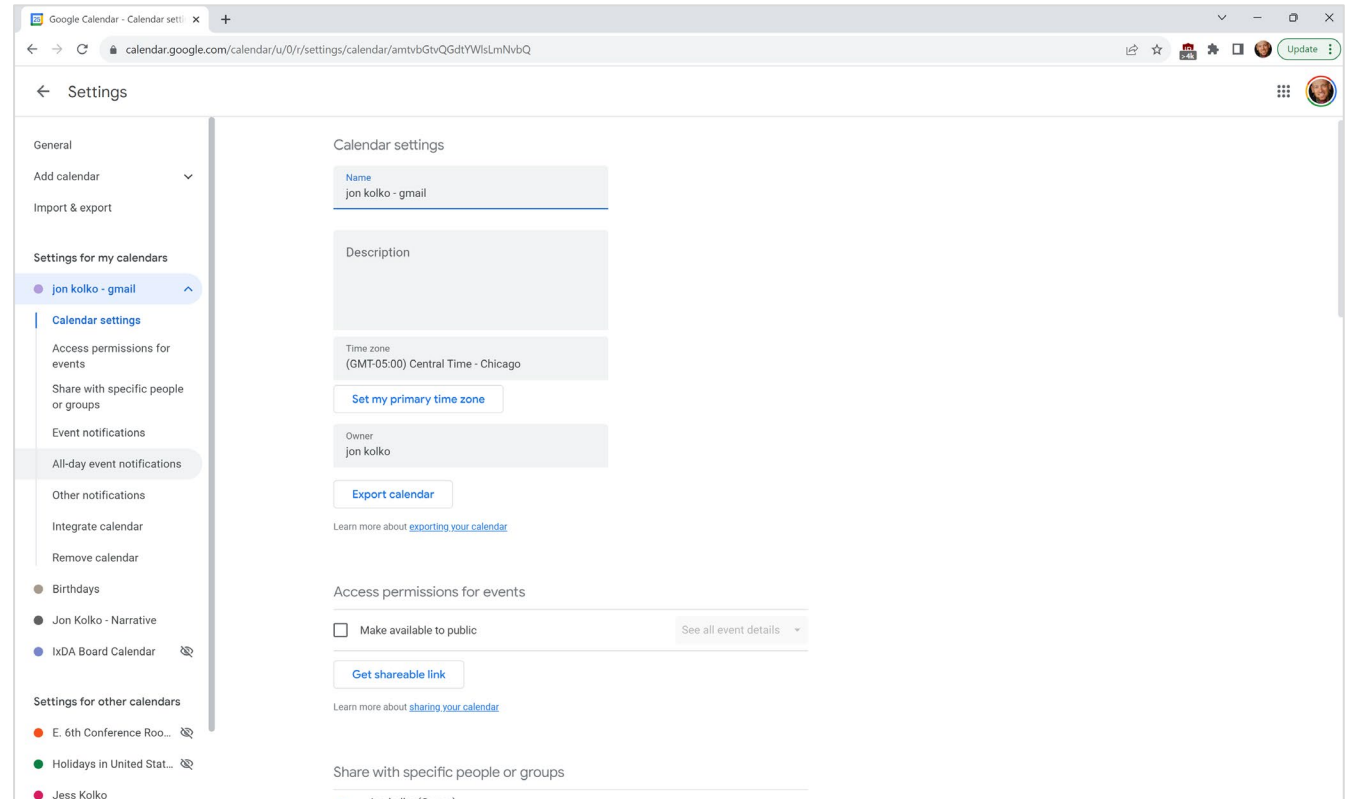
## My goal is to share my calendar with someone.

Will the user make a decision to take an action that moves them closer to completing their goal?

Will the user notice that the control necessary is available?

Will the user associate the control with their decision?

After taking action, will the user see progress is being made?



