

Prototyping: Fake It Till You Make It

Session 223

Jeffrey Traer Bernstein, Linda Dong, Julian Missig, Mark Hauenstein
Designers/Prototypers

Who Is This Session For?

Who Is This Session For?

Developers at companies

Who Is This Session For?

Developers at companies

Solo developers

Who Is This Session For?

Developers at companies

Solo developers

People who don't code

Who Is This Session For?

Developers at companies

Solo developers

People who don't code

Designers

Who Is This Session For?

Developers at companies

Solo developers

People who don't code

Designers

Management

The Plan

The Plan

Design and prototype an app

The Plan

Design and prototype an app

Go through the steps we go through in trying something out

The Plan

Design and prototype an app

Go through the steps we go through in trying something out

Show you a variety of prototyping methods

The Plan

Design and prototype an app

Go through the steps we go through in trying something out

Show you a variety of prototyping methods

Focus on prototyping an experience, not trying out an API or testing feasibility

Who Are We?

Who Are We?

We work across all of Apple's products

Who Are We?

We work across all of Apple's products

We explore what new interfaces mean to our devices, OS, and apps

Who Are We?

We work across all of Apple's products

We explore what new interfaces mean to our devices, OS, and apps

We do this by making interactive prototypes

Introducing

Available Now

None of this is real.

It's a prototype.

Why?

Idea

Idea → App

Idea → App → \$\$\$

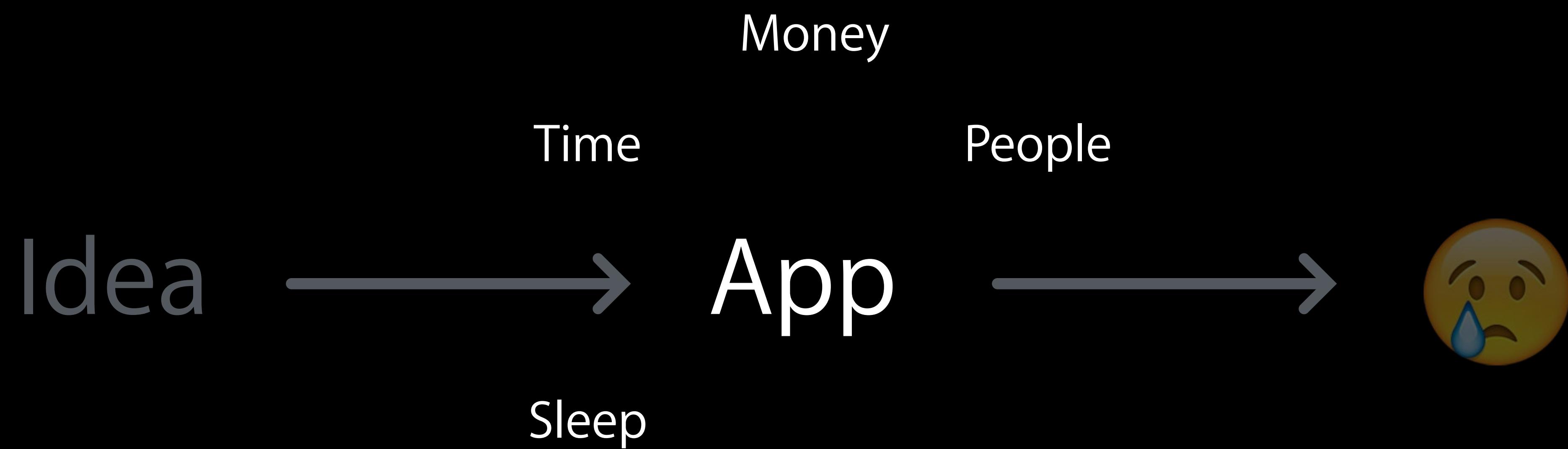


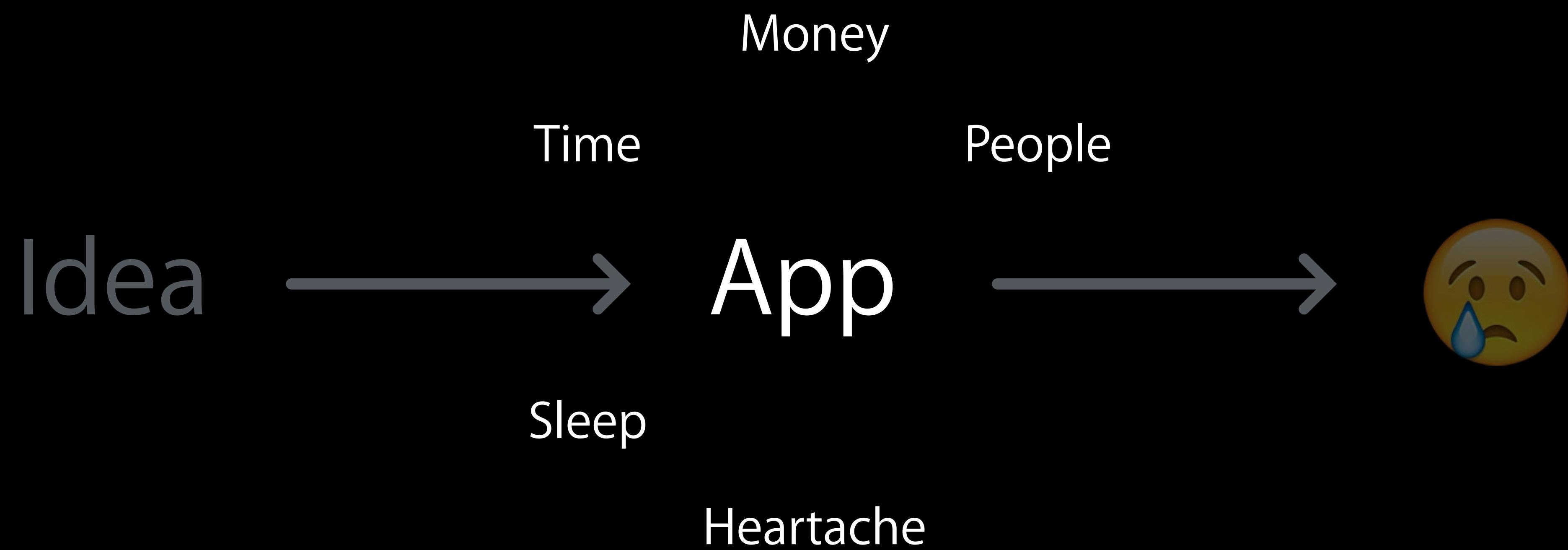
Idea → App → 😢

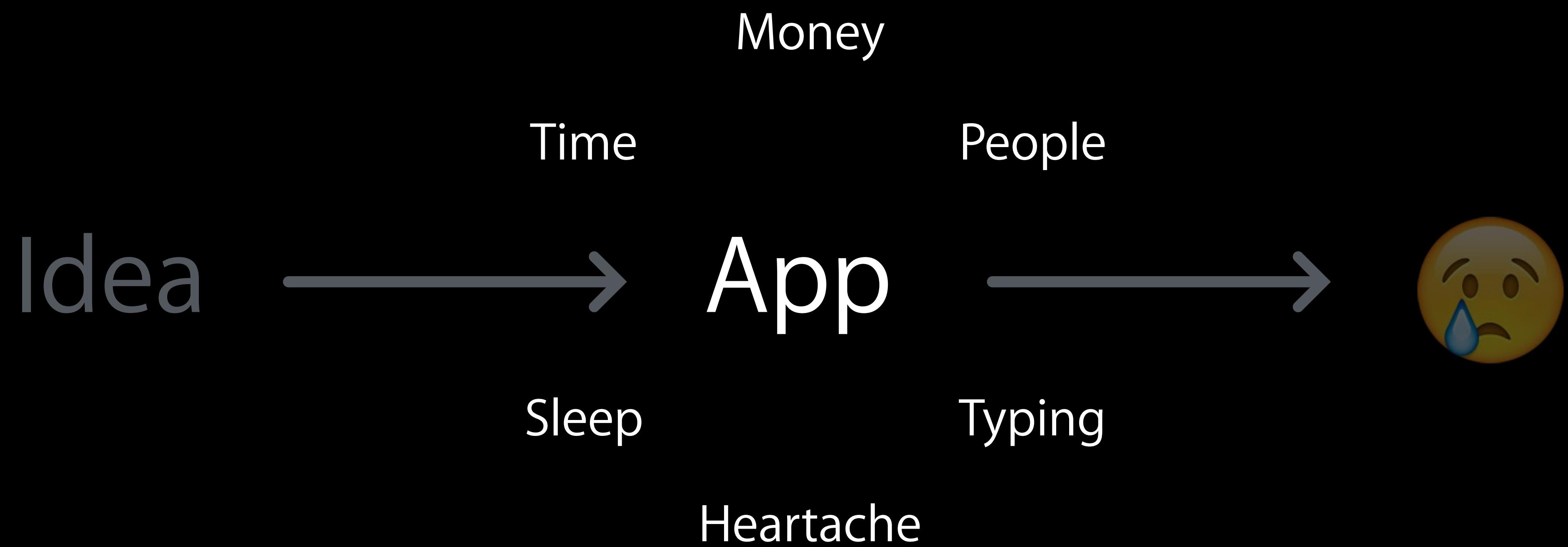












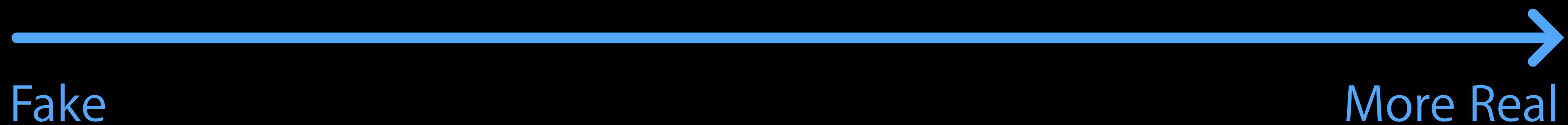
Idea → App

Idea → Prototype → App

Idea → Prototype → Prototype → App

Idea → Prototype → Prototype → Prototype → App

Idea → Prototype → Prototype → Prototype → App



Two Reasons to Prototype

Two Reasons to Prototype

Test ideas

Save time and money building the right things

Two Reasons to Prototype

Test ideas

Save time and money building the right things

Get new ideas

Make the experience of your product better

How?

How?

Make fake apps

How?

Make fake apps

Show people

How?

Make fake apps

Show people

Learn from their feedback

How?

How?

Make fake apps

How?

Make fake apps

Show people

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How?

Make fake apps

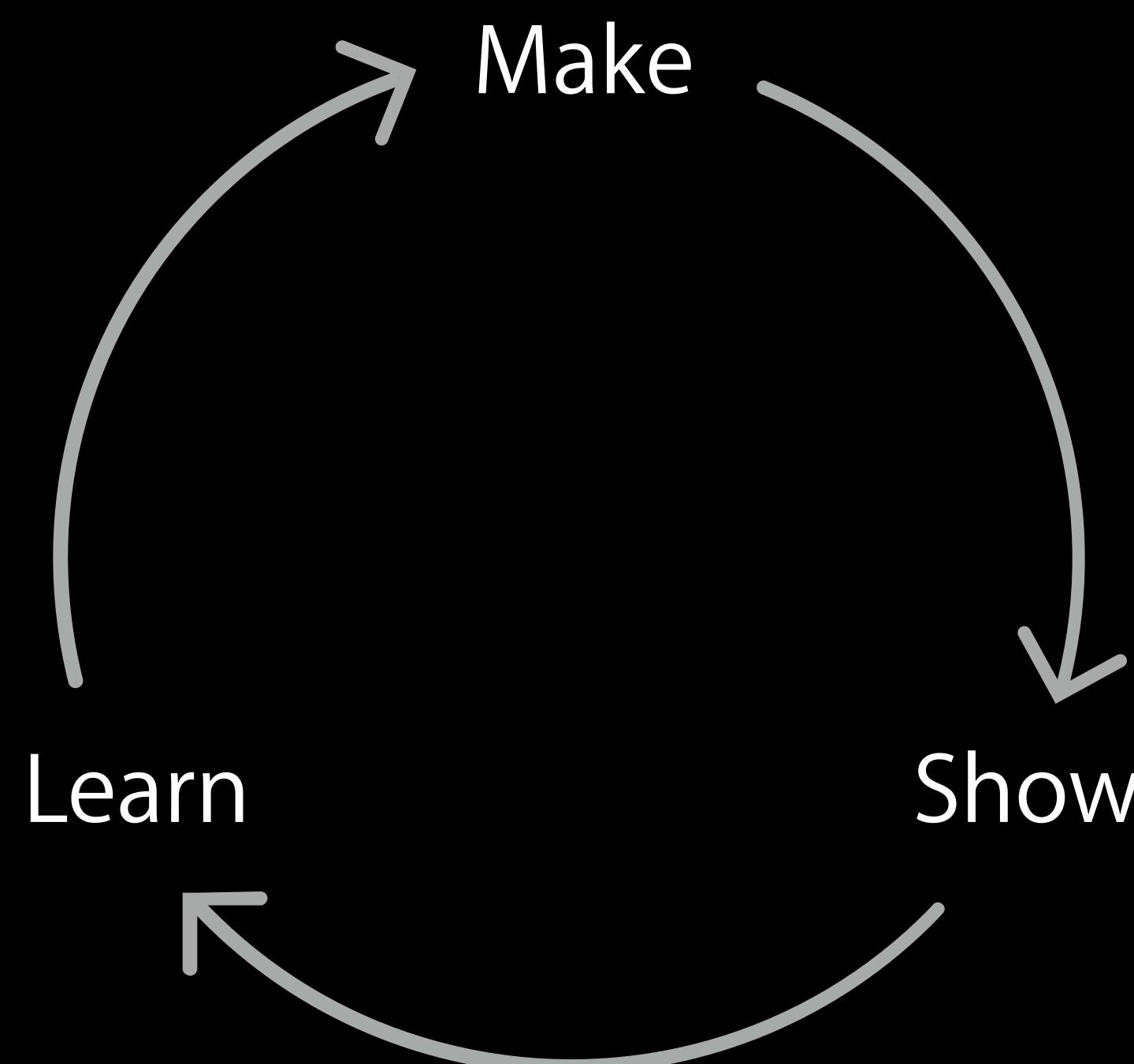
Show people

Learn from their feedback

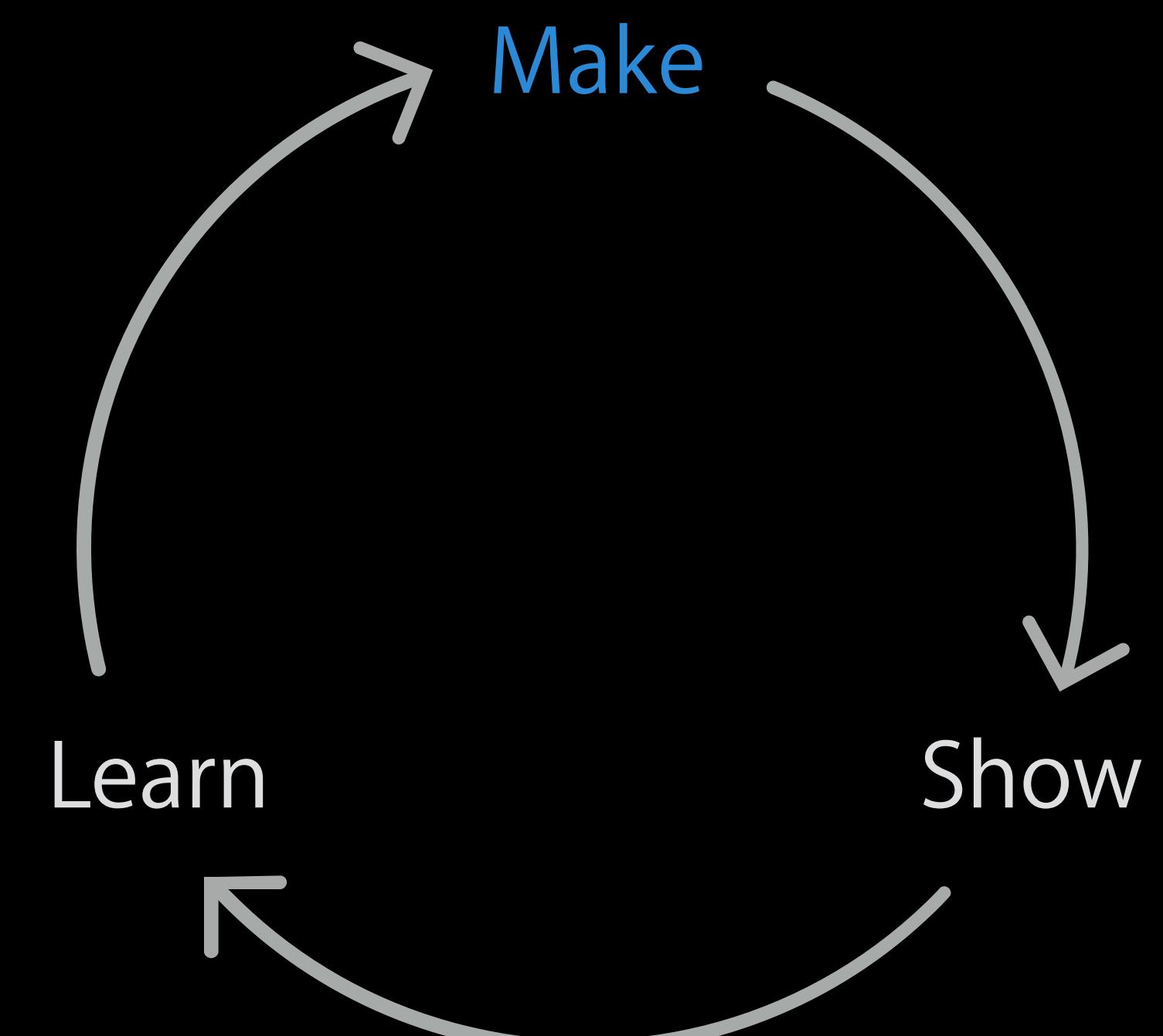
Make

Learn

Show

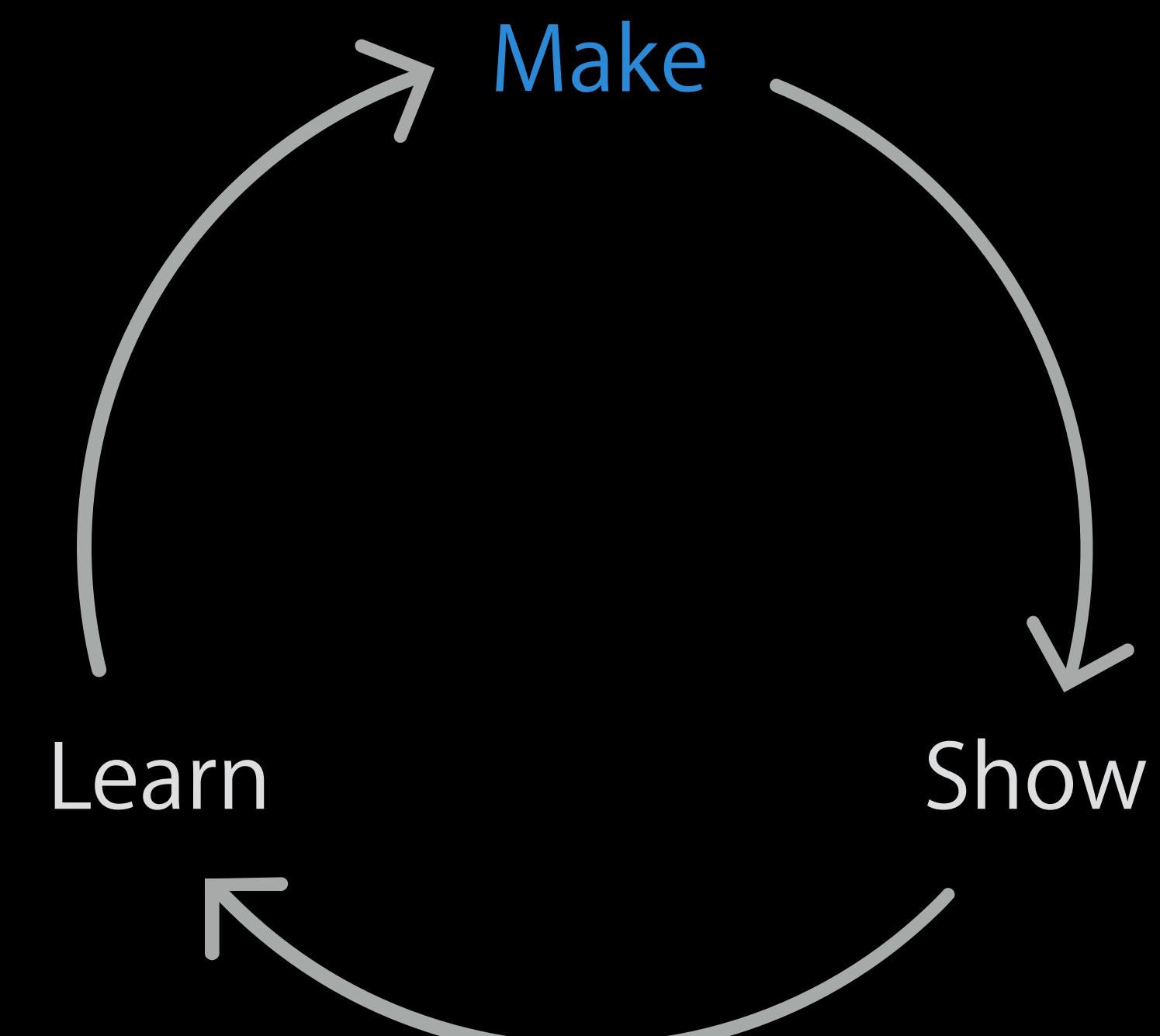


Make Fake Apps



Make Fake Apps

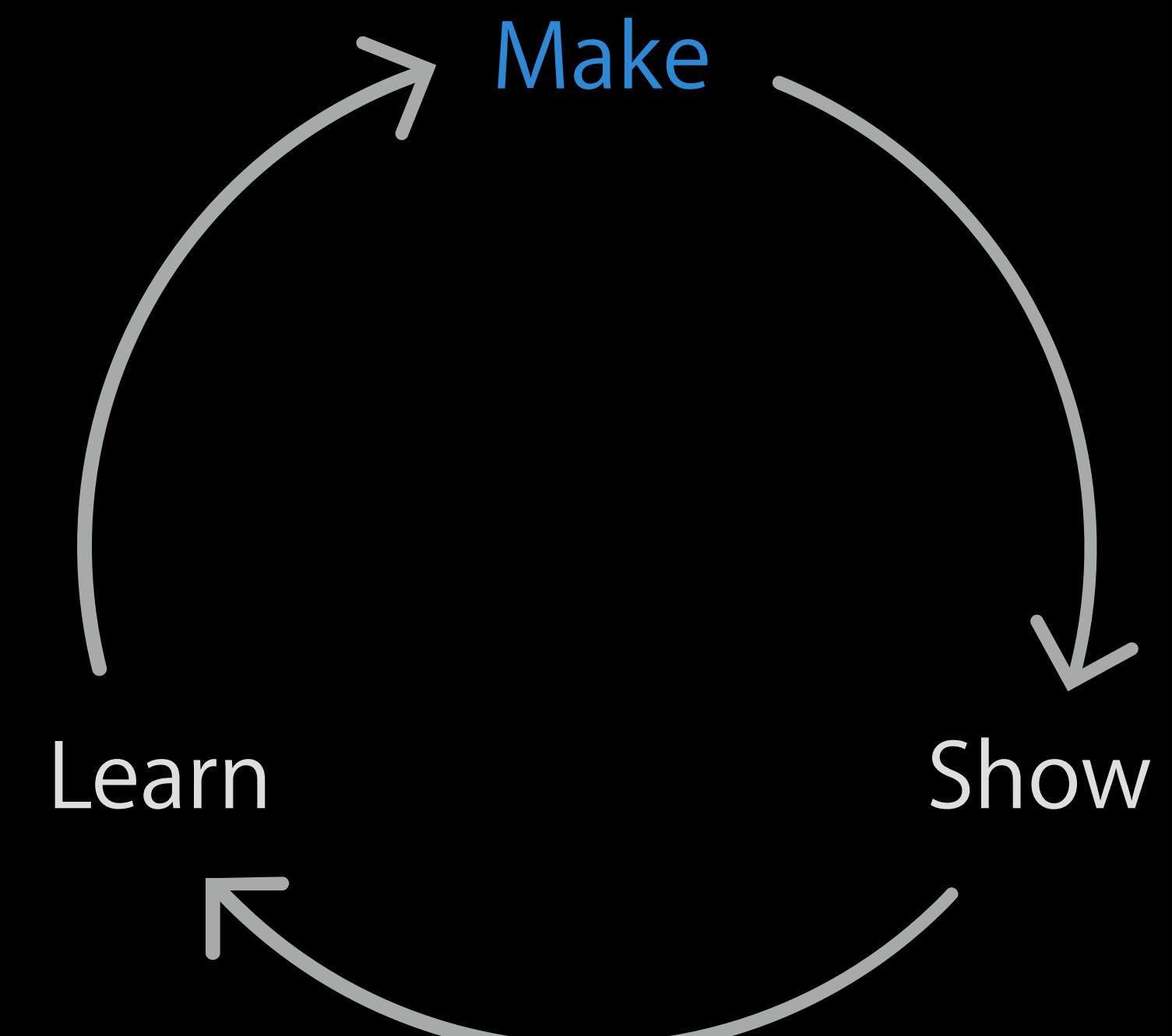
Three Questions



Make Fake Apps

Three Questions

What needs to be more real?

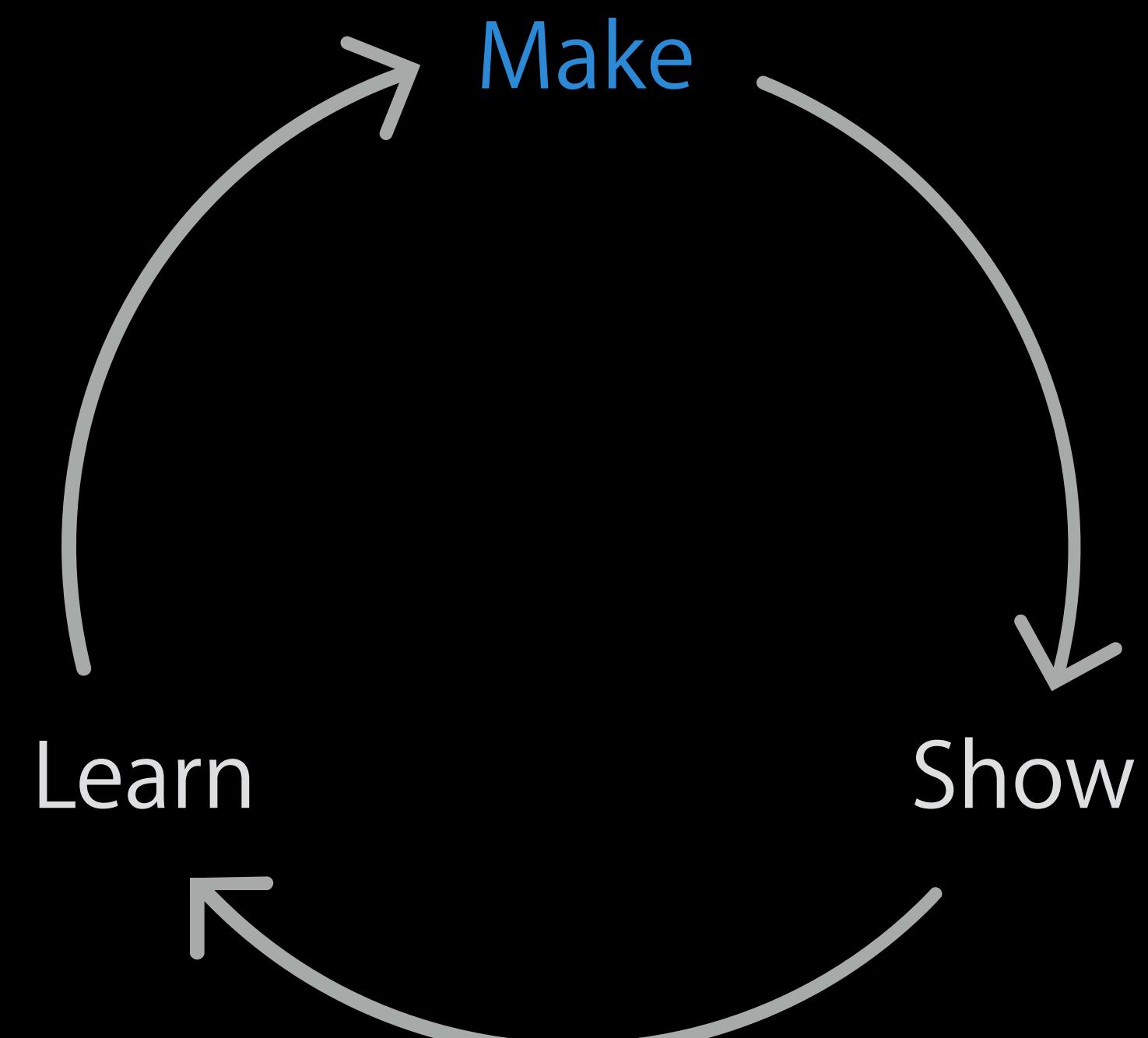


Make Fake Apps

Three Questions

What needs to be more real?

What can we fake?



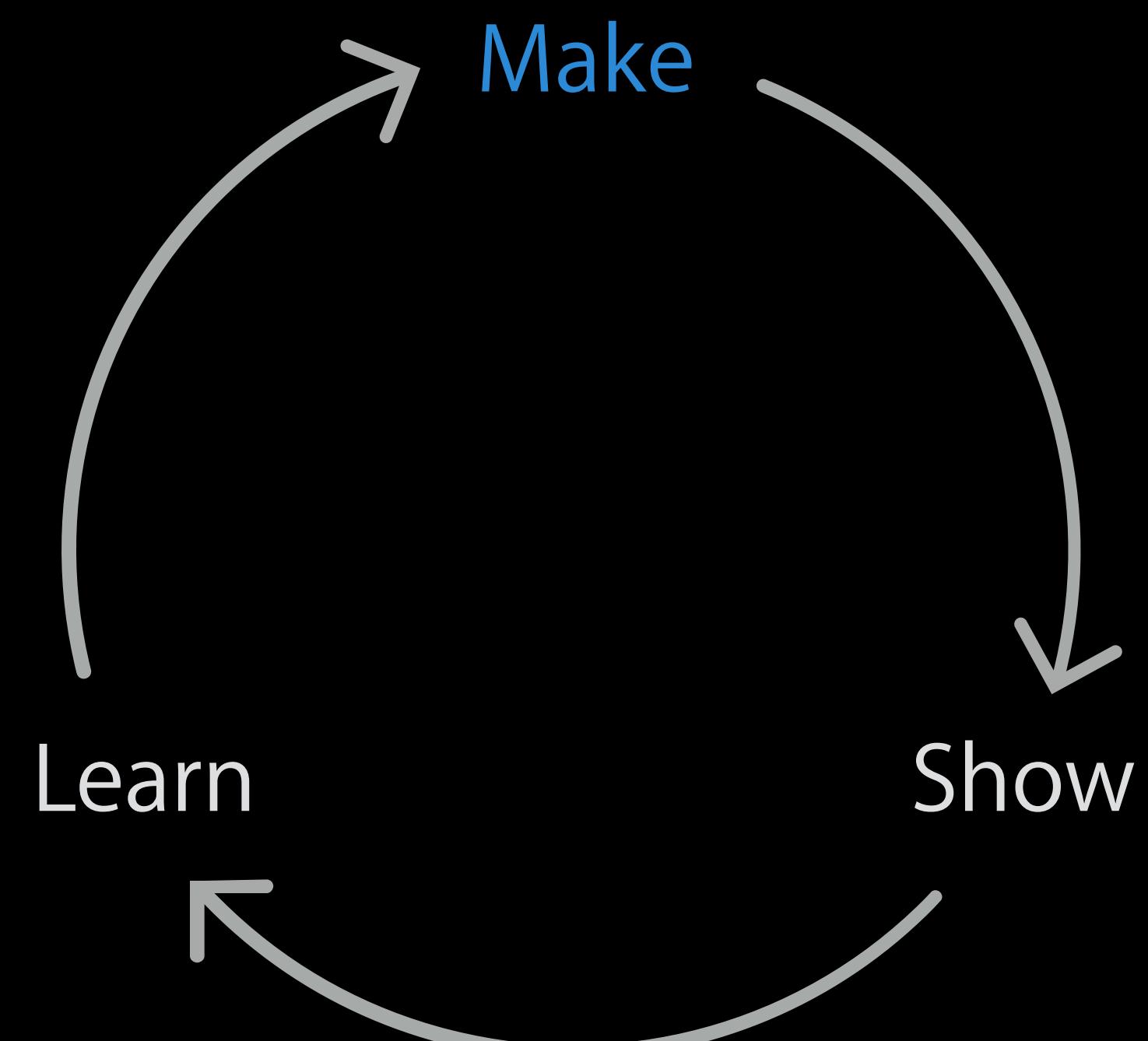
Make Fake Apps

Three Questions

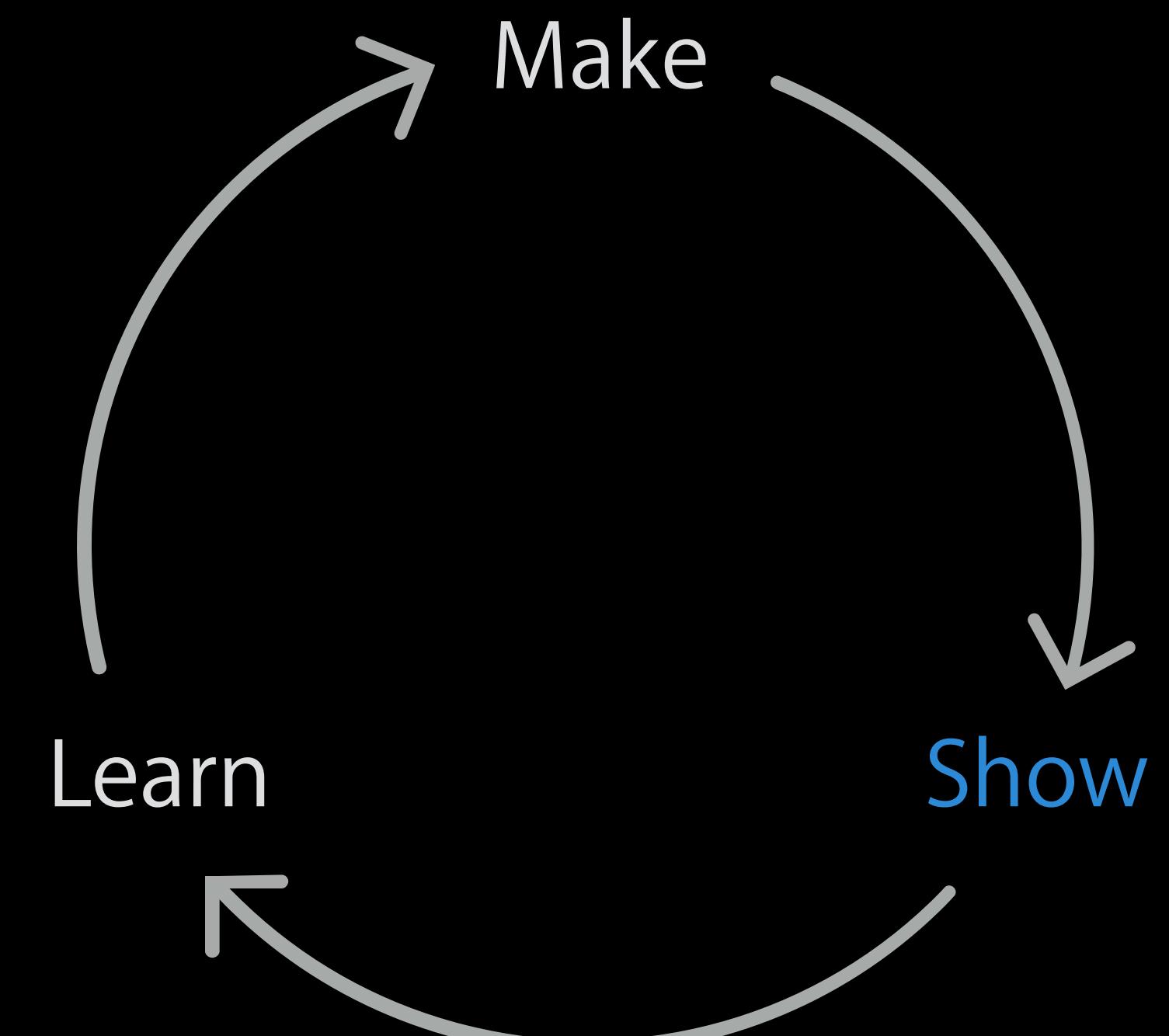
What needs to be more real?

What can we fake?

Where will they use it?

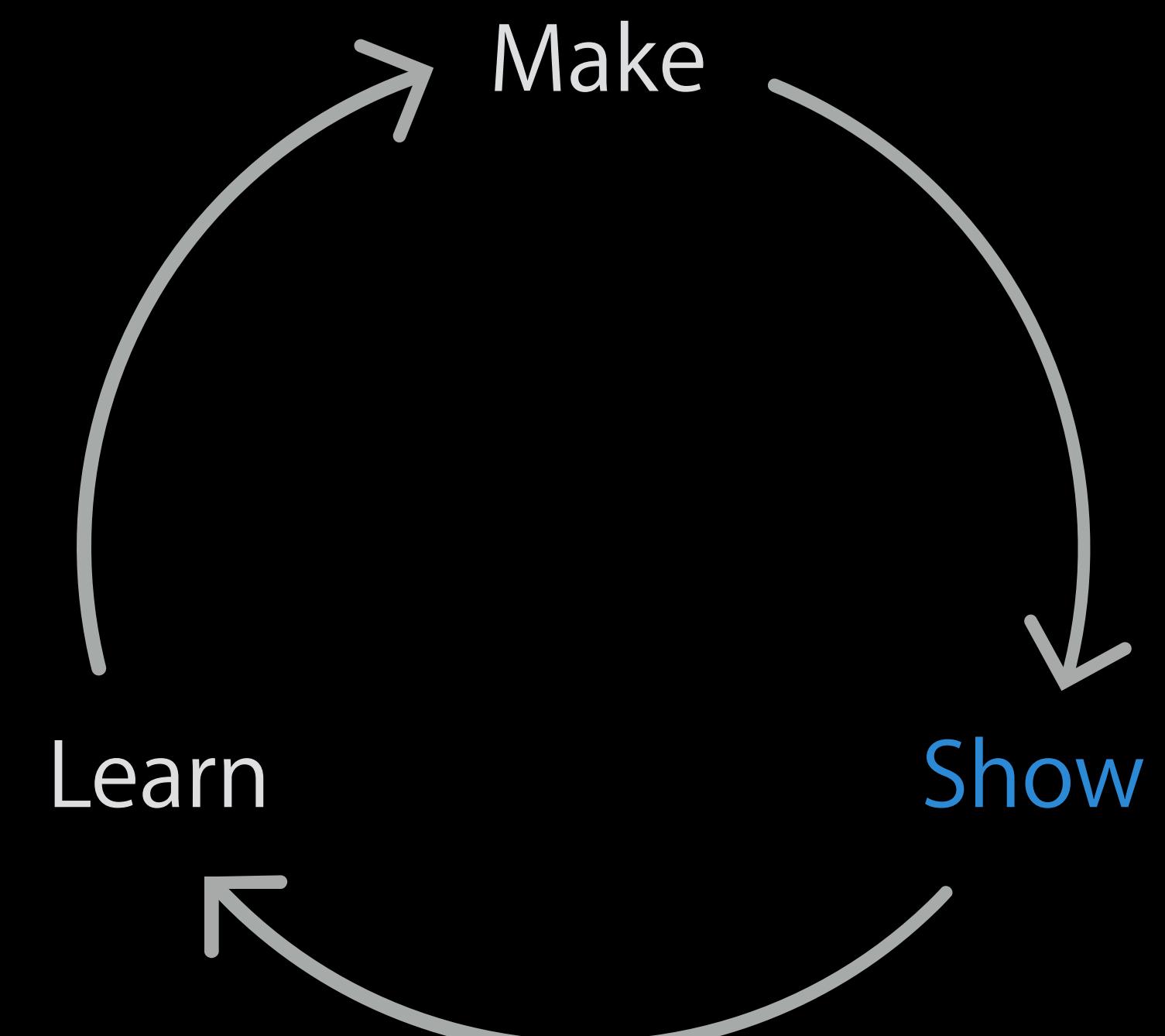


Show People



Show People

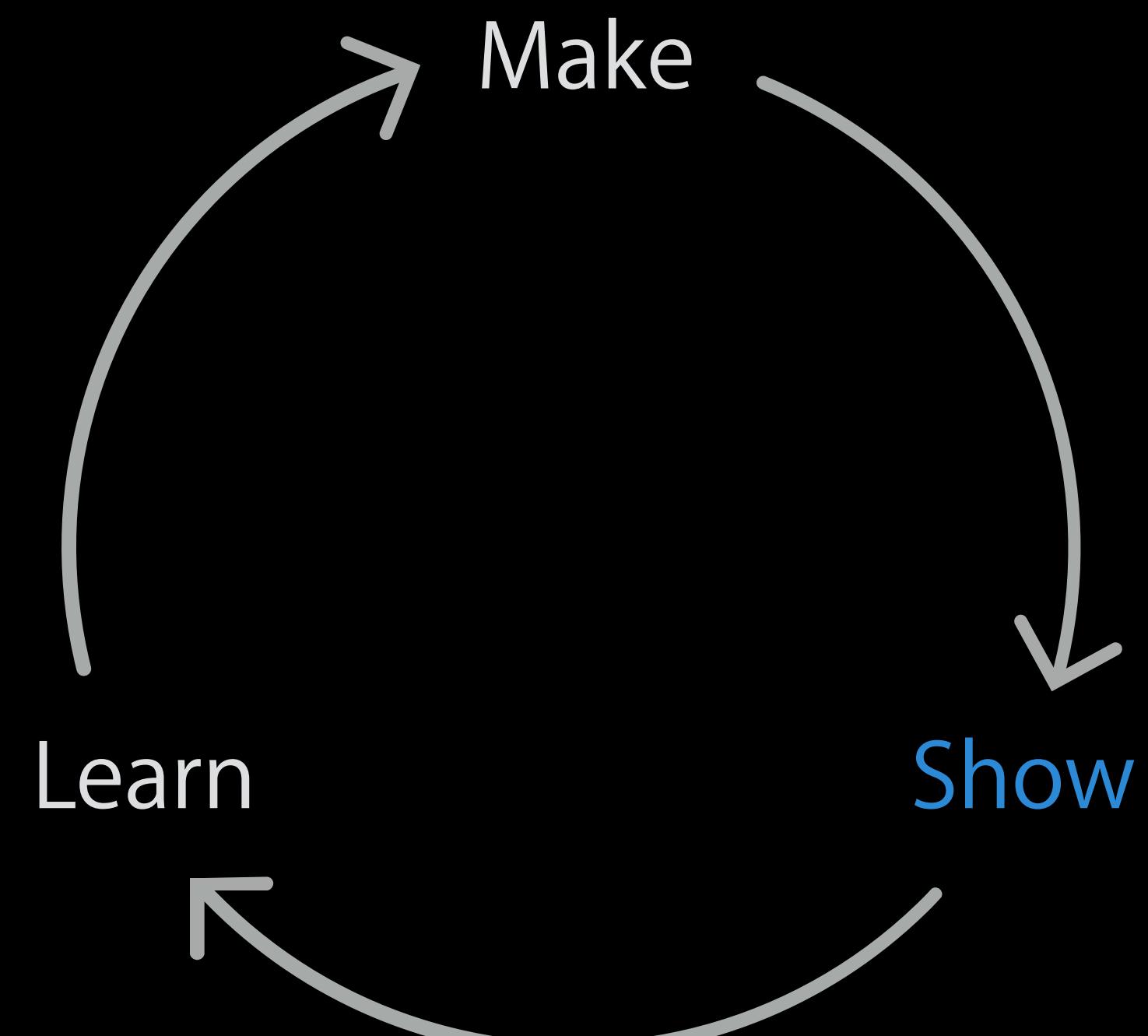
Three Questions



Show People

Three Questions

Do you know how to _____?