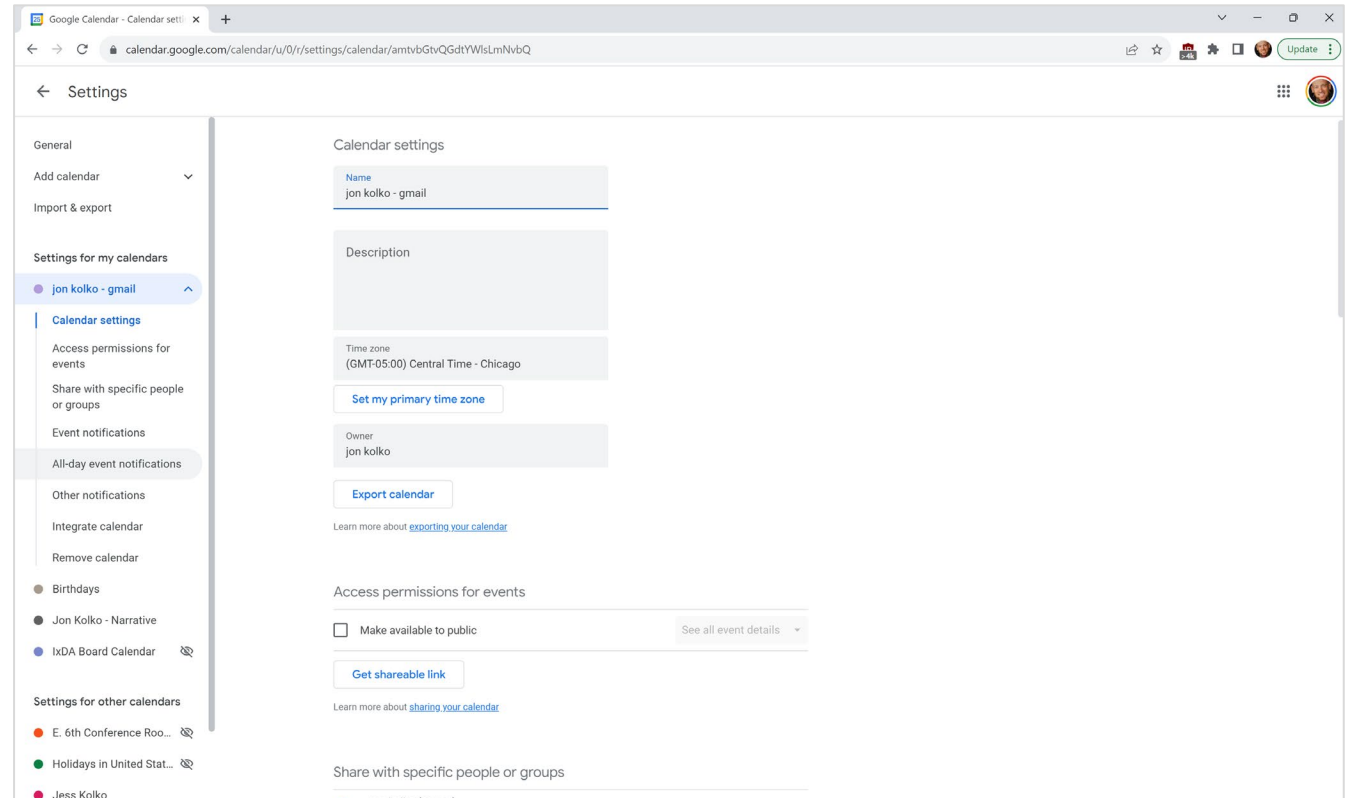
## Cognitive Walkthrough

# For example...

## I will click *Share with specific people*.

- ✓ Will the user make a decision to take an action that moves them closer to completing their goal?
- ✓ Will the user notice that the control necessary is available?
- ✓ Will the user associate the control with their decision?

After taking action, will the user see progress is being made?

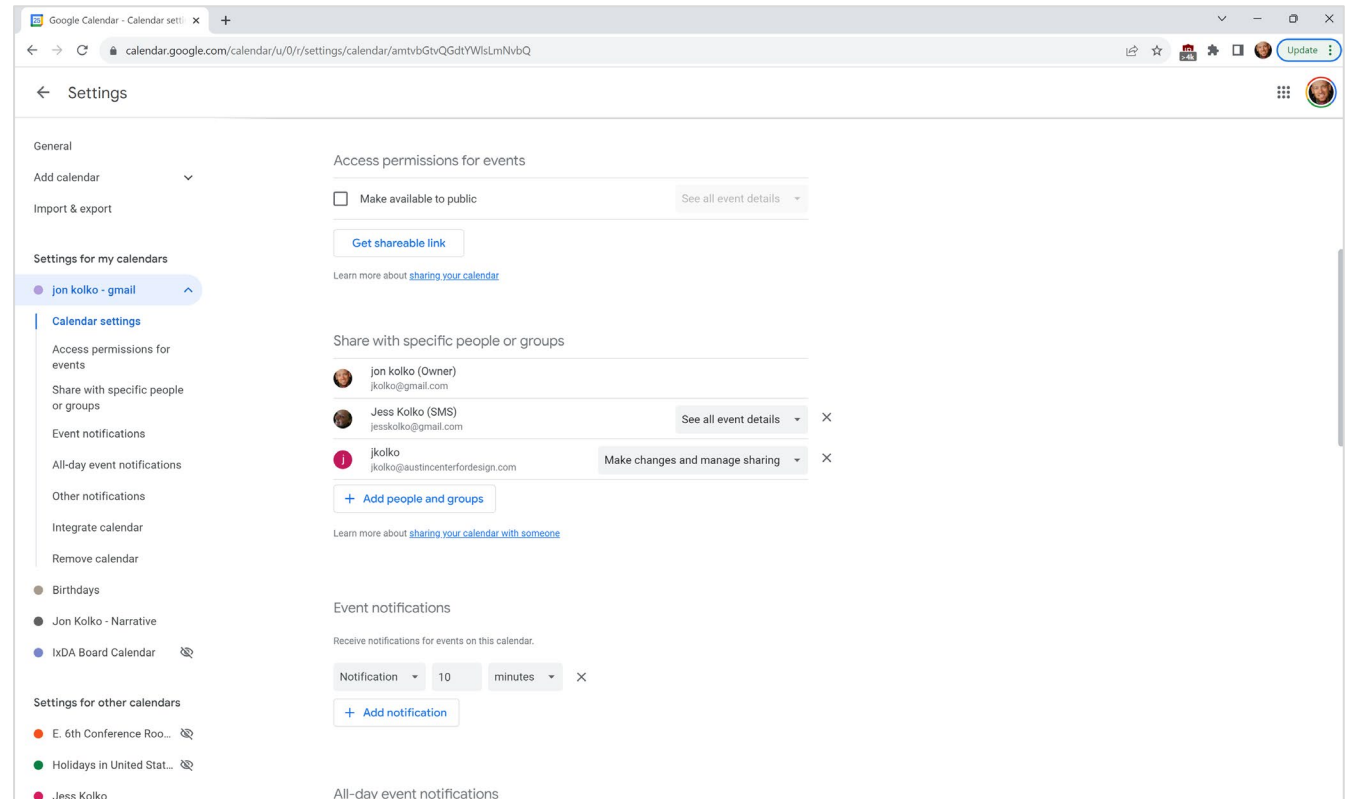


## Cognitive Walkthrough

# For example...

# I see a place to share with people.

- ✓ Will the user make a decision to take an action that moves them closer to completing their goal?
- ✓ Will the user notice that the control necessary is available?
- ✓ Will the user associate the control with their decision?
- ✓ After taking action, will the user see progress is being made?



## Cognitive Walkthrough

# For example...

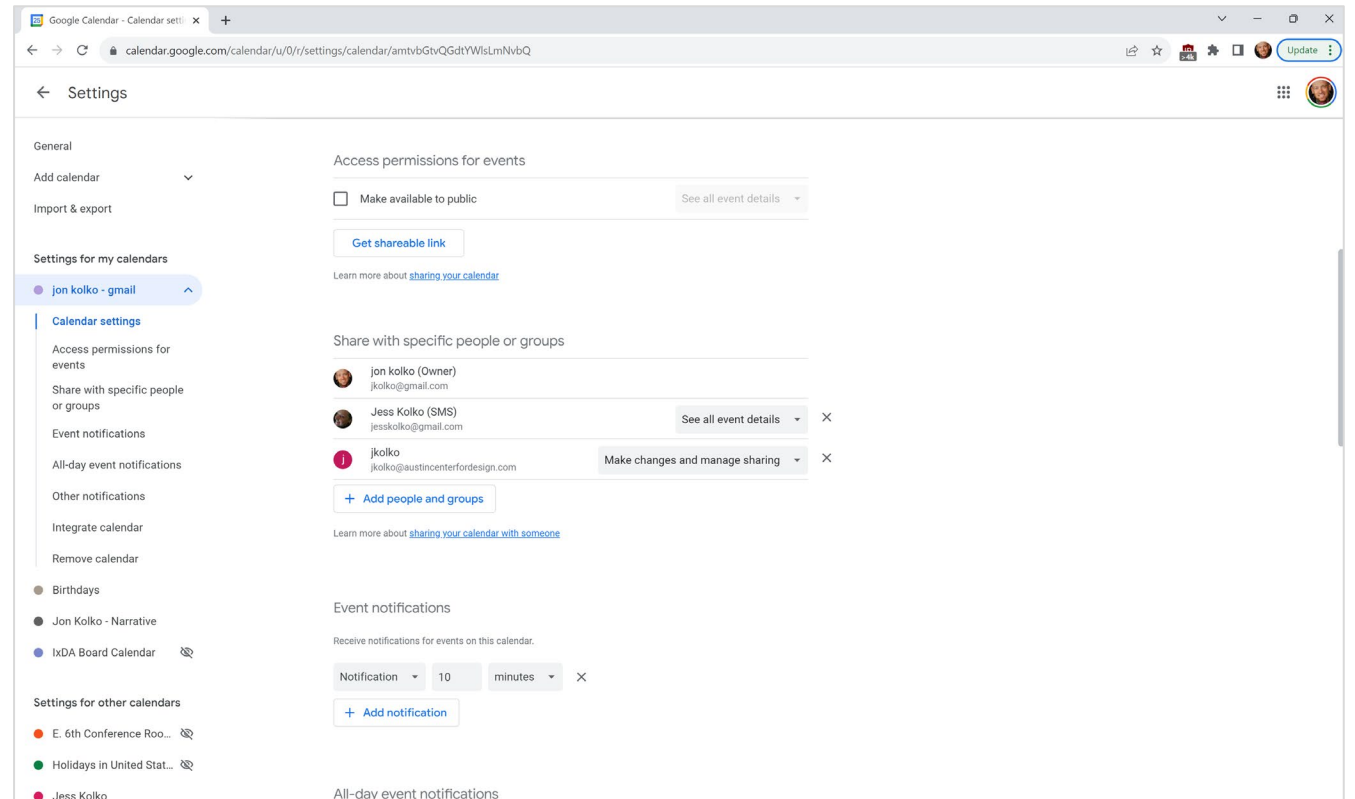
# My goal is to share my calendar with someone.

Will the user make a decision to take an action that moves them closer to completing their goal?

Will the user notice that the control necessary is available?

Will the user associate the control with their decision?

After taking action, will the user see progress is being made?