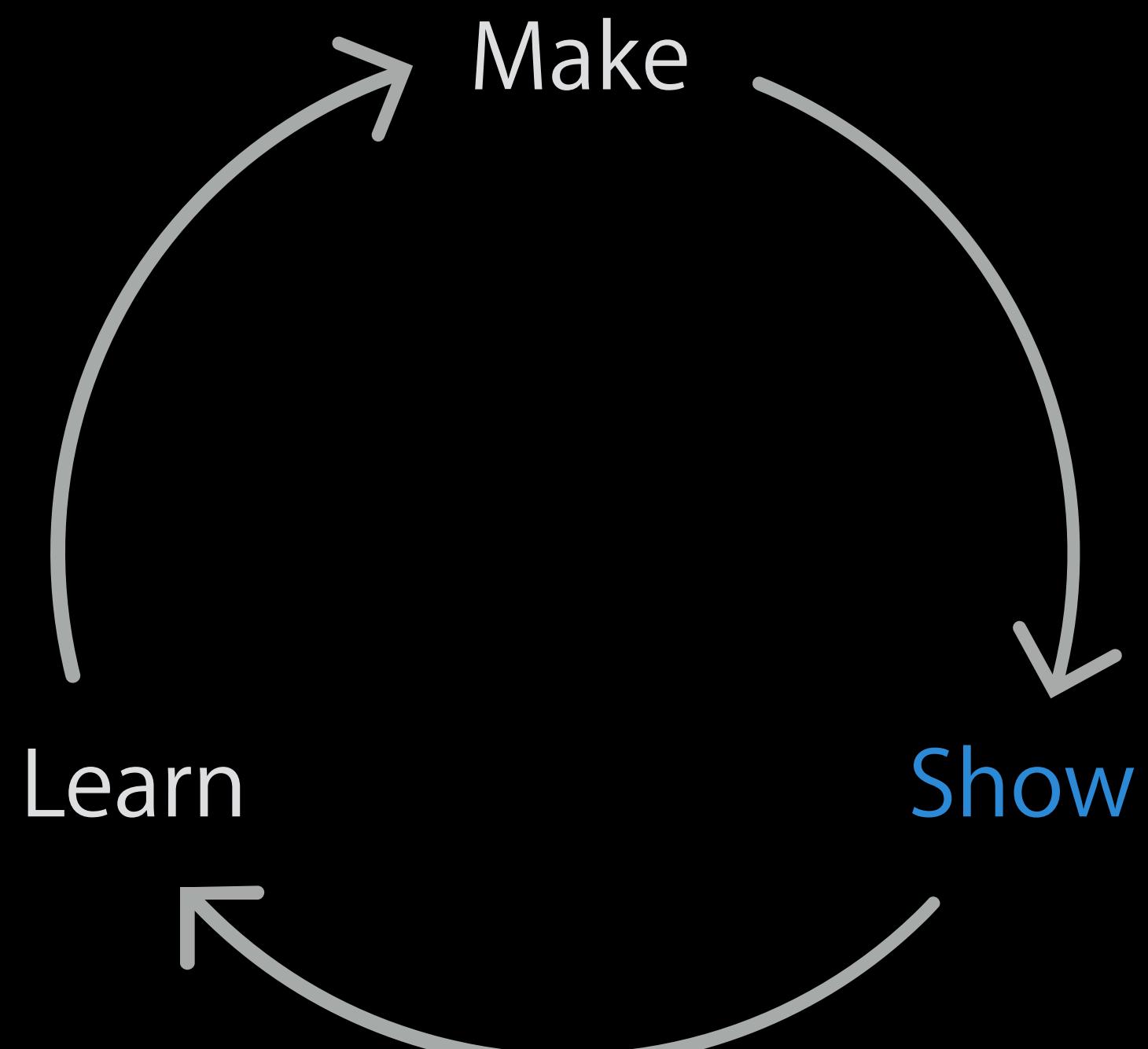


Show People

Three Questions

Do you know how to _____?

Is it easy to _____?



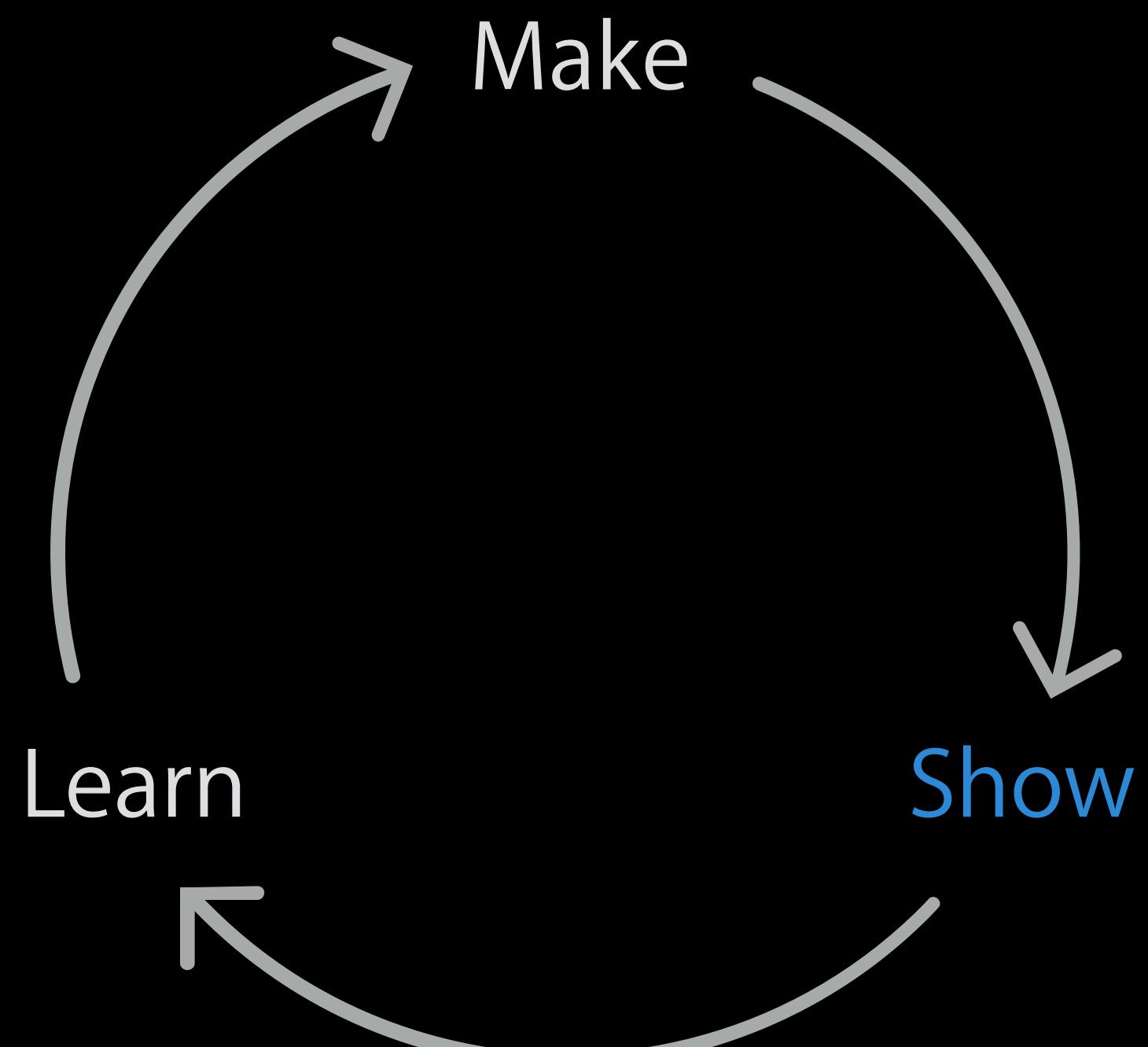
Show People

Three Questions

Do you know how to _____?

Is it easy to _____?

How can we make this better?



Show People

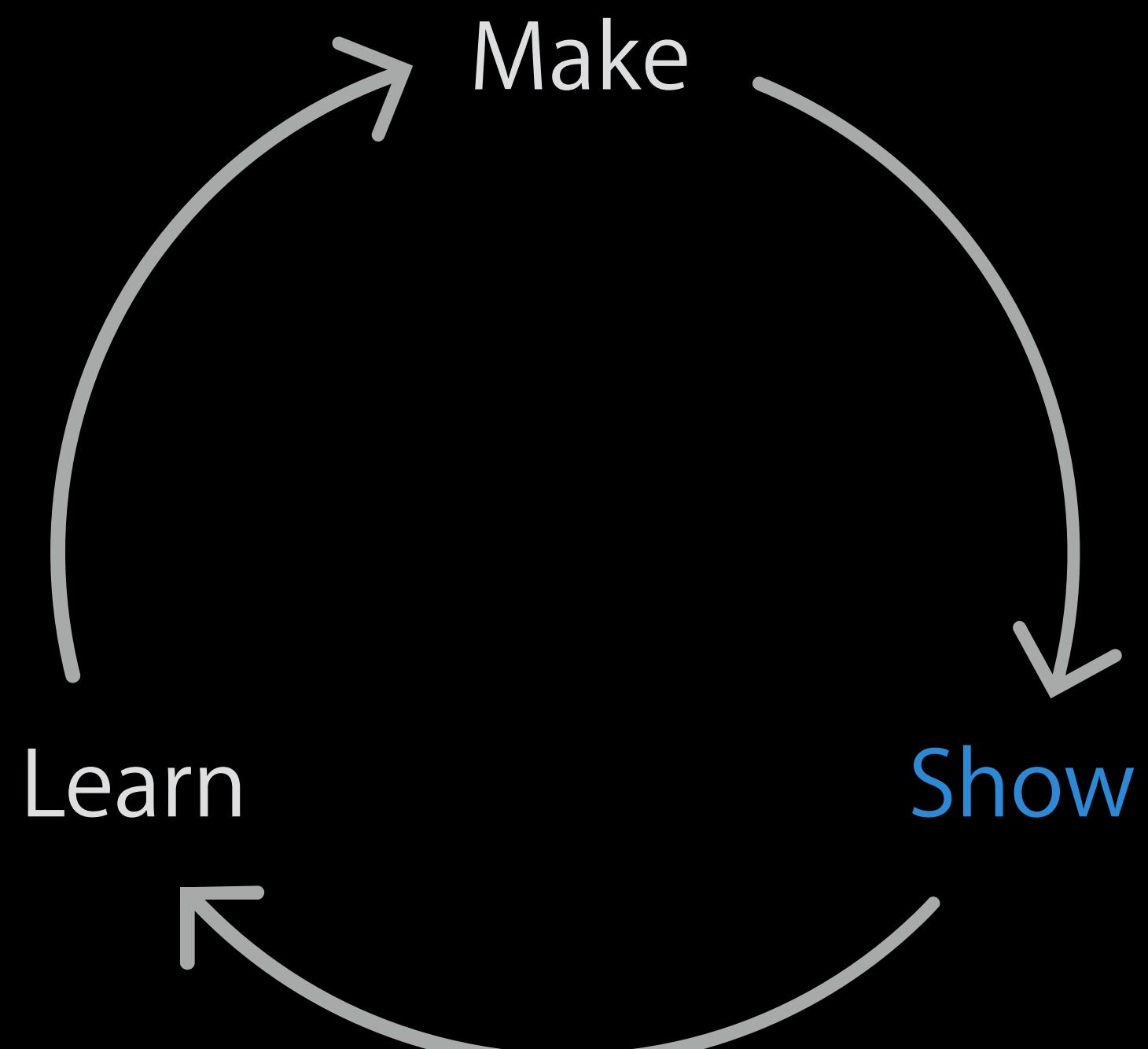
Three Questions

Do you know how to _____?

Is it easy to _____?

How can we make this better?

Who?



Show People

Three Questions

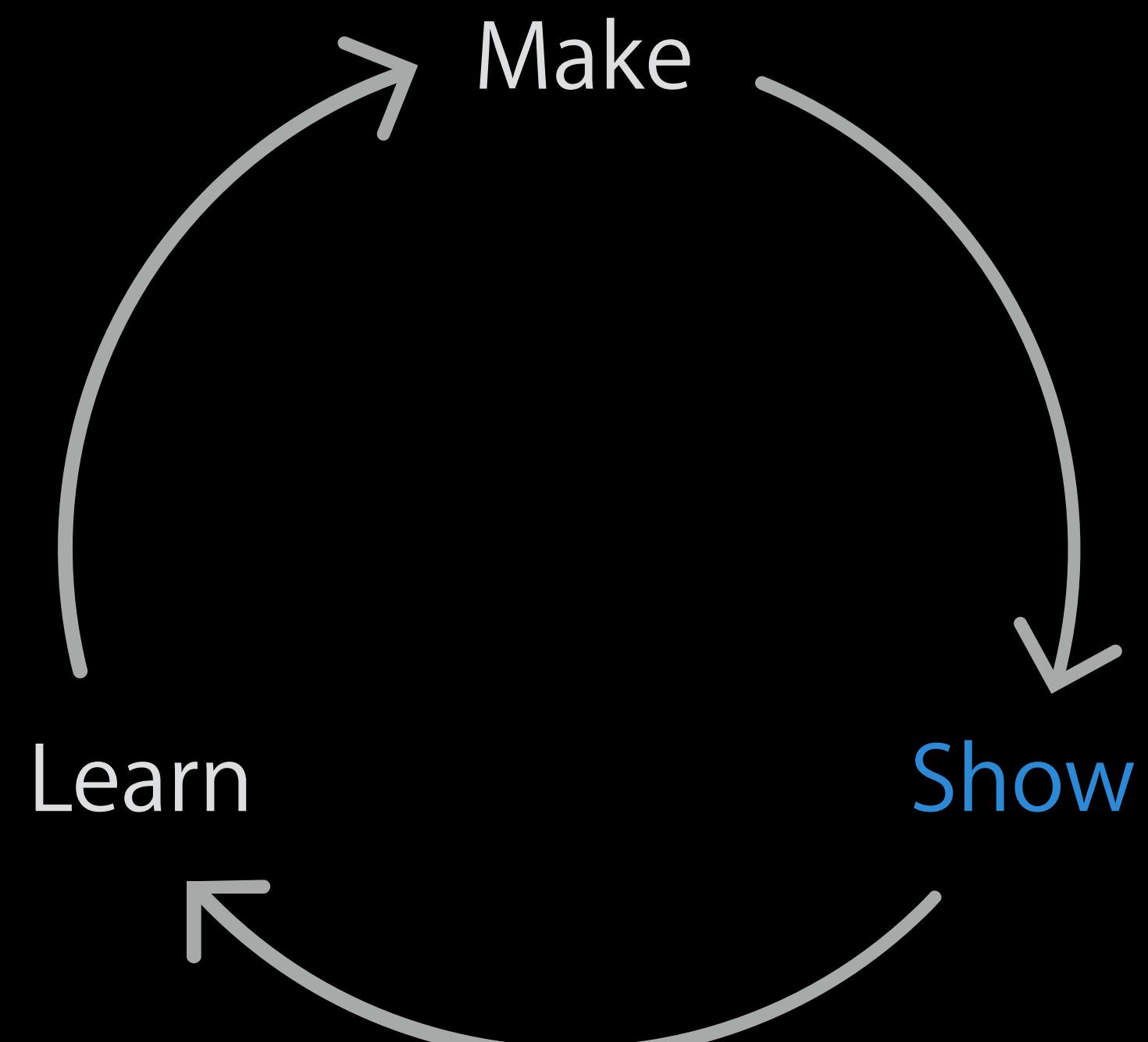
Do you know how to _____?

Is it easy to _____?

How can we make this better?

Who?

The people your app is for



Show People

Three Questions

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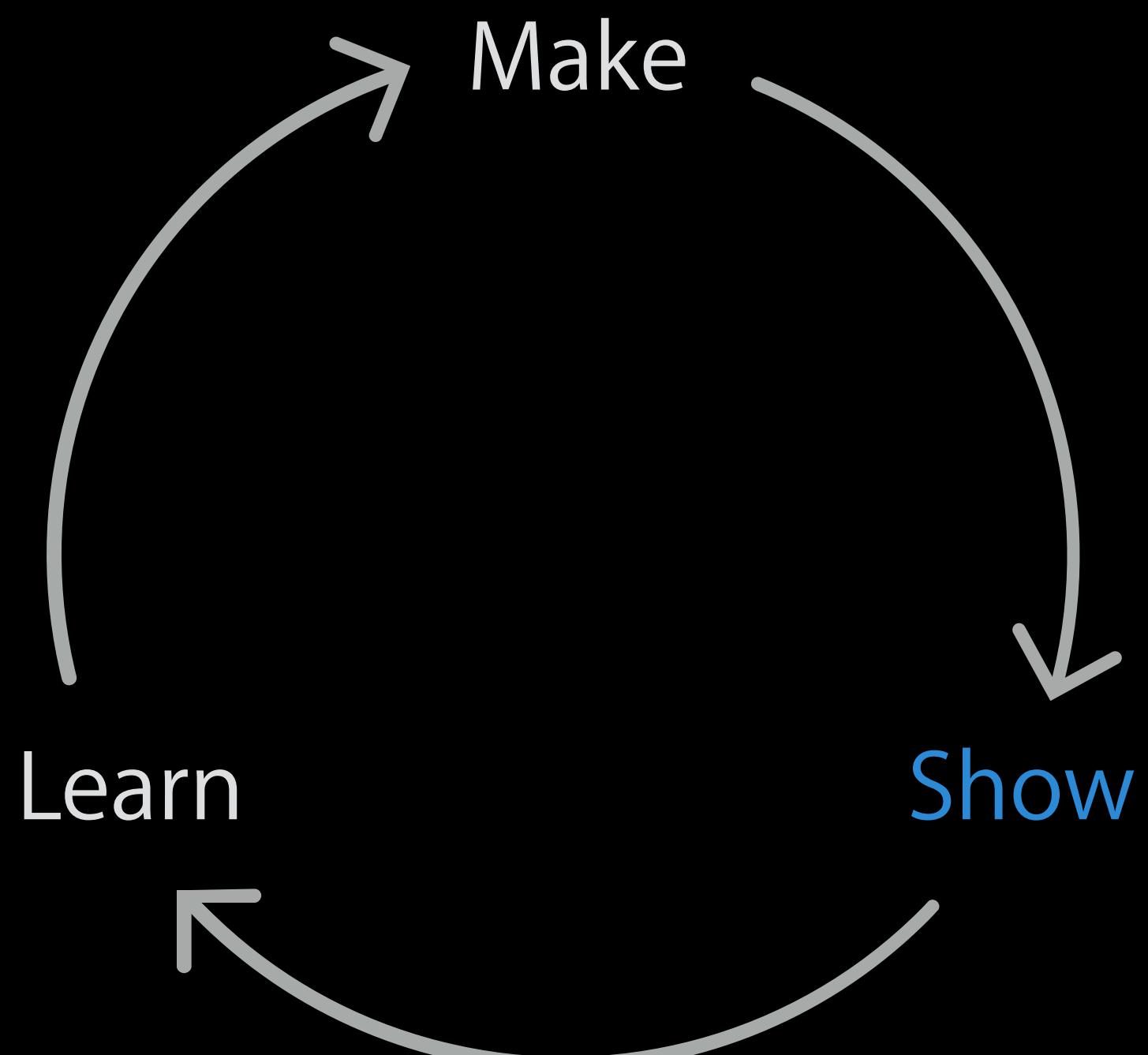
Is it easy to _____?

How can we make this better?

Who?

The people your app is for

Don't



Show People

Three Questions

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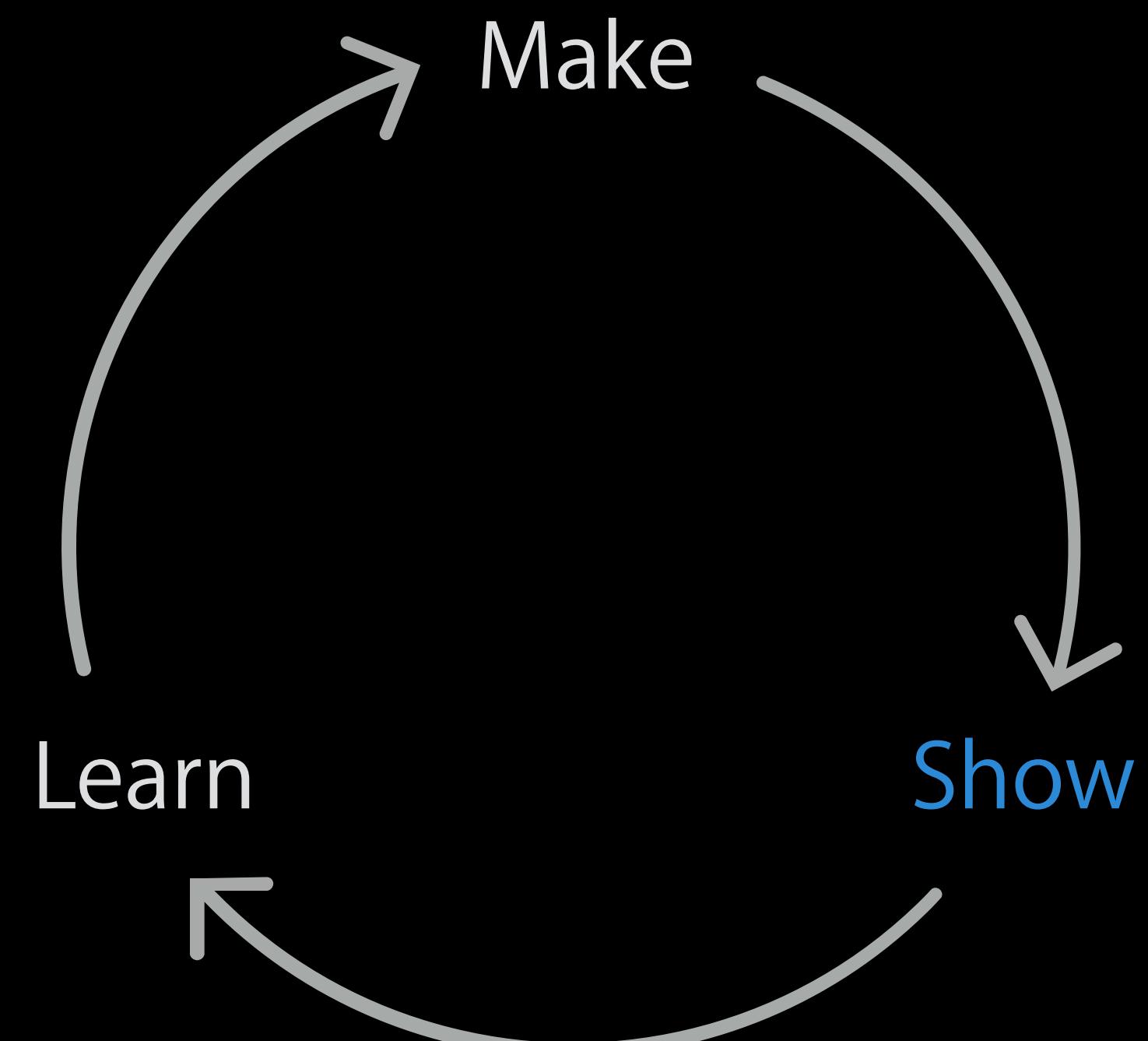
How can we make this better?

Who?

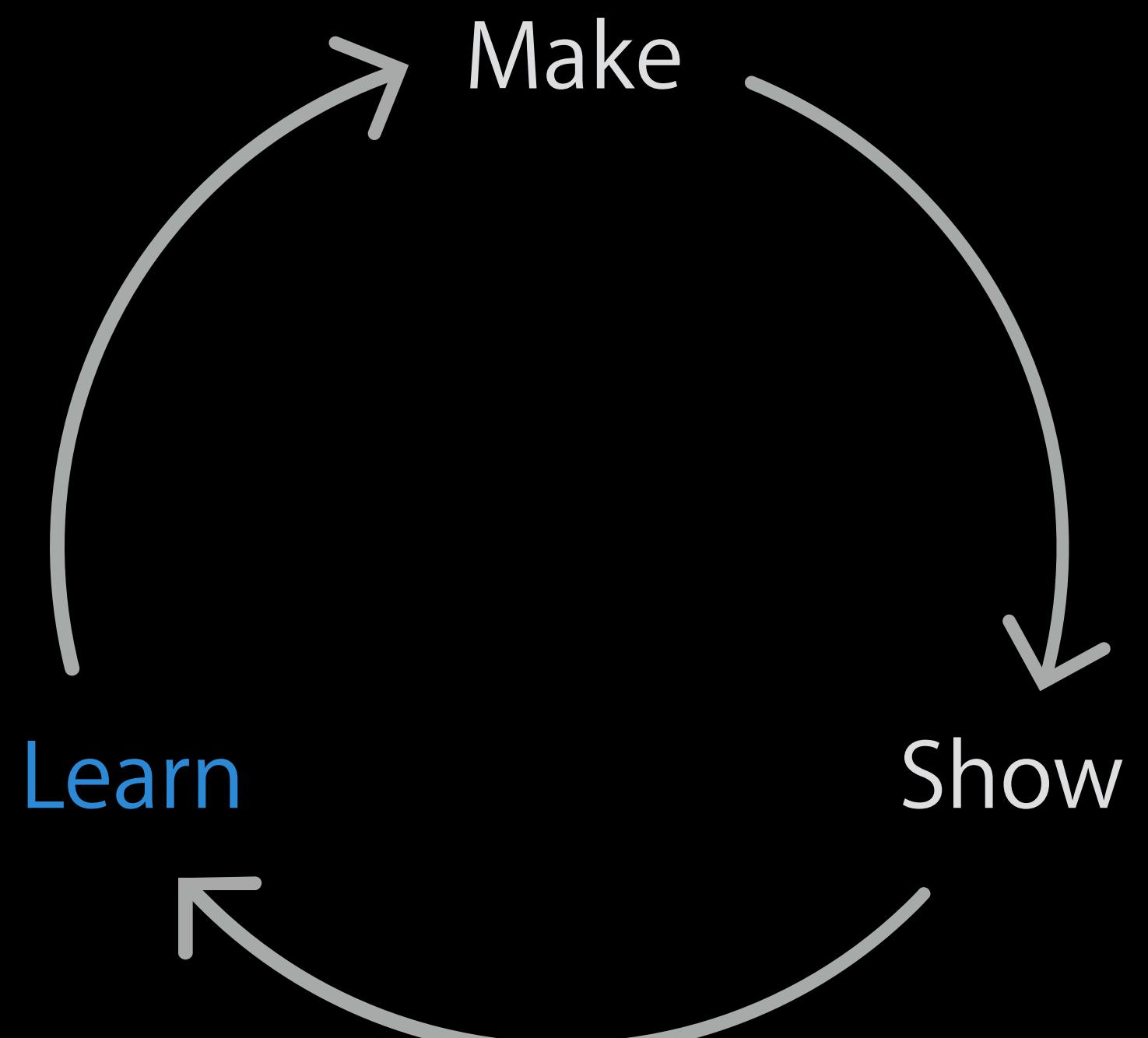
The people your app is for

Don't

Argue, defend, dismiss

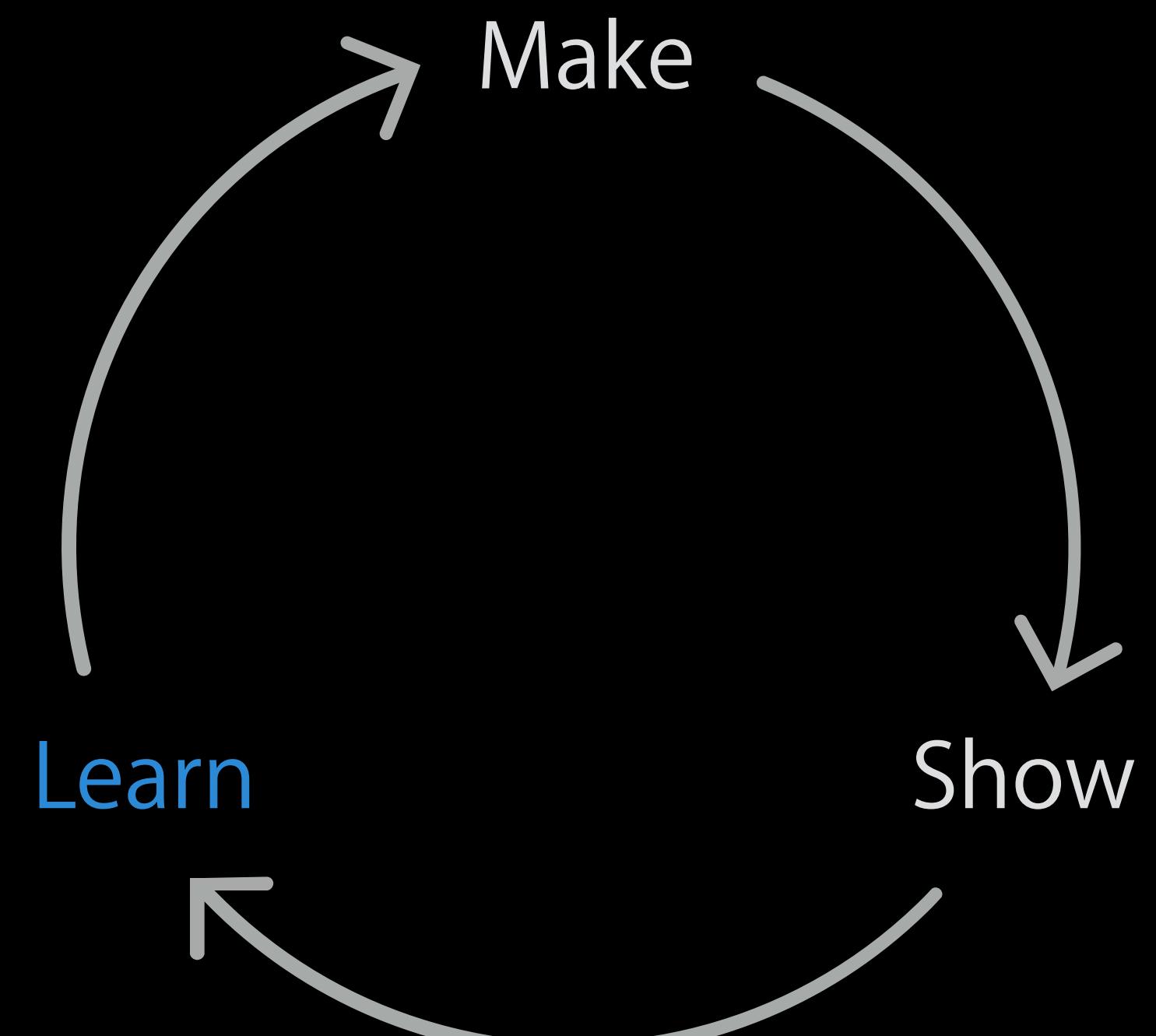


Learn from Their Feedback



Learn from Their Feedback

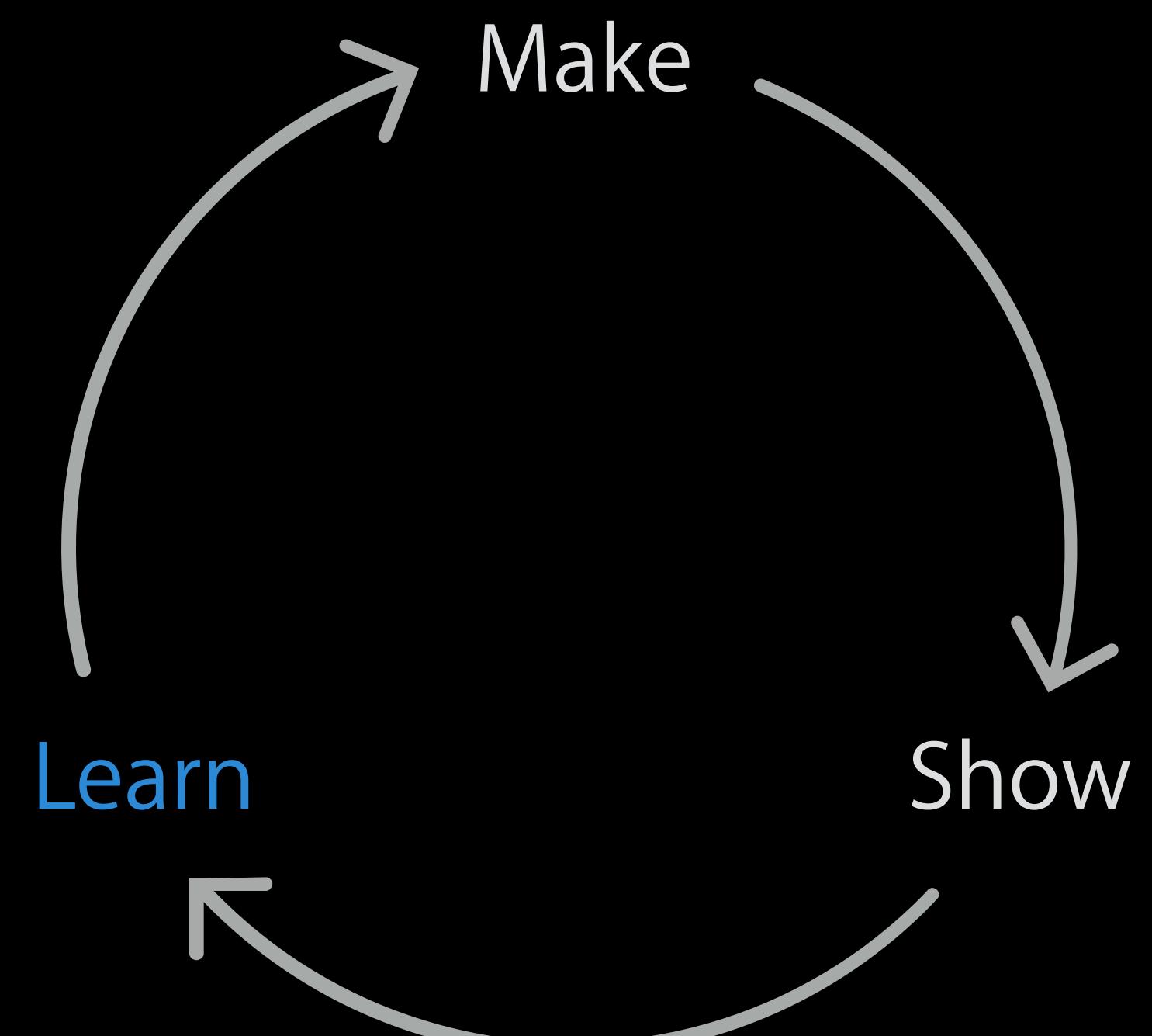
Three Questions



Learn from Their Feedback

Three Questions

What's working?

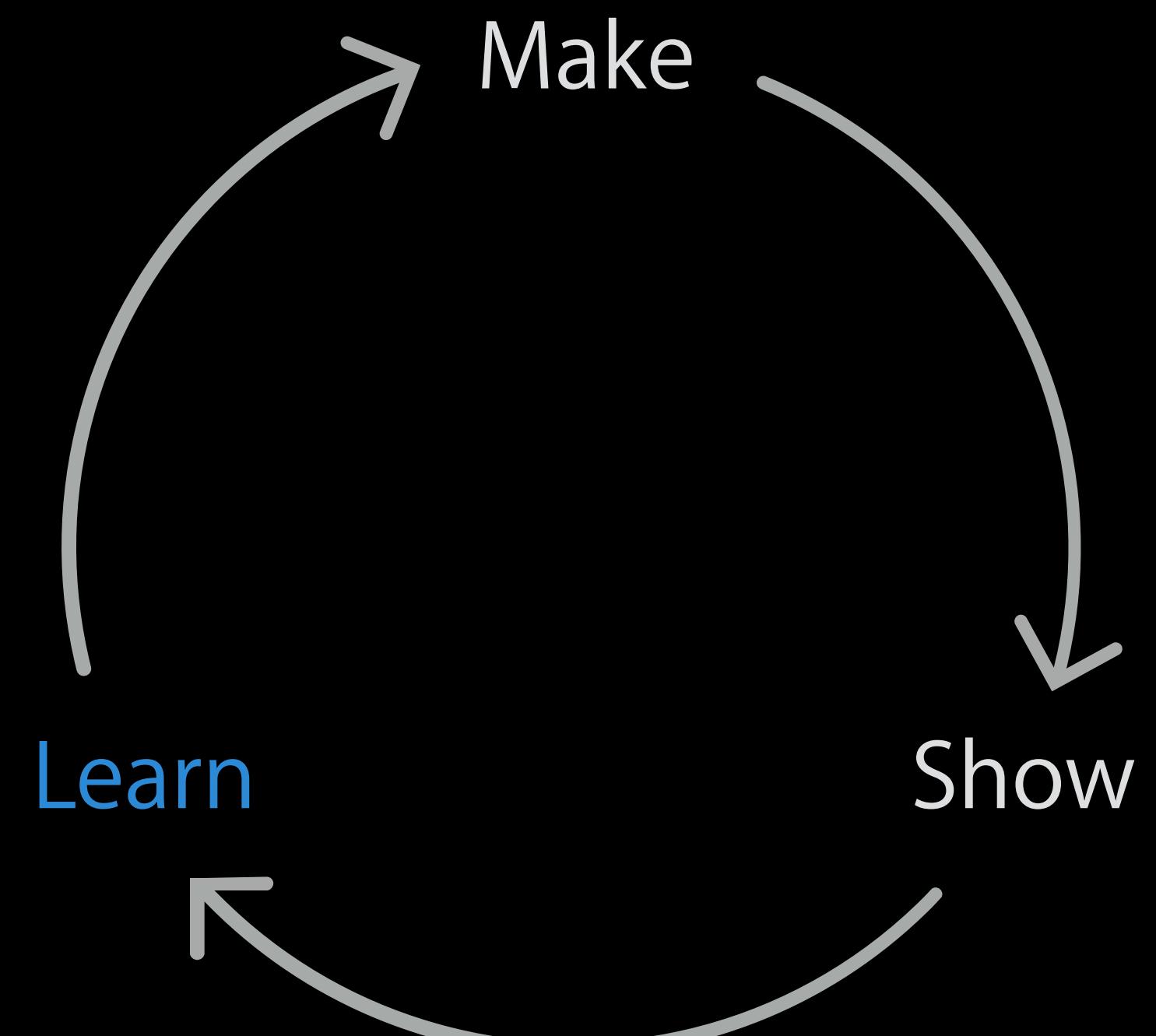


Learn from Their Feedback

Three Questions

What's working?

What's not working?



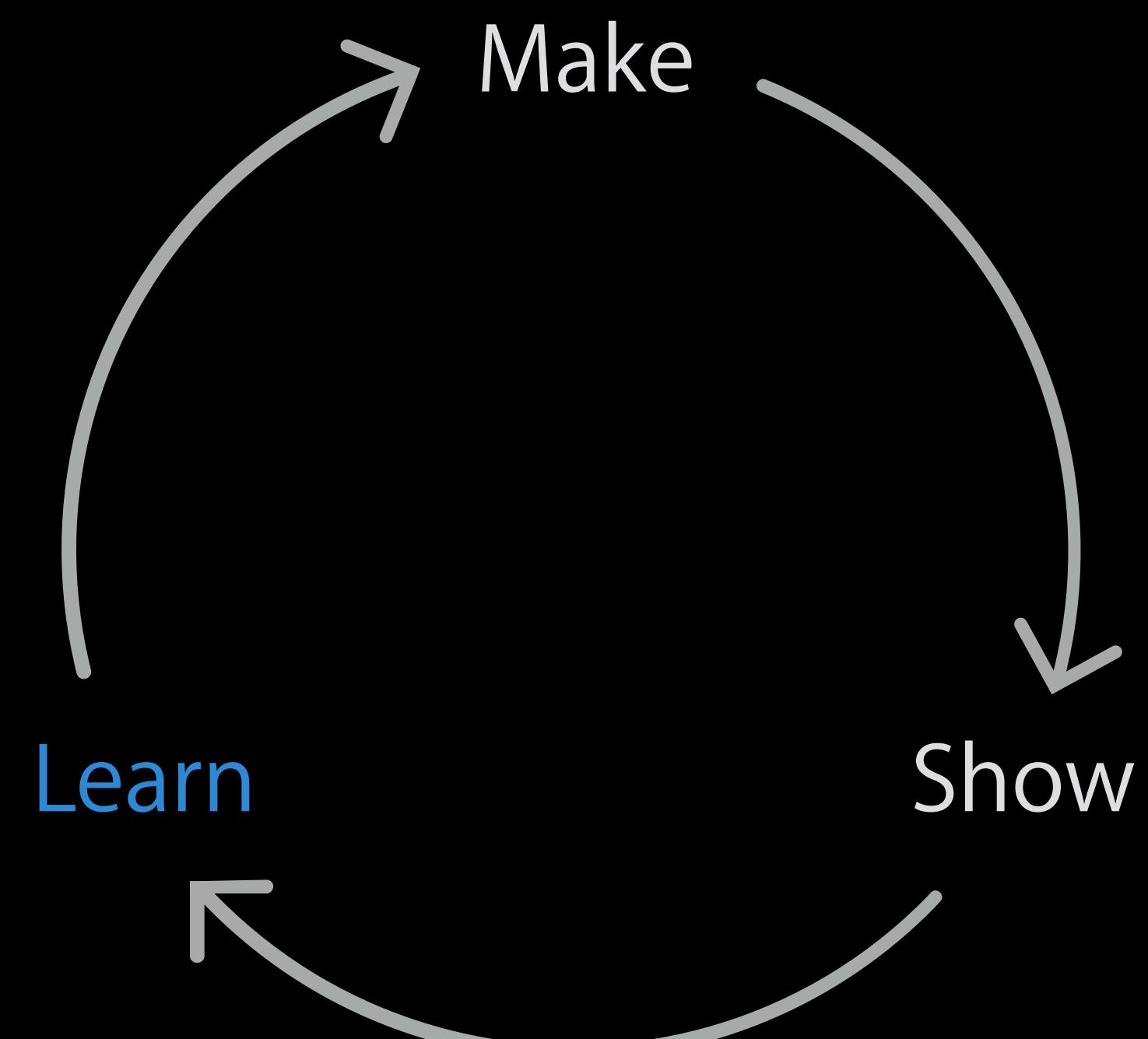
Learn from Their Feedback

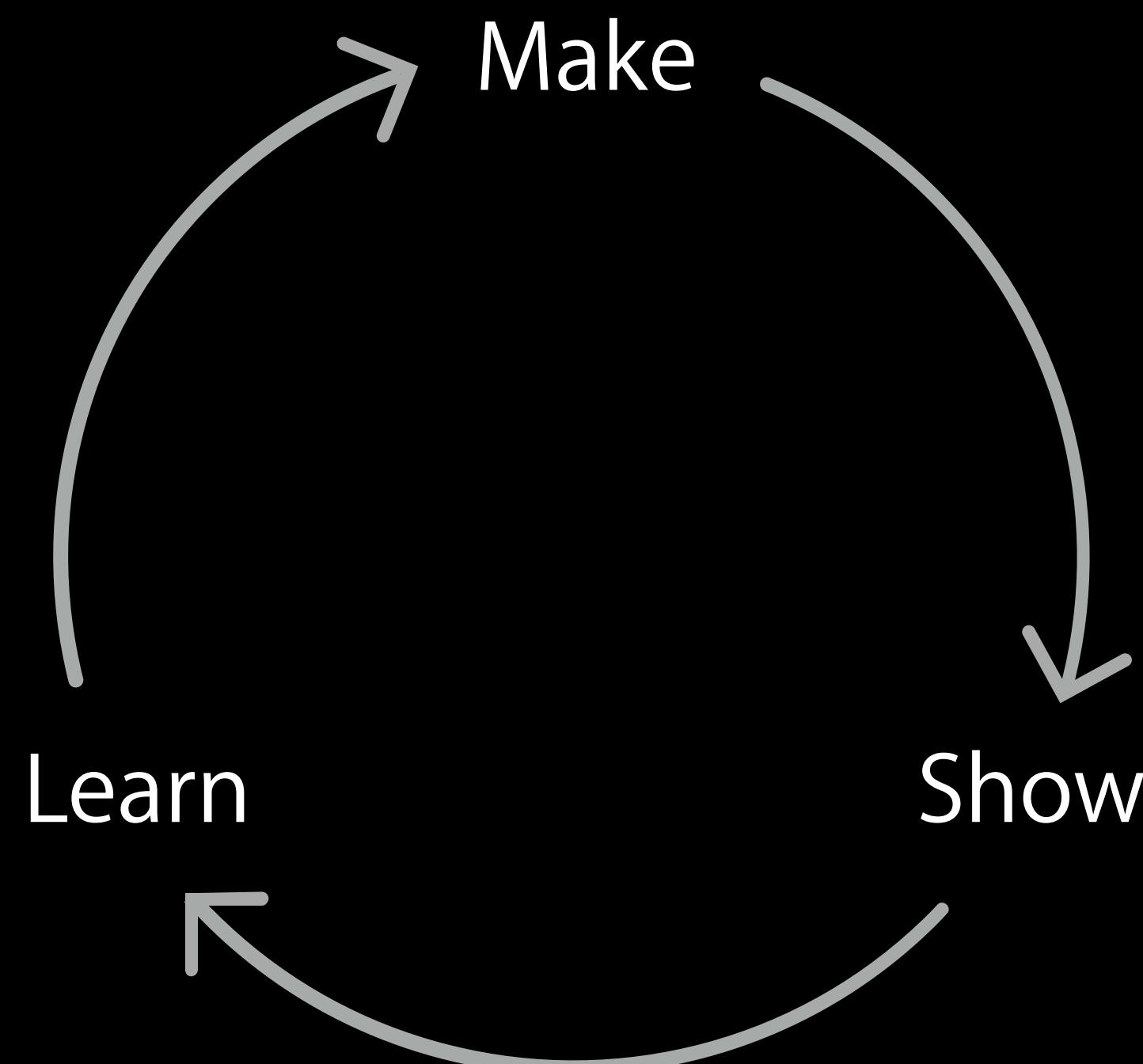
Three Questions

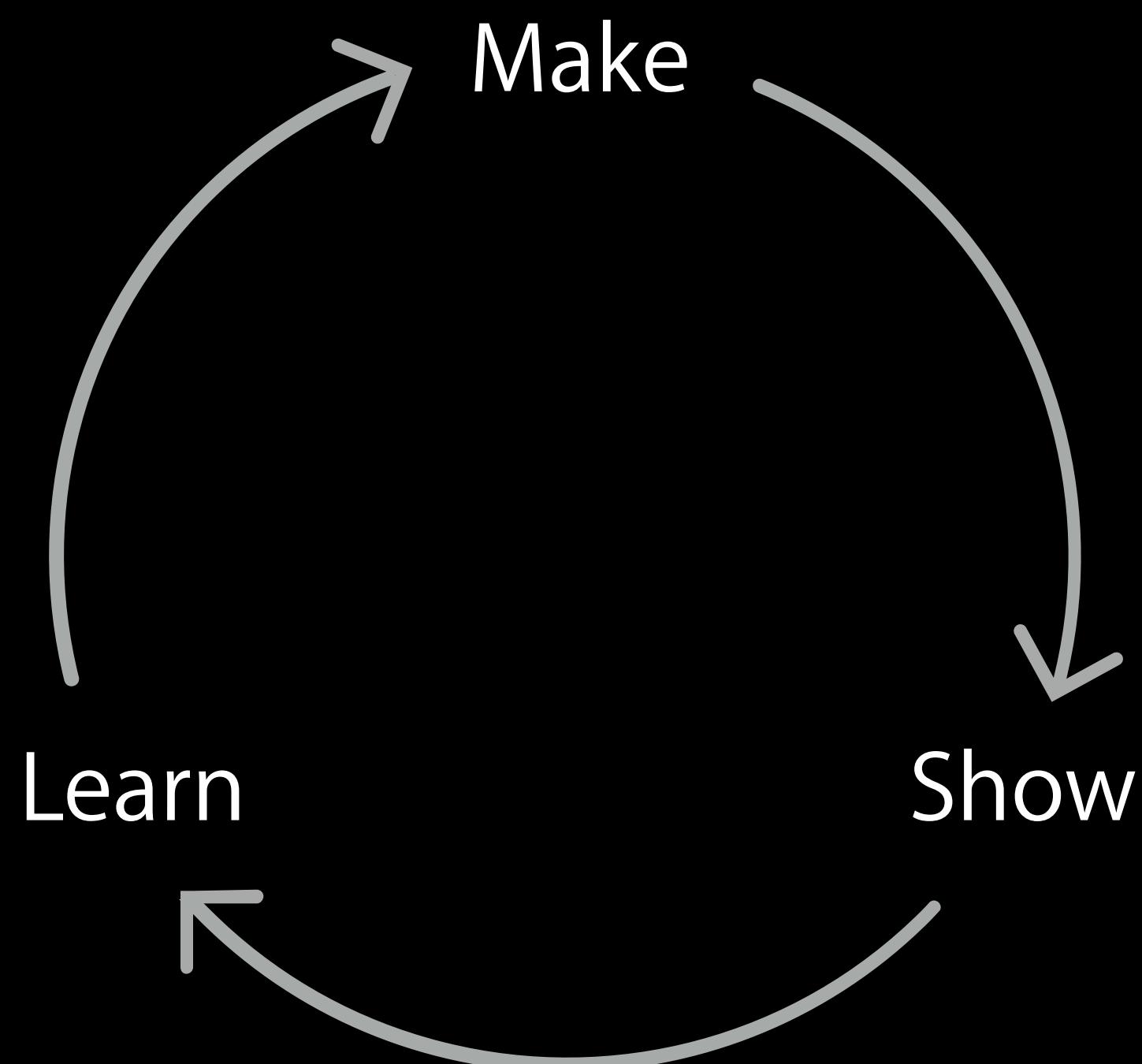
What's working?