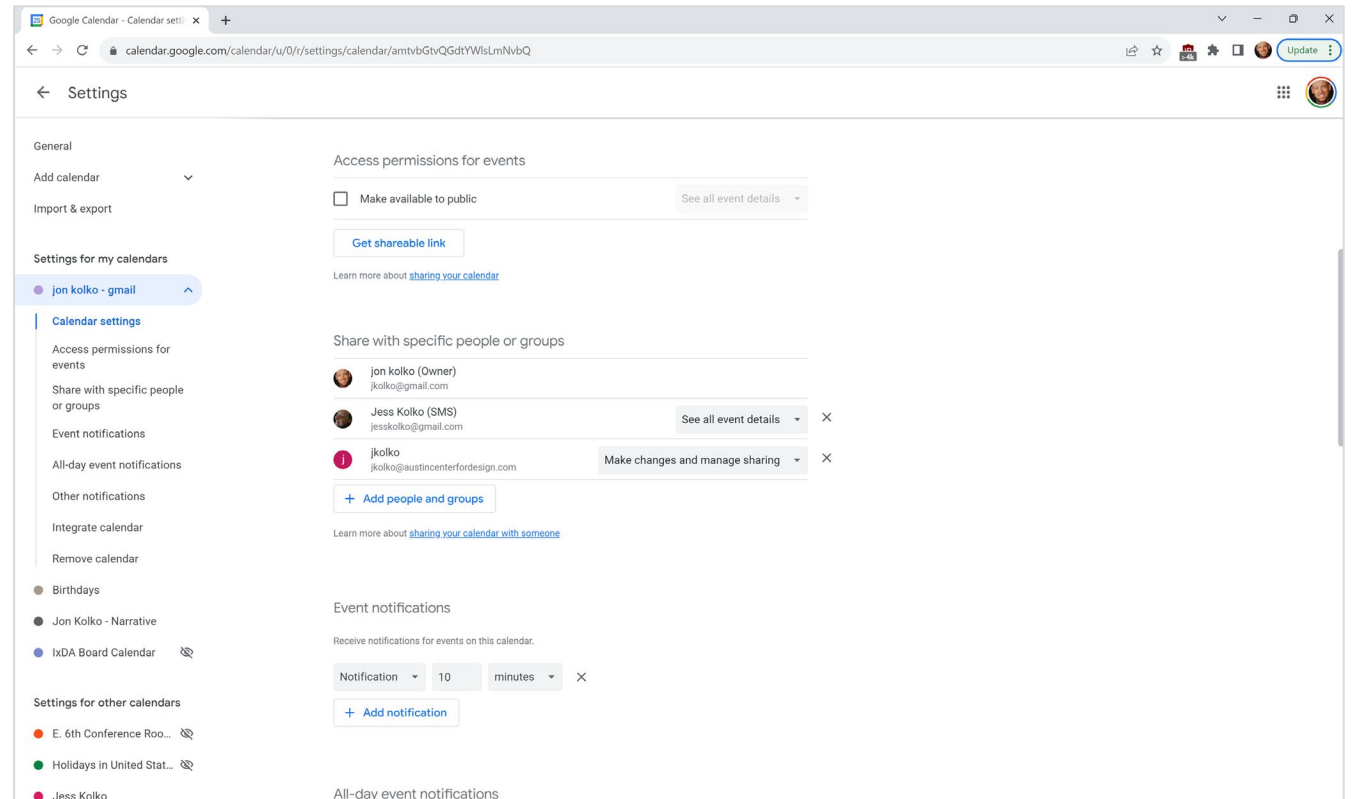
## Cognitive Walkthrough

# For example...

## I will click *Add people and groups*.

- ✓ Will the user make a decision to take an action that moves them closer to completing their goal?
- ✓ Will the user notice that the control necessary is available?
- ✓ Will the user associate the control with their decision?

After taking action, will the user see progress is being made?

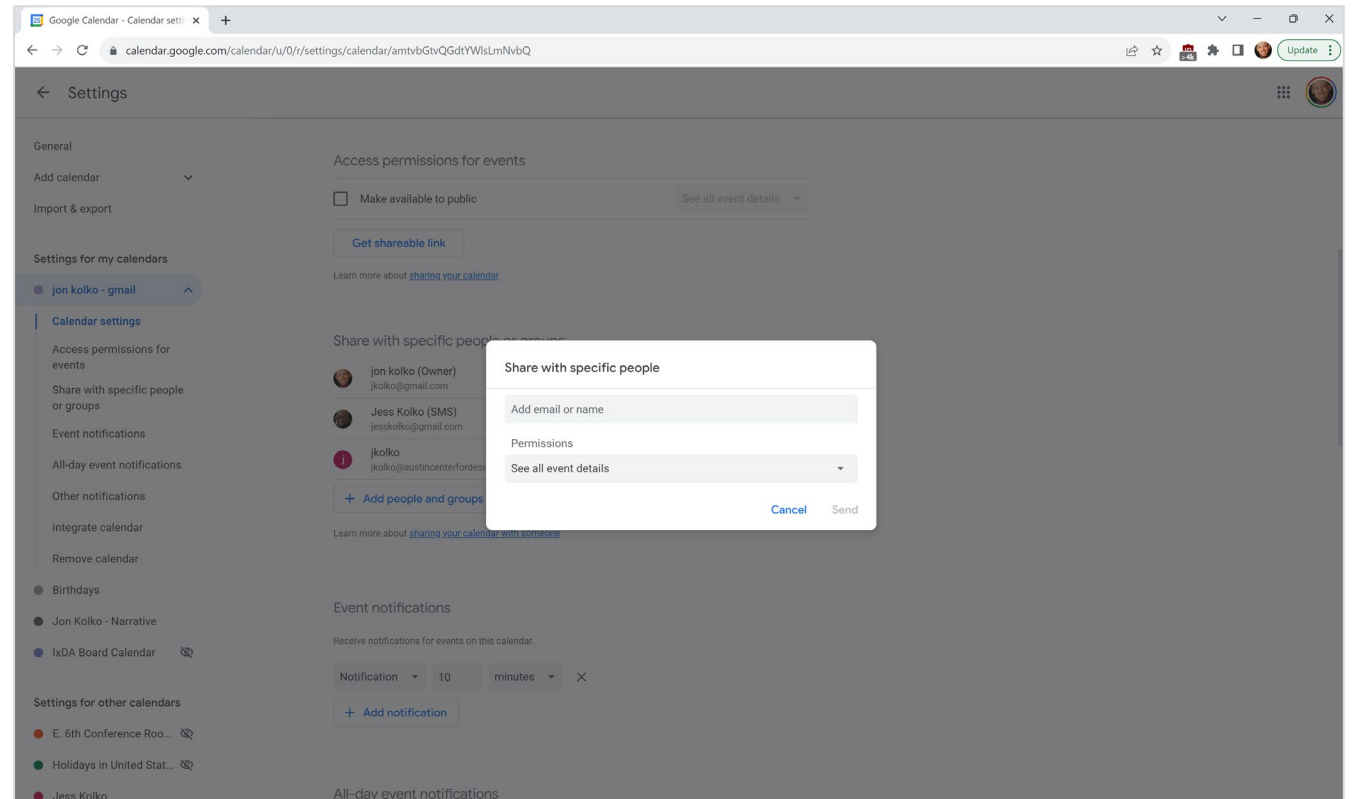


## Cognitive Walkthrough

# For example...

# I see a place to select the person.

- ✓ Will the user make a decision to take an action that moves them closer to completing their goal?
- ✓ Will the user notice that the control necessary is available?
- ✓ Will the user associate the control with their decision?
- ✓ After taking action, will the user see progress is being made?





## Cognitive Walkthrough

# For example...

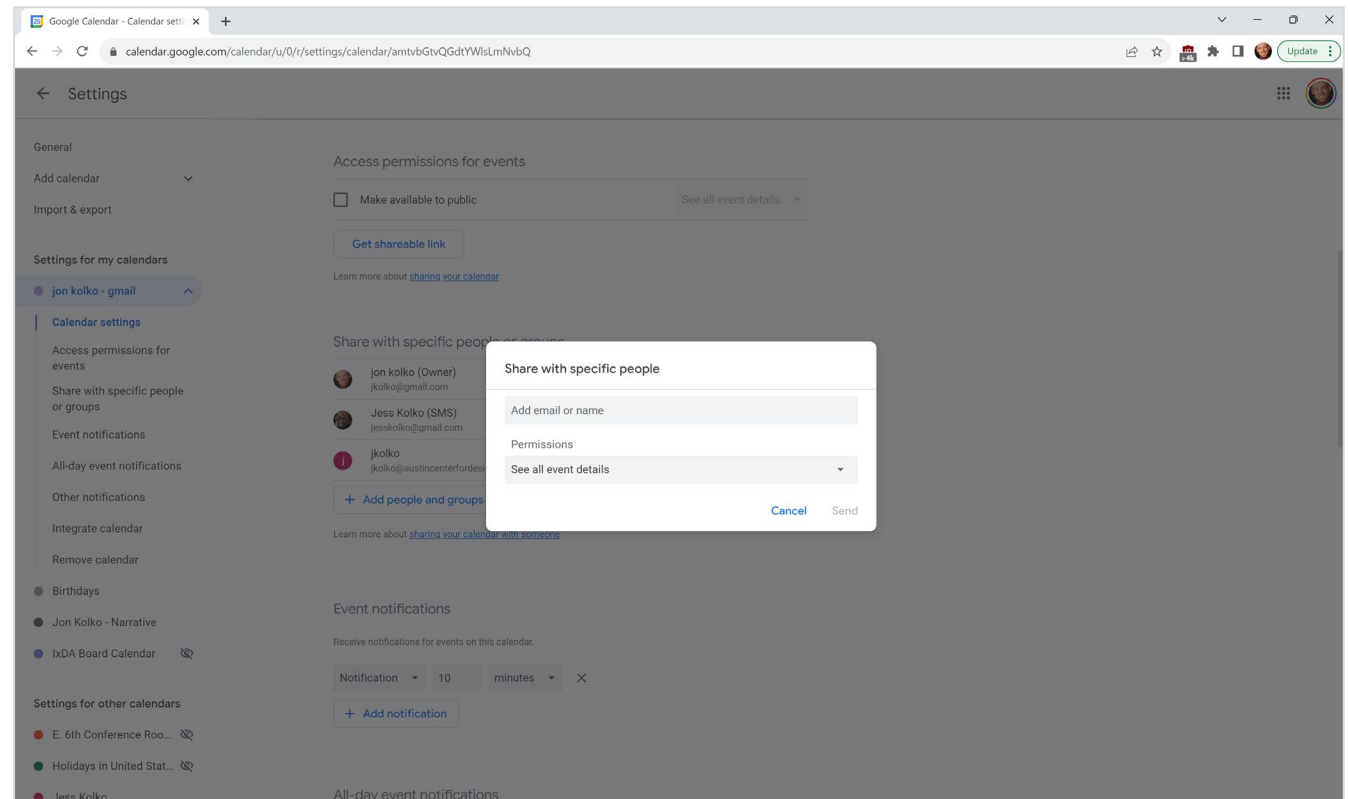
## My goal is to share my calendar with someone.