What's not working?

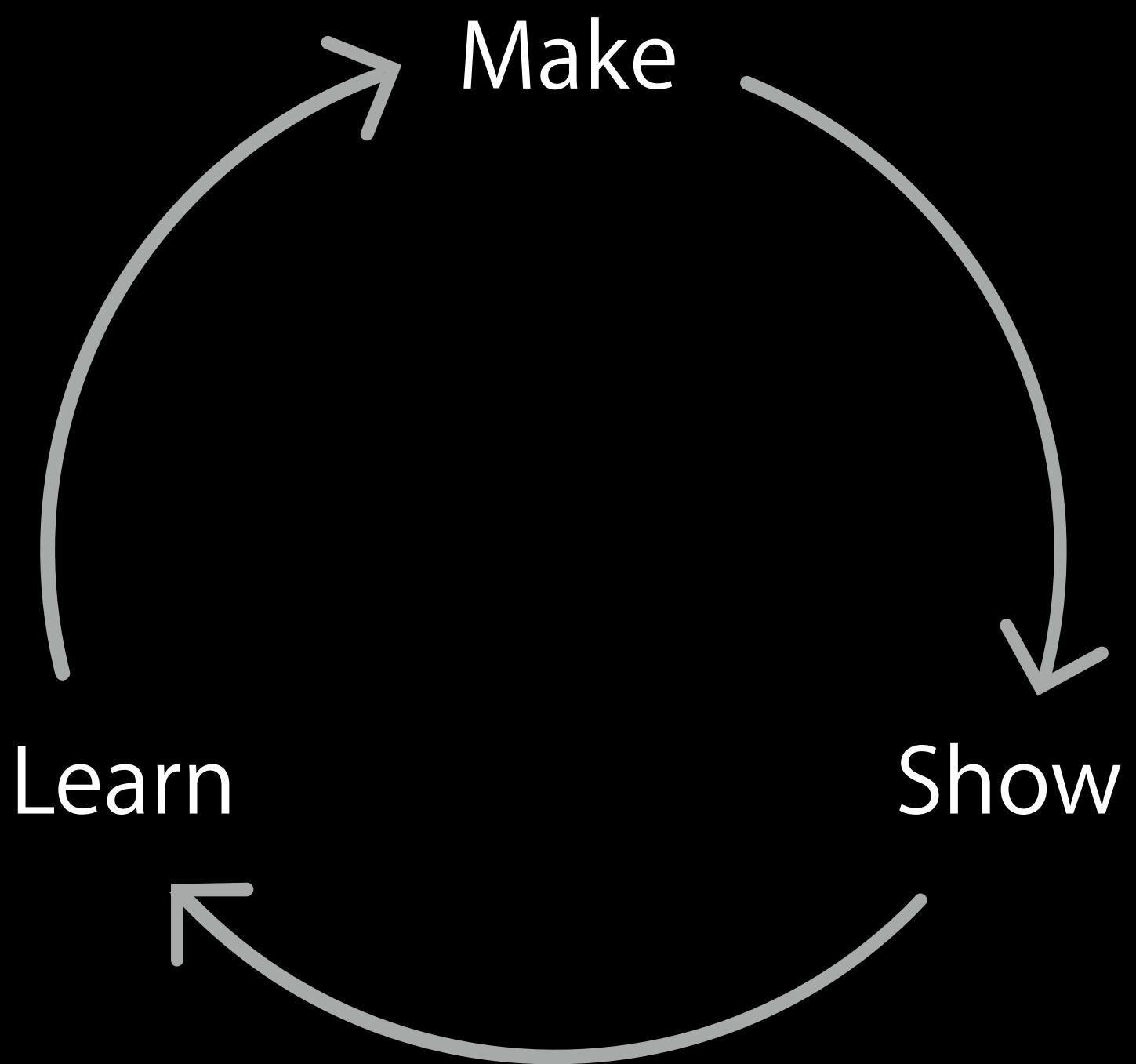
What other ideas does this give us?

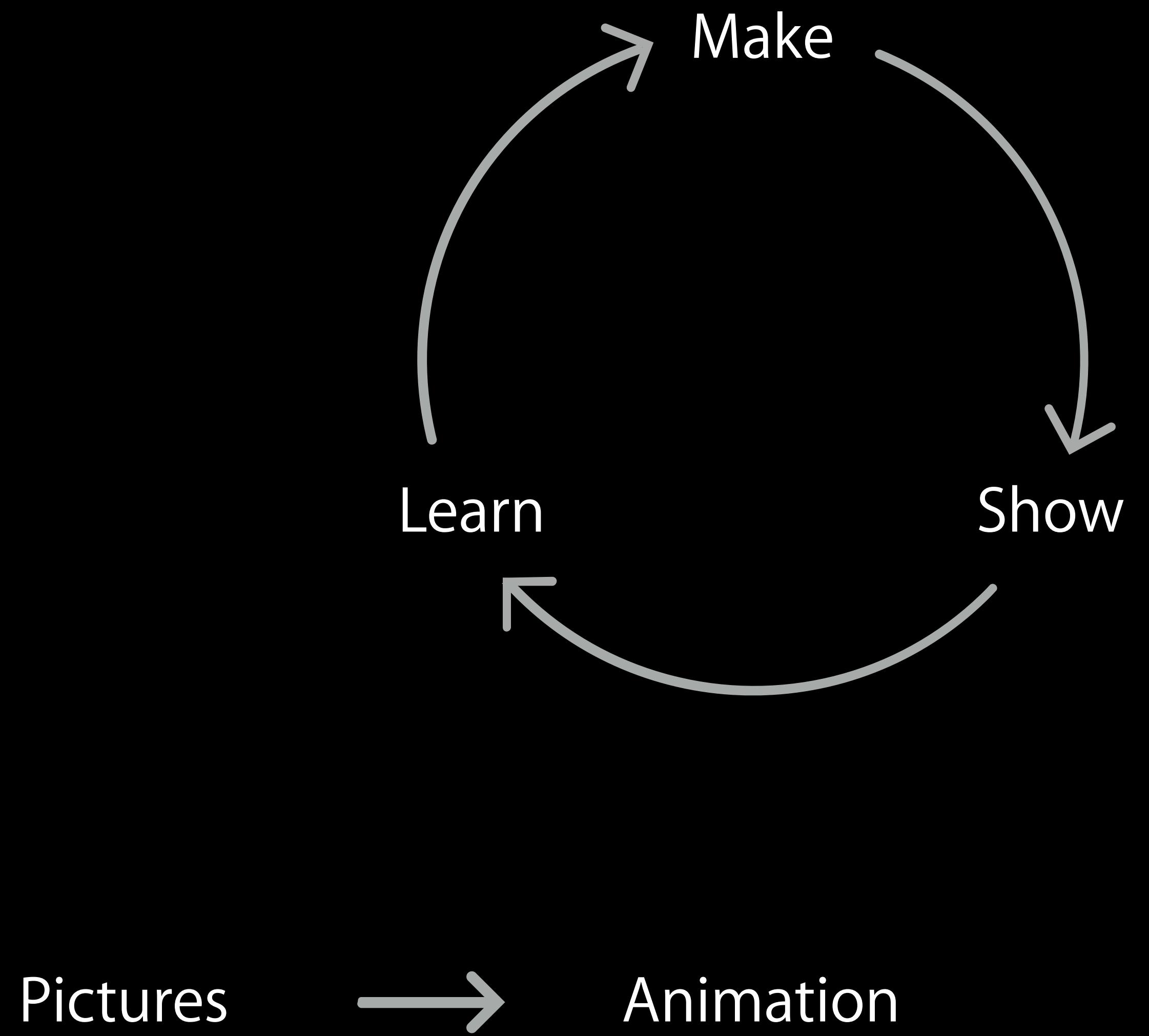


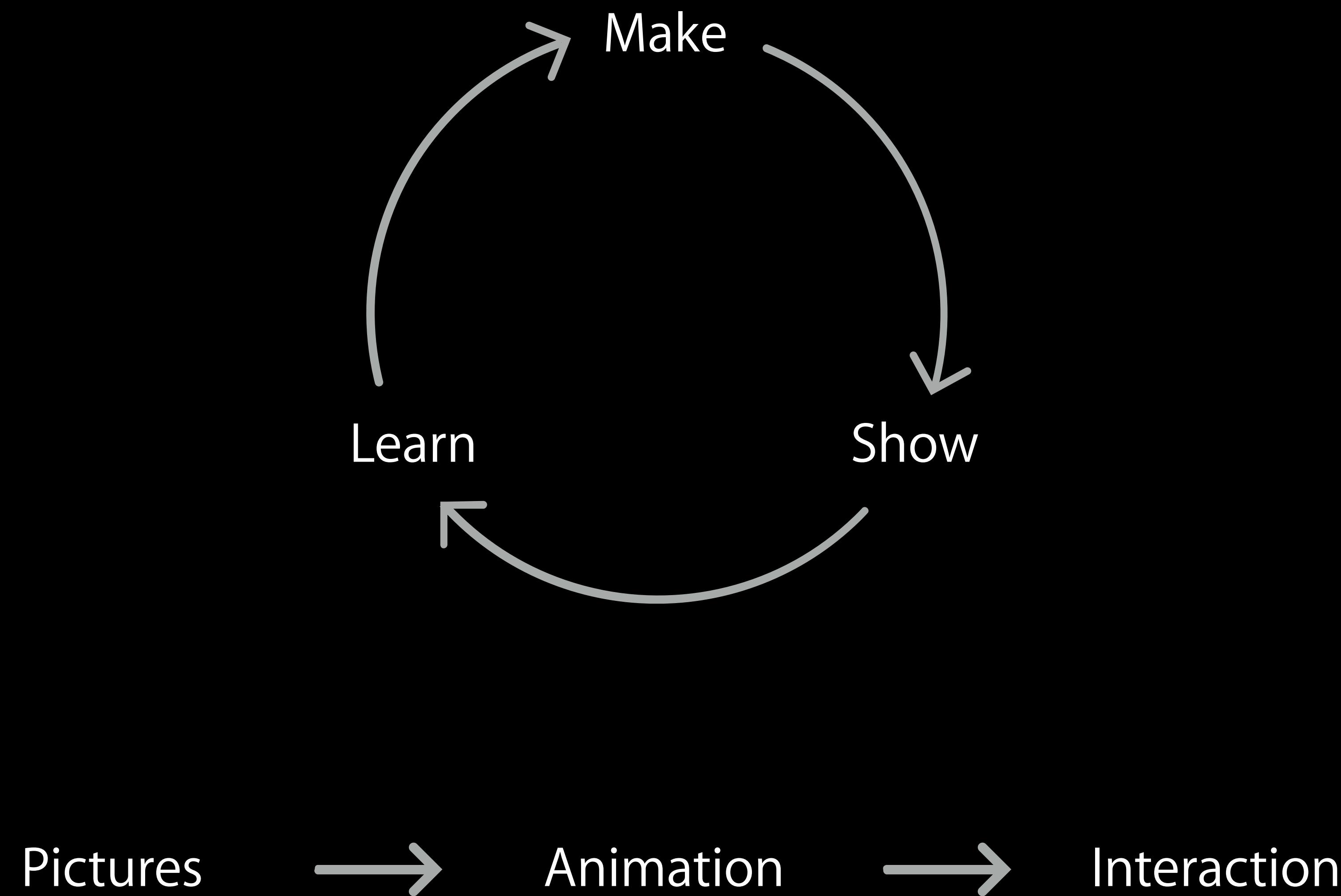


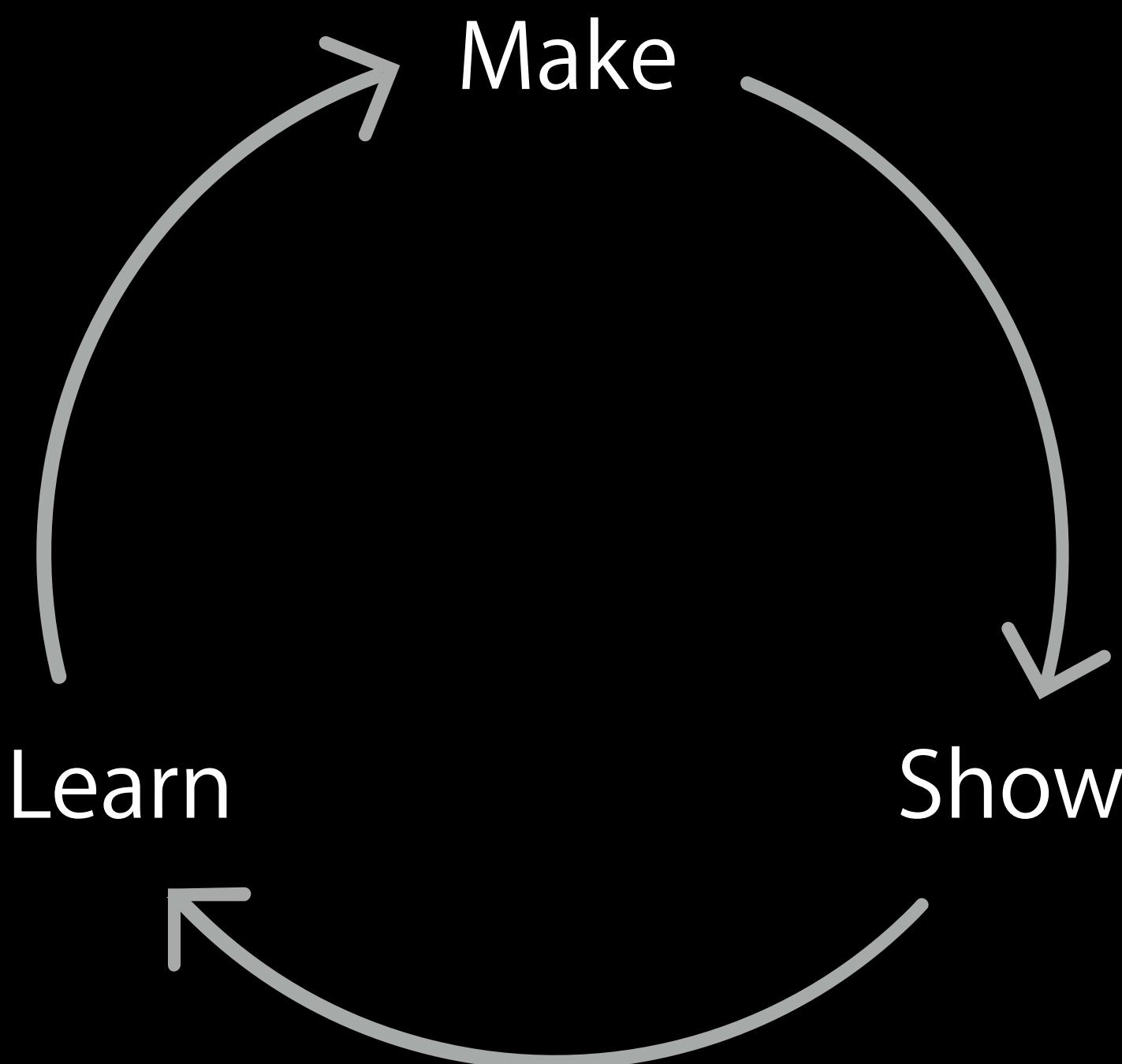


Pictures

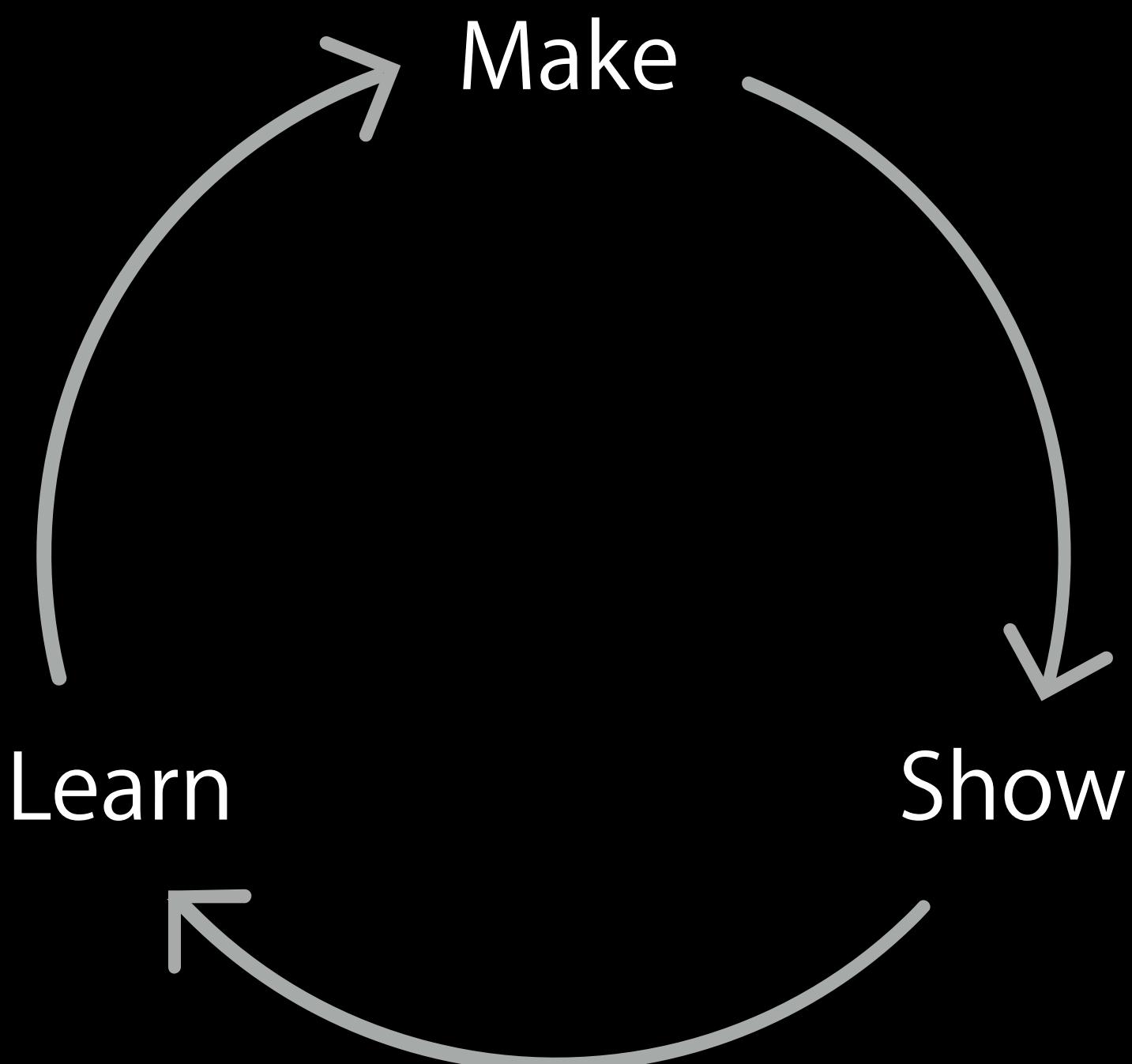




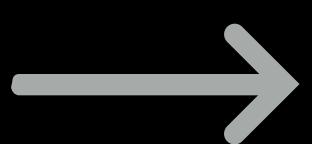




Pictures → Animation → Interaction
Keynote



Pictures



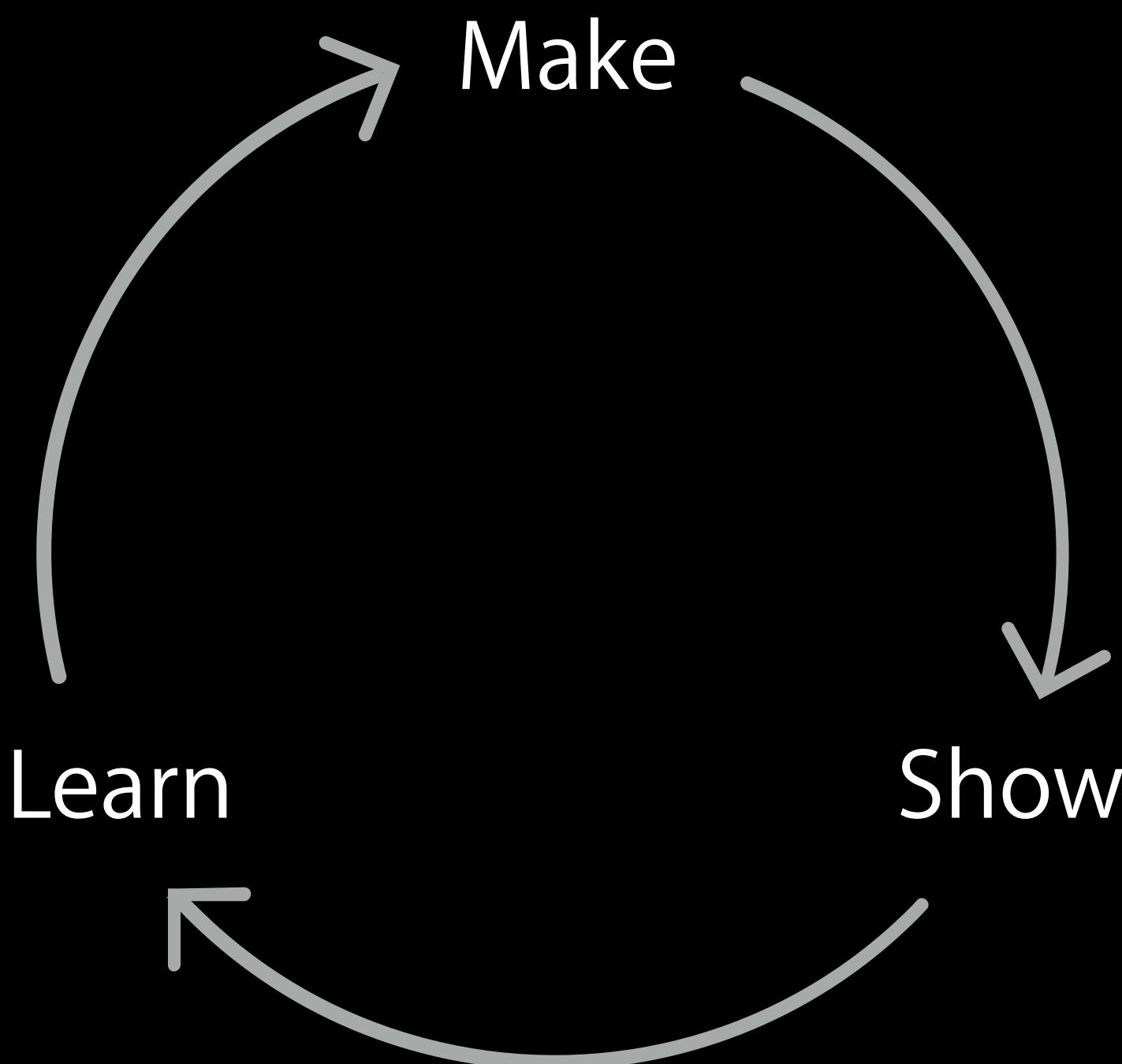
Animation



Interaction

Keynote

Keynote



Pictures



Animation



Interaction

Keynote

Keynote

Core Animation

Toast Modern Feature Set

Toast Modern Feature Set

Find toast to eat near me

Toast Modern Feature Set

Find toast to eat near me

Find top toast to eat

Toast Modern Feature Set

Find toast to eat near me

Find top toast to eat

Post toast

Toast Modern Feature Set

Find toast to eat near me

Find top toast to eat

Post toast

Rate toast

Toast Modern Feature Set

Find toast to eat near me

Find top toast to eat

Post toast

Rate toast

Review and discuss toast with my fellow toast aficionados

Toast Modern Feature Set

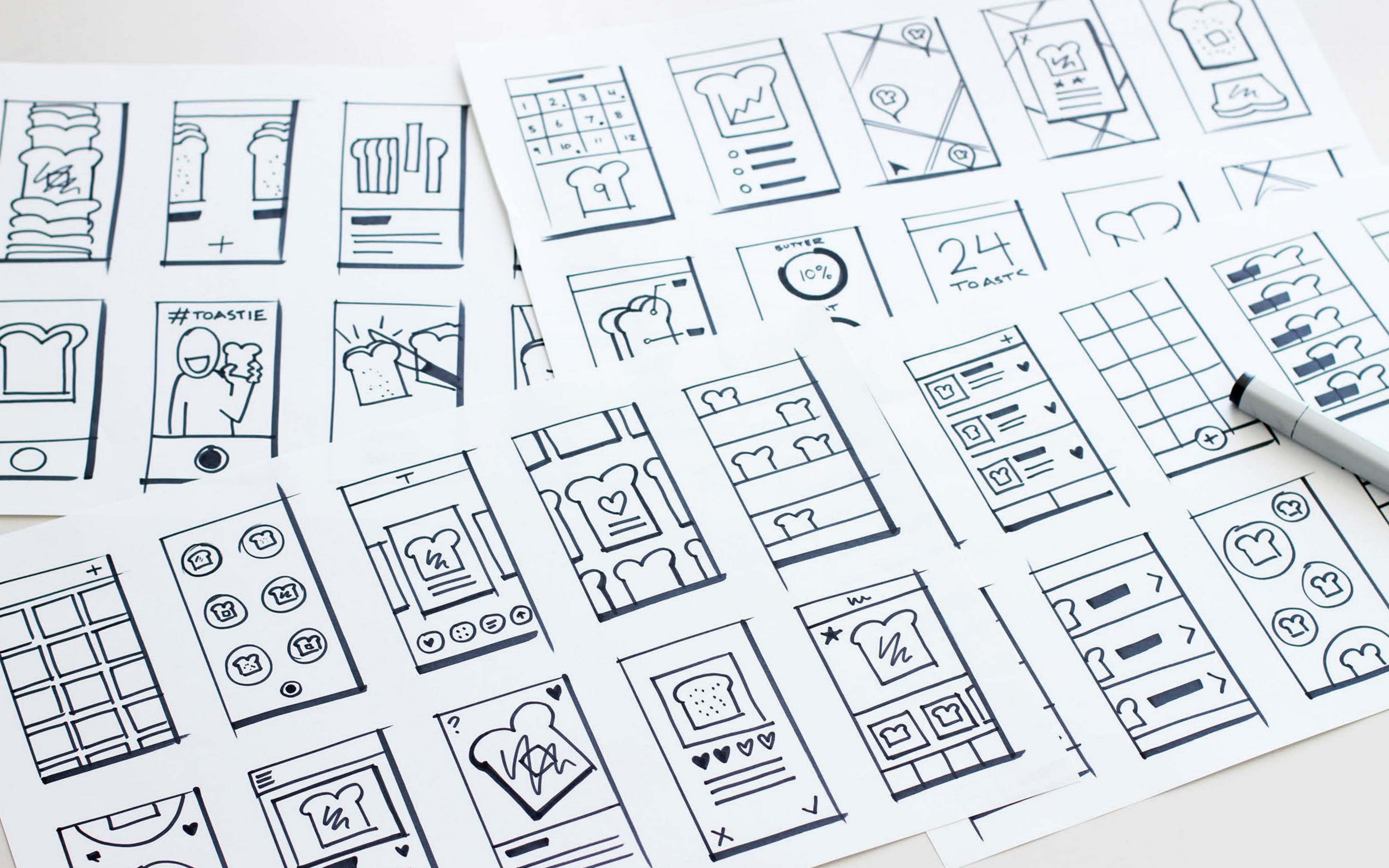
Find toast to eat near me

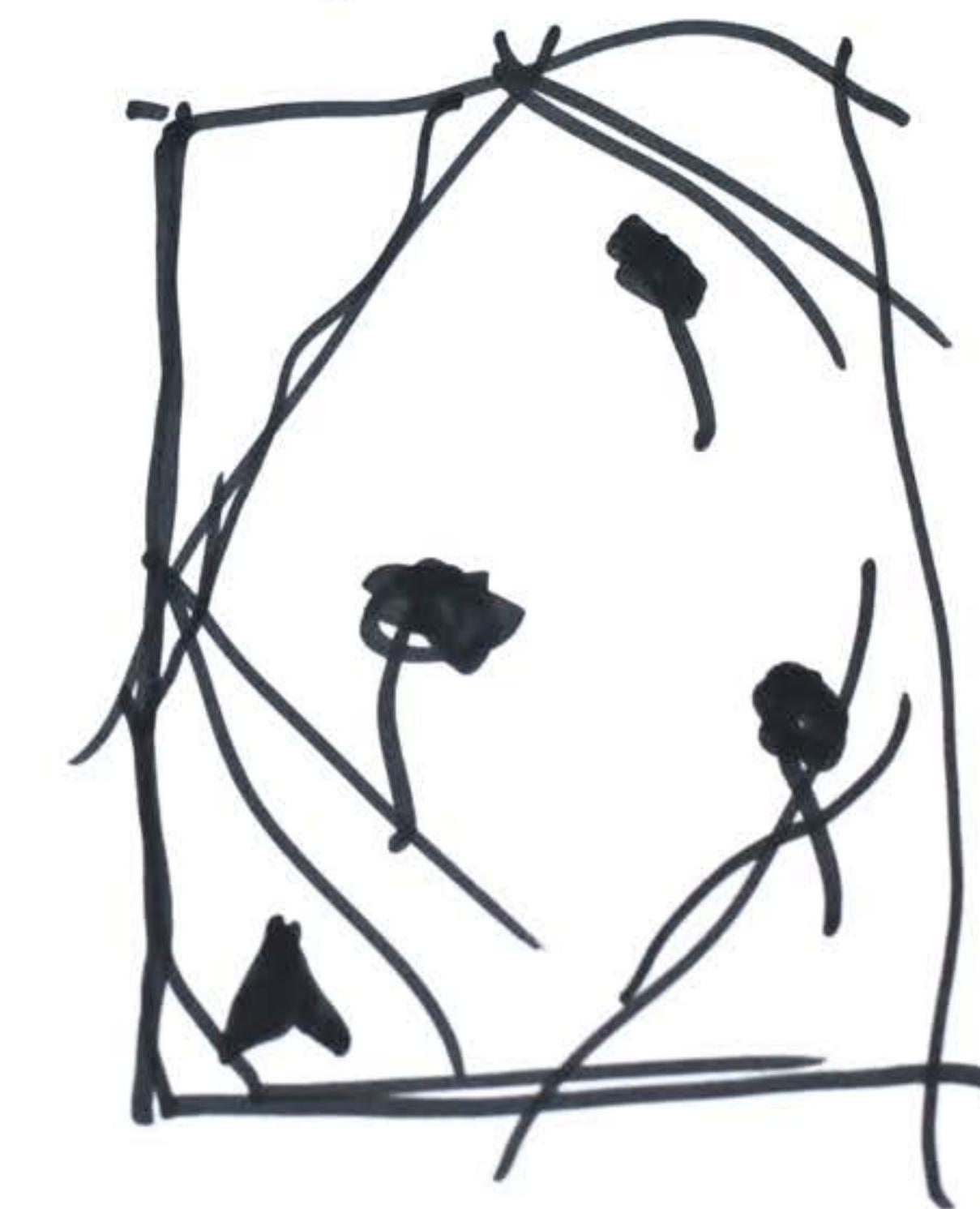
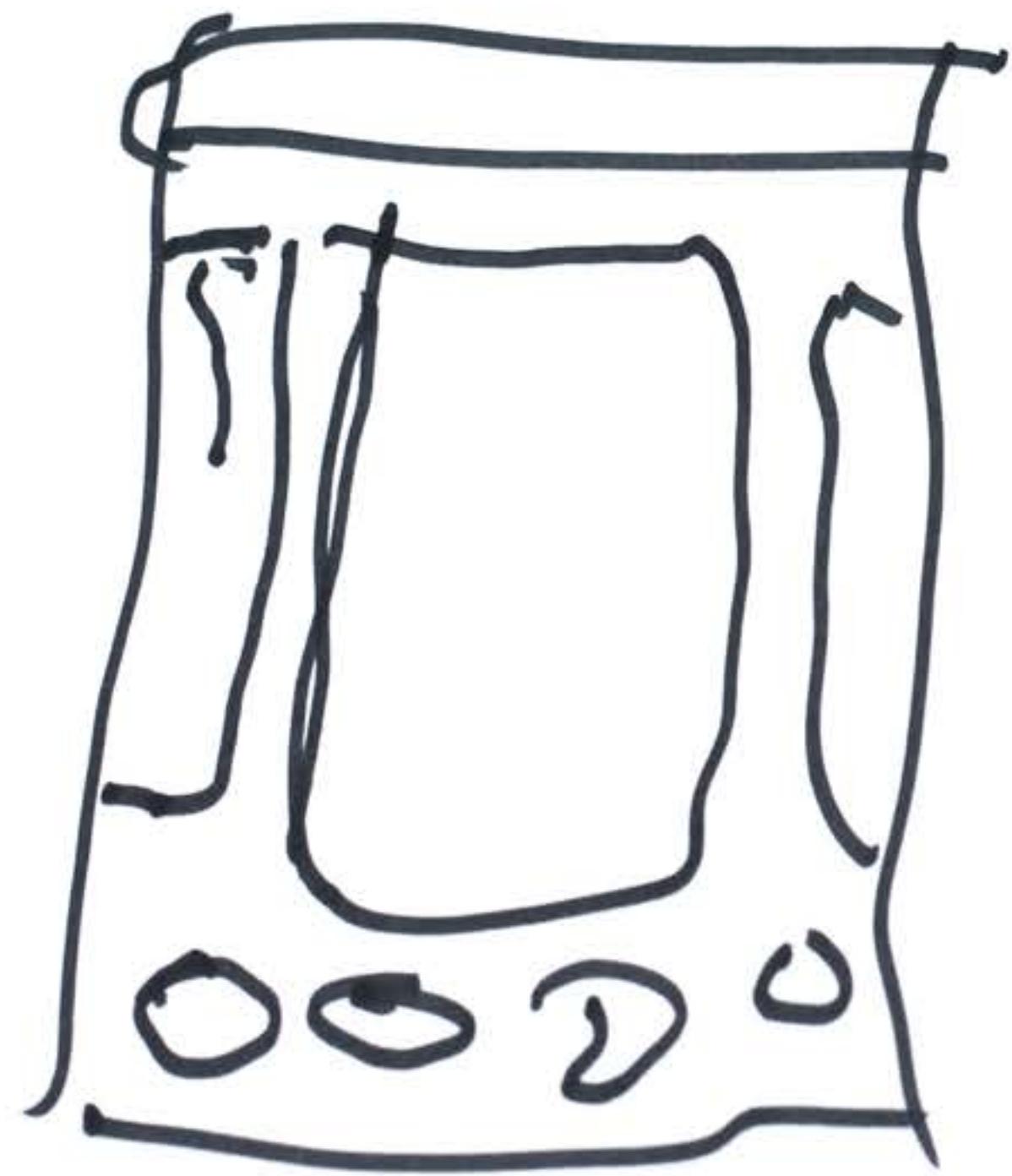
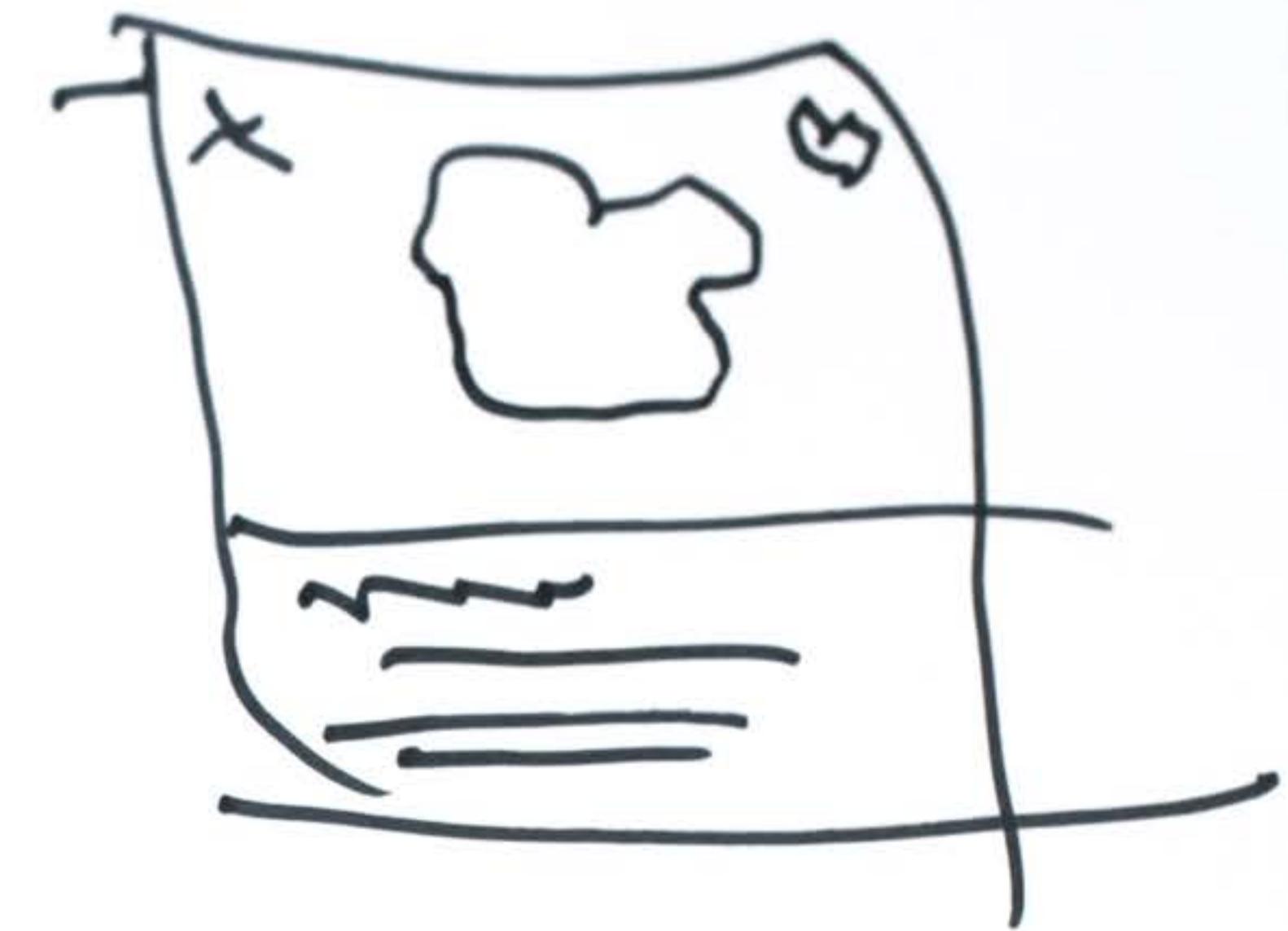
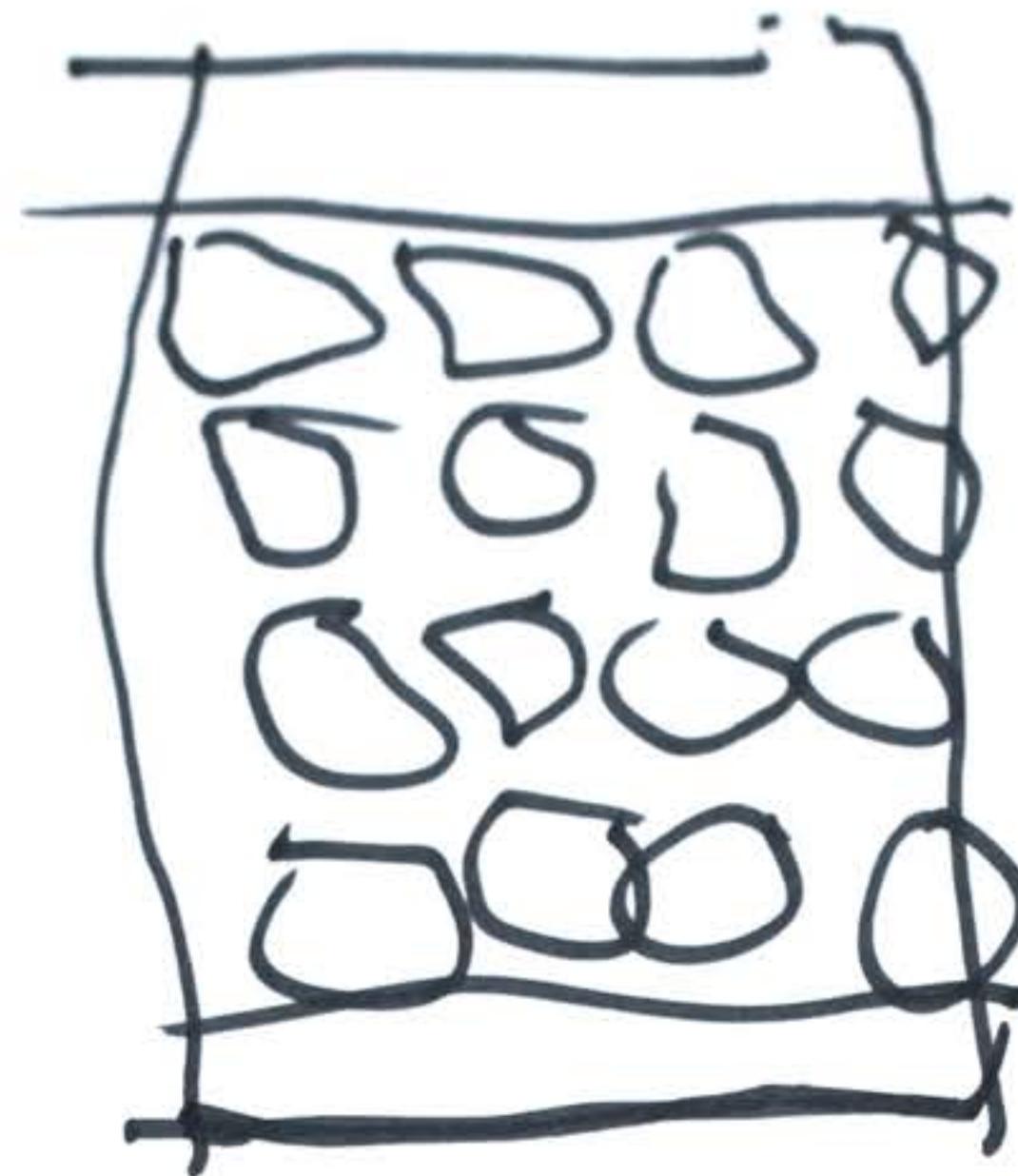
Find top toast to eat

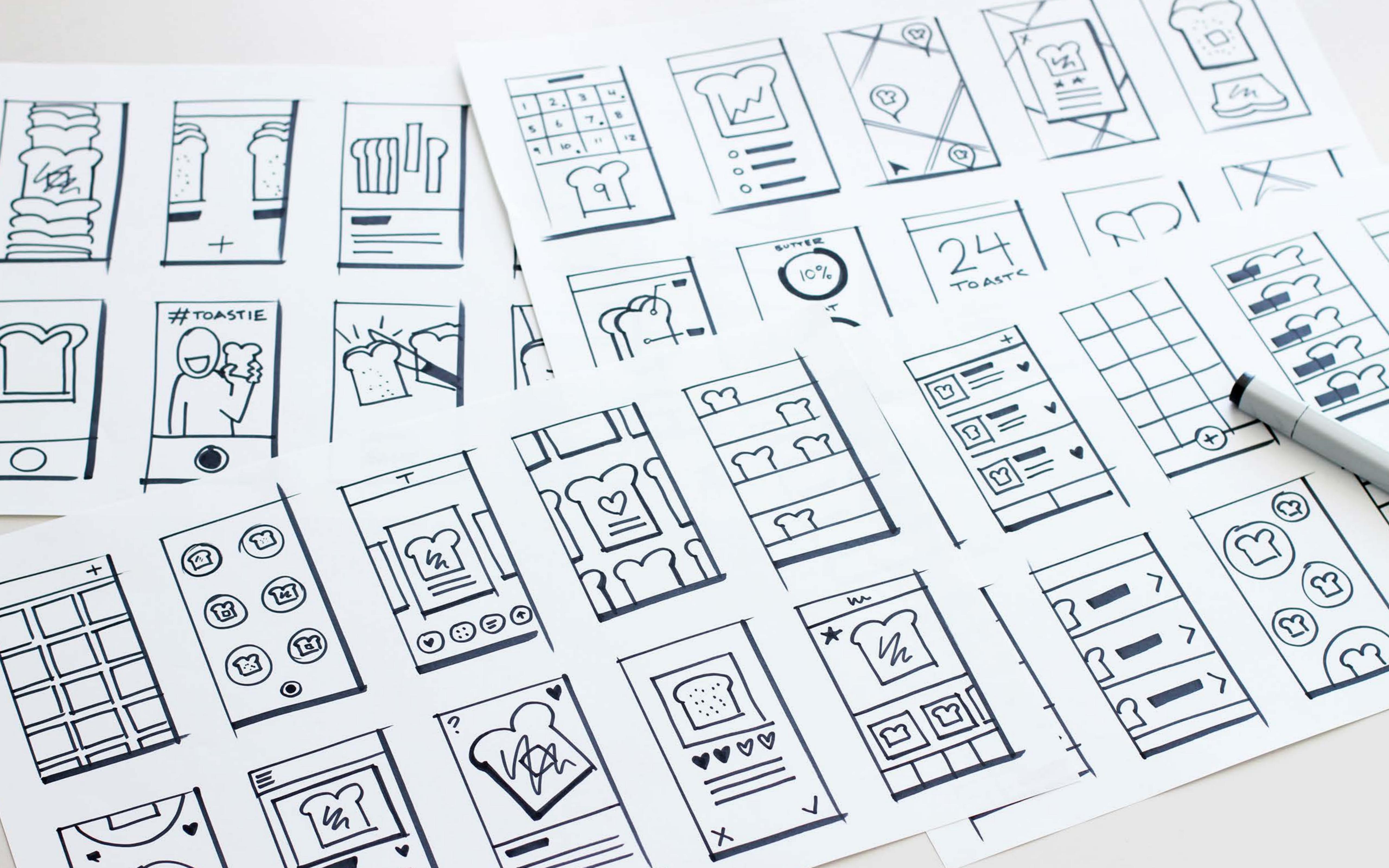
Post toast

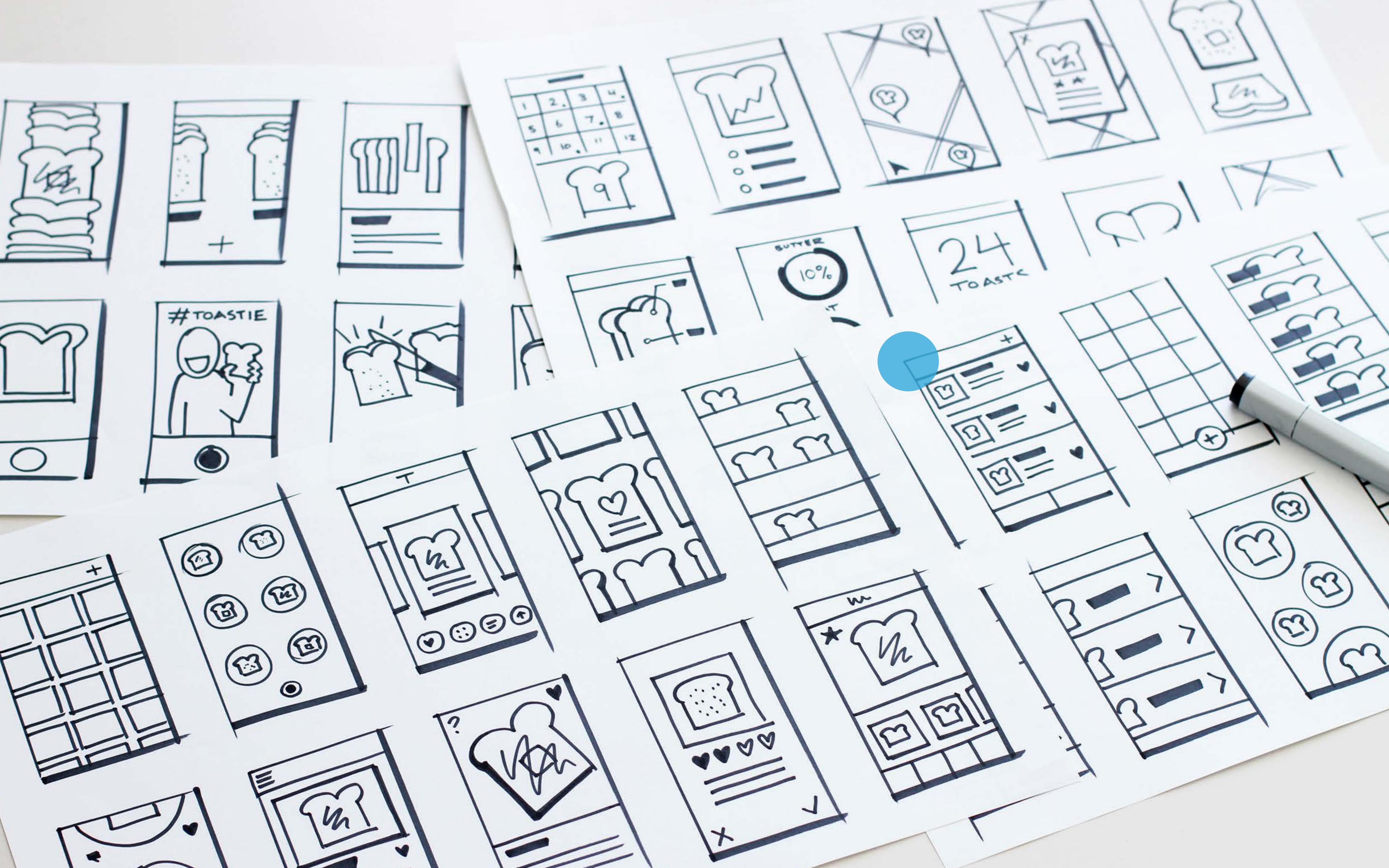
Rate toast

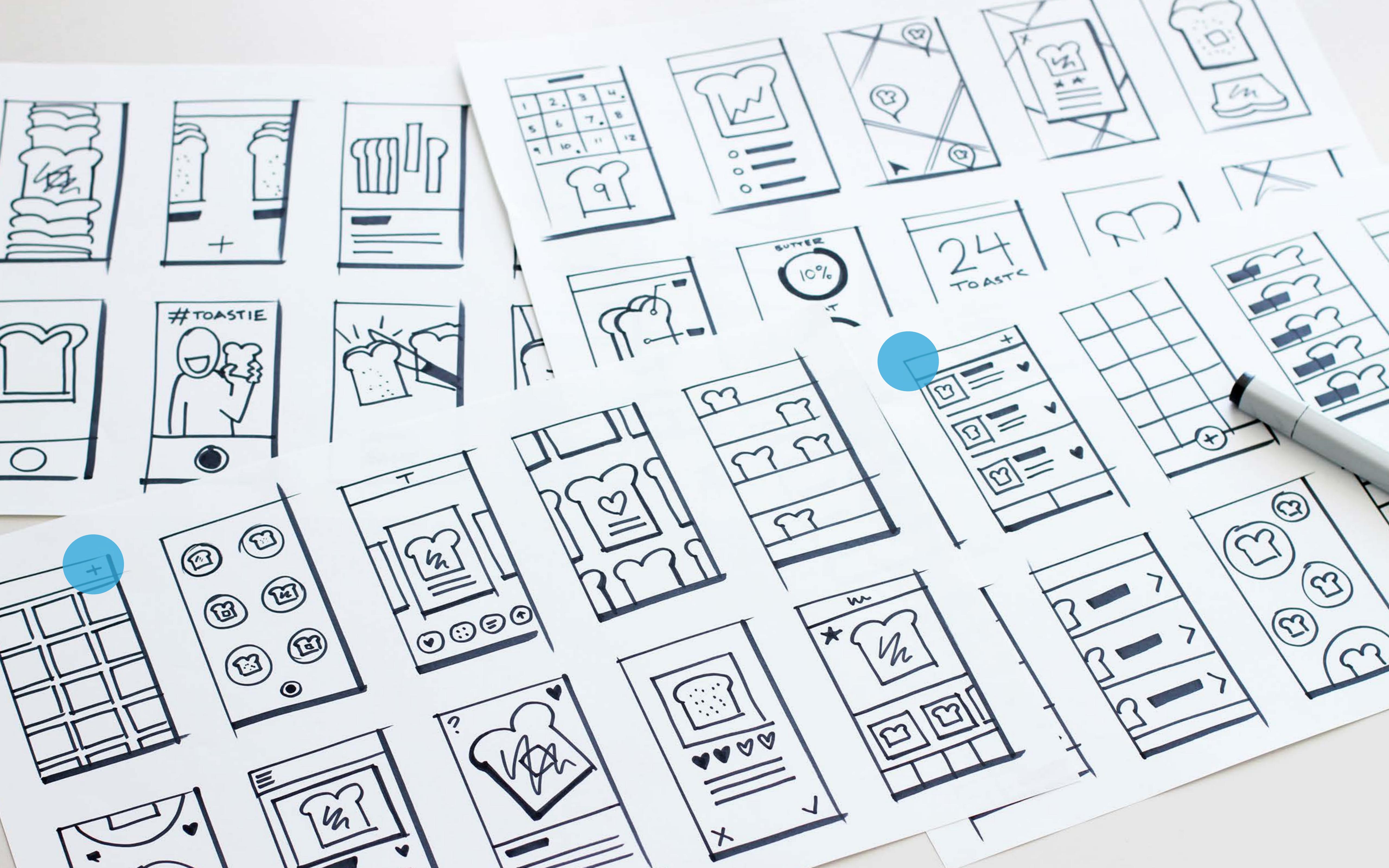
Review and discuss toast with my fellow toast aficionados

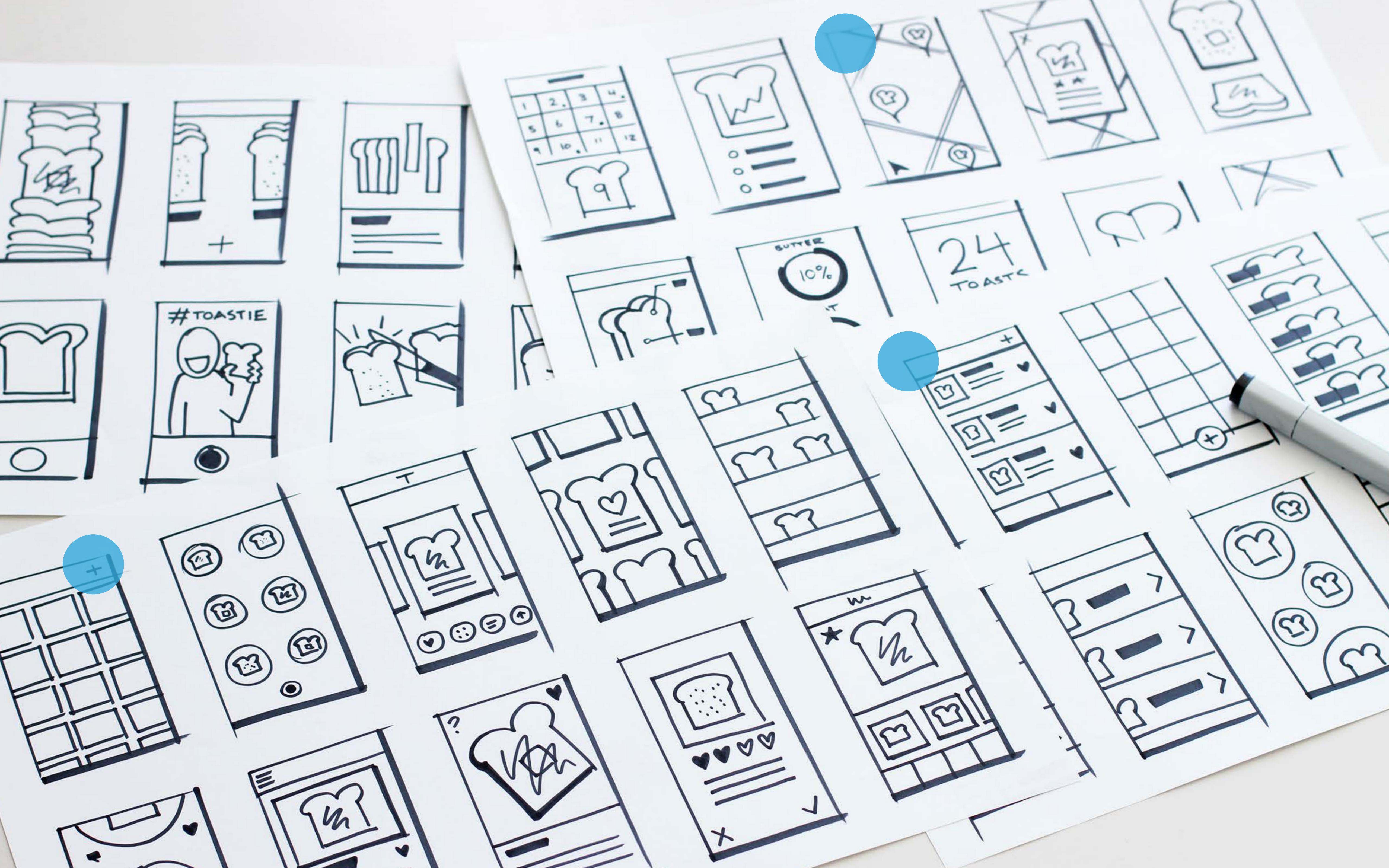


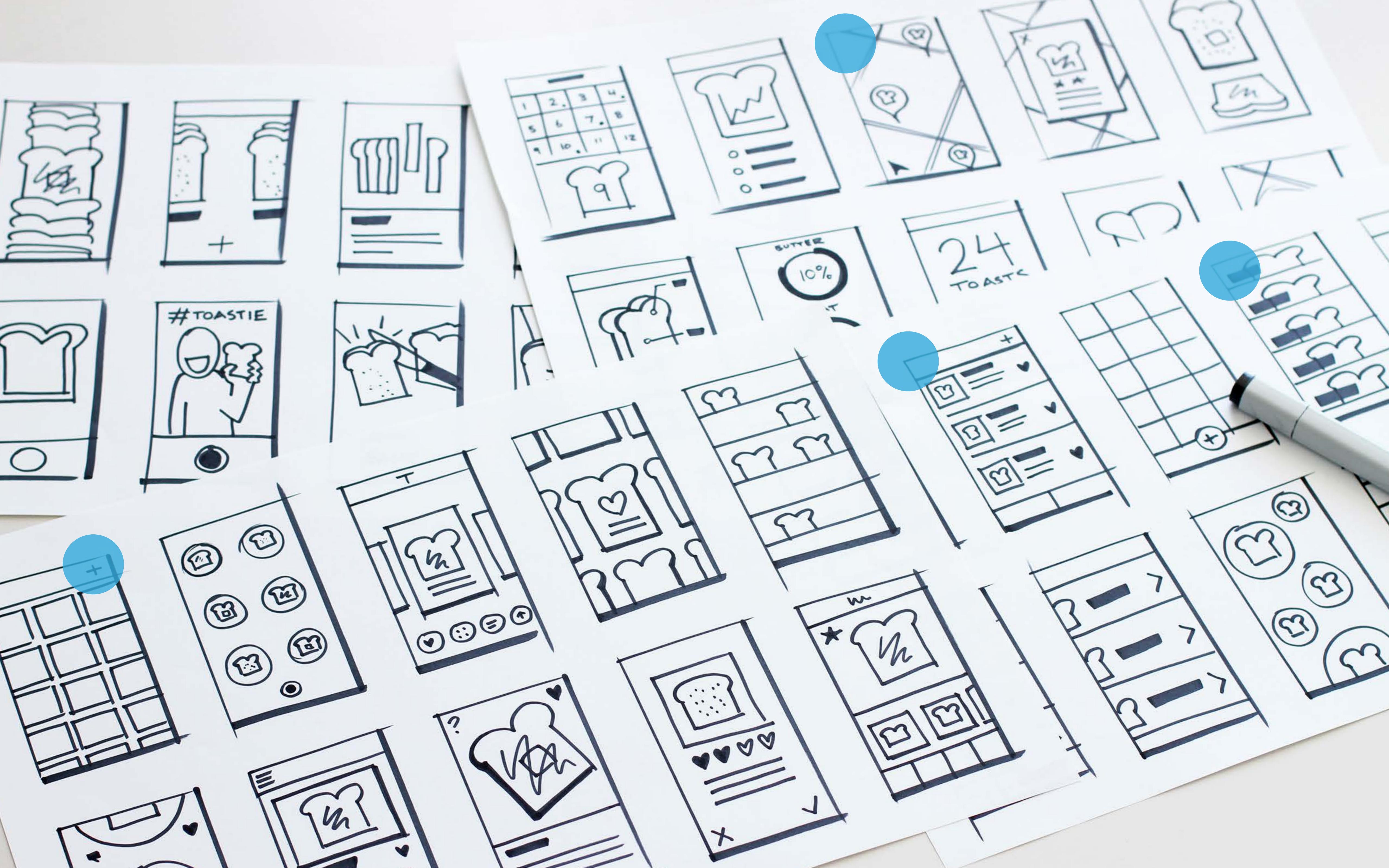












Make Fake Apps

Make Fake Apps

What needs to be more real?

Make Fake Apps

What needs to be more real?

How these ideas will look on the screen in your hand

Make Fake Apps

What needs to be more real?

How these ideas will look on the screen in your hand

What can we fake?

Make Fake Apps

What needs to be more real?

How these ideas will look on the screen in your hand

What can we fake?

Photos, text, icons

Make Fake Apps

What needs to be more real?

How these ideas will look on the screen in your hand

What can we fake?

Photos, text, icons

Where will we use it?

Make Fake Apps

What needs to be more real?

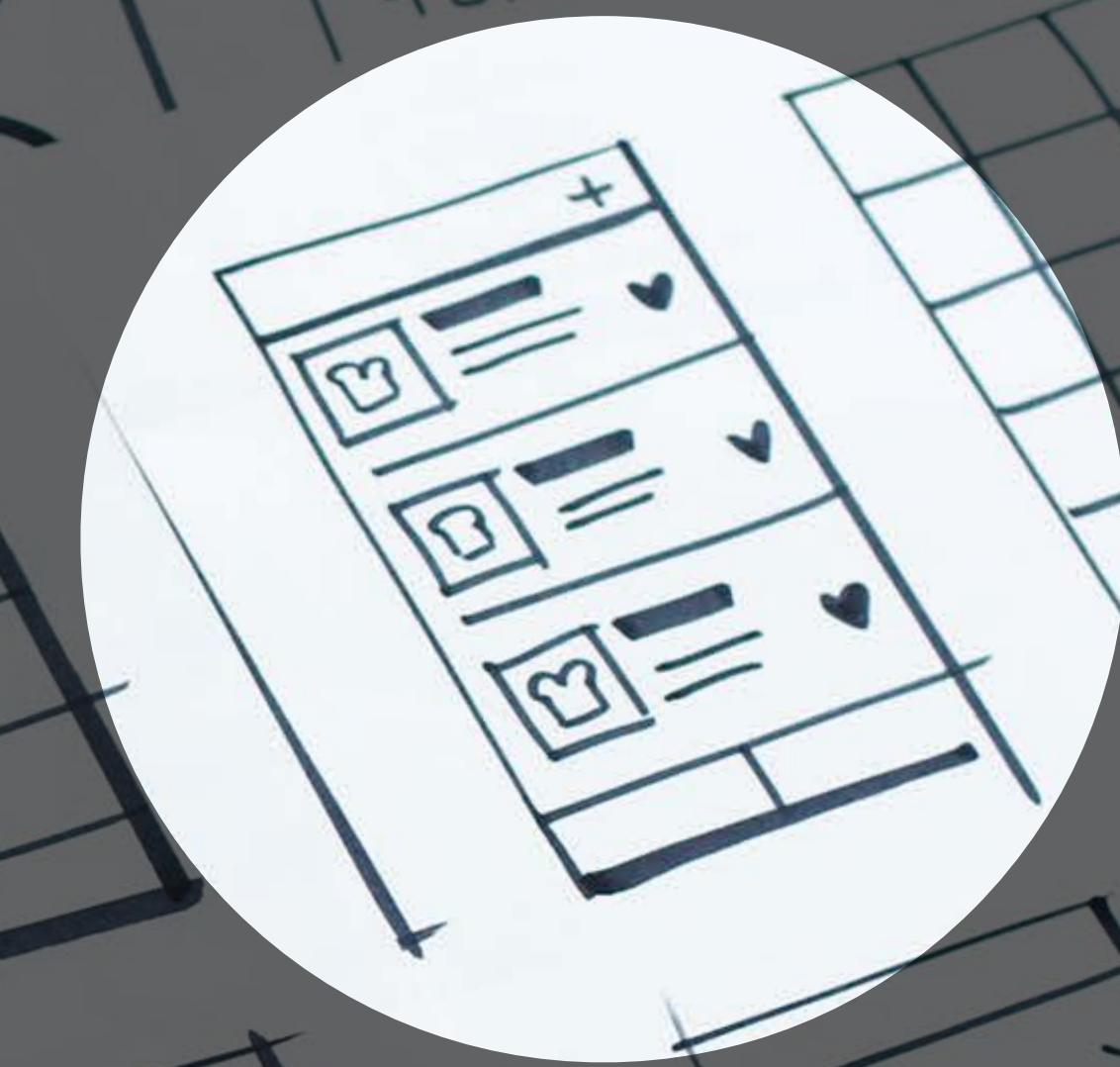
How these ideas will look on the screen in your hand

What can we fake?

Photos, text, icons

Where will we use it?

On an iPhone, outside



•••••

9:41 AM

100% 

Store

Artists

A



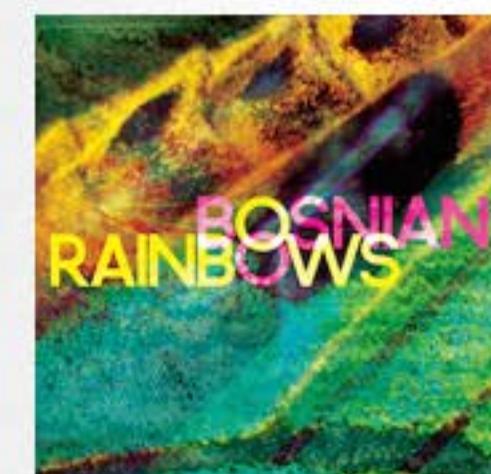
At the Drive-In

1 album, 13 songs



Austra

1 album, 13 songs



Bosnian Rainbows

1 album, 11 songs



The Civil Wars

1 album, 12 songs

Q
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Radio



Genius



Playlists



Artists

...
More



9:41 AM

100%

Store

Artists

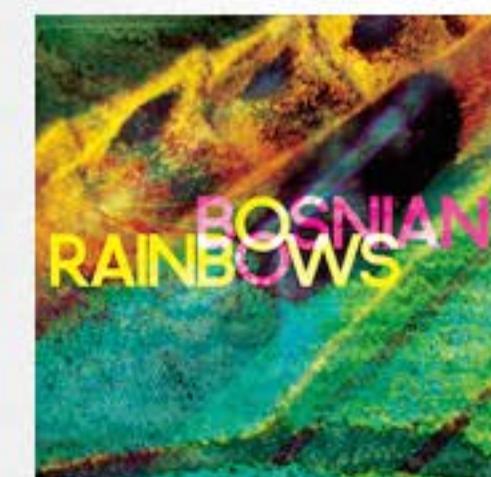
A

**At the Drive-In**

1 album, 13 songs

**Austra**

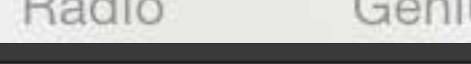
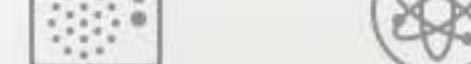
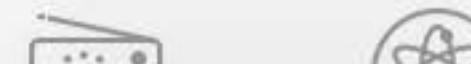
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Radio

Genius

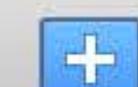
Playlists

Artists

More



50%

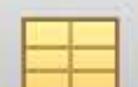


View

Zoom



Play



Table



Chart



Text



Shape



Media



Comment



Share



Tips



Format



Animate



Document

••••• Wi-Fi 9:41 AM 100%

Store Artists

A

At the Drive-In
1 album, 13 songs

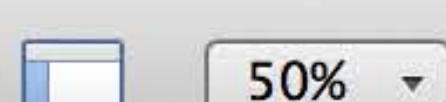
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Radio Genius Playlists Artists More



50%



View

Zoom



Play



Table



Chart



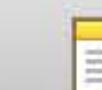
Text



Shape



Media



Comment



Share



Tips



Format



Animate



Document

The screenshot shows a Spotify mobile application interface. At the top, there's a navigation bar with icons for View, Zoom, Add Slide, Play, Table, Chart, Text, Shape, Media, Comment, Share, Tips, Format, Animate, and Document. A sidebar on the left contains letters A through Z, a search bar, and a battery icon at 0%.

The main content area displays a search result for "The Civil Wars". It includes a small album cover image of the band, the artist name "The Civil Wars", and the text "1 album, 12 songs". Below this, there are several navigation icons: Radio, Genius, Playlists, Artists (which is highlighted in red), and More.



50%



Zoom



Add Slide



Play



Table



Chart



Text



Shape



Media



Comment



Share



Tips



Format



Animate



Document

••••• Wi-Fi 9:41 AM 100%

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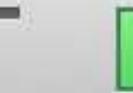
Radio Genius Playlists Artists More



50%



Zoom



View

Zoom

Add Slide

Play

Table

Chart

Text

Shape

Media

Comment

Share

Tips



••••• Wi-Fi 9:41 AM 100%

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Radio Genius Playlists Artists More



50%



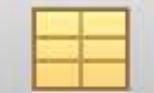
Zoom



Add Slide



Play



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Radio Genius Playlists Artists More



50%



Zoom



Play



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Radio Genius Playlists Artists More

View

50% ▾

+

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Play

Table

Chart

T

Shape

Media

Comment

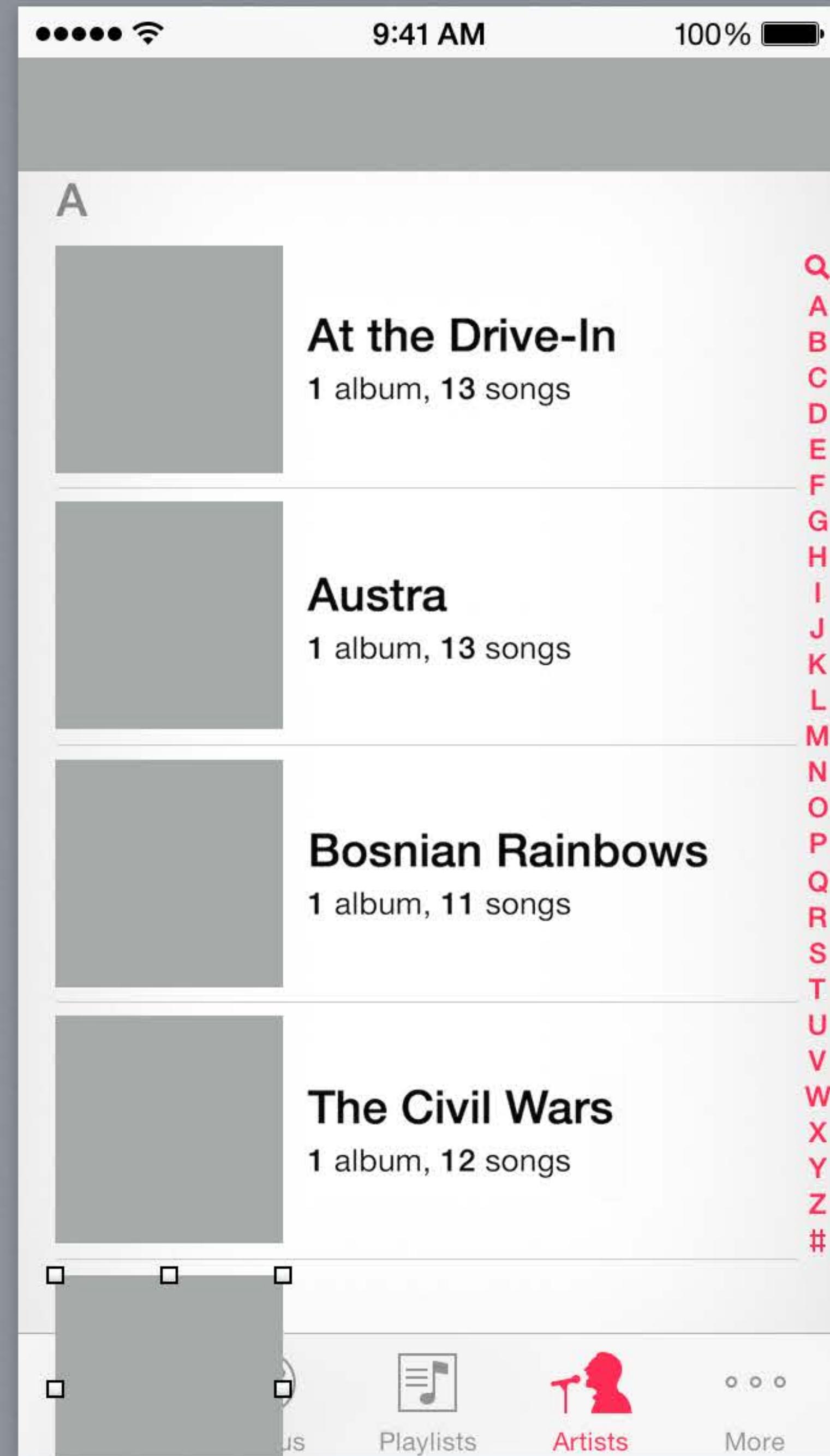
Share

?

Format

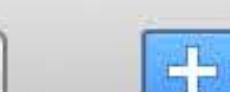
Animate

Document





50%



View

Zoom



Add Slide



Play



Table



Chart



Text



Shape



Media



Comment



Share



Tips



Format



Animate



Document

The screenshot shows a mobile application interface for searching artists. At the top, there is a status bar with signal strength, the time (9:41 AM), and battery level (100%). Below the status bar, the letters 'A' through 'Z' are listed vertically on the right side, each preceded by a small red square icon. The main content area displays four artist entries, each consisting of a gray square thumbnail, the artist's name in bold black text, and a subtitle indicating the number of albums and songs. A vertical scroll bar is visible on the right side of the content area. At the bottom, there are navigation icons for 'Home', 'Playlists', 'Artists' (which is highlighted in red), and 'More'.

Artist	Albums	Songs
At the Drive-In	1 album	13 songs
Austra	1 album	13 songs
Bosnian Rainbows	1 album	11 songs
The Civil Wars	1 album	12 songs



50%



View

Zoom



Play



Table



Chart



Text



Shape



Media



Comment



Share



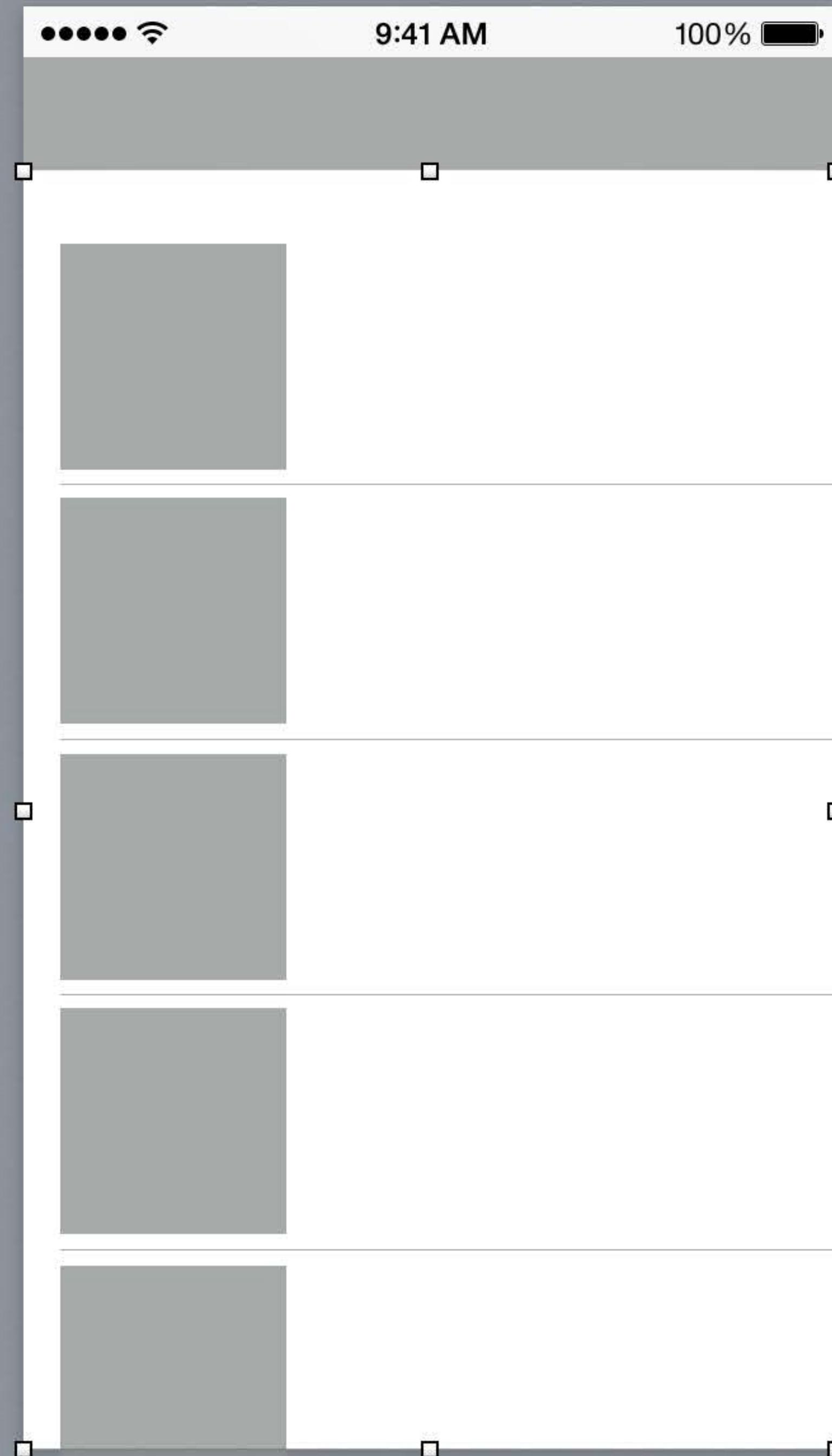
Tips

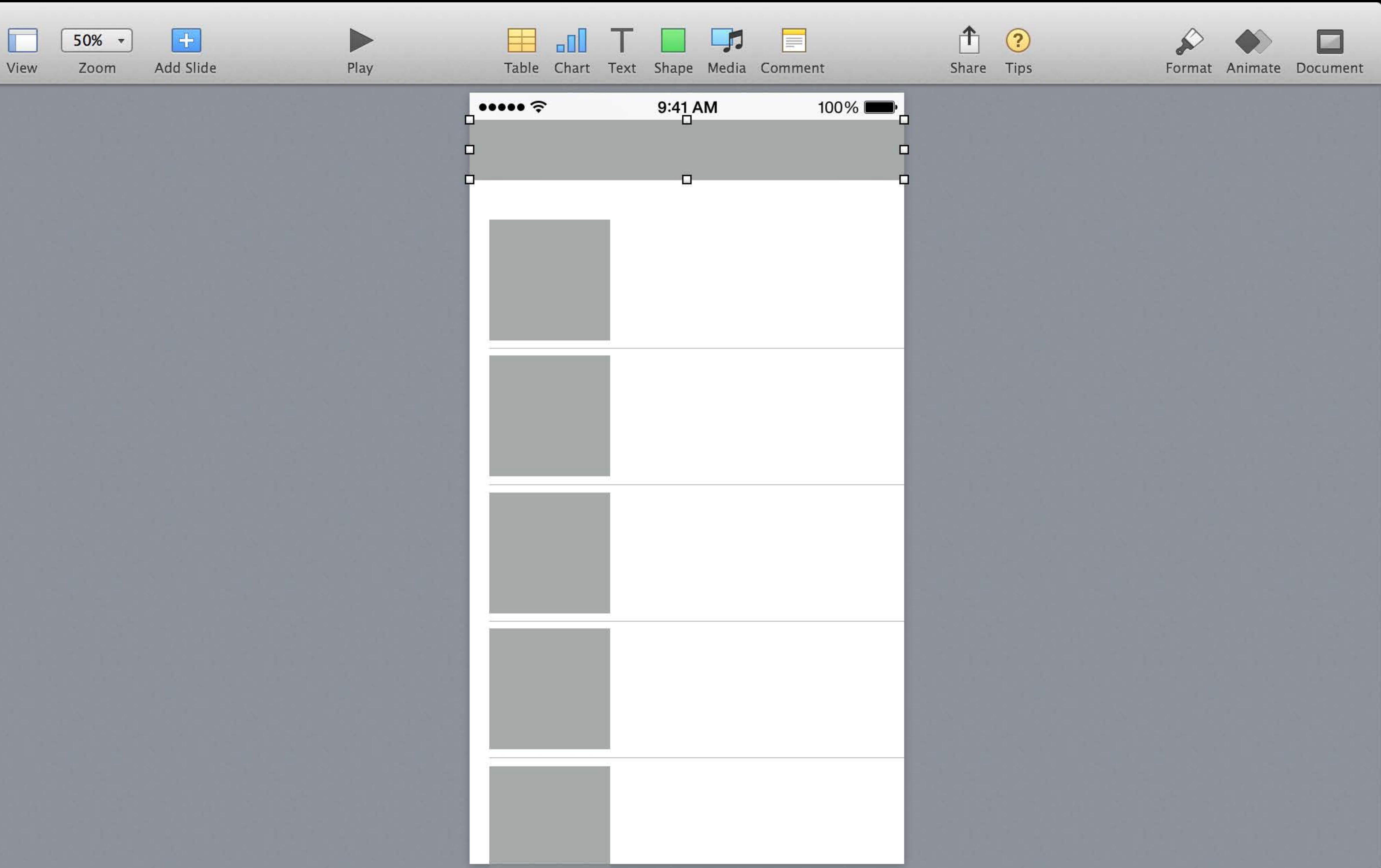


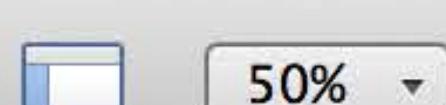
Format



Animate







50%



View

Zoom



Play



Table



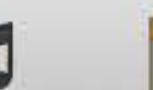
Chart



Text



Shape



Media



Comment



Share



Tips



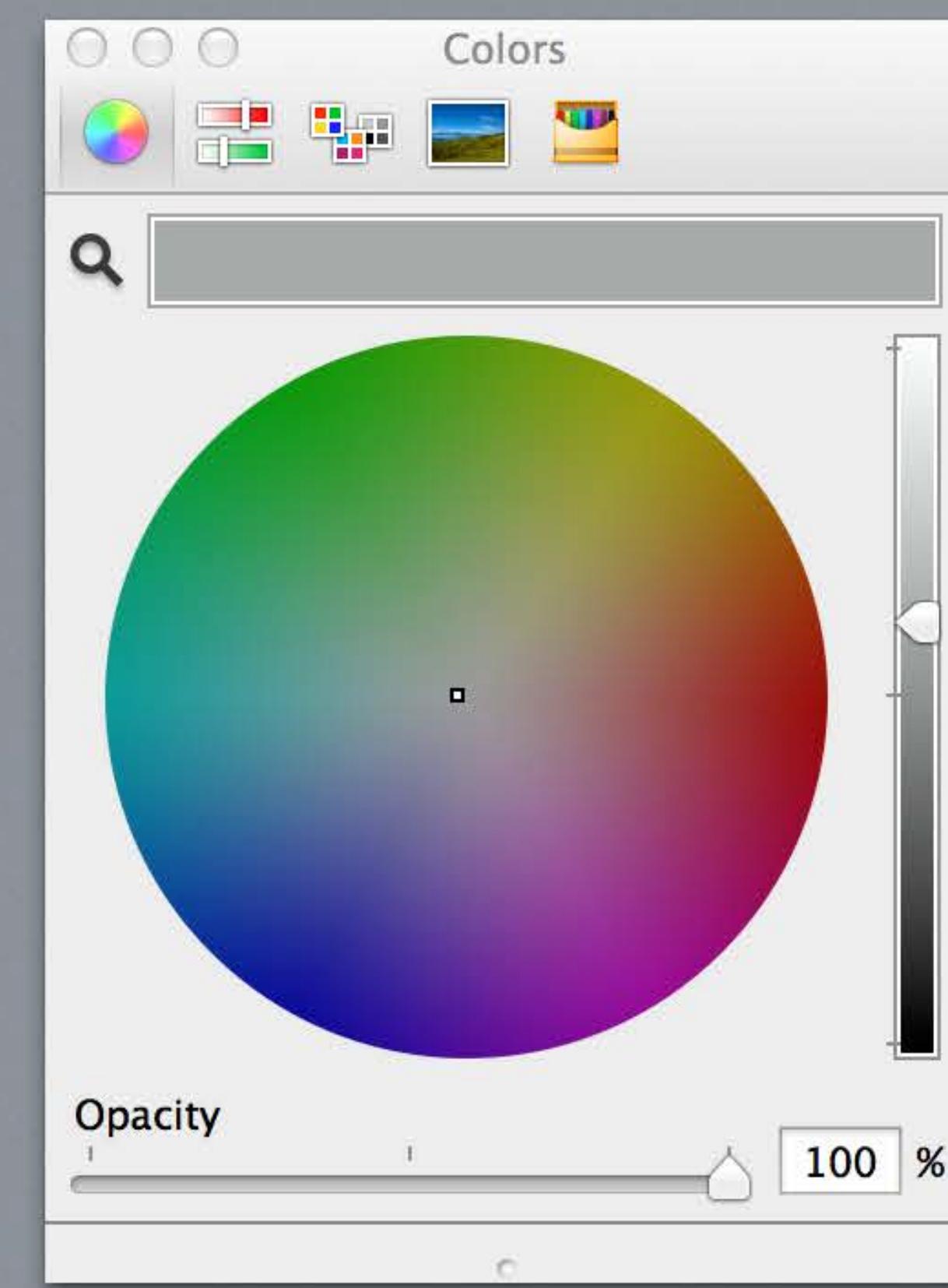
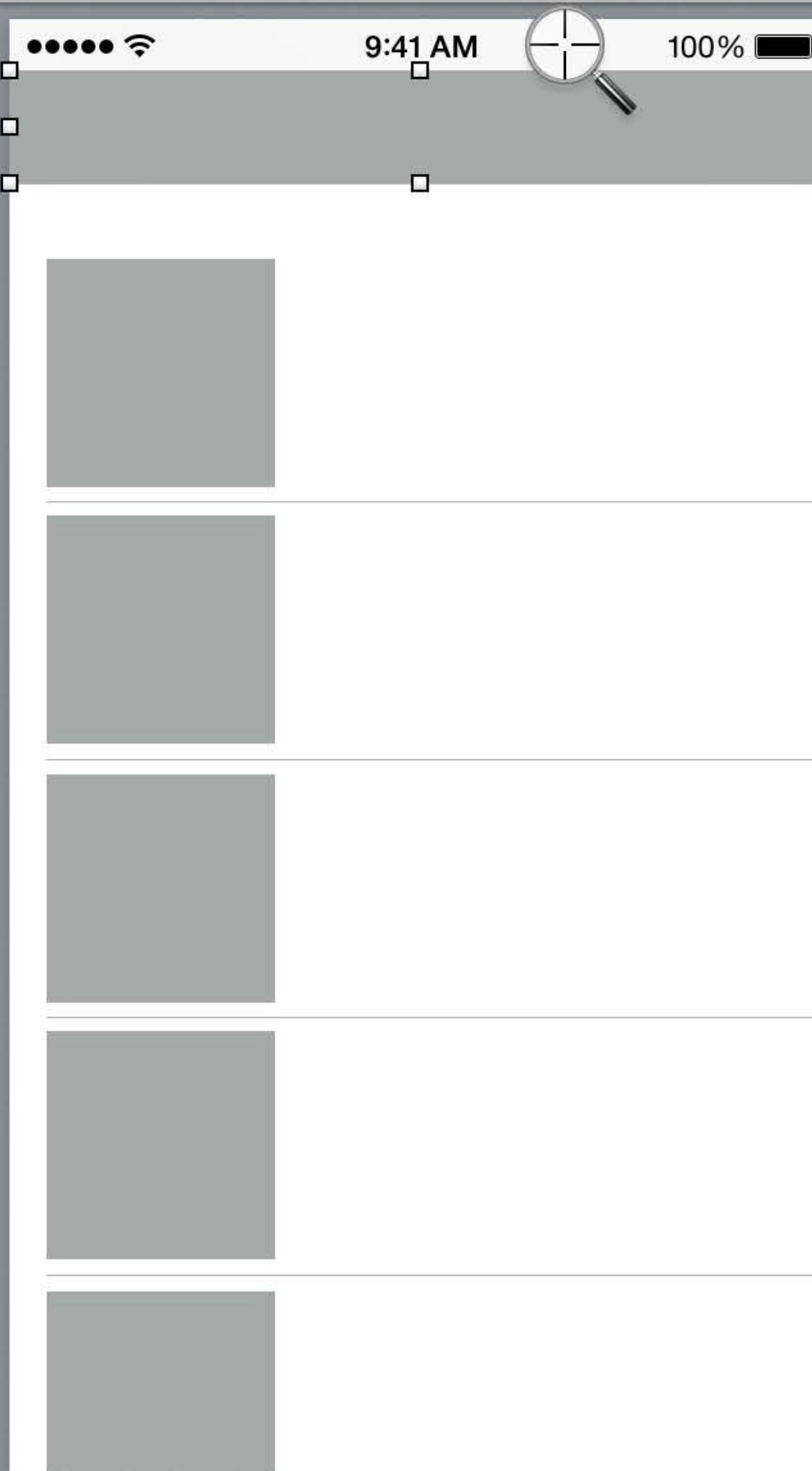
Format