Will the user make a decision to take an action that moves them closer to completing their goal?

Will the user notice that the control necessary is available?

Will the user associate the control with their decision?

After taking action, will the user see progress is being made?



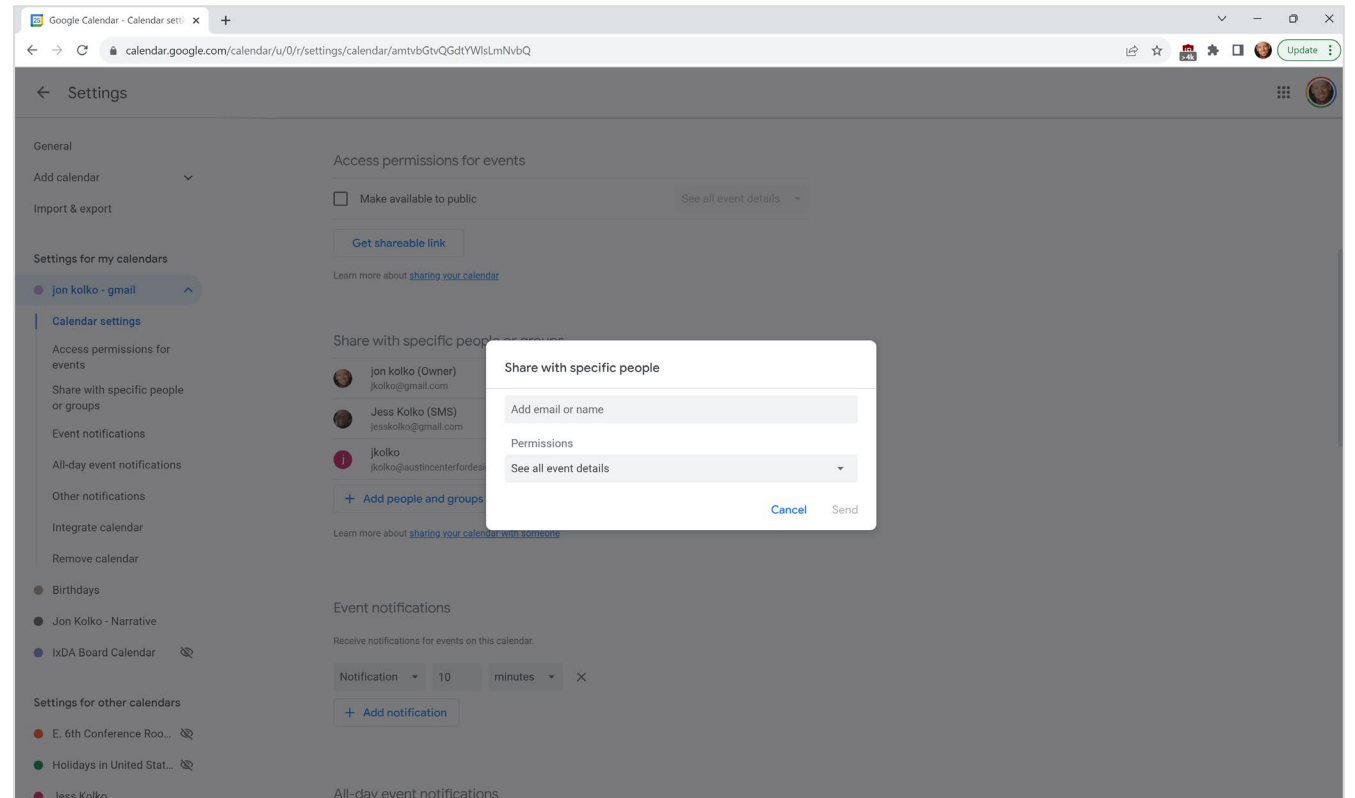
## Cognitive Walkthrough

# For example...

# I will enter the person's name.

- ✓ Will the user make a decision to take an action that moves them closer to completing their goal?
- ✓ Will the user notice that the control necessary is available?
- ✓ Will the user associate the control with their decision?

After taking action, will the user see progress is being made?

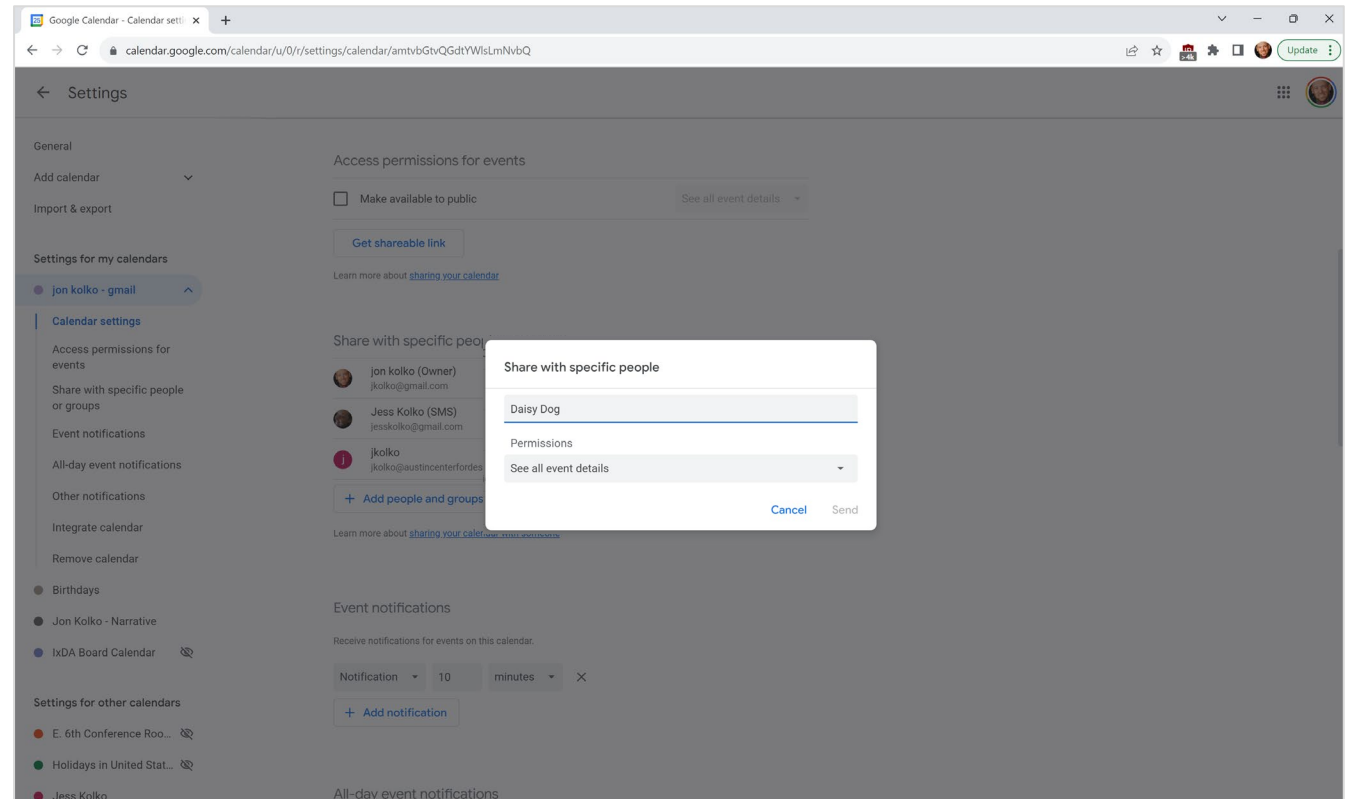


## Cognitive Walkthrough

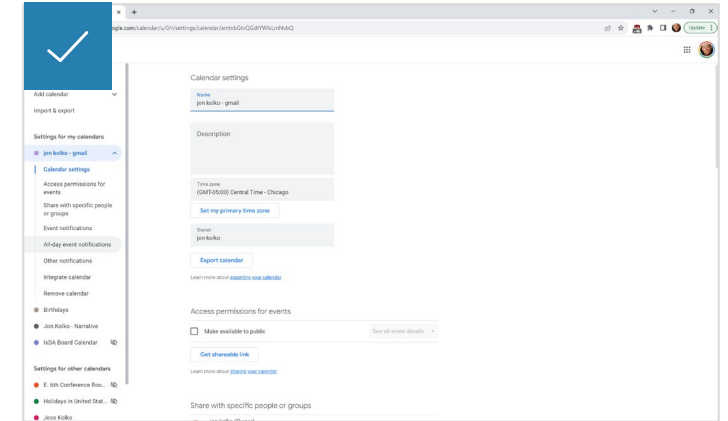
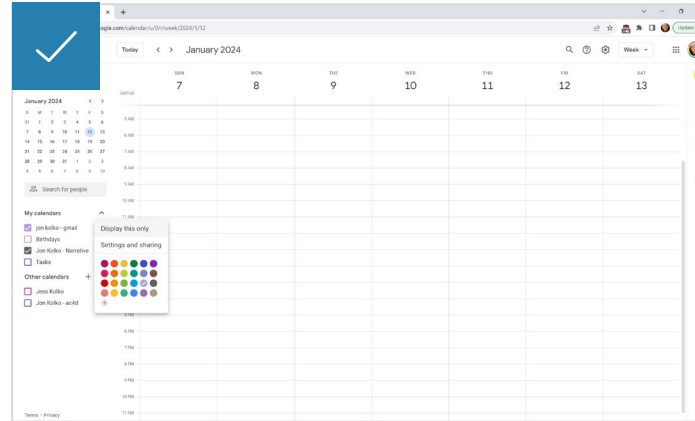
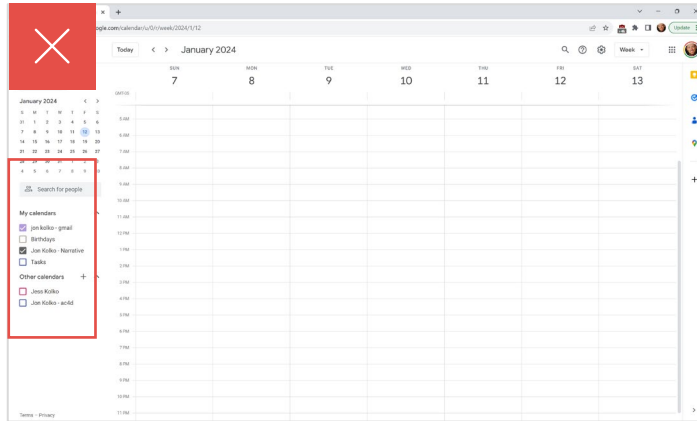
# For example...