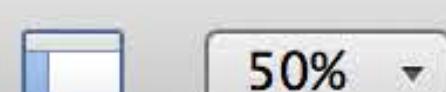


Animate



Document



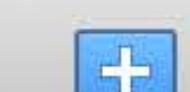


50%



View

Zoom



Add Slide



Play



Table



Chart



Text



Shape



Media



Comment



Share



Tips



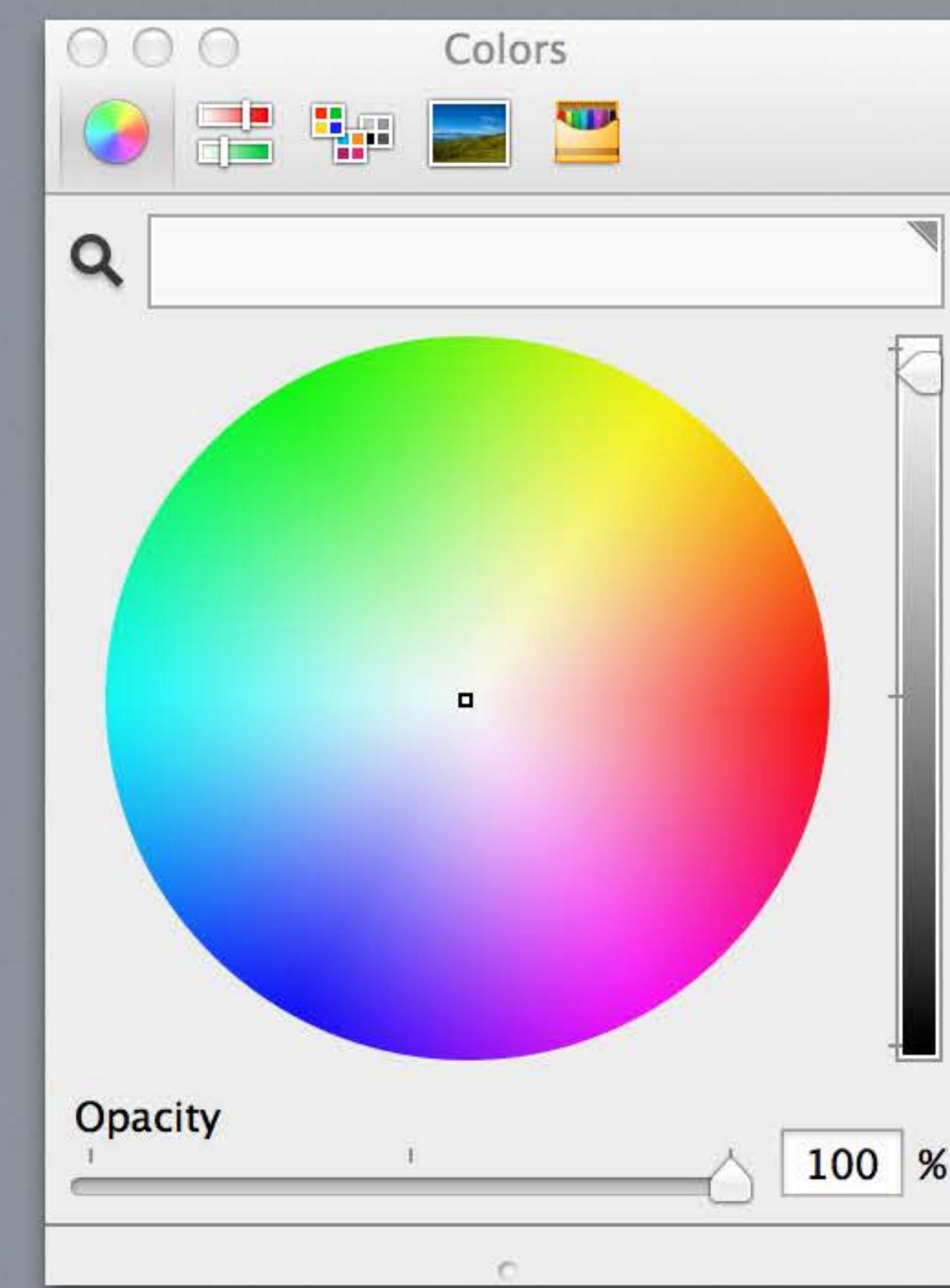
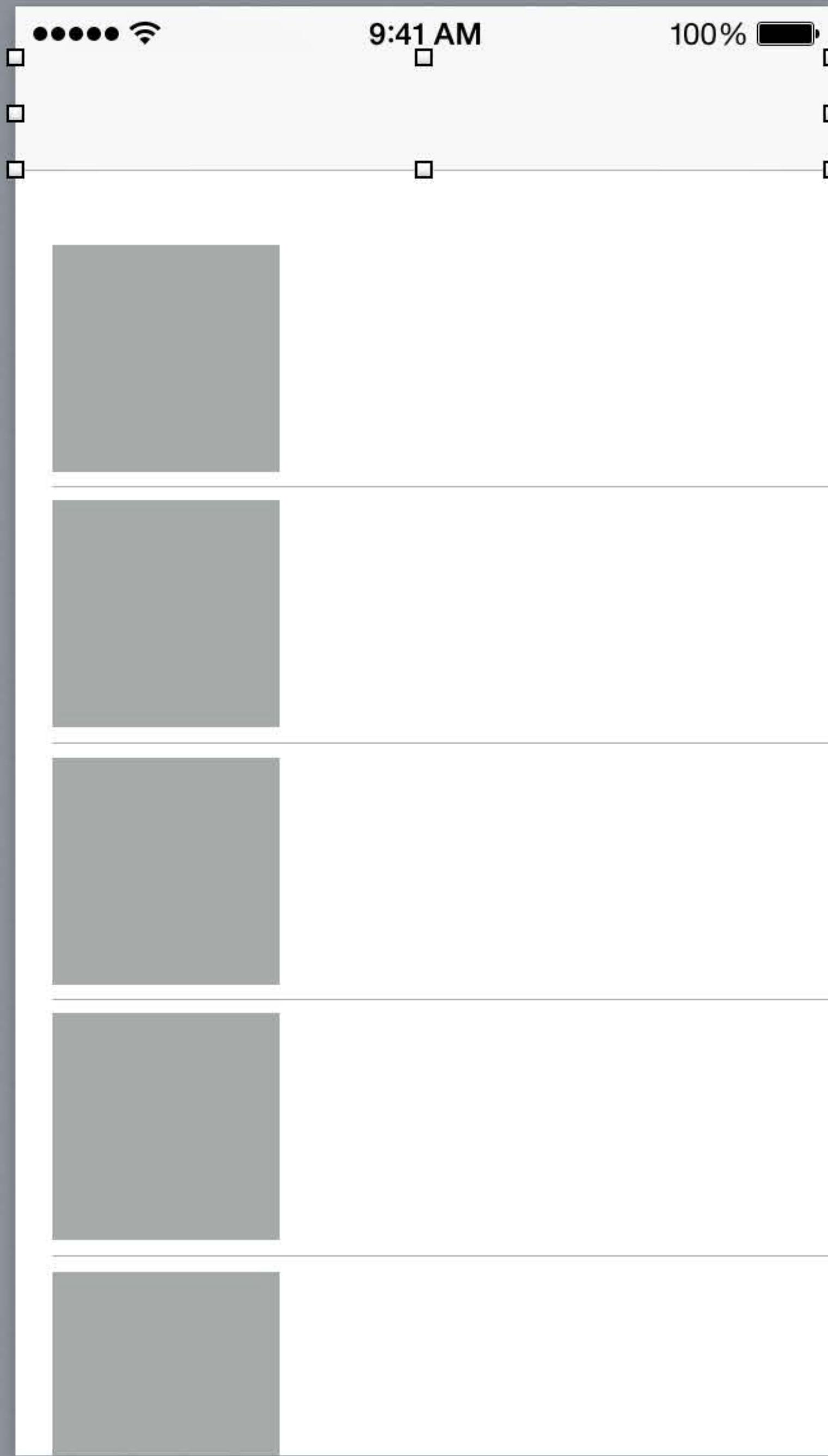
Format

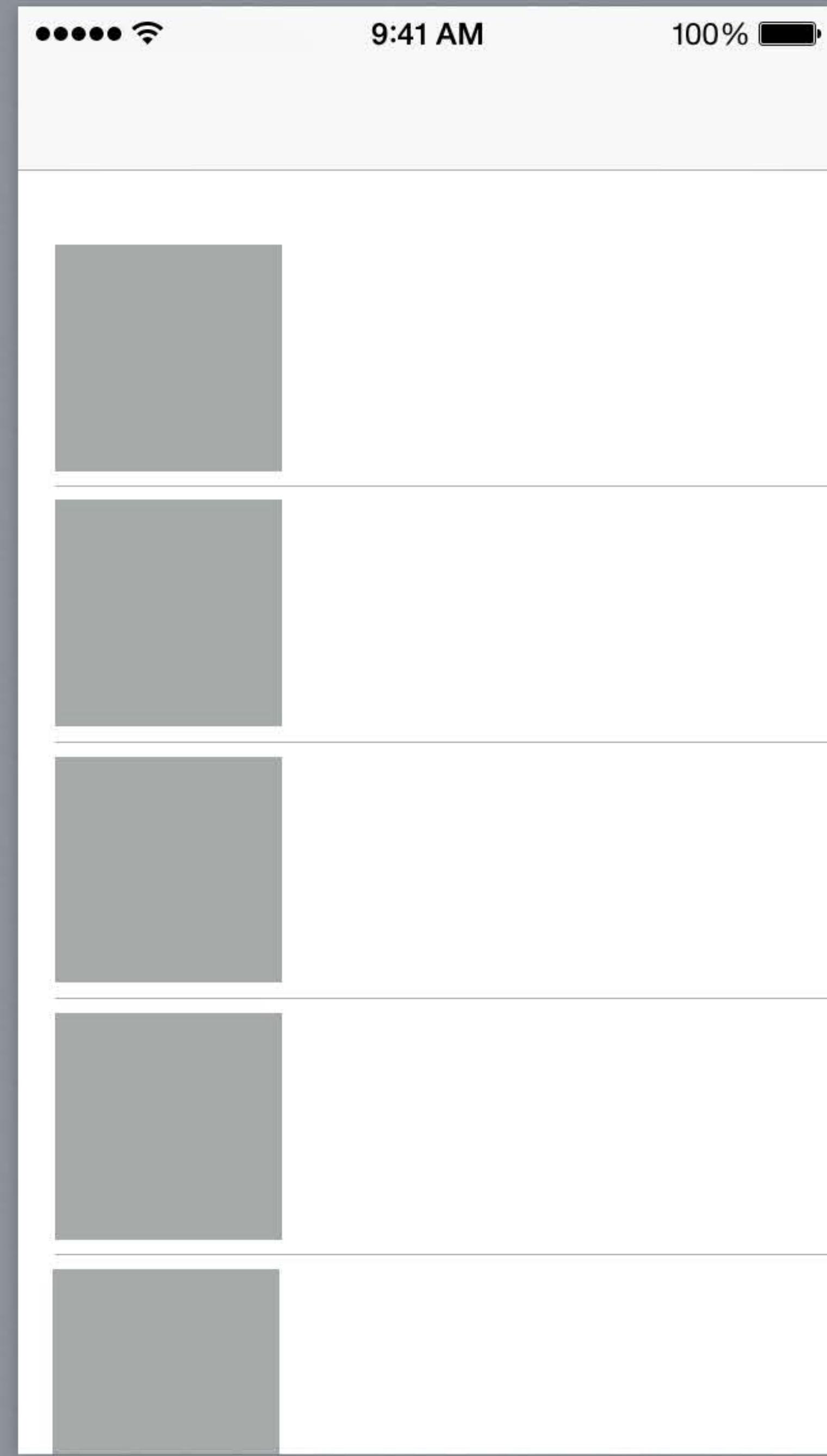


Animate



Document







50%



View

Zoom

Add Slide



Table

Chart

Text

Shape

Media

Comment

Share

Tips



Photos

Music

Movies



Classic Cronuts

Daily Duffins

Celebratory Cragels

Daily Dookies

Periodic Pakes

Today's Toasts





50%

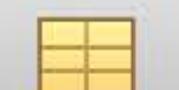


View

Zoom



Play



Table



Chart



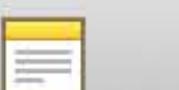
Text



Shape



Media



Comment



Share



Tips



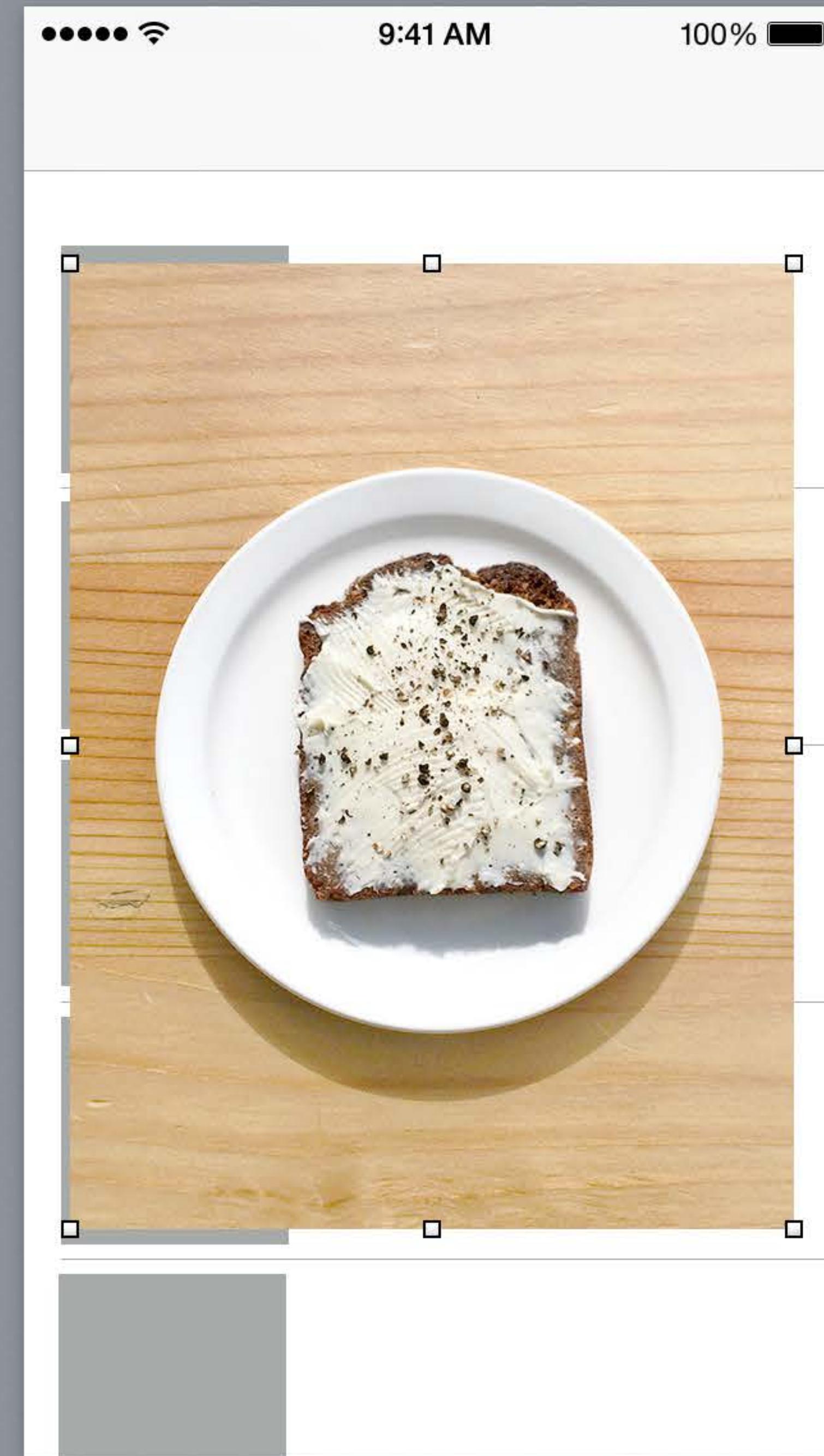
Format



Animate



Document





Keynote

File

Edit

Insert Slide

Format

Arrange

View

Play

Share

Window

Help

Linda Dong



50%



View

Zoom

Add Slide

Play

Font

Text

Table

Chart

Shapes and Lines

Image

Movie

Copy Style

Paste Style

Copy Animation

Paste Animation

Conditional Highlighting...

Add Link

Remove Link

Reapply Master to Selection

Advanced



Comment

Share



Edit Mask

Reset Mask

Mask With Shape

Instant Alpha

Remove Instant Alpha

Rectangle

Rounded Rectangle

Oval

Triangle

Right Triangle

Arrow

Double Arrow

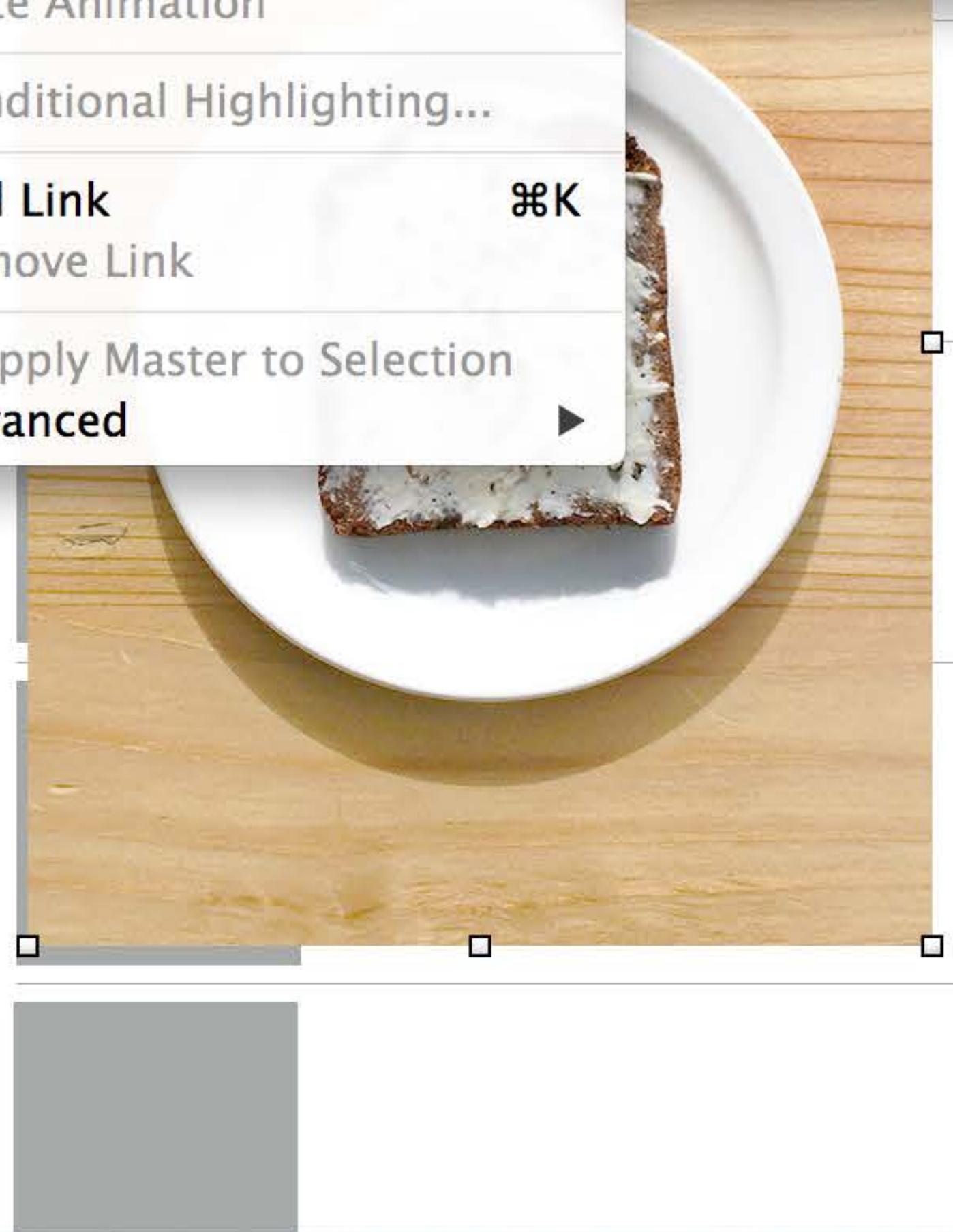
Diamond

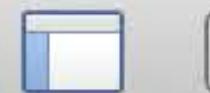
Quote Bubble

Callout

Star

Polygon





50%

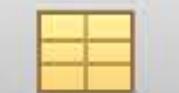


View

Zoom



Play



Table



Chart



Text



Shape



Media



Comment



Share



Tips



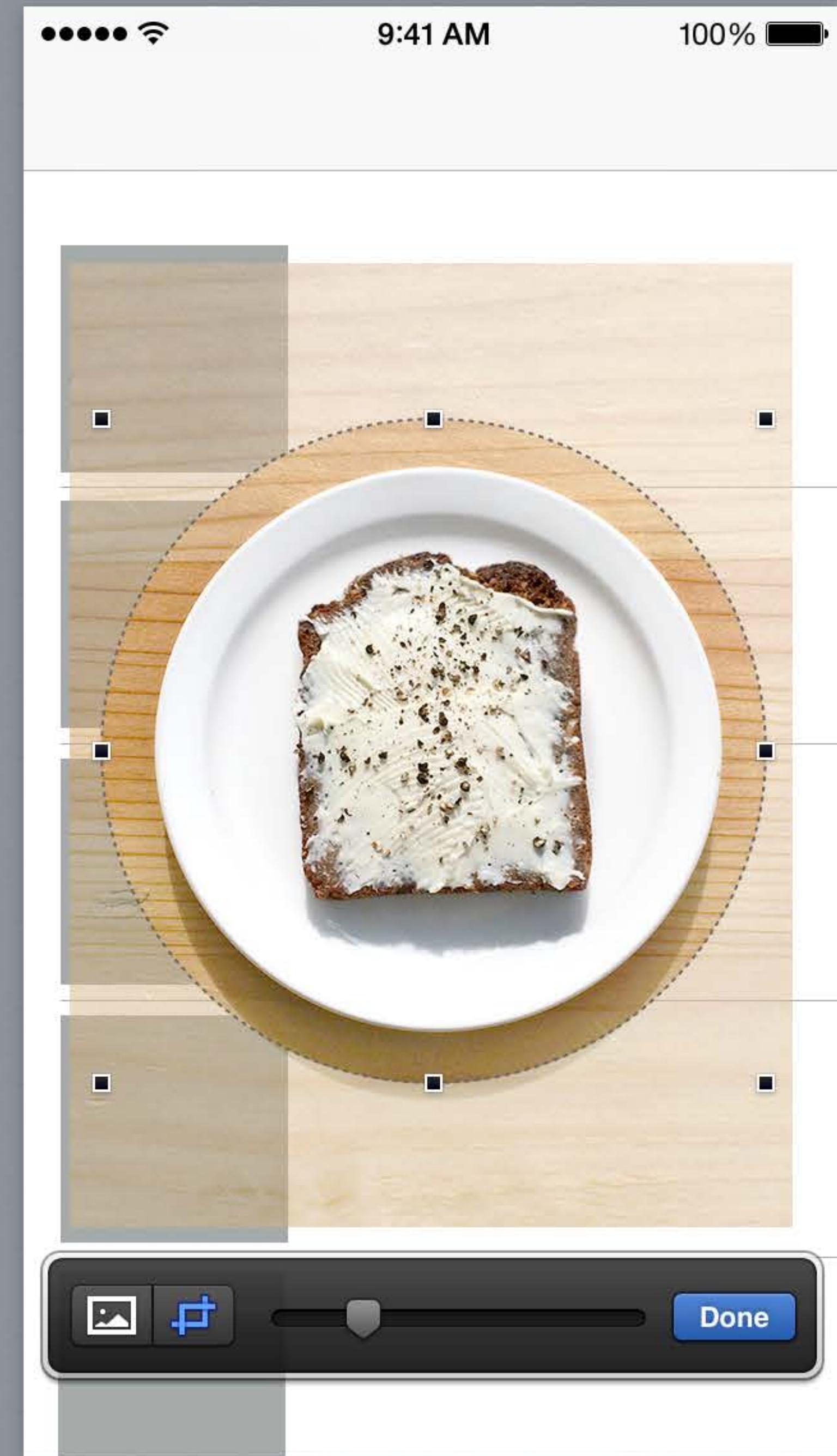
Format



Animate



Document





50%



View

Zoom



Play



Table



Chart



Text



Shape



Media



Comment



Share



Tips



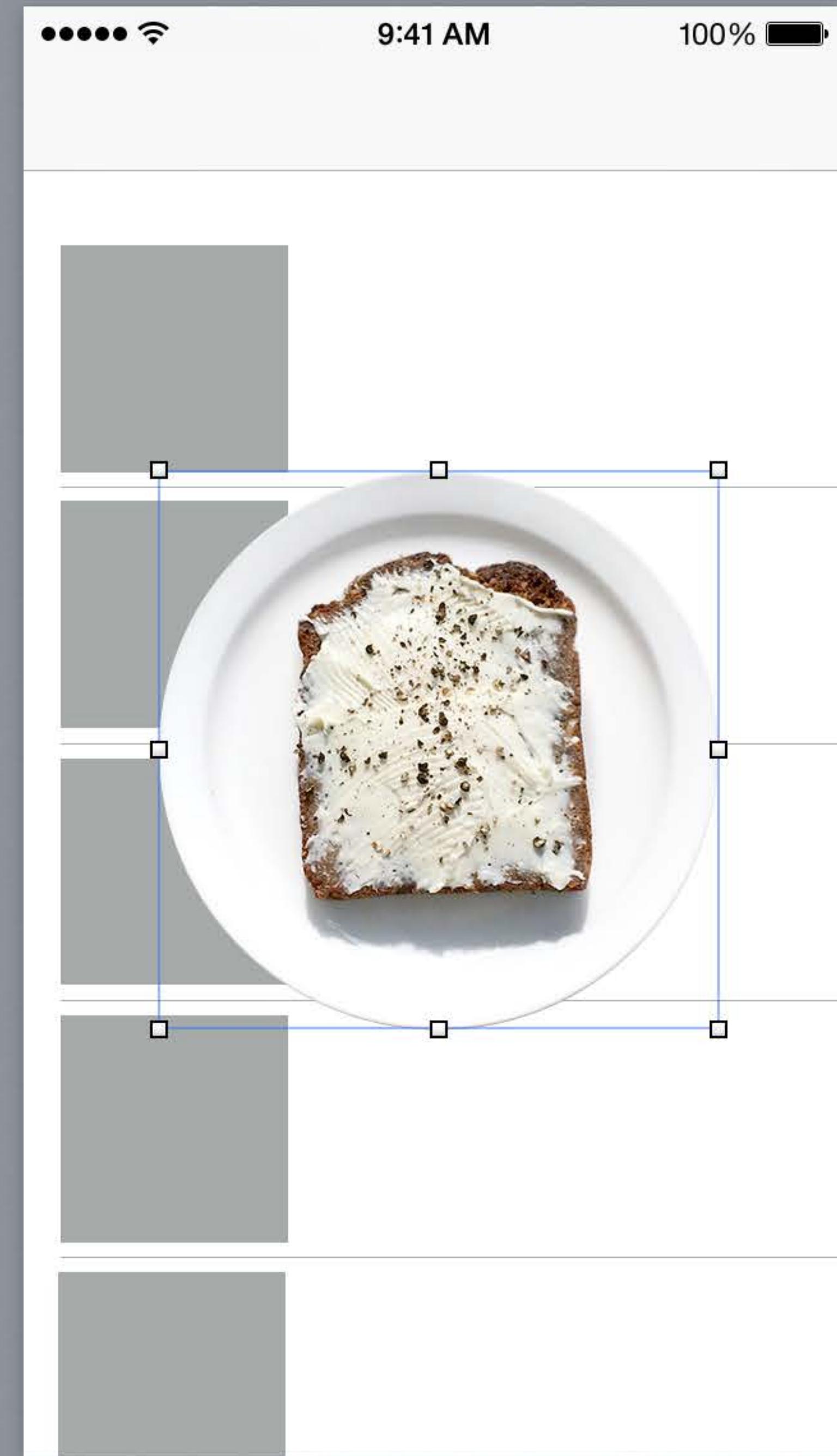
Format

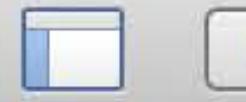


Animate



Document





50%



View

Zoom



Play



Table



Chart



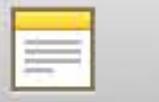
Text



Shape



Media



Comment



Share



Tips



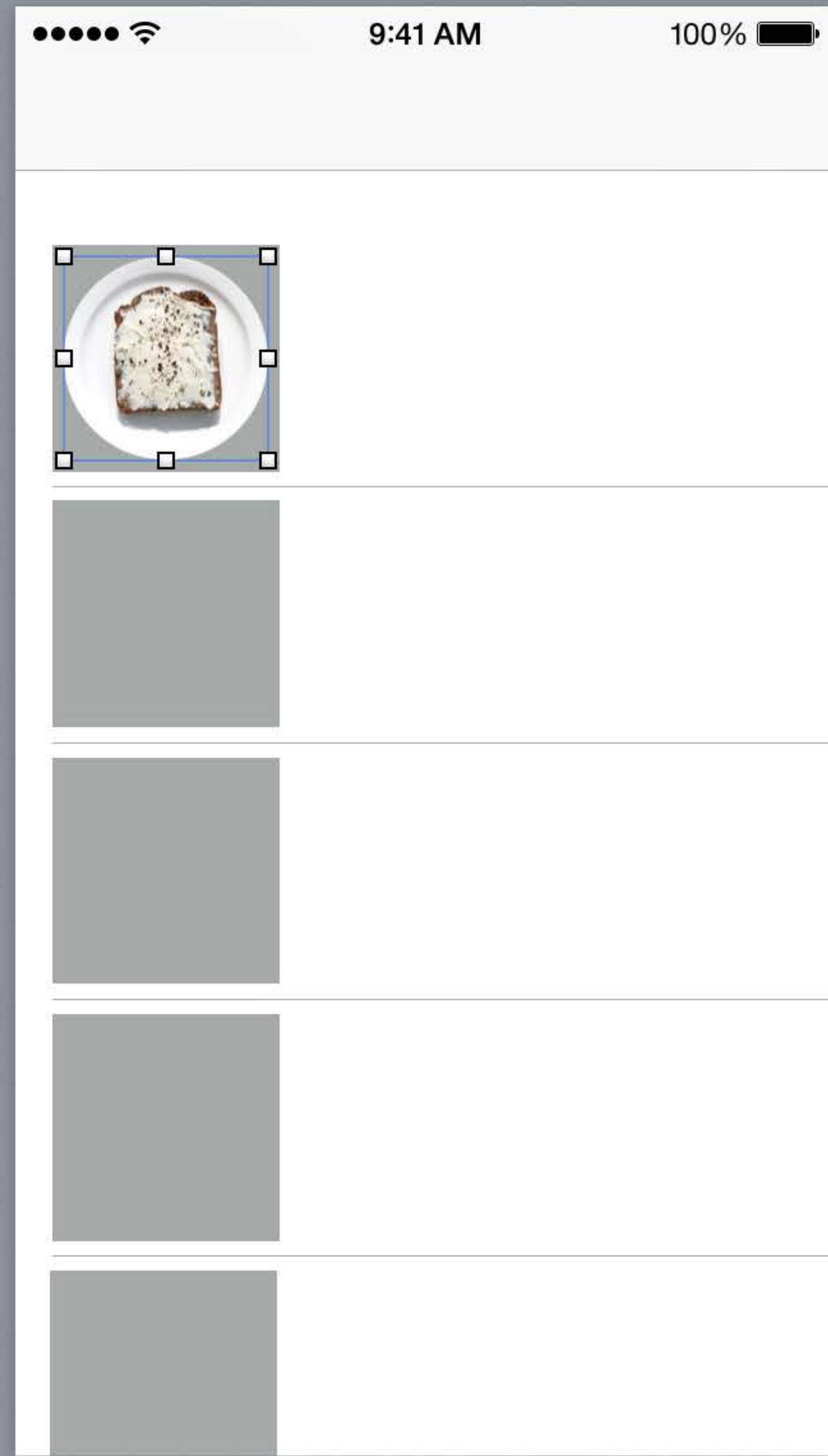
Format



Animate



Document





50%



View

Zoom

Add Slide



Play



Table



Chart



Text



Shape



Media



Comment



Share



Tips



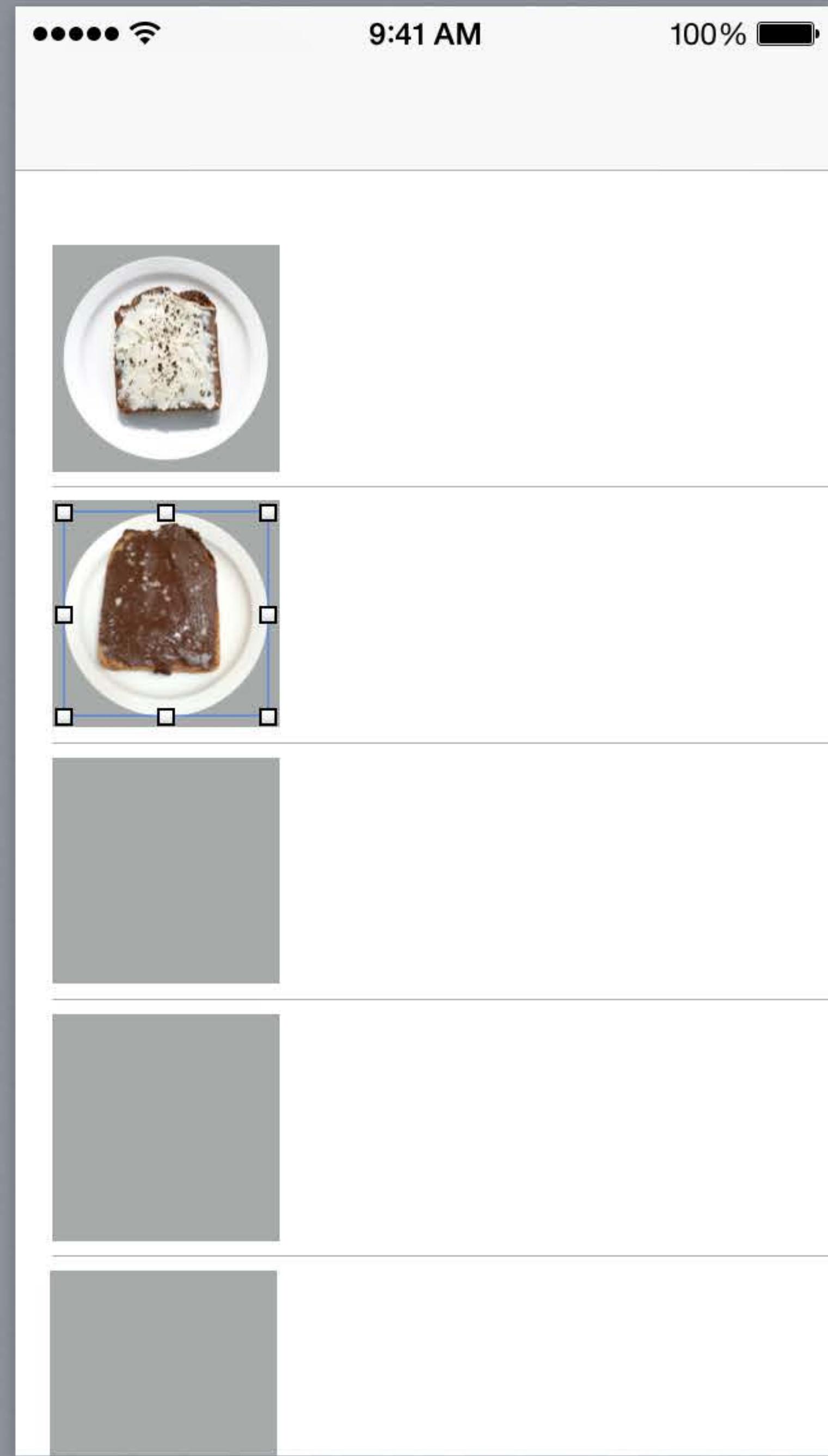
Format



Animate



Document





50%



View

Zoom



Play



Table



Chart



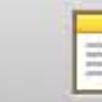
Text



Shape



Media



Comment



Share



Tips



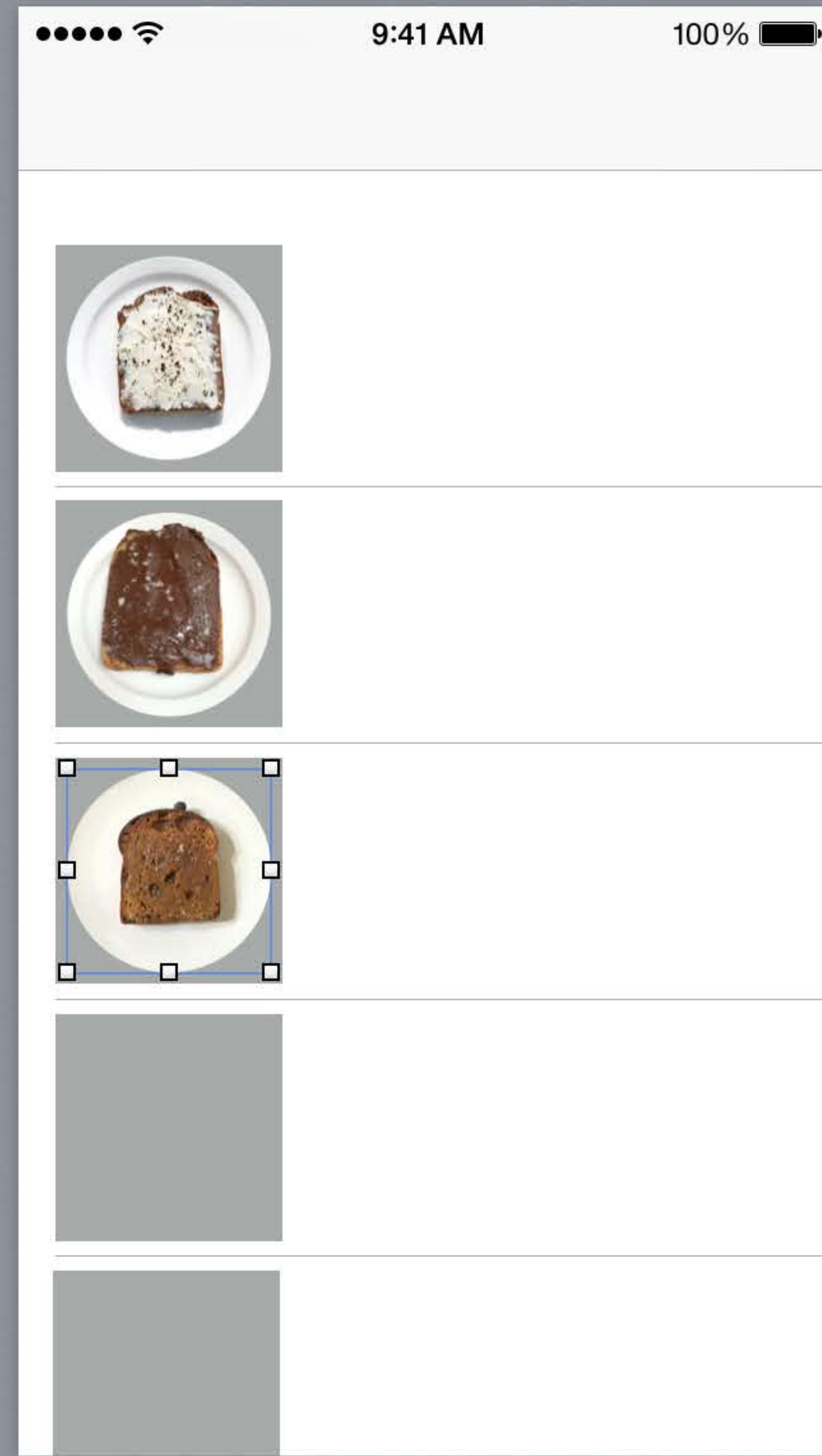
Format

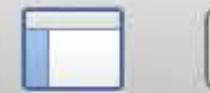


Animate

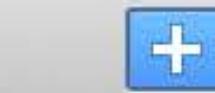


Document





50%



View

Zoom

Add Slide



Play



Table



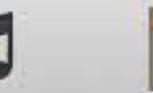
Chart



Text



Shape



Media



Comment



Share



Tips



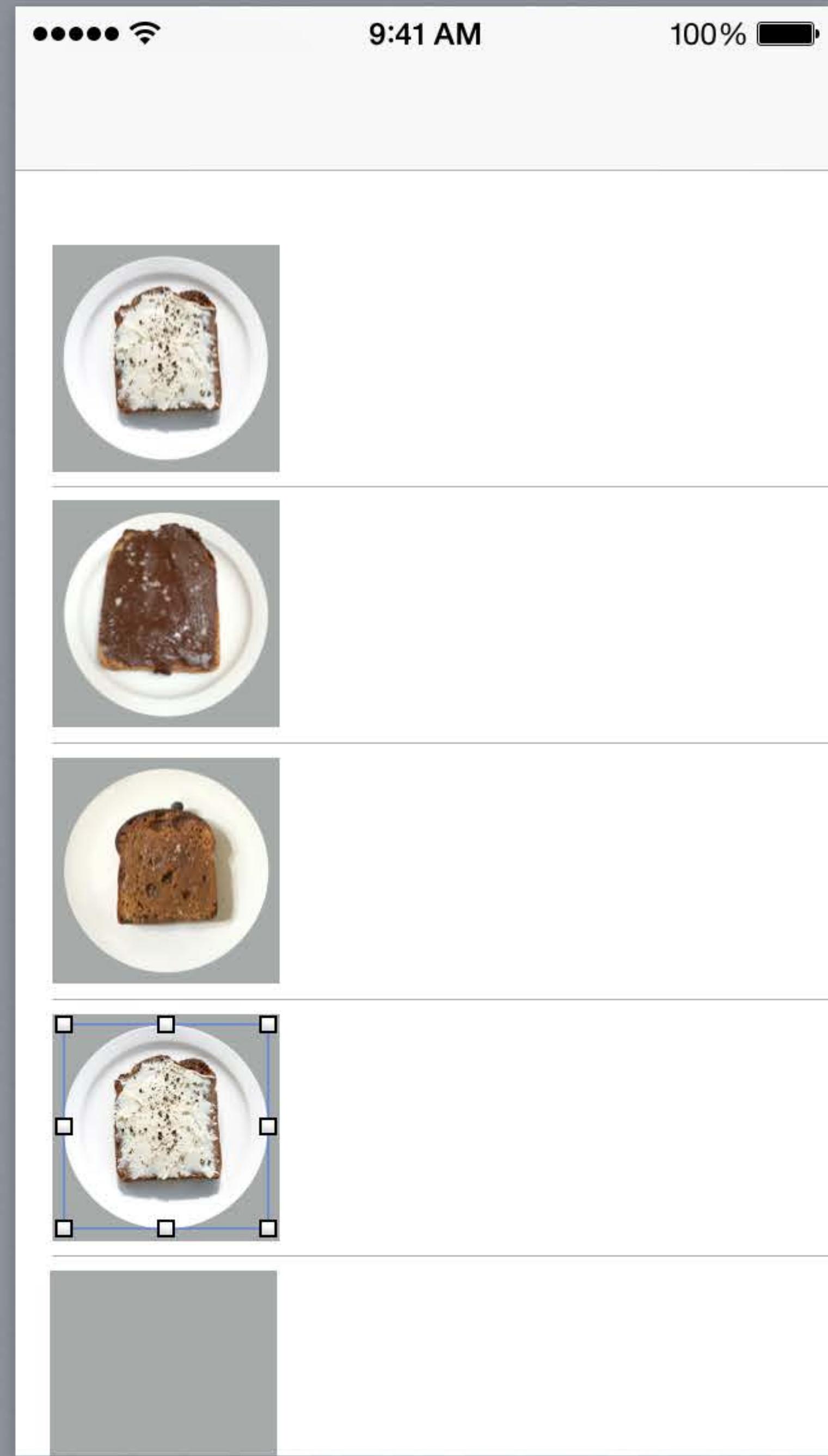
Format

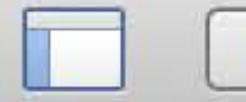


Animate



Document





50%



View

Zoom



Add Slide



Play



Table



Chart



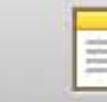
Text



Shape



Media



Comment



Share



Tips



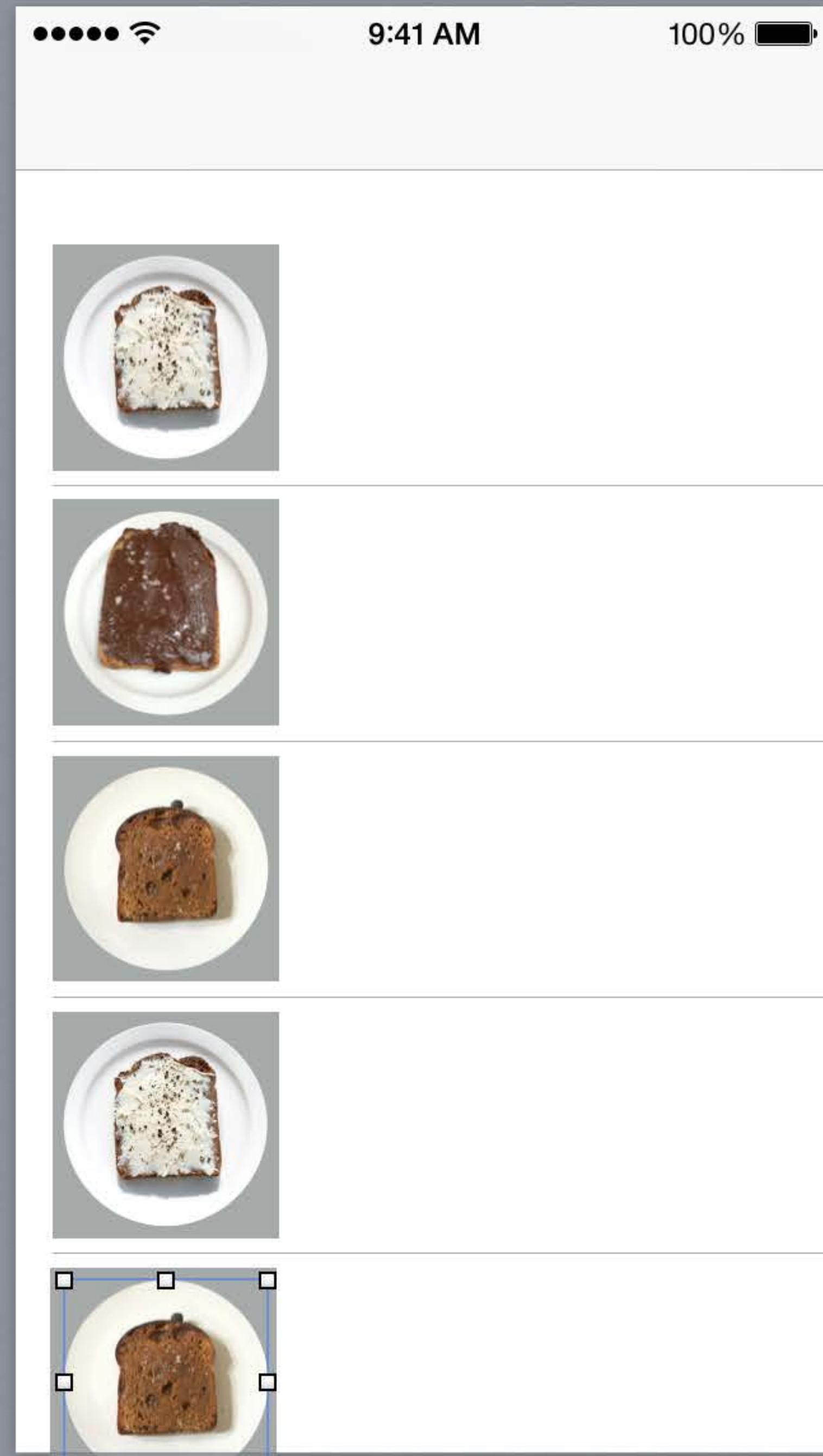
Format



Animate



Document





50%



View

Zoom



Play



Table



Chart



Text



Shape



Media



Comment



Share



Tips



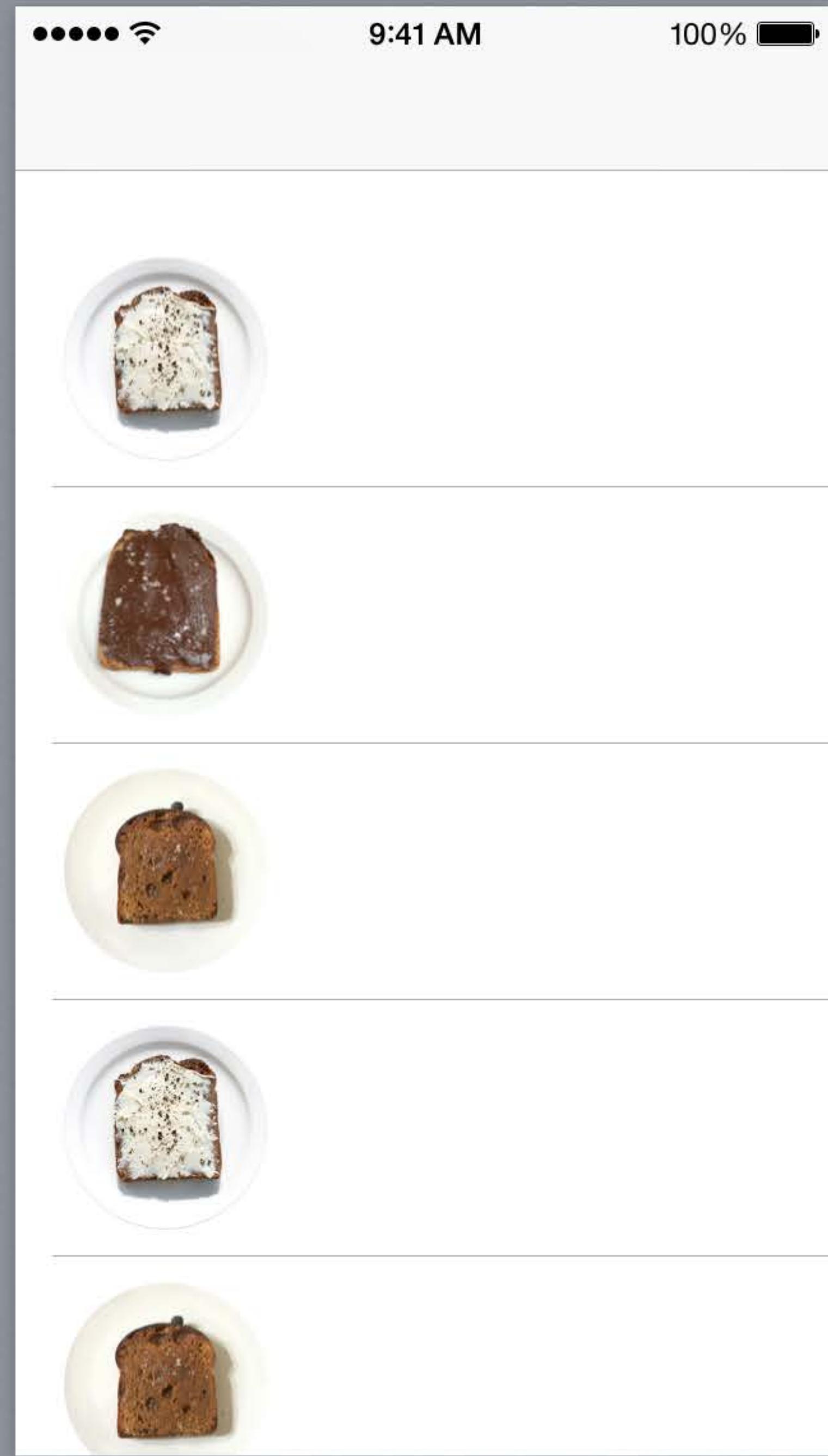
Format



Animate



Document



View

50%

Add Slide

Play

Table

Chart

Text

Shape

Media

Comment

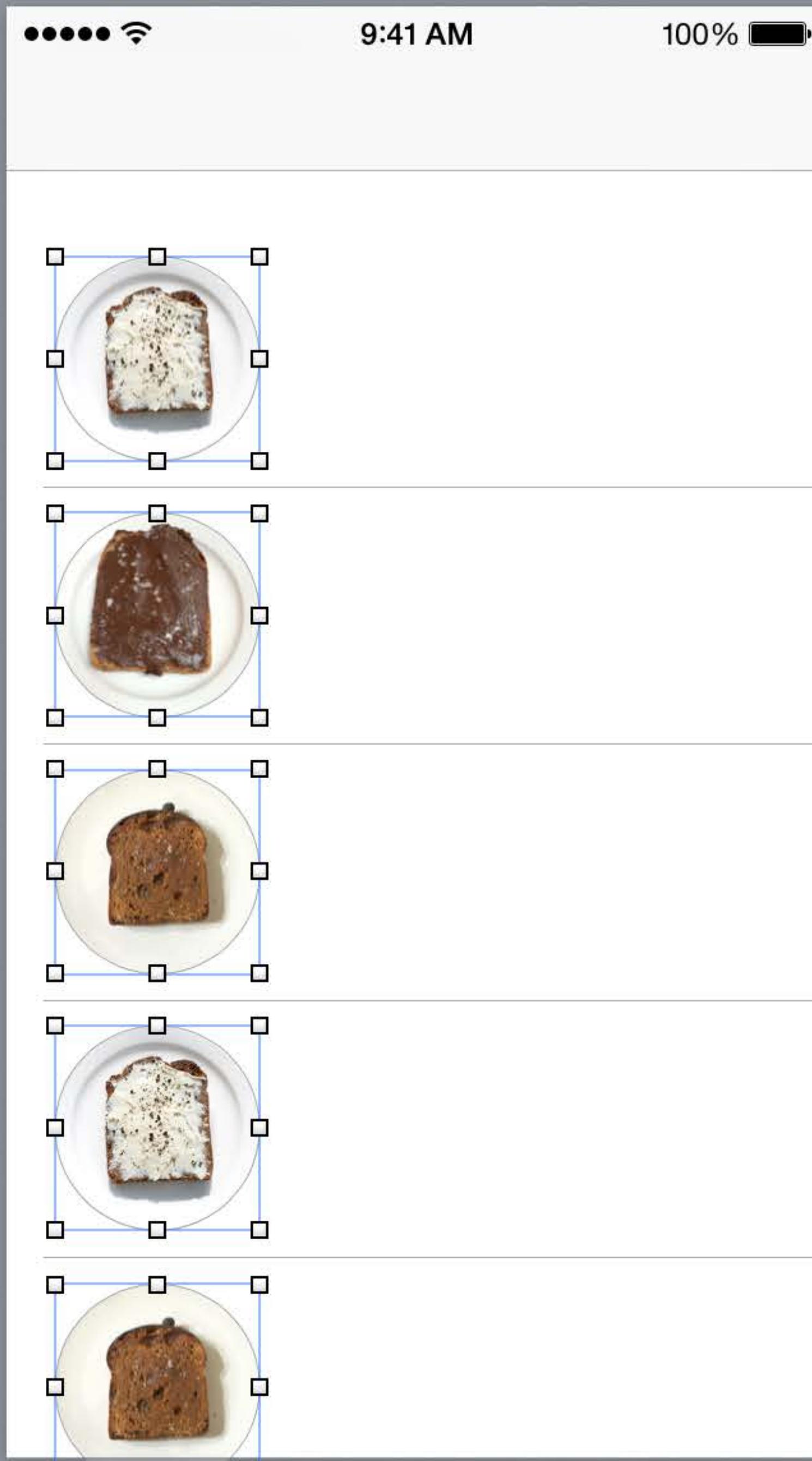
Share

Tips

Format

Animate

Document



Style Image Arrange

Image Styles

Border

Line

— 1 pt

Shadow

None

Reflection

Opacity

100%

A floating toolbar on the right side of the screen provides various styling options for the selected toast images. It includes tabs for 'Style', 'Image', and 'Arrange'. Under the 'Style' tab, there is a section for 'Image Styles' showing a grid of nine preview icons. Below this are sections for 'Border' (set to 'Line', '1 pt'), 'Shadow' (set to 'None'), 'Reflection' (unchecked), and 'Opacity' (set to '100%').



50%



View

Zoom



Play



Table



Chart



Text



Shape



Media



Comment



Share



Tips



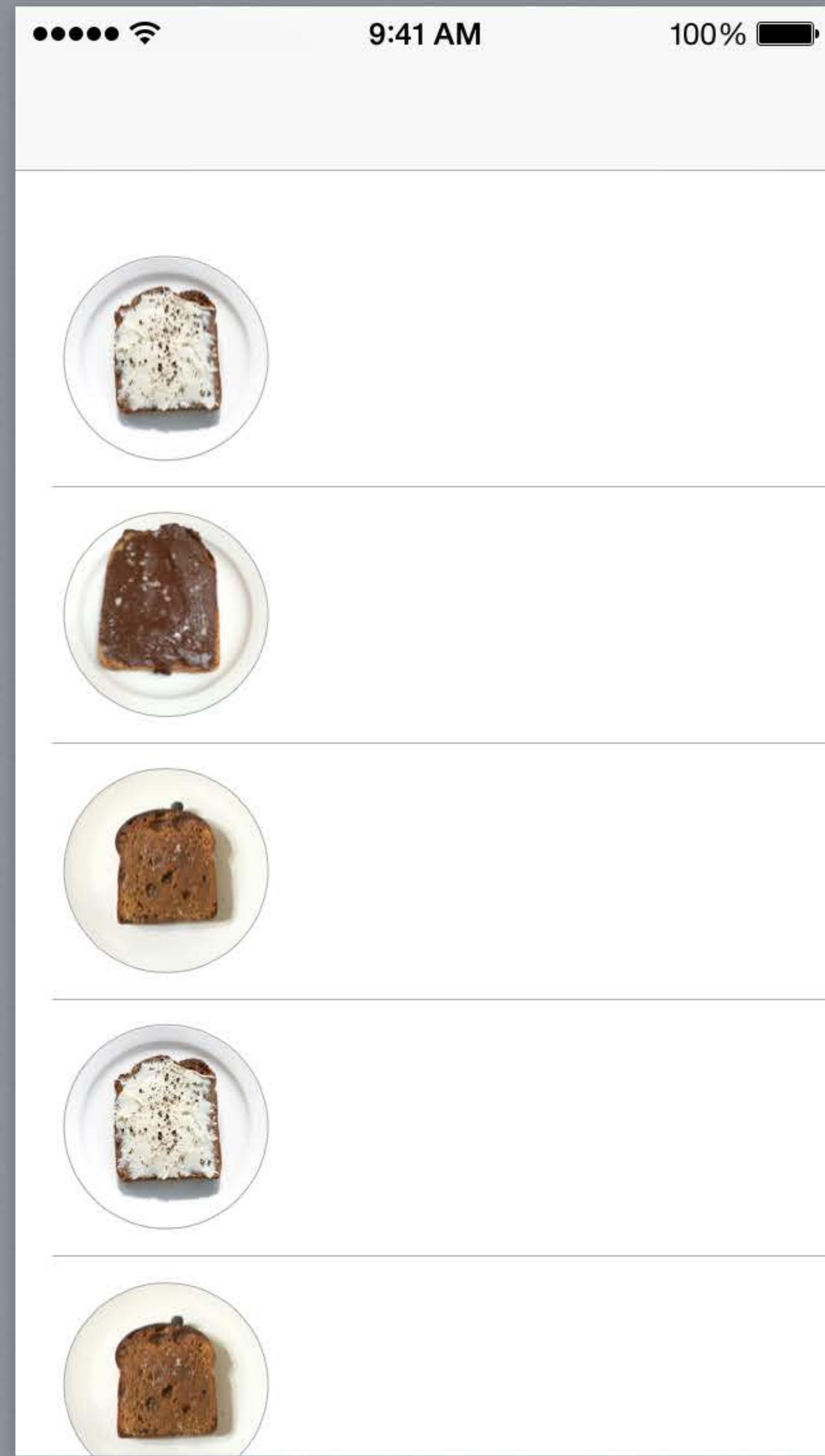
Format



Animate



Document





50%



View

Zoom

Add Slide



Table



Chart



Text



Shape



Media



Comment



Share



Tips



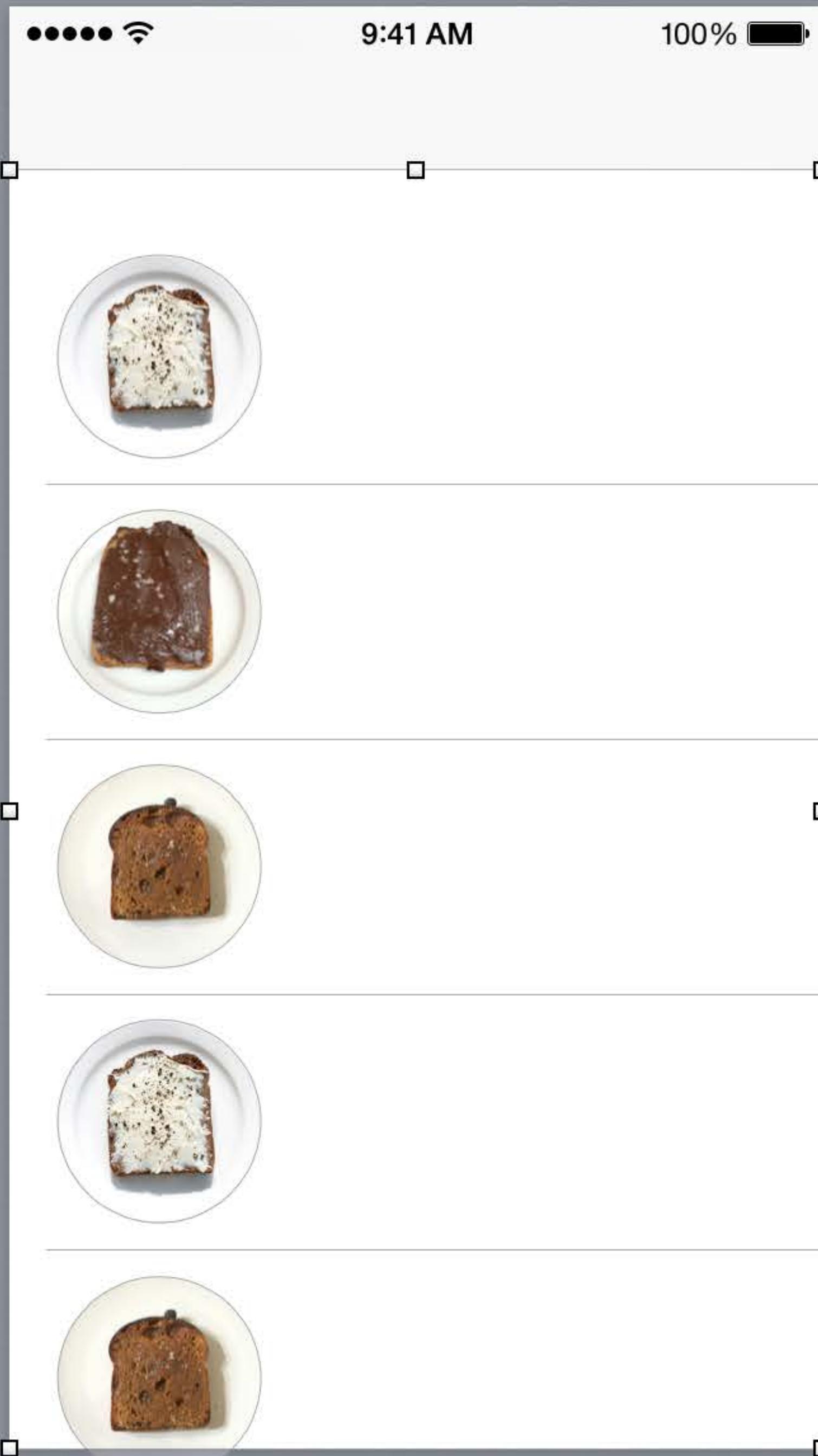
Format

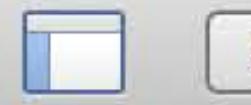


Animate



50%





50%

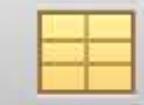


View

Zoom



Play



Table



Chart



Text



Shape



Media



Comment



Share



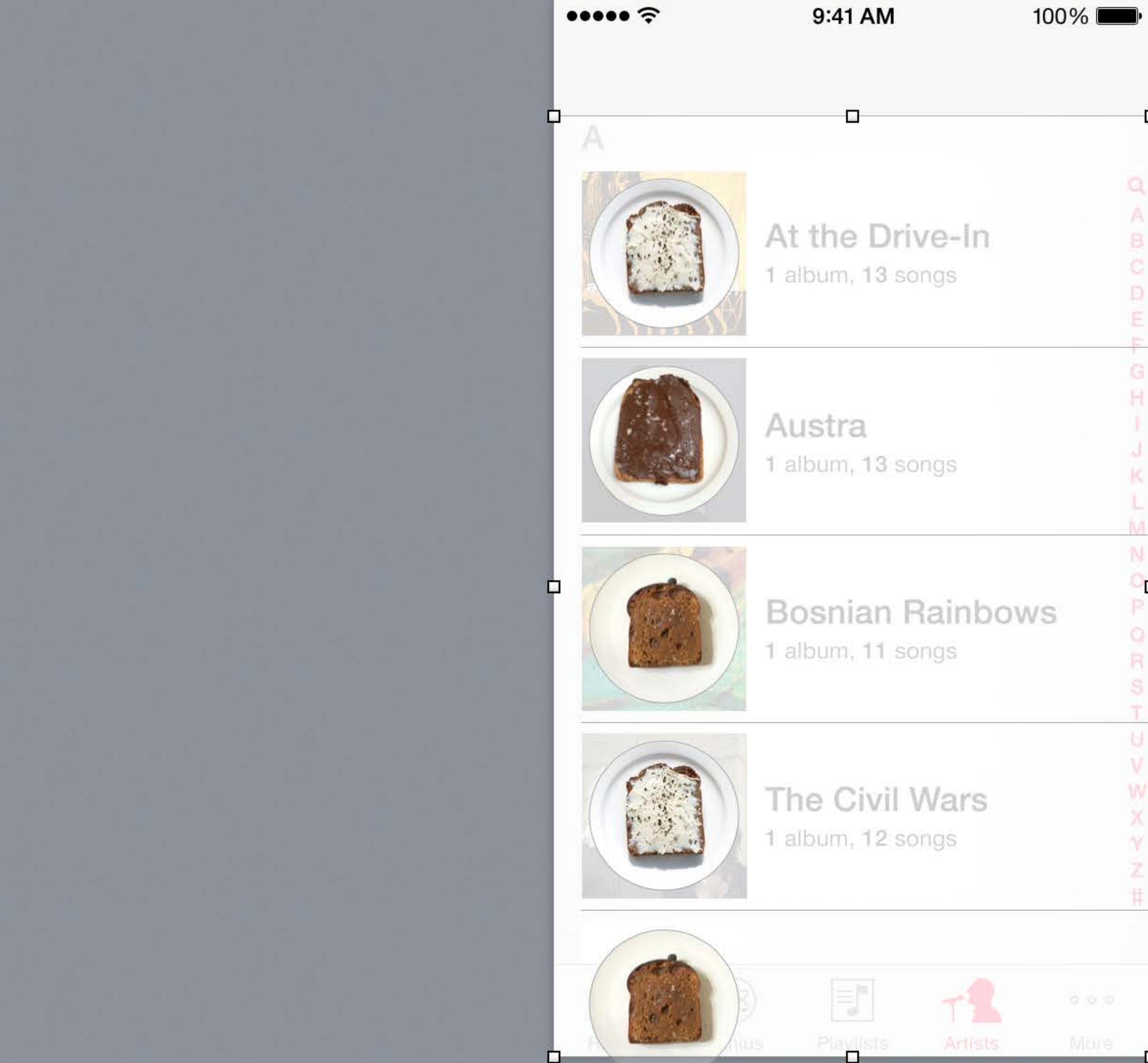
Tips



Format



Animate





50%



View

Zoom

Add Slide



Play



Table



Chart



Text



Shape



Media



Comment



Share



Tips



Format



Animate



Document

••••• Wi-Fi 9:41 AM 100%

A

Blue Barrel
Nutella, Sea Salt

Austra
1 album, 13 songs

Bosnian Rainbows
1 album, 11 songs

The Civil Wars
1 album, 12 songs



50%



Zoom



Add Slide



Play



Table



Chart



Text



Shape



Media



Comment



Share



Tips



Format



Animate



Document

••••• Wi-Fi 9:41 AM 100%

A

Blue Barrel-In
Nutella, Sea Salt

Four Glass
Goat Butterings

Bosnian Rainbows
1 album, 11 songs

The Civil Wars
1 album, 12 songs

More

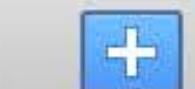
Q A B C D E F G H I J K L M N O P R S T U V W X Y Z #



50%



Zoom



Add Slide



Play



Table



Chart



Text



Shape



Media



Comment



Share



Tips



Format



Animate



Document

••••• Wi-Fi 9:41 AM 100%

A

Blue Barrel-In
Nutella, Sea Salt

Four Glass
Goat Butterings

Slanted Toast
Foie Gras songs

The Civil Wars
1 album, 12 songs



50%



Zoom



Add Slide



Play



Table



Chart



Text



Shape



Media



Comment



Share



Tips



Format



Animate



Document

••••• Wi-Fi 9:41 AM 100%

A

Blue Barrel-In
Nutella, Sea Salt

Four Glass
Goat Butterings

Slanted Toast
Foie Gras

Atelier Bread
Creme Fraiche

Atelier Bread
Creme Fraiche

Playlists Artists More



50%



Zoom



Add Slide



Play



Table



Chart



Text



Shape



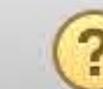
Media



Comment



Share



Tips



Format



Animate



Document

••••• Wi-Fi 9:41 AM 100%

A

Blue Barrel-In
Nutella, Sea Salt

Four Glass
Goat Butterings

Slanted Toast
Foie Gras

Atelier Bread
Creme Fraiche

The Barn
Cacao, Trout

More



50%



View

Zoom



Play



Table



Chart



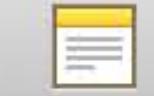
Text



Shape



Media



Comment



Share



Tips



Format



Animate



Document

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Blue Barrel
Nutella, Sea Salt



Four Glass
Goat Butter



Slanted Toast
Foie Gras



Atelier Bread
Creme Fraiche



The Barn
Cacao, Trout



50%



Zoom



Add Slide



Play



Table



Chart



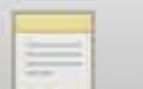
Text



Shape



Media



Comment



Share



Tips



Format



Animate



Document

••••• Wi-Fi 9:41 AM 100%



Blue Barrel
Nutella, Sea Salt



Four Glass
Goat Butter



Slanted Toast
Foie Gras



Atelier Bread
Creme Fraiche



The Barn
Cacao, Trout



Keynote

File

Edit

Insert

Slide

Format Arrange

View

Play

Share

Window

Help

Linda Dong



50%



View

Zoom

Add Slide

Undo**⌘Z****Cut****⌘X****Copy****⌘C****Paste****⌘V****Paste and Match Style****⌘⌃⌘V****Paste Formula Results****Delete****Clear All****Duplicate Selection****⌘D****Select All****⌘A****Deselect All****⇧⌘A****Select Parent****⌘←****Remove Highlights and Comments****Find****Spelling and Grammar****Substitutions****Transformations****Speech****Start Dictation****fn fn****Special Characters...****⌘⌘Space****The Barn**

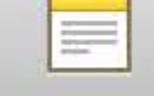
Cacao, Trout

Slanted Toast

Foie Gras

Atelier Bread

Creme Fraiche



Share

Tips



Format

Animate

Document

View Zoom Add Slide Play Table Chart Text Shape Media Comment Share Tips Format Animate Document

50% + ⏪ 9:41 AM 100%

Characters

Recently Used

- Arrows
- () Parentheses
- , Punctuation
- \$ Curre...ymbols
- ⠇ Pictographs
- * Bullets/Stars
- ✓ Math Symbols
- ⠼ Letterl...mbols
- 😊 Emoji
- ⠇ Latin

BLACK STAR

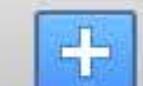
Add to Favorites

Font Variation

The Barn
Cacao, Trout



50%



Zoom



Add Slide



Play



Table



Chart



Text



Shape



Media



Comment



Share



?

Tips



Format



Animate

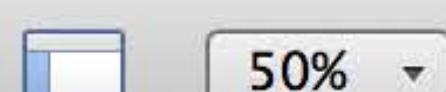


Document

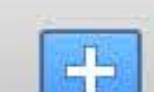
••••• Wi-Fi 9:41 AM 100%

Top Toast

	Blue Barrel Nutella, Sea Salt	★★★
	Four Glass Goat Butter	★★★
	Slanted Toast Foie Gras	★★
	Atelier Bread Creme Fraiche	★★
	The Barn Cacao, Trout	★



50%



View Zoom Add Slide



Play



Table



Chart



Text



Shape



Media



Comment



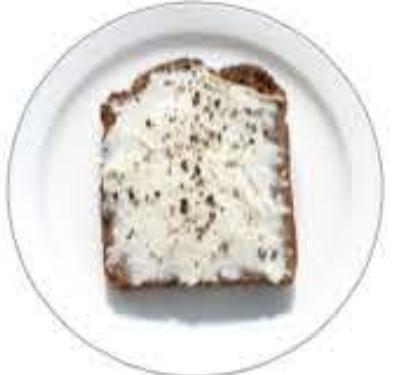
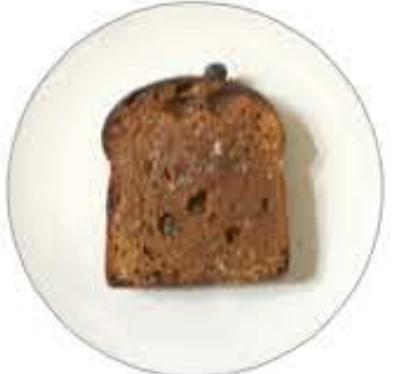
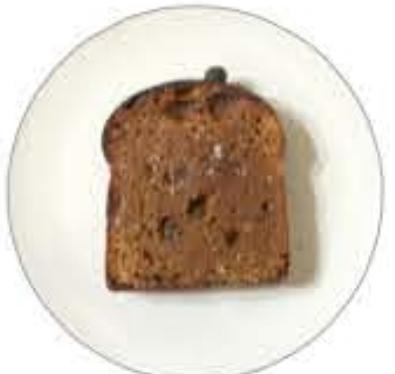
Share



Tips



Format Animate Document

	Blue Barrel Nutella, Sea Salt	★★★
	Four Glass Goat Butter	★★★
	Slanted Toast Foie Gras	★★
	Atelier Bread Creme Fraiche	★★
	The Barn Cacao, Trout	★

Style Text Arrange

Shape Styles

Fill

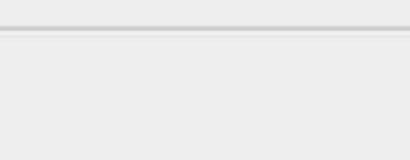
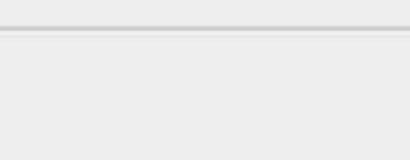
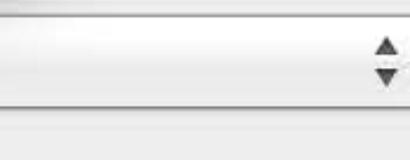
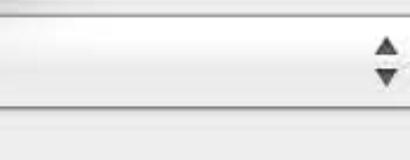
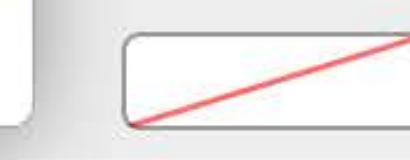
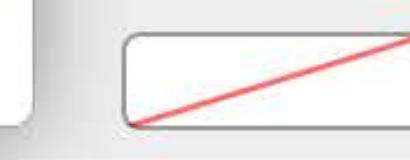
Color Fill

None

Reflection

Opacity

100%





50%



View

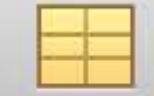
Zoom



Add Slide



Play



Table



Chart



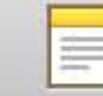
Text



Shape



Media



Comment



Share



Tips



Format



Animate



Document

••••• Wi-Fi 9:41 AM 100%

	Blue Barrel Nutella, Sea Salt	
	Four Glass Goat Butter	
	Slanted Toast Foie Gras	
	Atelier Bread Creme Fraiche	
	The Barn Cacao, Trout	



50%



Zoom



Add Slide



Play



Table



Chart



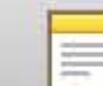
Text



Shape



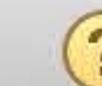
Media



Comment



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Tips



Format



Animate



Document

••••• Wi-Fi 9:41 AM 100%

	Blue Barrel Nutella, Sea Salt	★★★
	Four Glass Goat Butter	★★★
	Slanted Toast Foie Gras	★★
	Atelier Bread Creme Fraiche	★★
	The Barn Cacao, Trout	★



50%



Zoom



Add Slide



Play



Table



Chart



Text



Shape



Media



Comment



Share



Tips



Format



Animate



Document

••••• Wi-Fi 9:41 AM 100%

Blue Barrel
Nutella, Sea Salt

Four Glass
Goat Butter

Slanted Toast
Foie Gras

Atelier Bread
Creme Fraiche

The Barn
Cacao, Trout



50%



Zoom



Add Slide



Play



Table



Chart



Text



Shape



Media



Comment



Share



Tips



Format



Animate



Document

••••• Wi-Fi 9:41 AM 100%

	Blue Barrel Nutella, Sea Salt	★★★
	Four Glass Goat Butter	★★★
	Slanted Toast Foie Gras	★★
	Atelier Bread Creme Fraiche	★★
	The Barn Cacao, Trout	★



50%

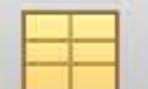


View

Zoom



Play



Table



Chart



Text



Shape



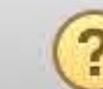
Media



Comment



Share



Tips



Format



Animate

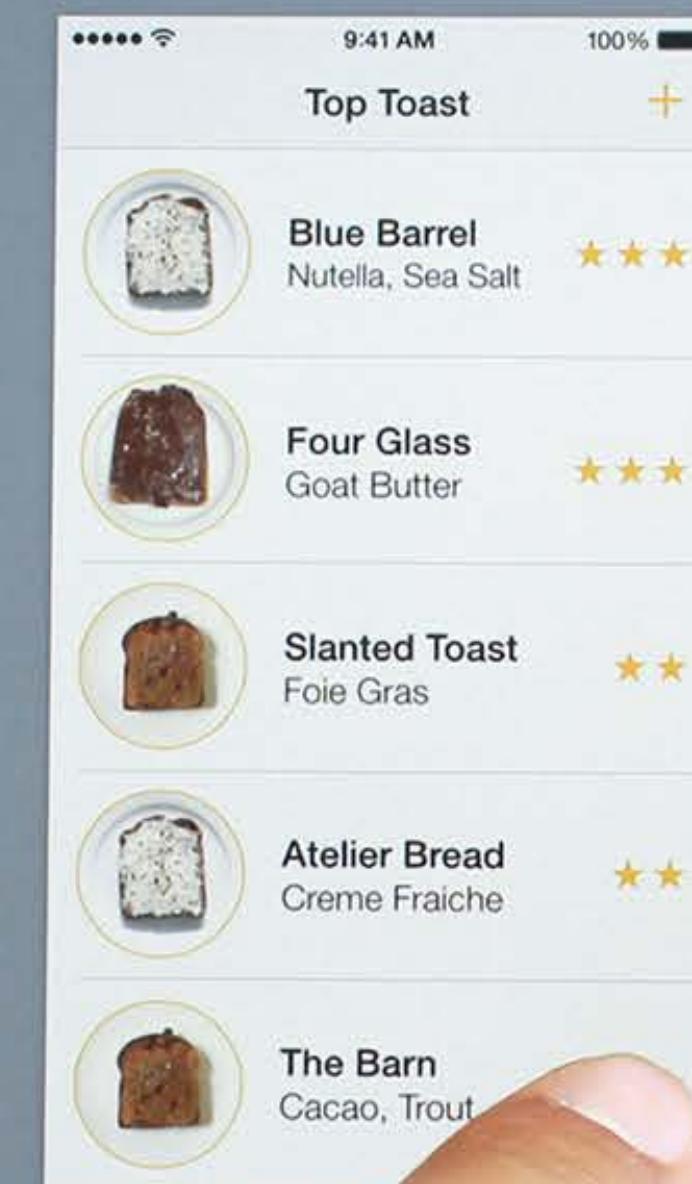


Document

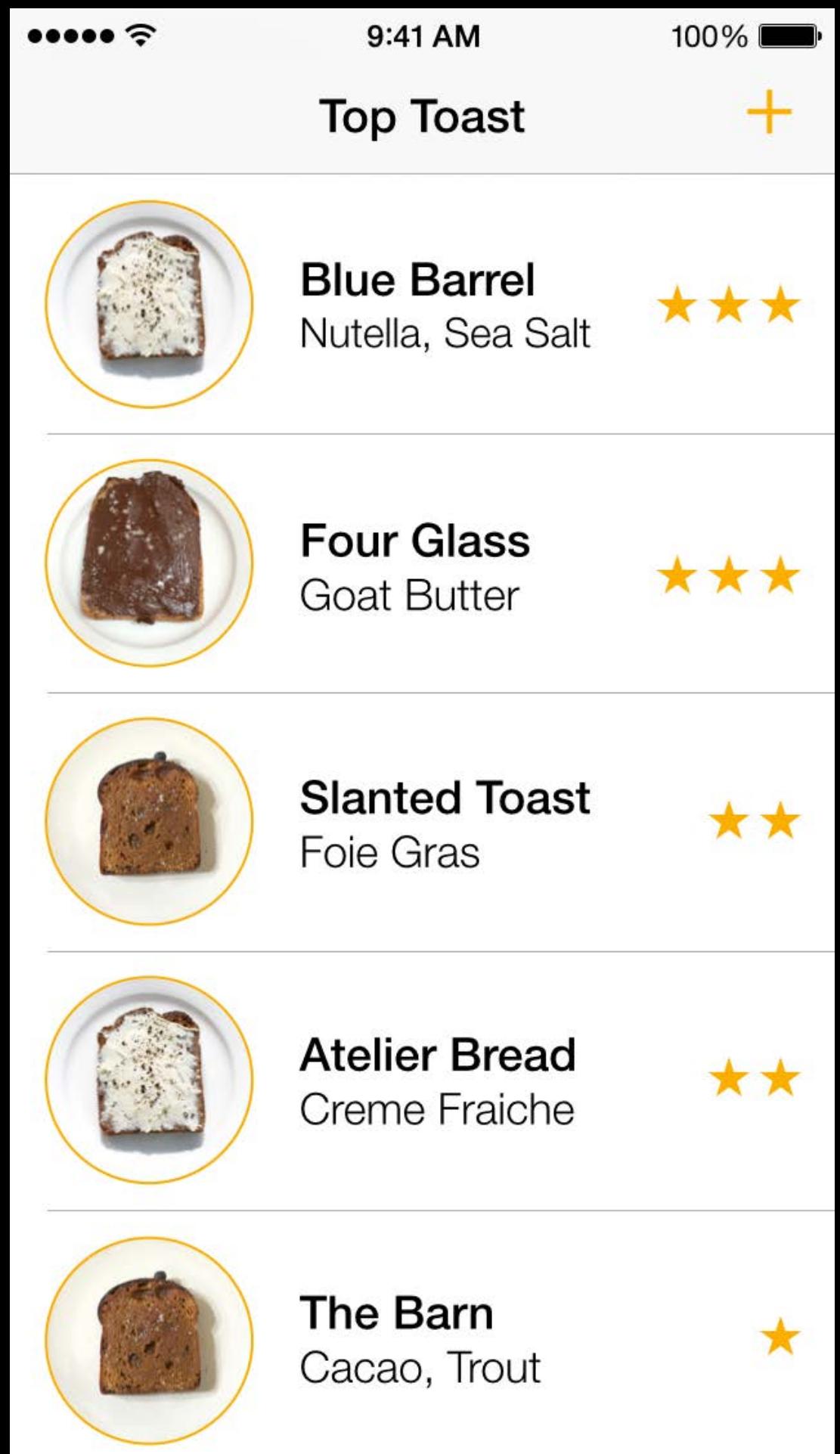
••••• Wi-Fi 9:41 AM 100%

Top Toast

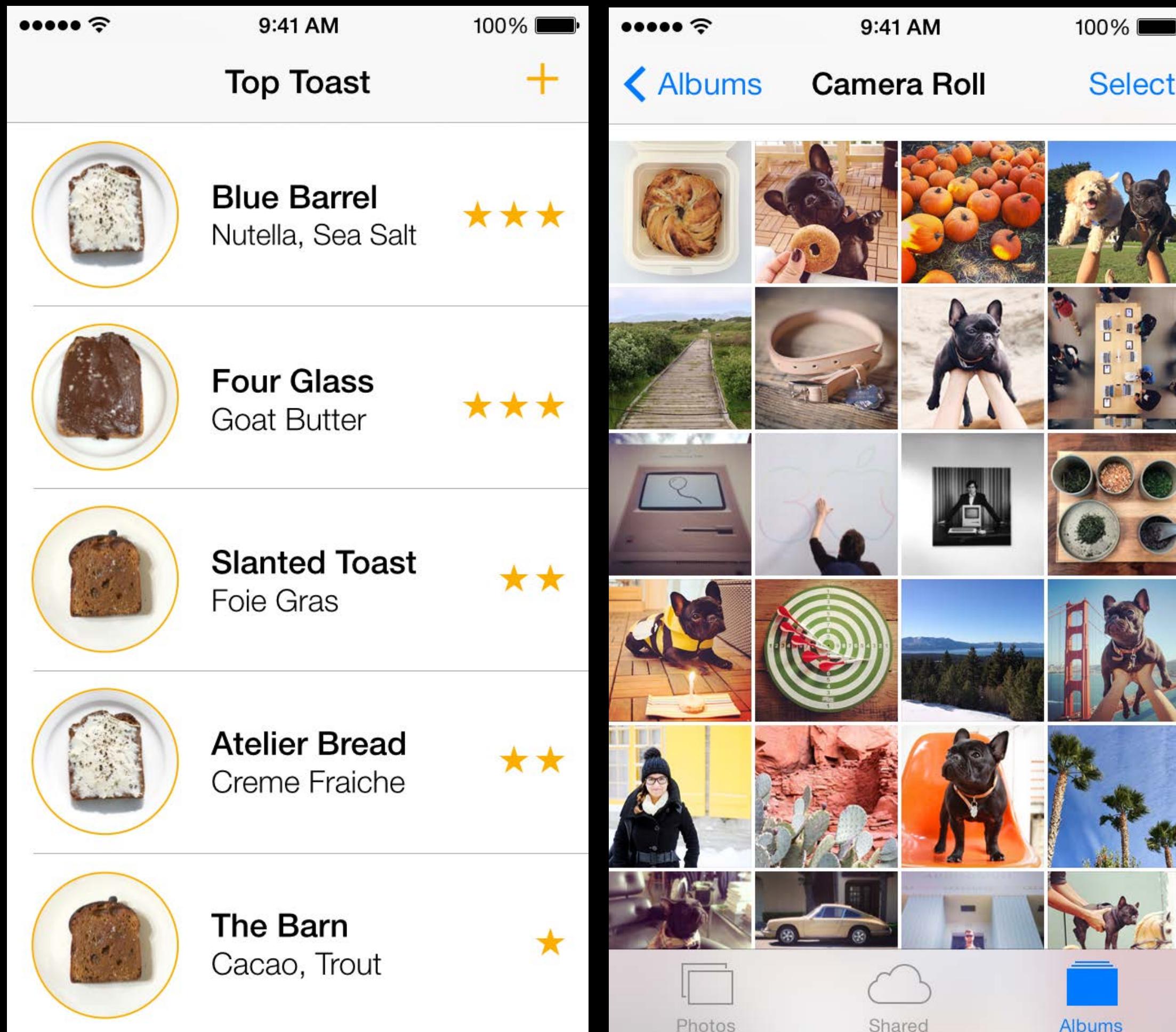
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	Four Glass Goat Butter	
	Slanted Toast Foie Gras	
	Atelier Bread Creme Fraiche	
	The Barn Cacao, Trout	