## The Send button is not clickable.

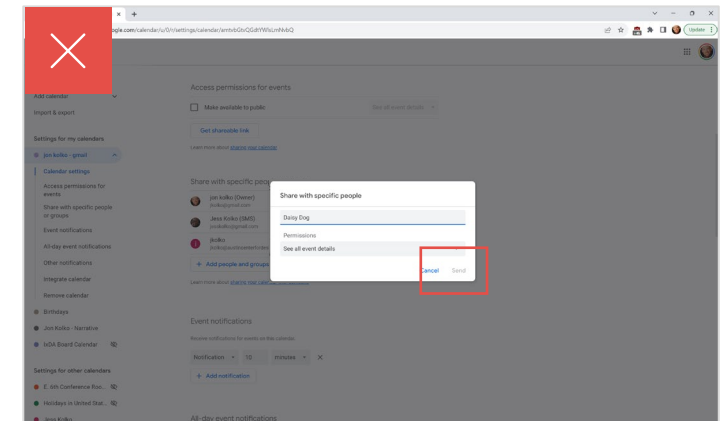
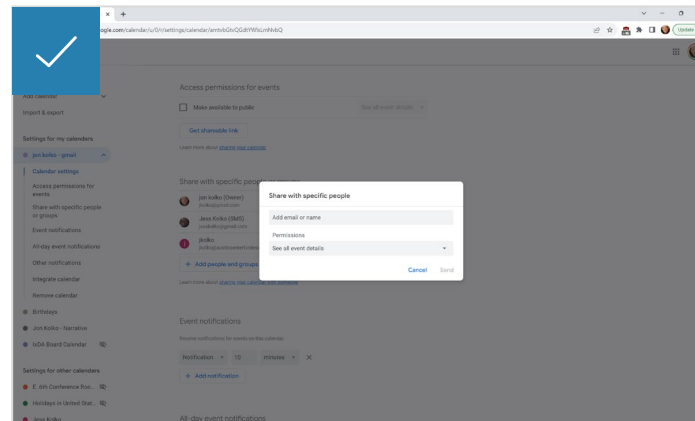
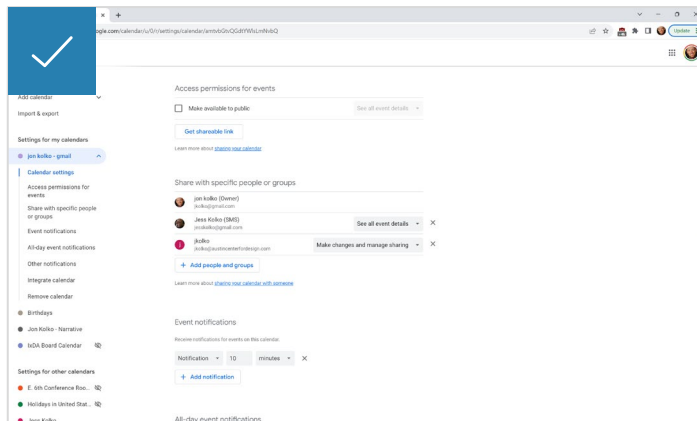
- ✓ Will the user make a decision to take an action that moves them closer to completing their goal?
- ✓ Will the user notice that the control necessary is available?
- ✓ Will the user associate the control with their decision?
- ✗ After taking action, will the user see progress is being made?



### Cognitive Walkthrough



Control is hidden and only shows up on hover



Button is disabled without instructions

## Cognitive Walkthrough

# This method is useful because it forces us to think like a novice.

When confronted with a unique, new situation, people leverage a problem solving theory based on exploration and progressive behavior refinement.

1. We make a decision to take an action that will move us closer to completing our final goal
2. We determine what controls are available that we can use to take the action
3. We select the best choice (the control we think is most likely to work) and take action
4. We see what happens, determine if we're closer to our final goal, and do it all again.

# Thank you!

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