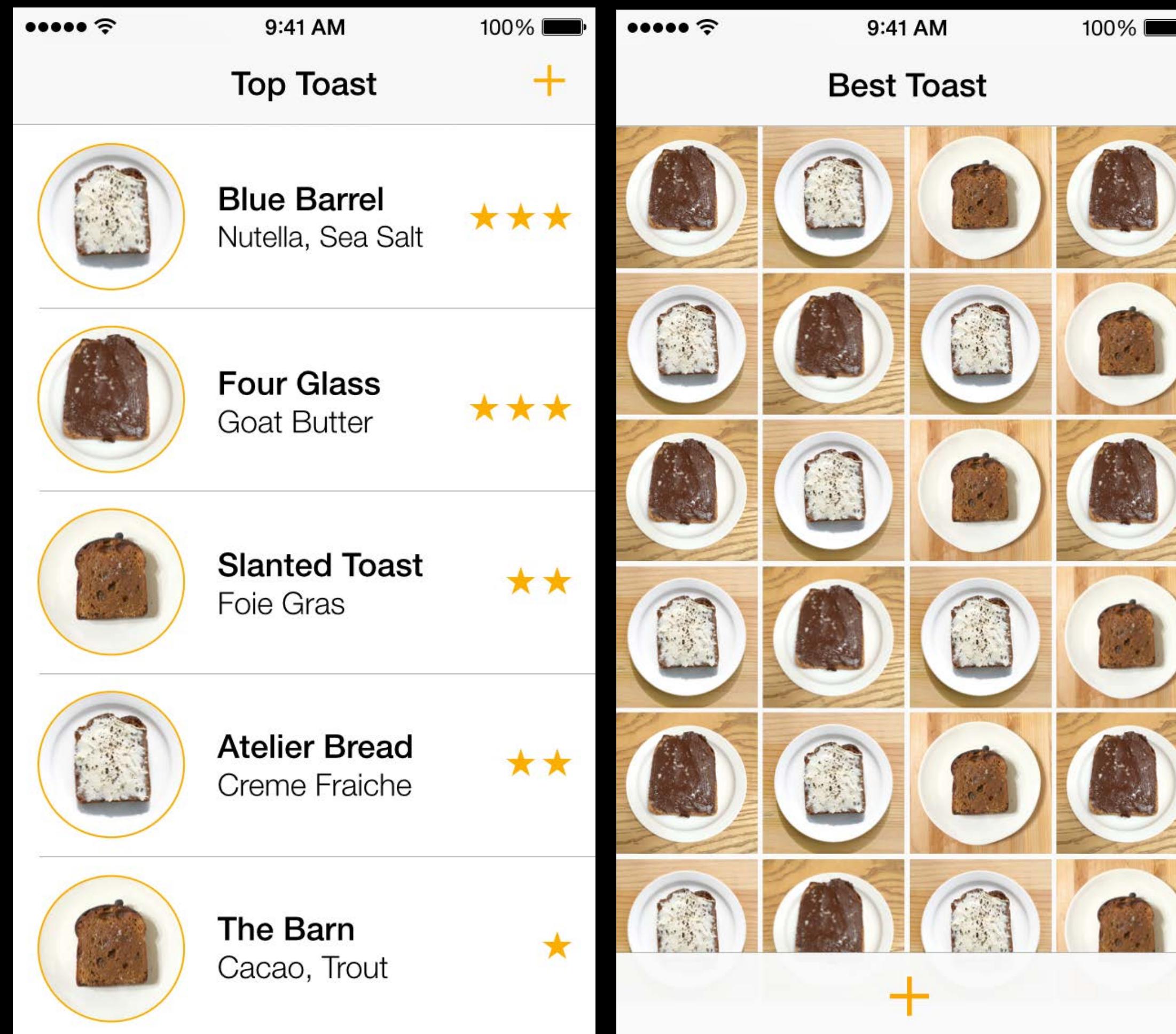
Make Fake Apps



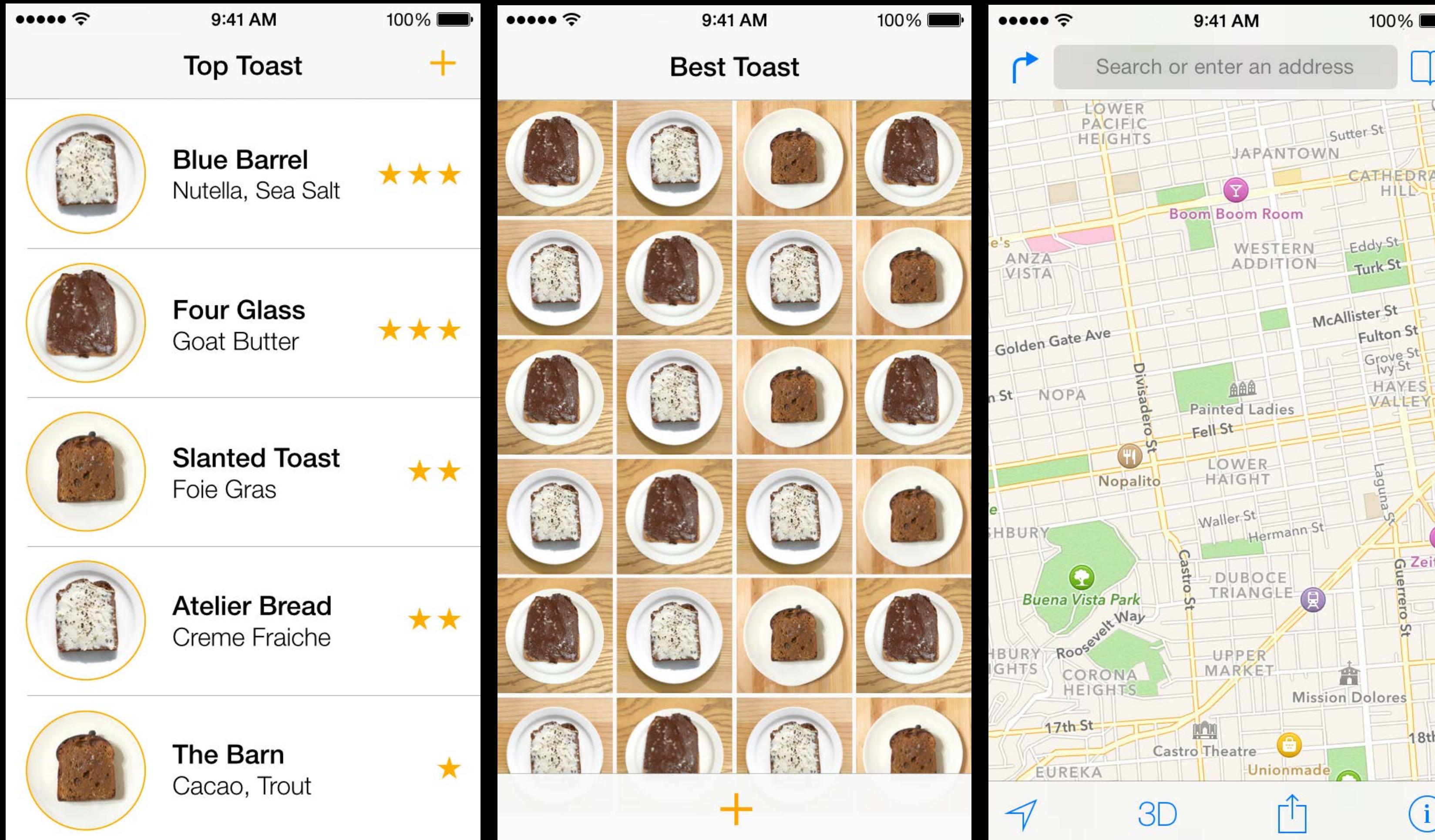
Make Fake Apps



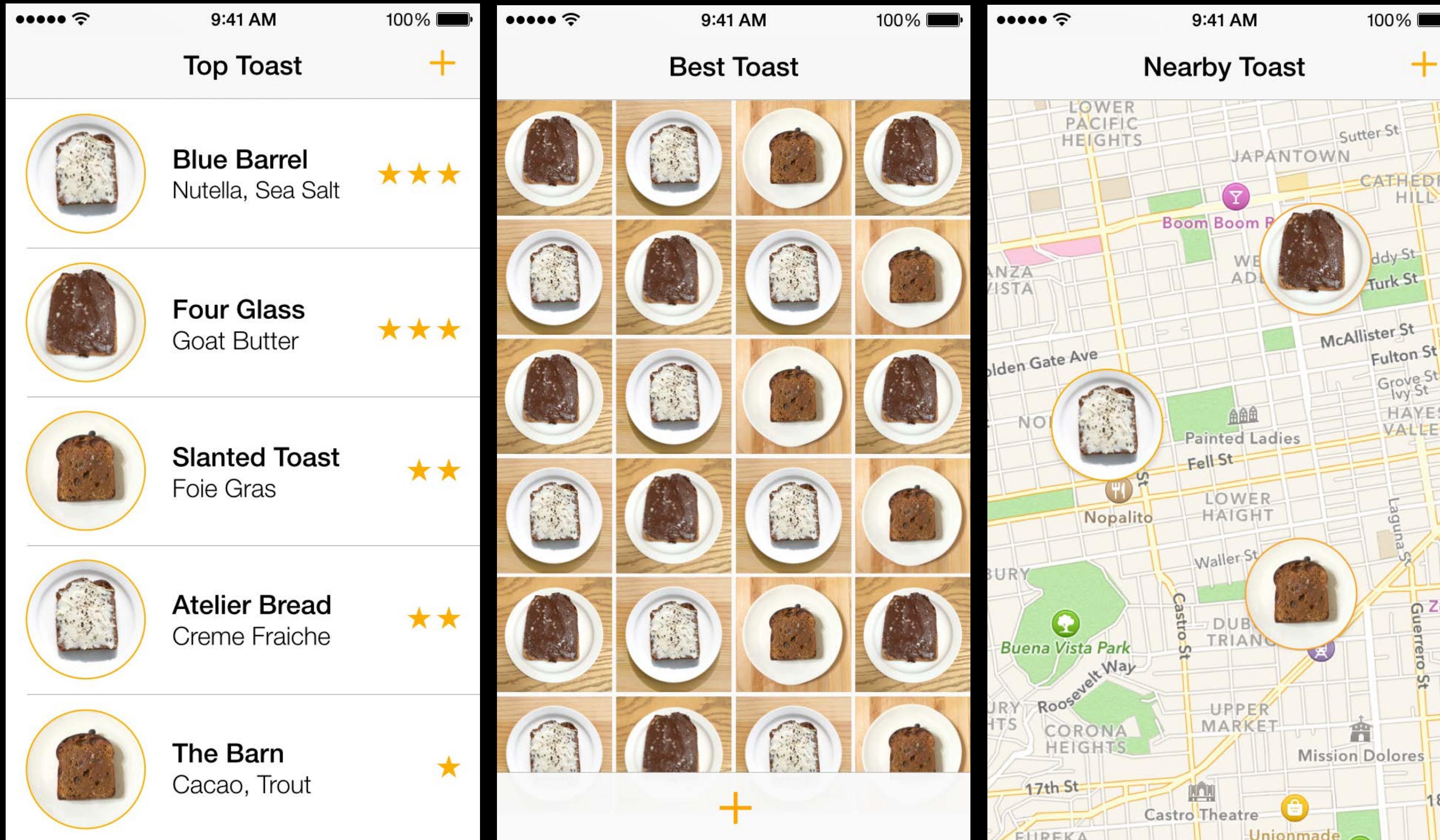
Make Fake Apps



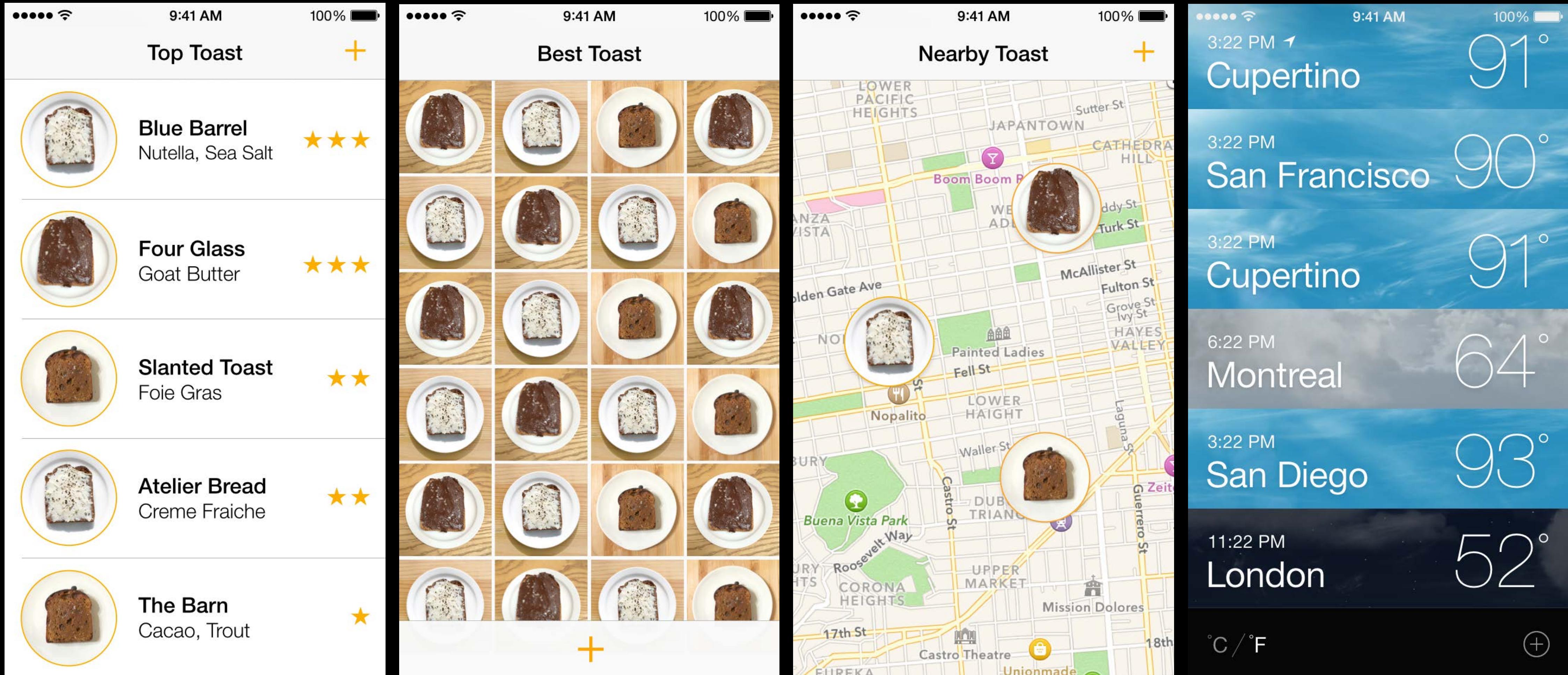
Make Fake Apps



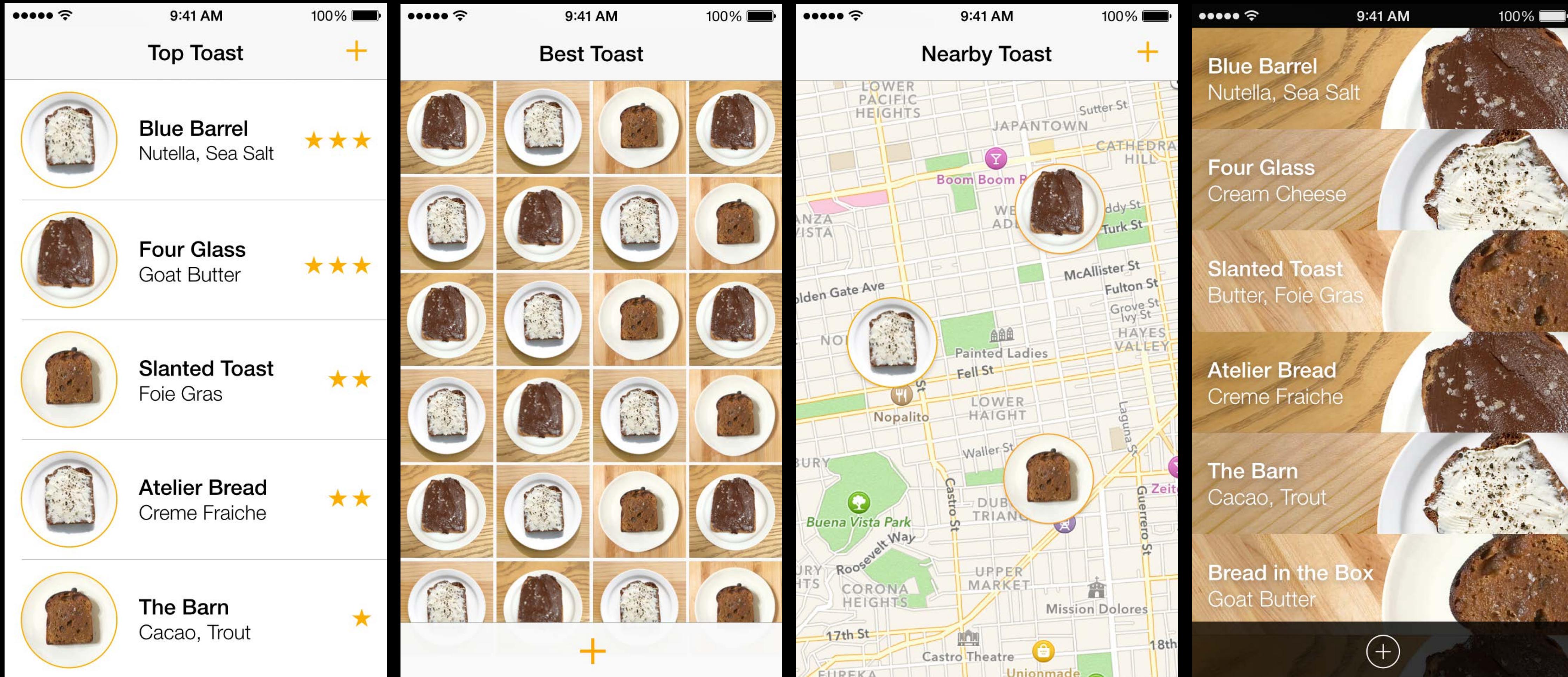
Make Fake Apps



Make Fake Apps



Make Fake Apps



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QuickTime

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Images

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Slides: All

From: 1 to

Create an image for each stage of builds

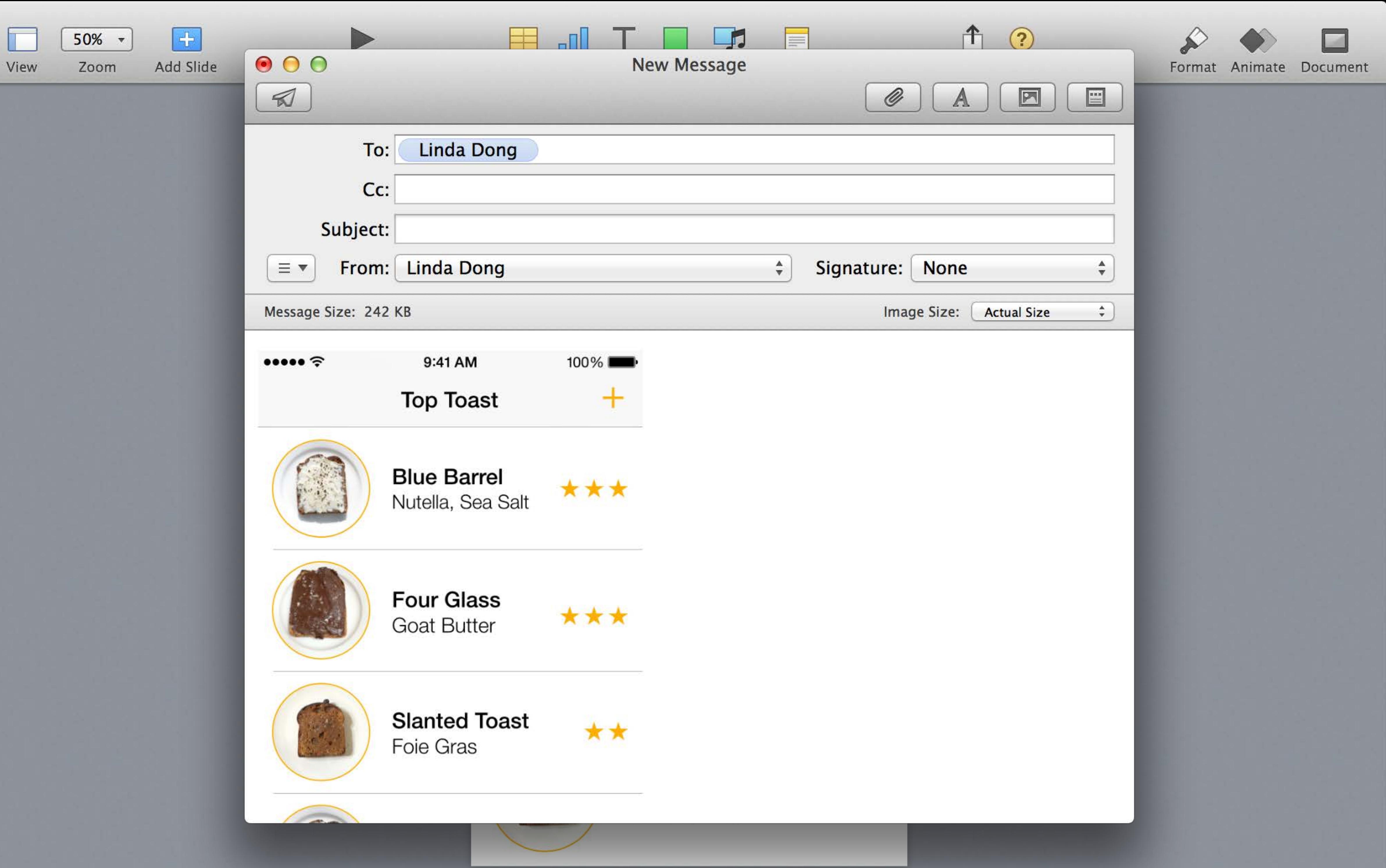
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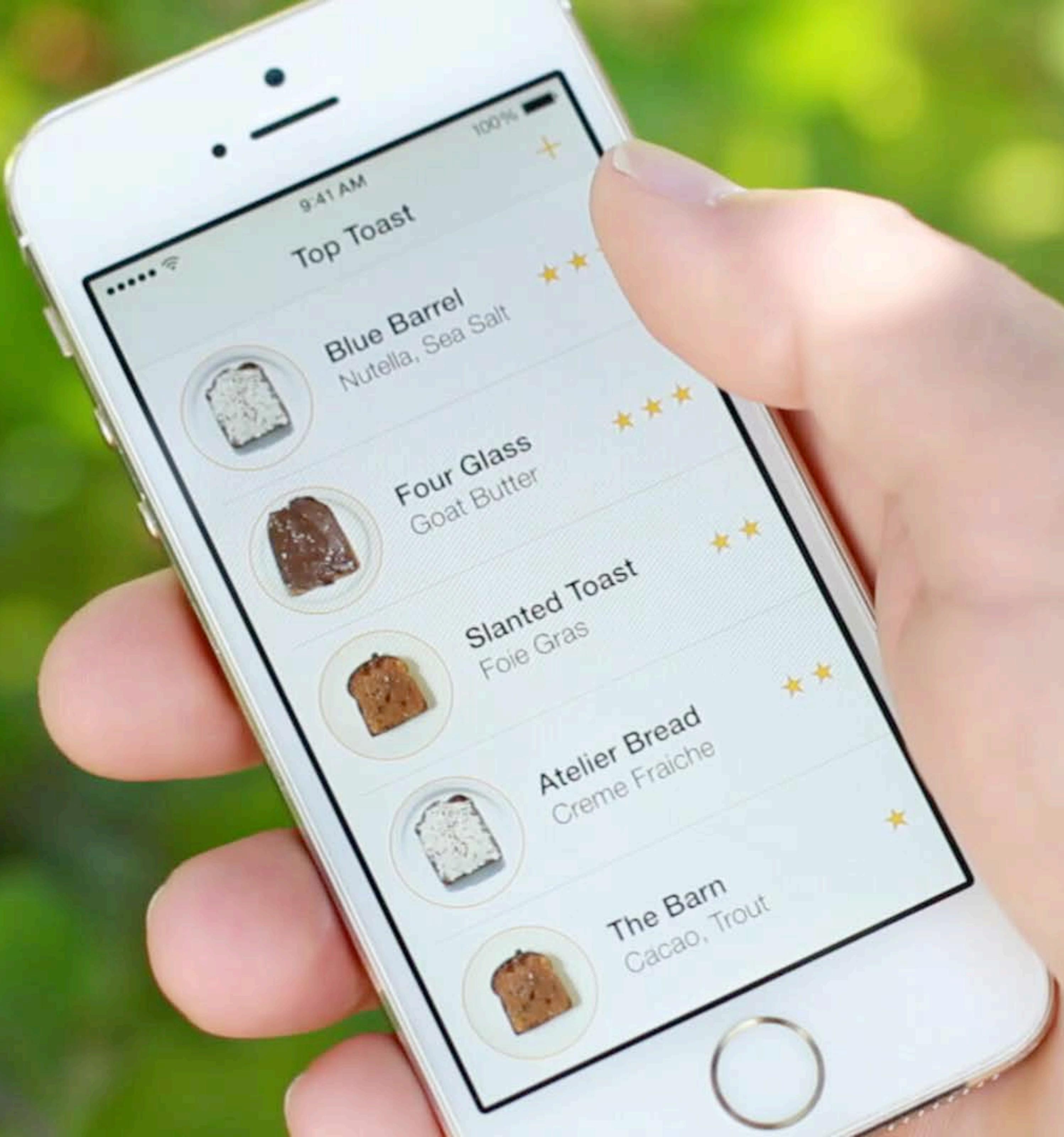


Cancel

Next...

- | | | |
|---|---------------------------------------|----|
|  | Slanted Toast
Foie Gras | ★★ |
|  | Atelier Bread
Creme Fraiche | ★★ |
|  | The Barn
Cacao, Trout | ★ |





9:41 AM

Top Toast

Blue Barrel
Nutella, Sea Salt



Four Glass
Goat Butter



Slanted Toast
Foie Gras



Atelier Bread
Creme Fraiche



The Barn
Cacao, Trout



Show People

Show People

Do you know how to find top rated toast? Nearby toast?

Show People

Do you know how to find top rated toast? Nearby toast?

“I’m looking at star icons so this list must be sorted by rating”

Show People

Do you know how to find top rated toast? Nearby toast?

“I’m looking at star icons so this list must be sorted by rating”

“I don’t understand how to find nearby toast when there’s no map”

Show People

Do you know how to find top rated toast? Nearby toast?

“I’m looking at star icons so this list must be sorted by rating”

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Is it easy to browse through toast?

Show People

Do you know how to find top rated toast? Nearby toast?

“I’m looking at star icons so this list must be sorted by rating”

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Is it easy to browse through toast?

“Ow, the grid view hurts my retinas...”

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Do you know how to find top rated toast? Nearby toast?

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Is it easy to browse through toast?

“Ow, the grid view hurts my retinas...”

How can we make this better?

Show People

Do you know how to find top rated toast? Nearby toast?

“I’m looking at star icons so this list must be sorted by rating”

“I don’t understand how to find nearby toast when there’s no map”

Is it easy to browse through toast?

“Ow, the grid view hurts my retinas...”

How can we make this better?

“Keep going with the list and the map ideas!”

Learn from Feedback

Learn from Feedback

What's working?

Learn from Feedback

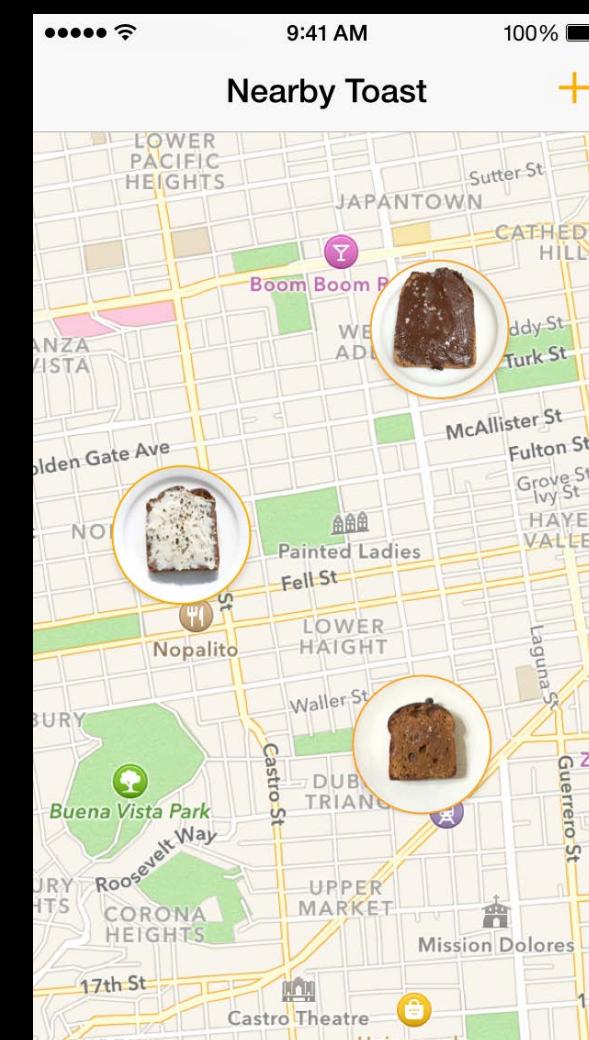
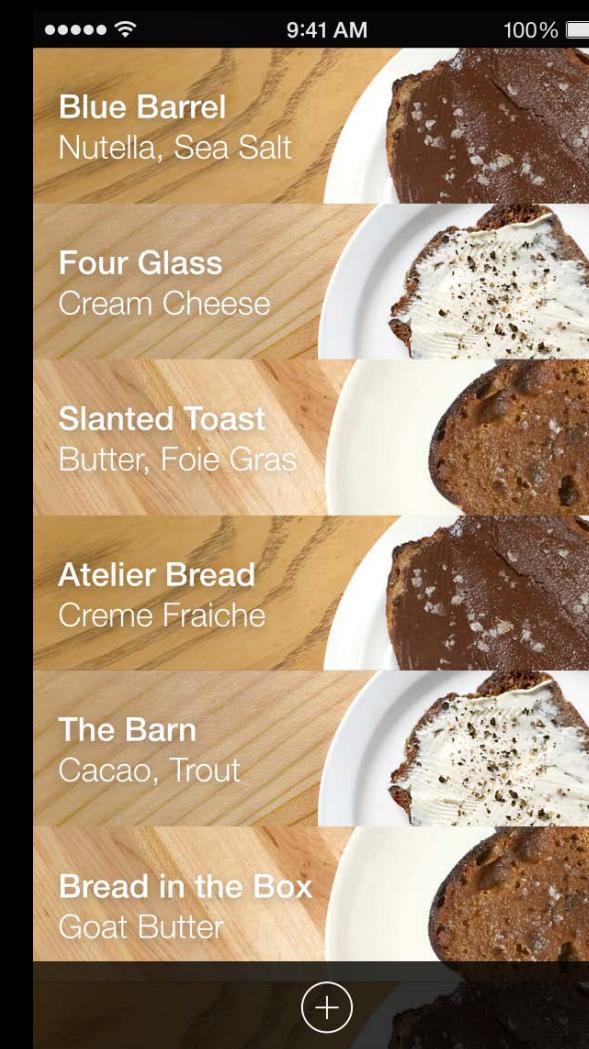
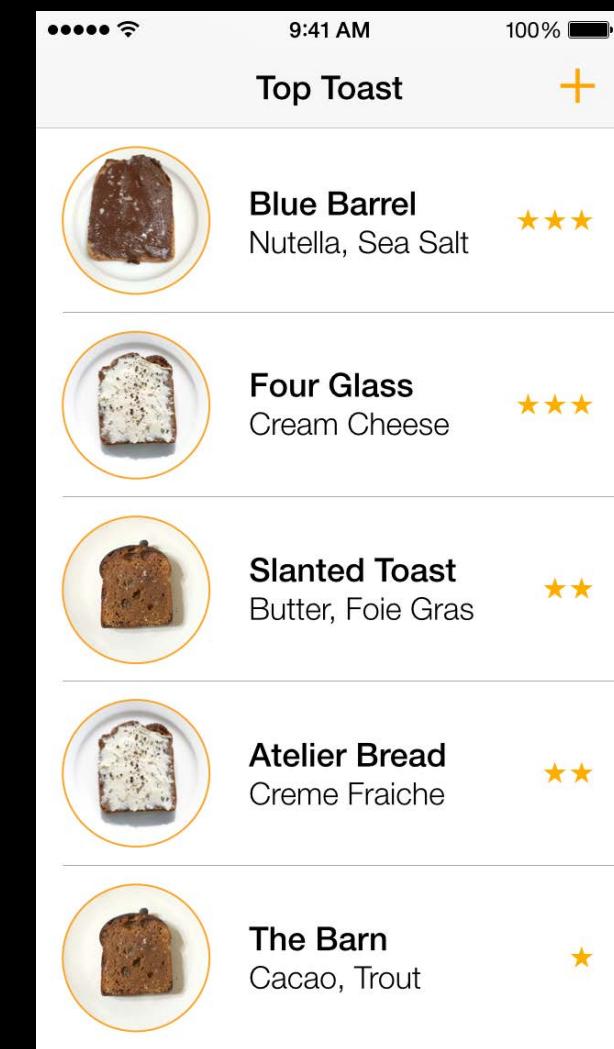
What's working?

Lists of toast, maps of toast, top toast

Learn from Feedback

What's working?

Lists of toast, maps of toast, top toast

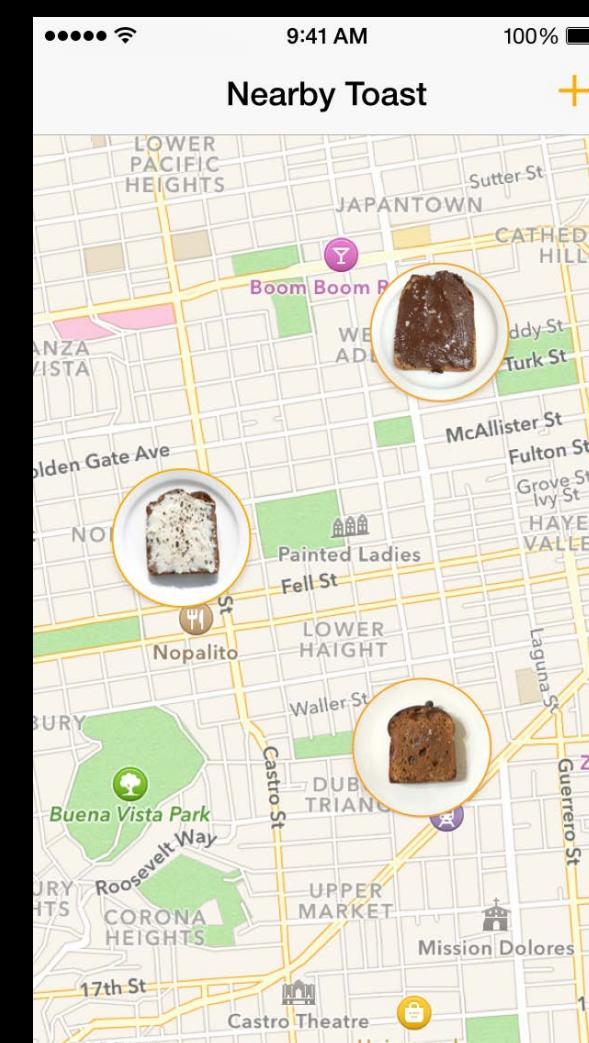
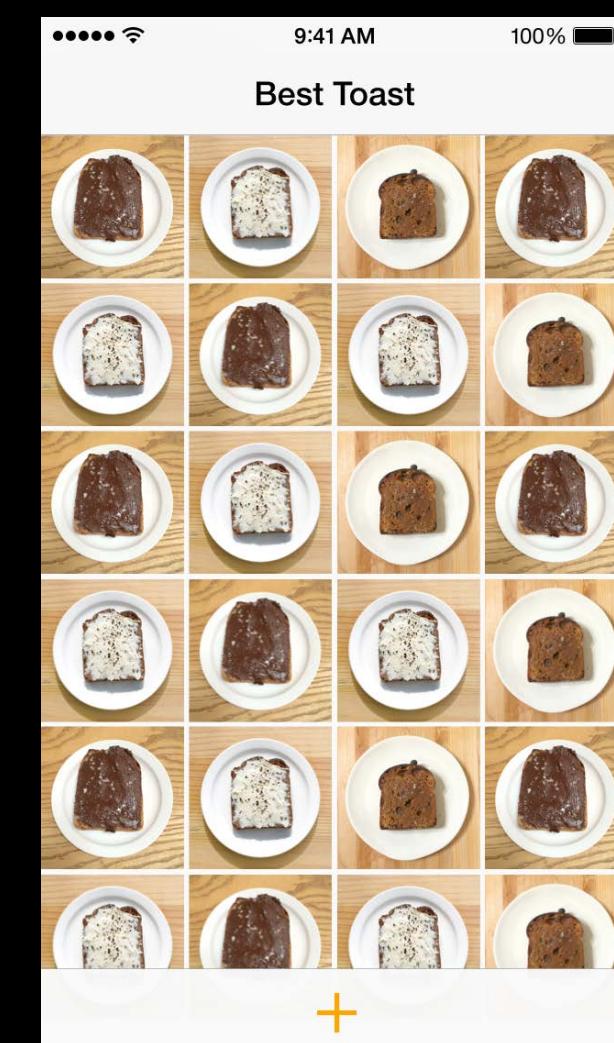
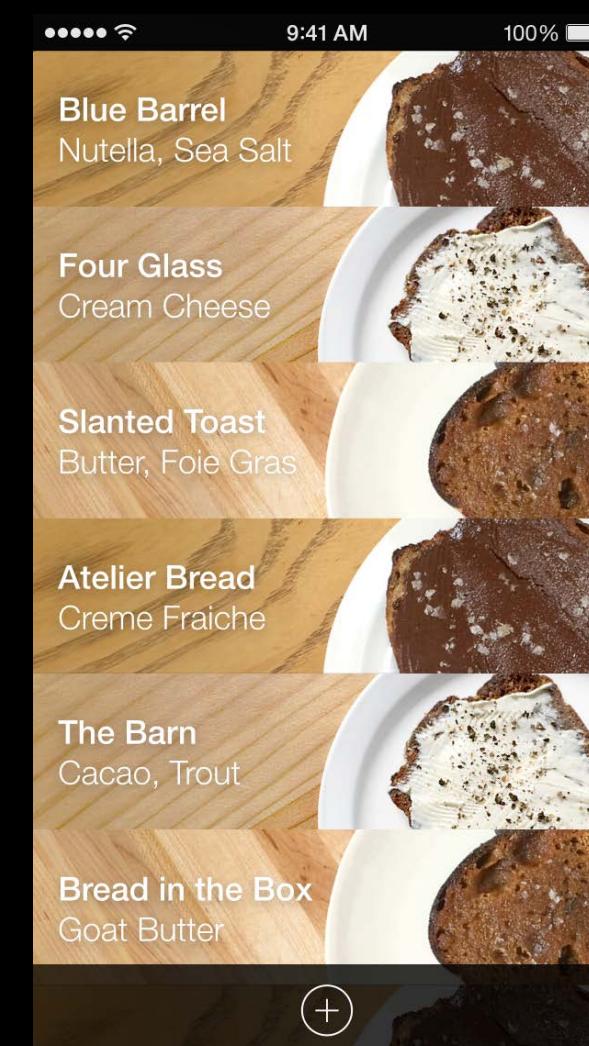
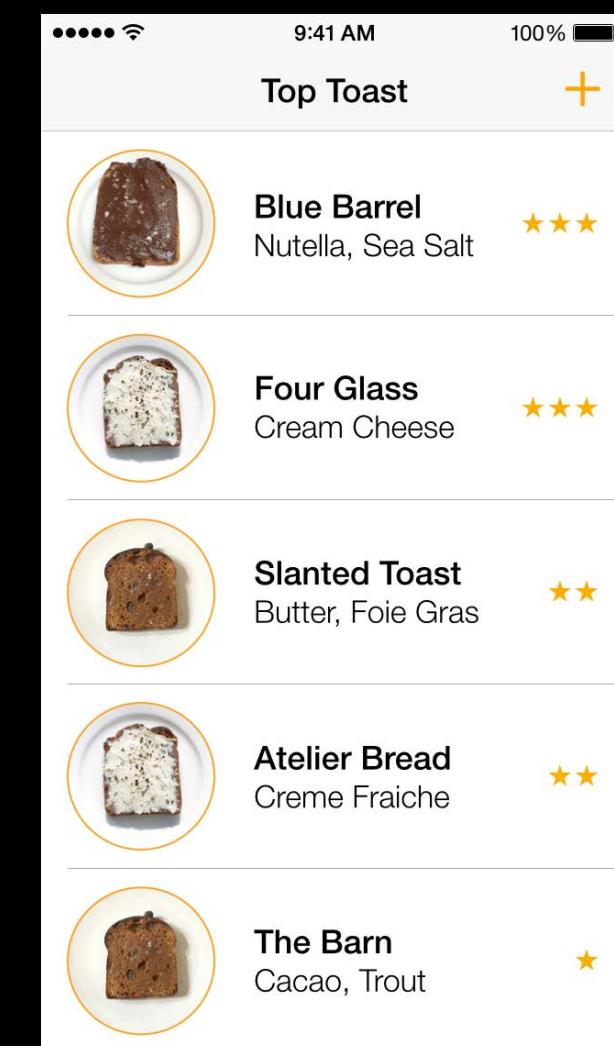


Learn from Feedback

What's working?

Lists of toast, maps of toast, top toast

What's not working?



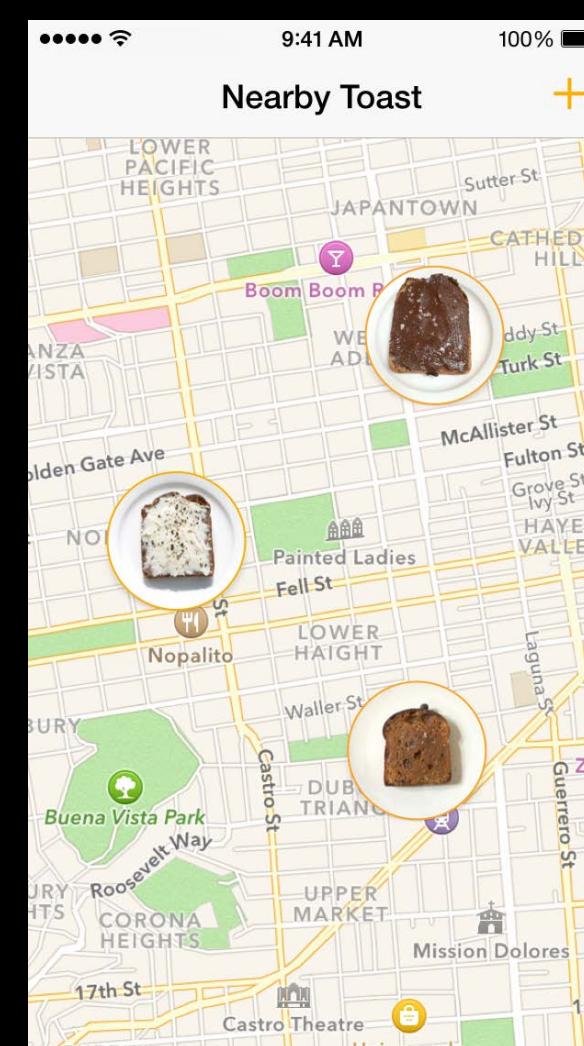
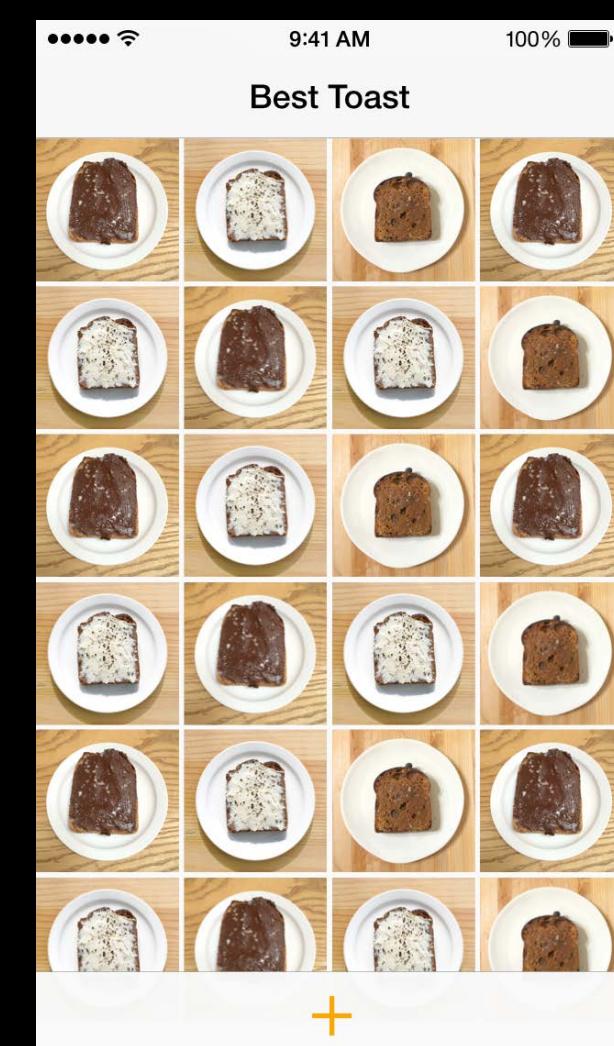
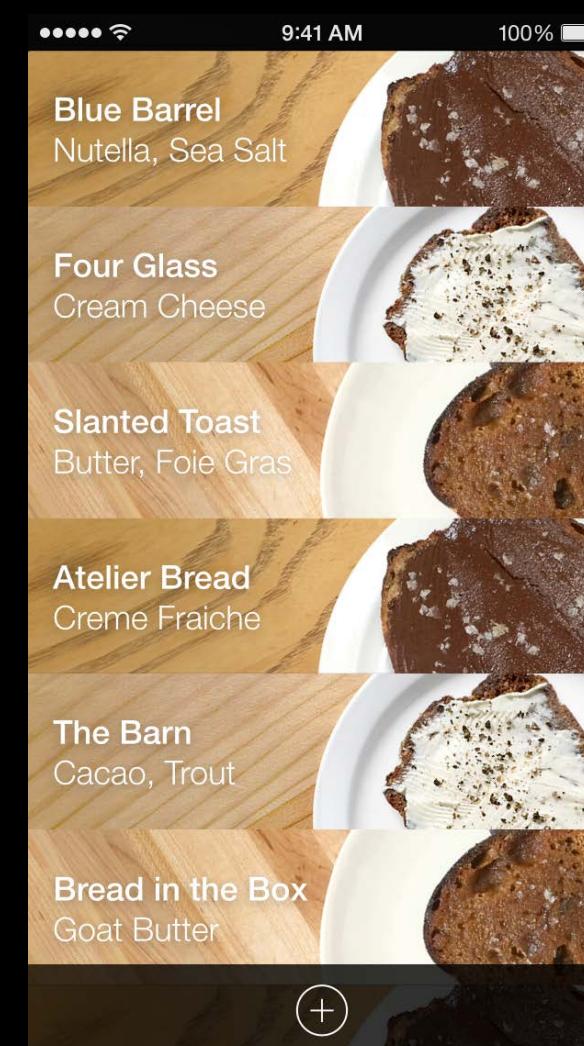
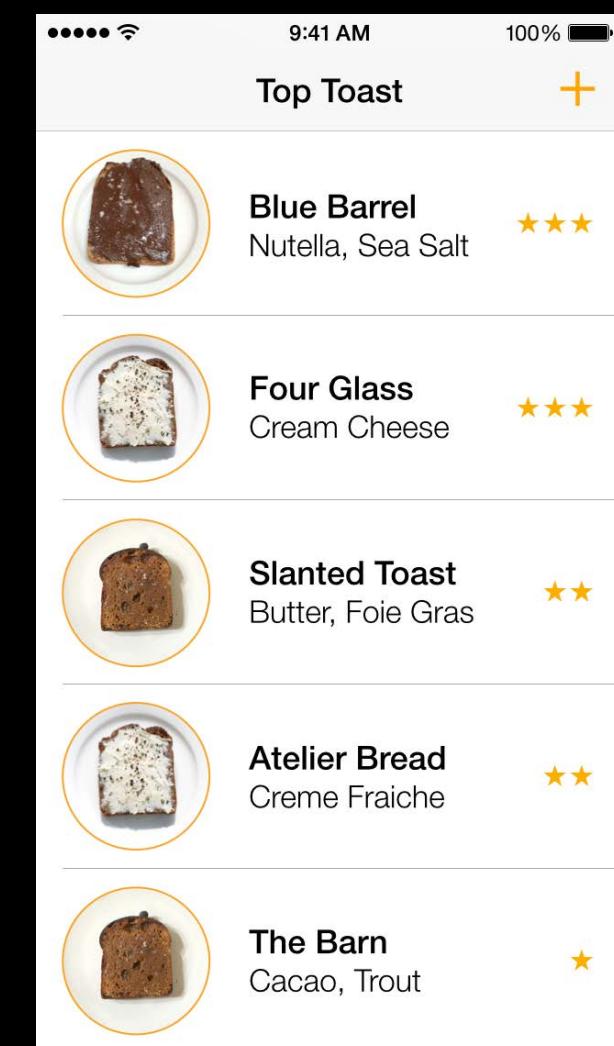
Learn from Feedback

What's working?

Lists of toast, maps of toast, top toast

What's not working?

No single method seems like enough—it's not clear how they work together



Learn from Feedback

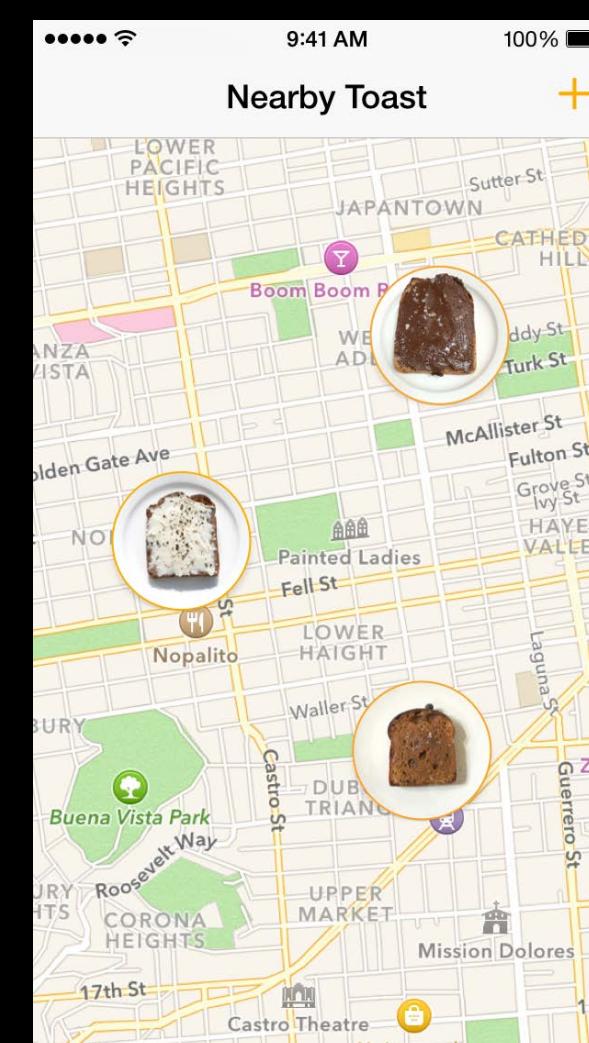
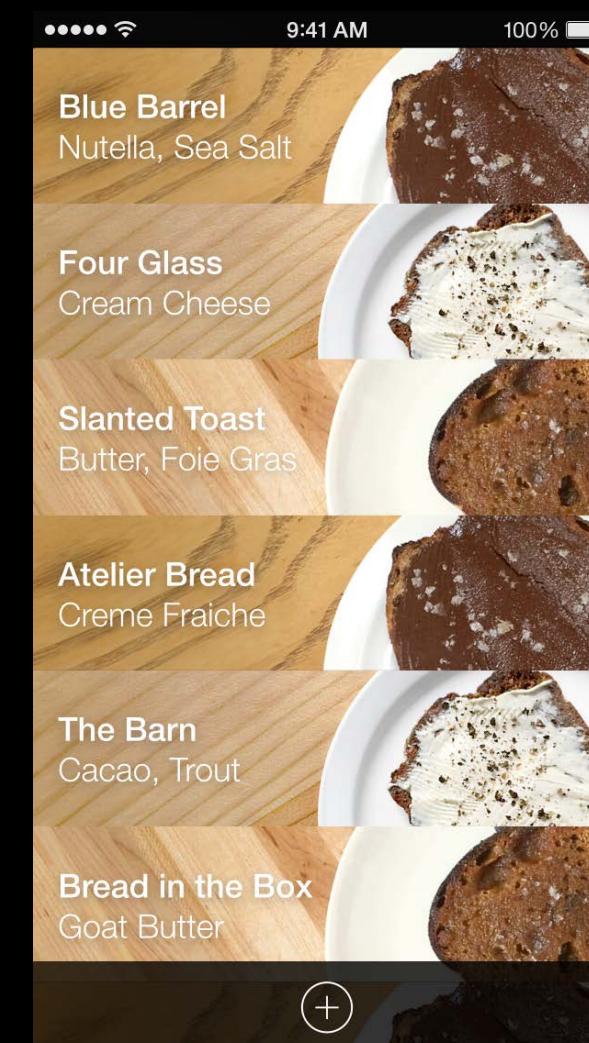
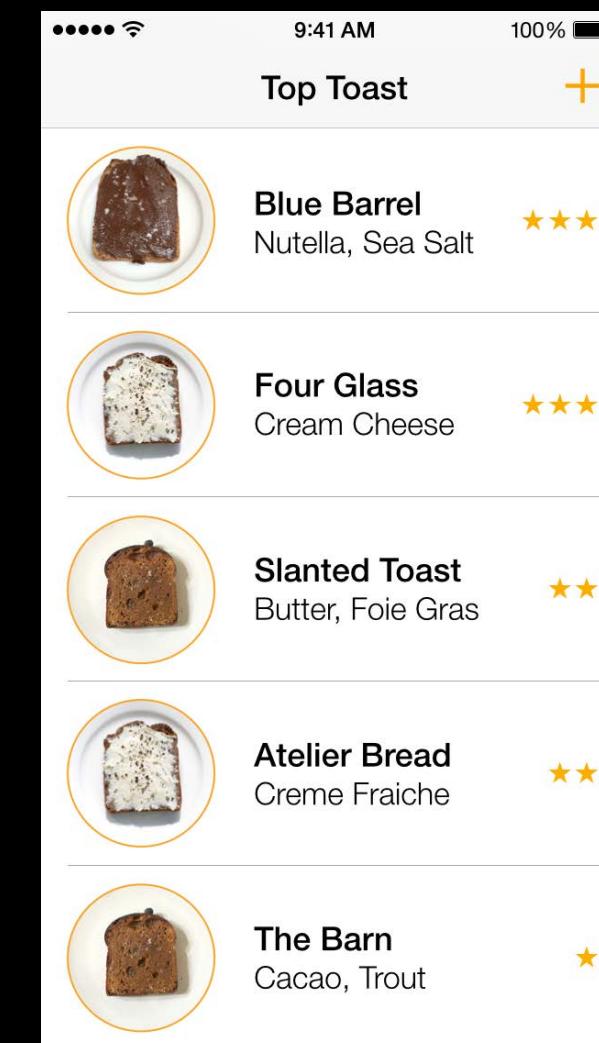
What's working?

Lists of toast, maps of toast, top toast

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What other ideas does this give us?



Learn from Feedback

What's working?

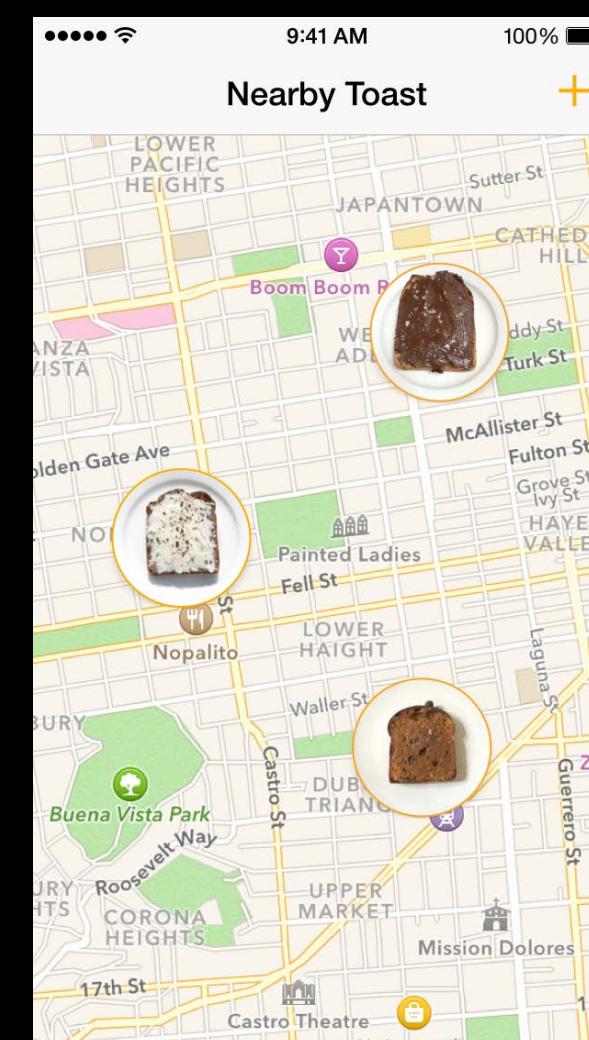
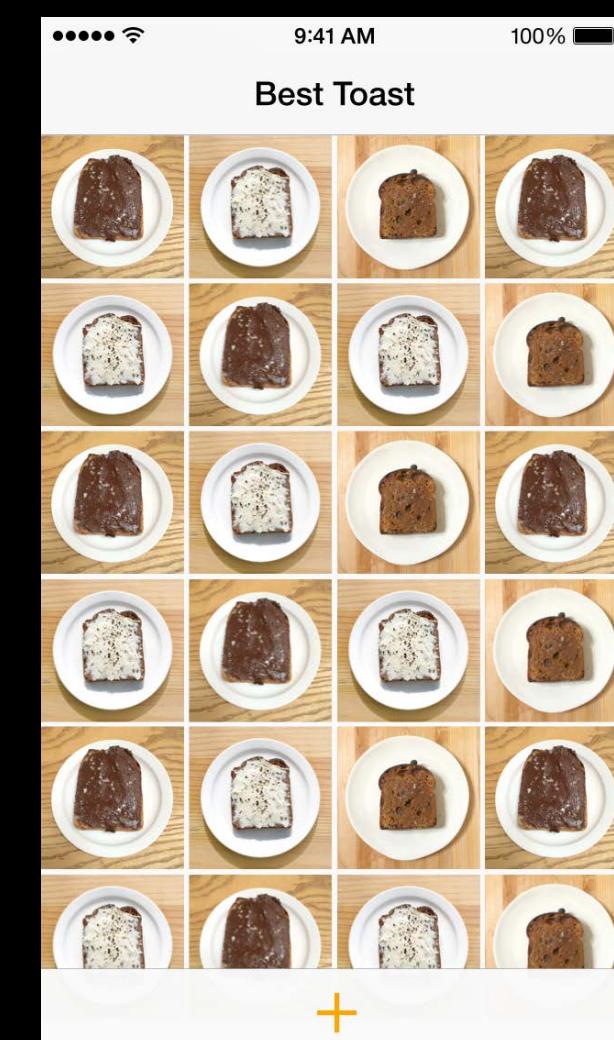
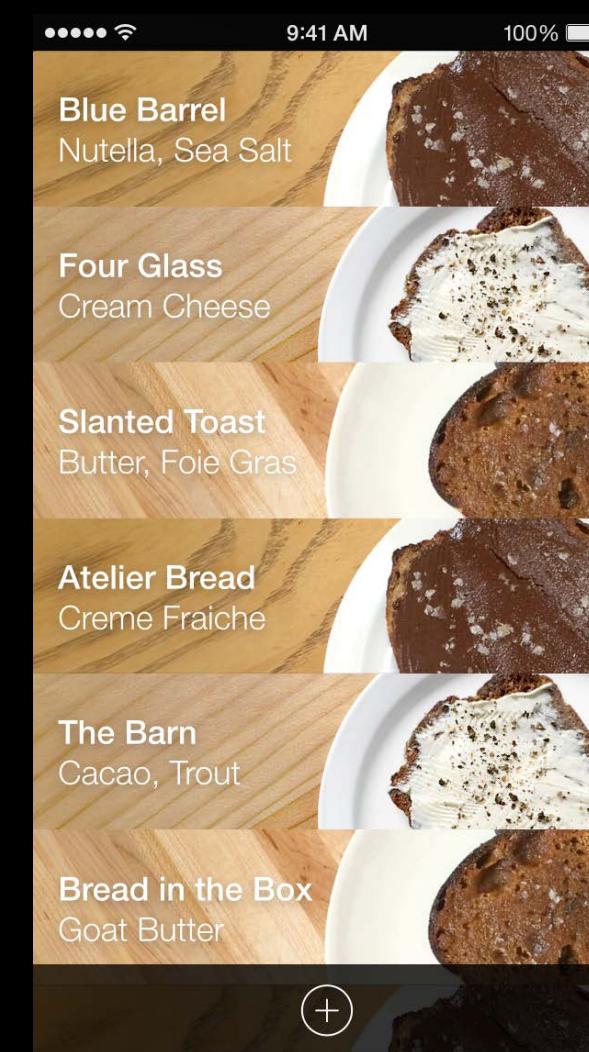
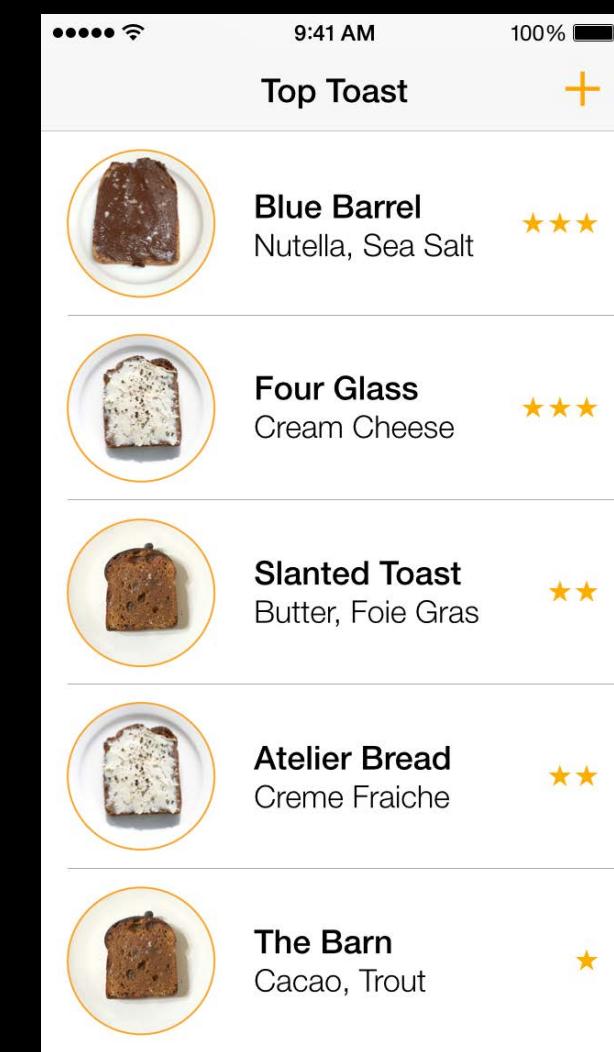
Lists of toast, maps of toast, top toast

What's not working?

No single method seems like enough—it's not clear how they work together

What other ideas does this give us?

We could let people choose how they want to find toast



Make Fake Apps

Make Fake Apps

What needs to be more real?

Make Fake Apps

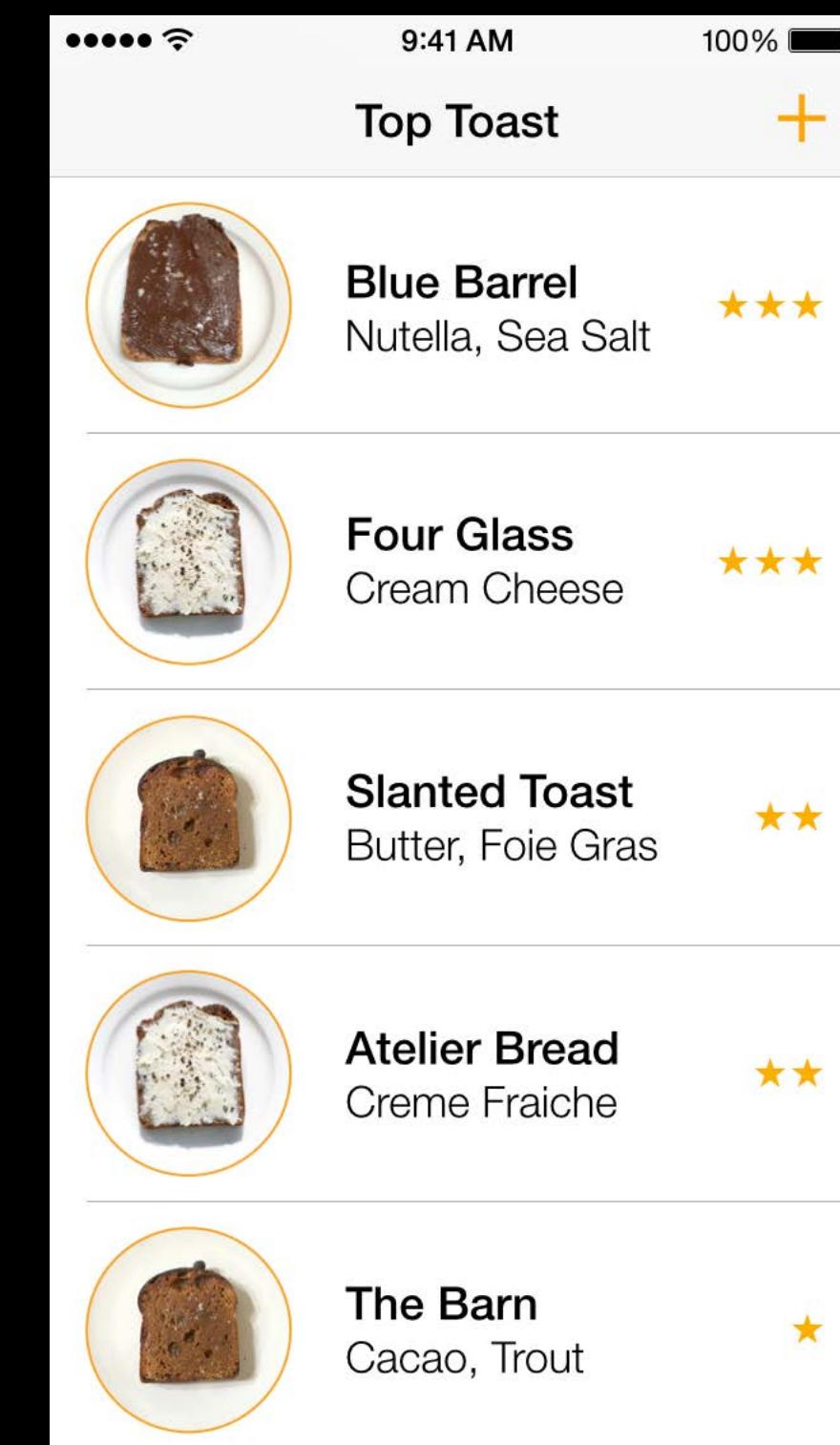
What needs to be more real?

The connection between top toast and
nearby toast

Make Fake Apps

What needs to be more real?

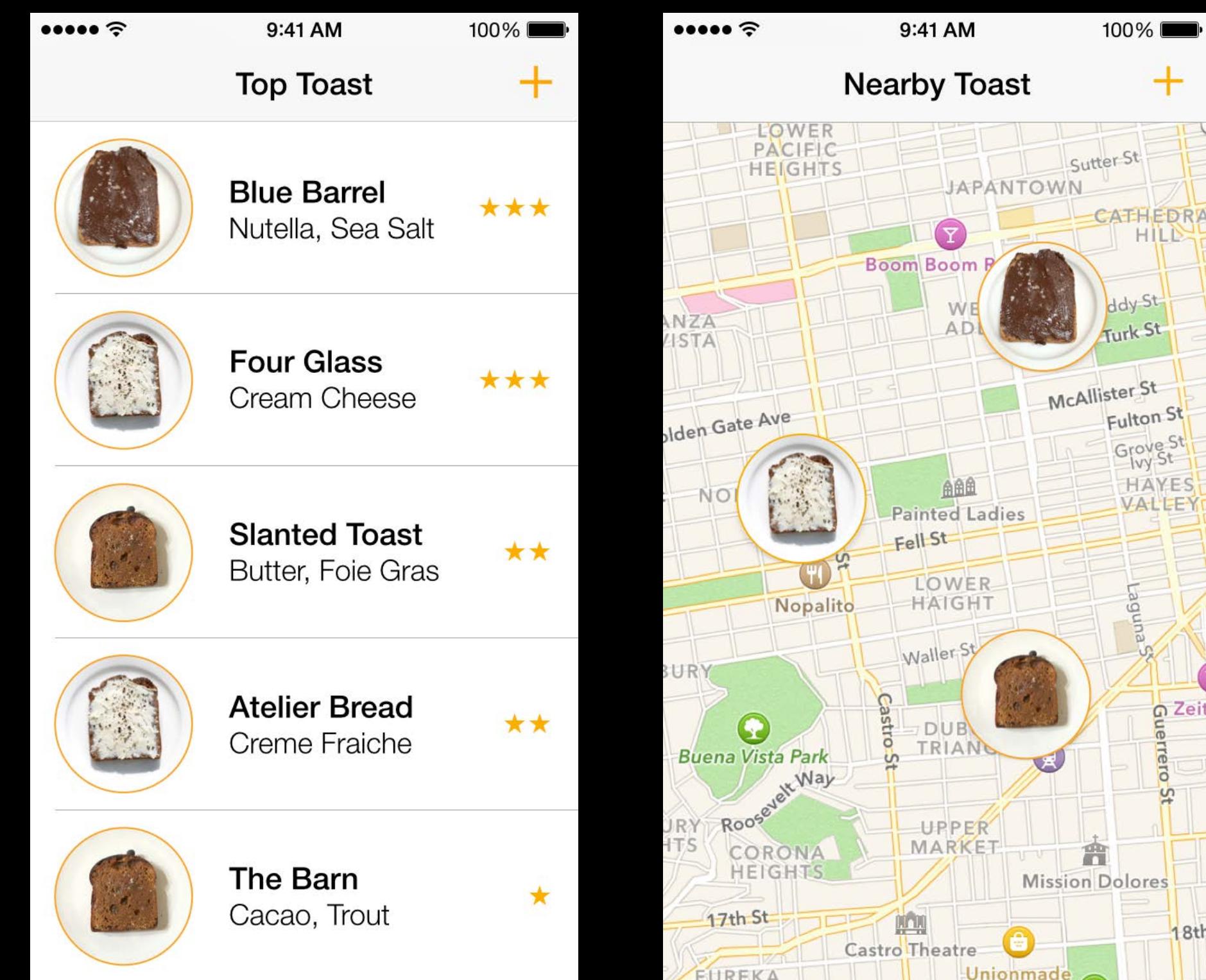
The connection between top toast and nearby toast



Make Fake Apps

What needs to be more real?

The connection between top toast and nearby toast

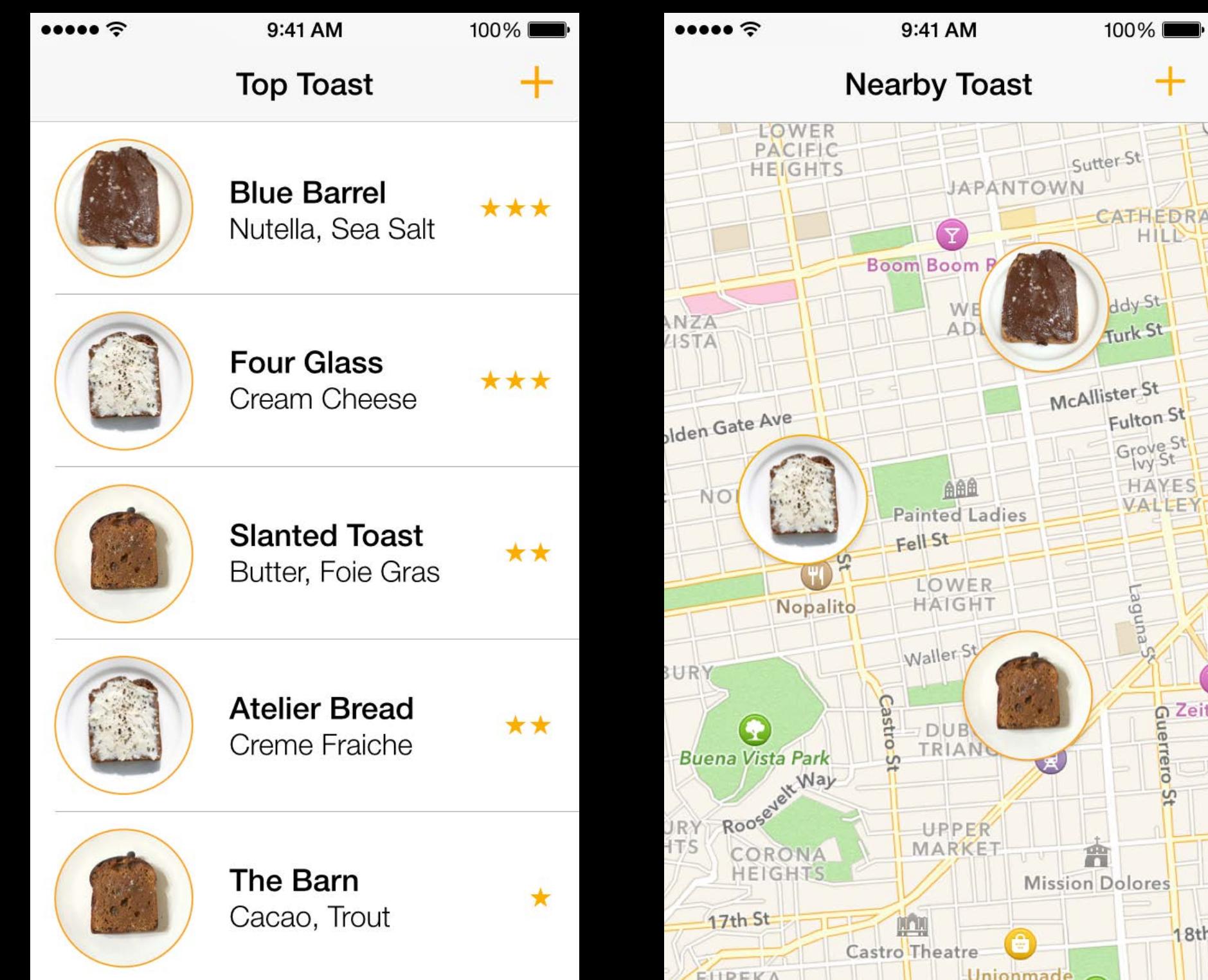


Make Fake Apps

What needs to be more real?

The connection between top toast and nearby toast

What can we fake?



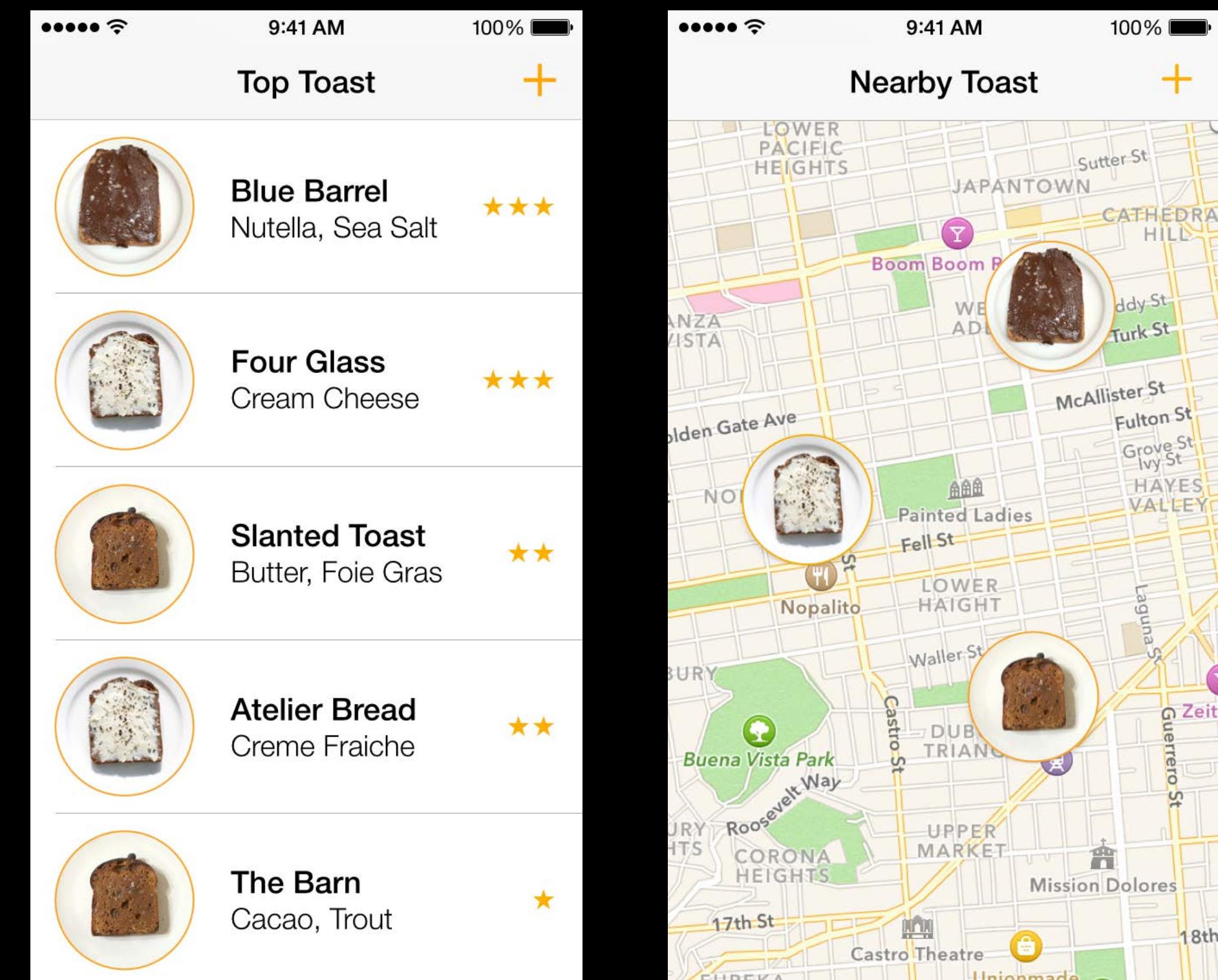
Make Fake Apps

What needs to be more real?

The connection between top toast and nearby toast

What can we fake?

Nothing really needs to be interactive
Final screens don't have to be done



Make Fake Apps

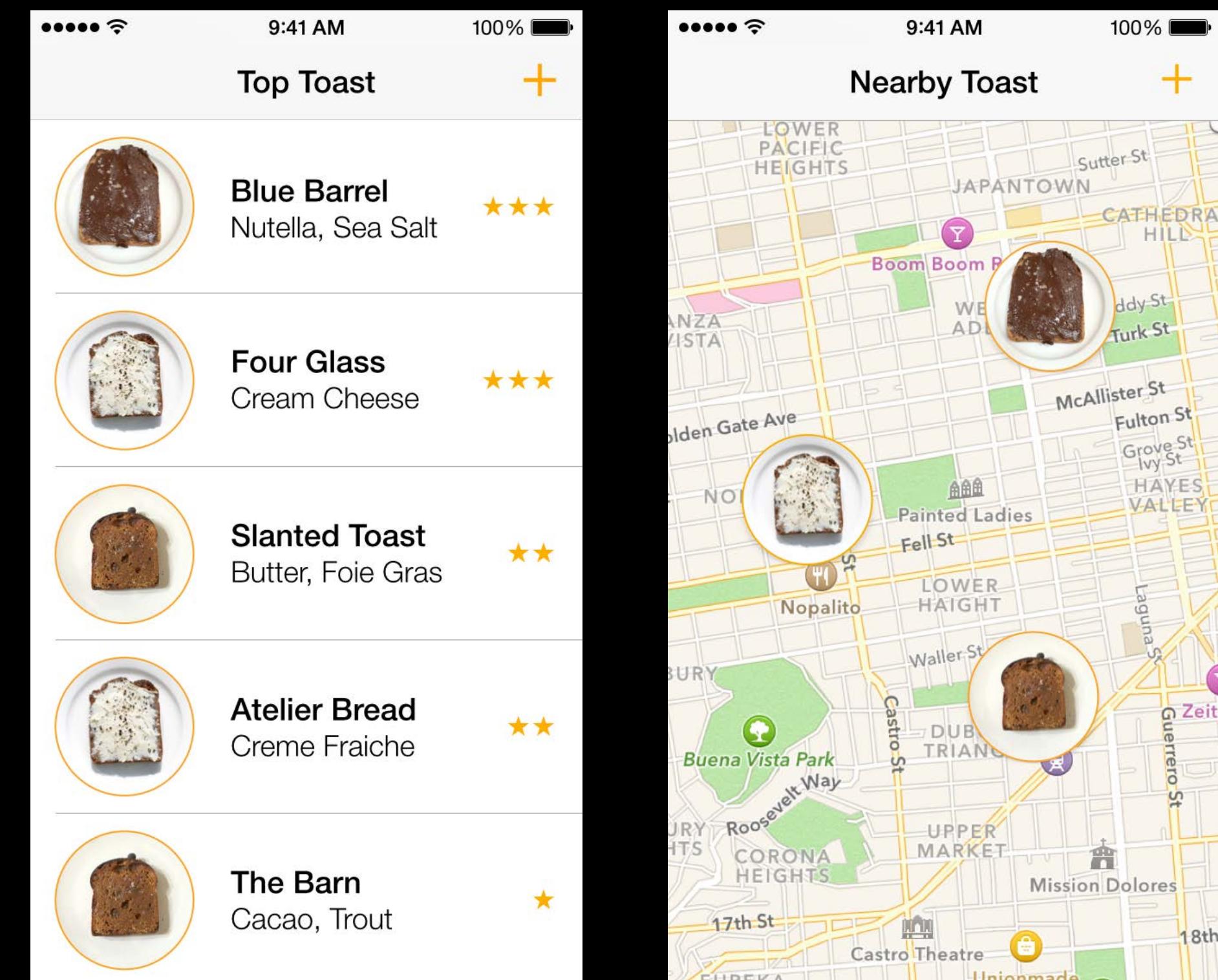
What needs to be more real?

The connection between top toast and nearby toast

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Final screens don't have to be done

Where will this be used?



Make Fake Apps

What needs to be more real?

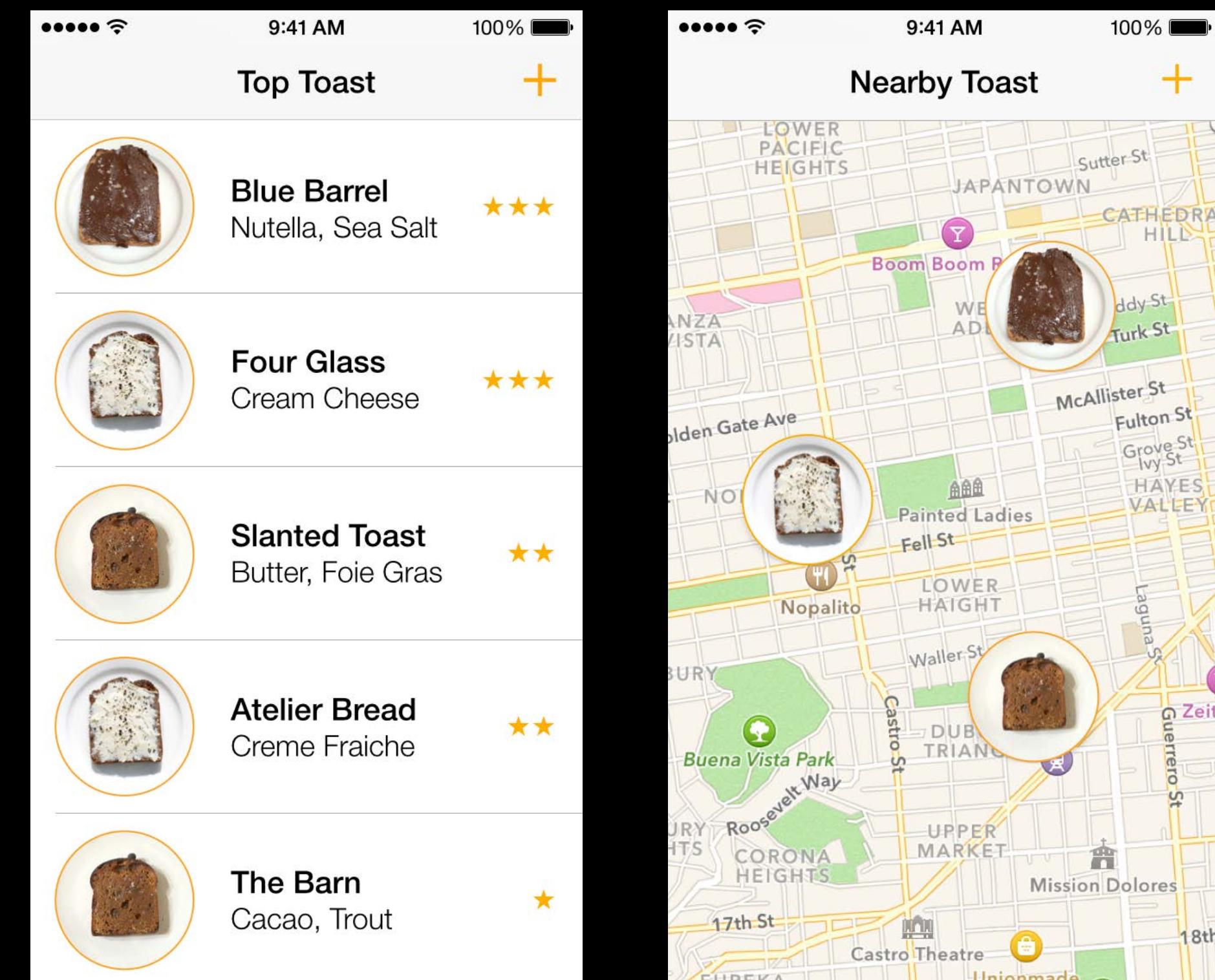
The connection between top toast and nearby toast

What can we fake?

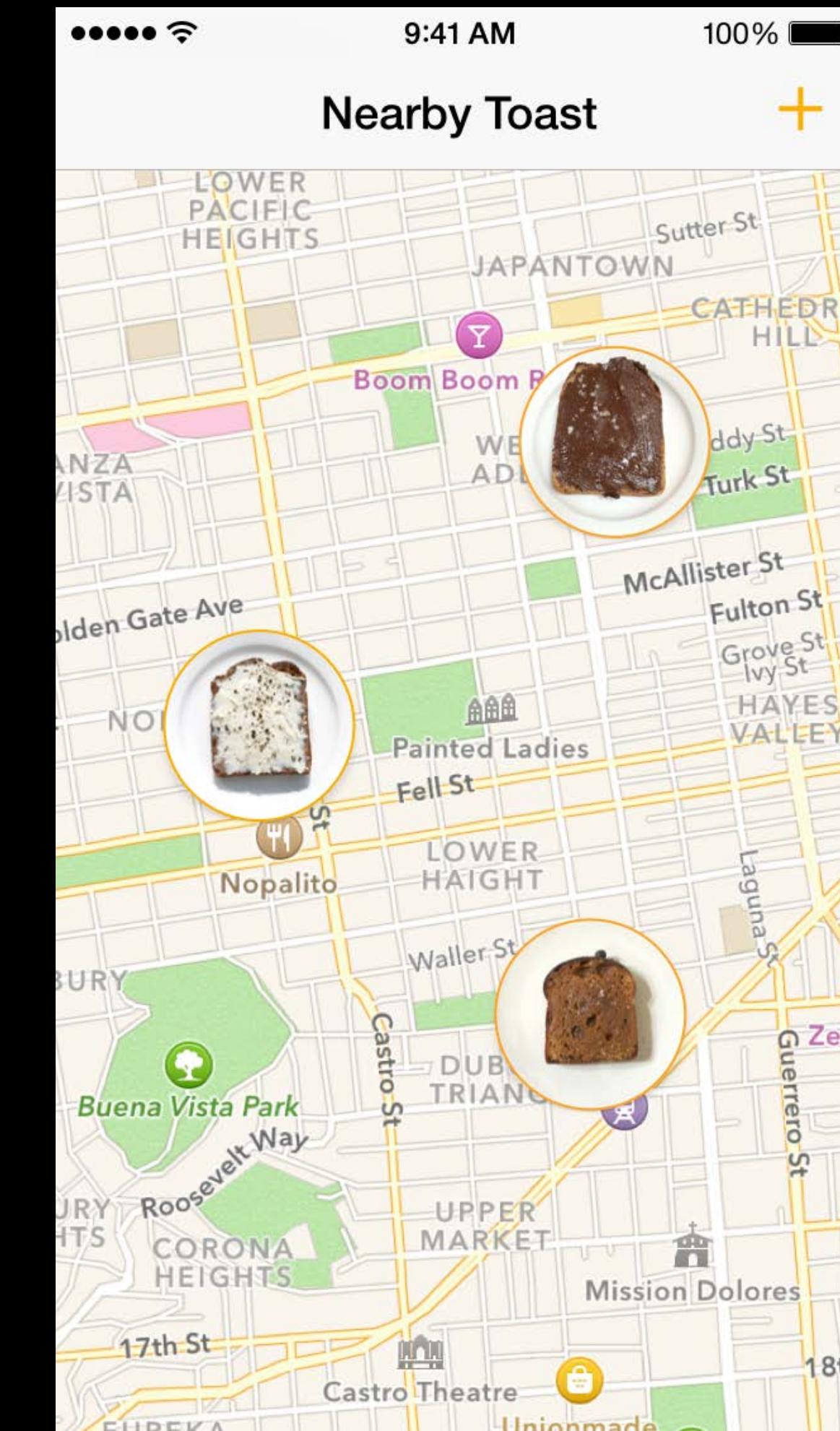
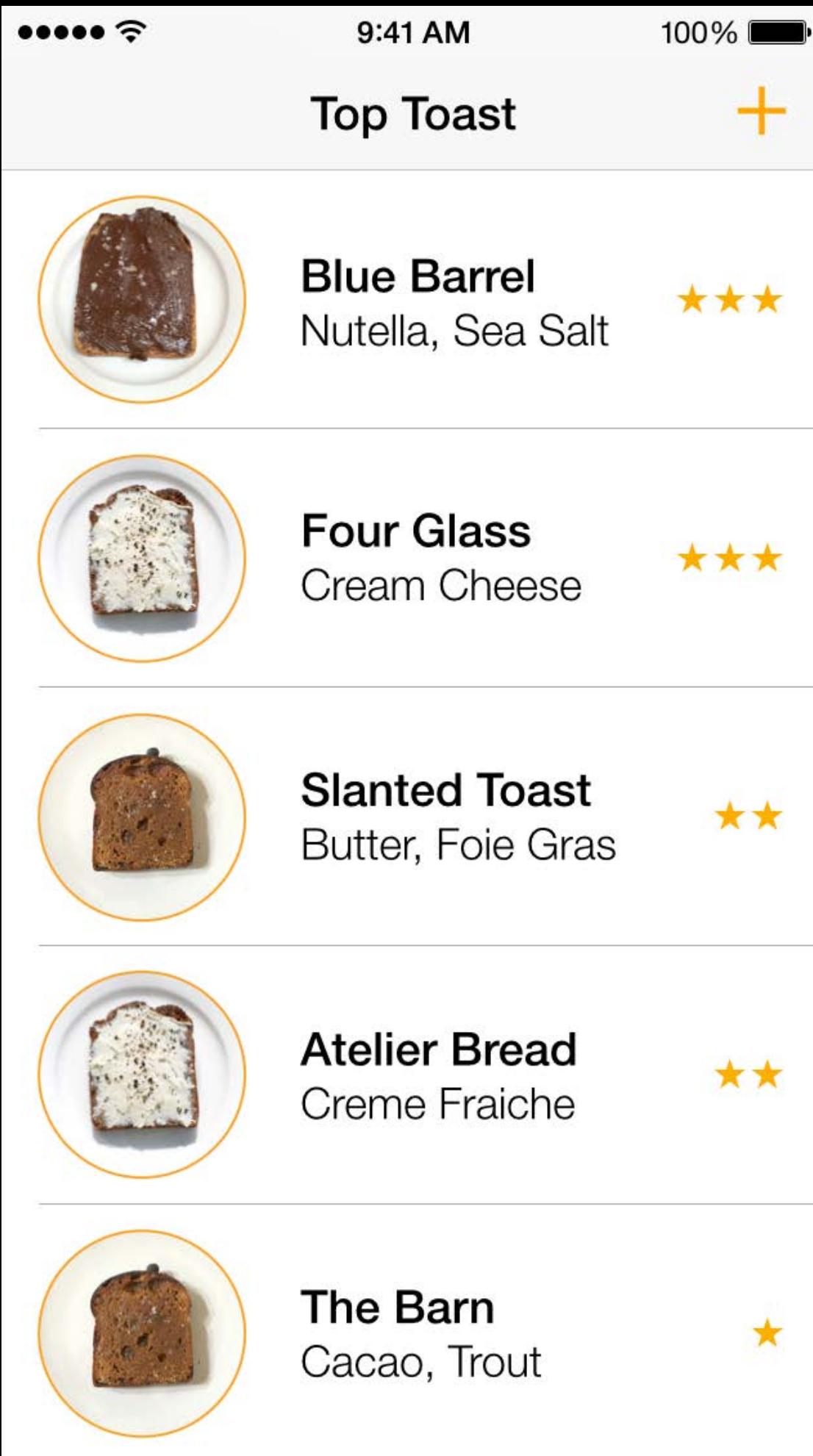
Nothing really needs to be interactive
Final screens don't have to be done

Where will this be used?

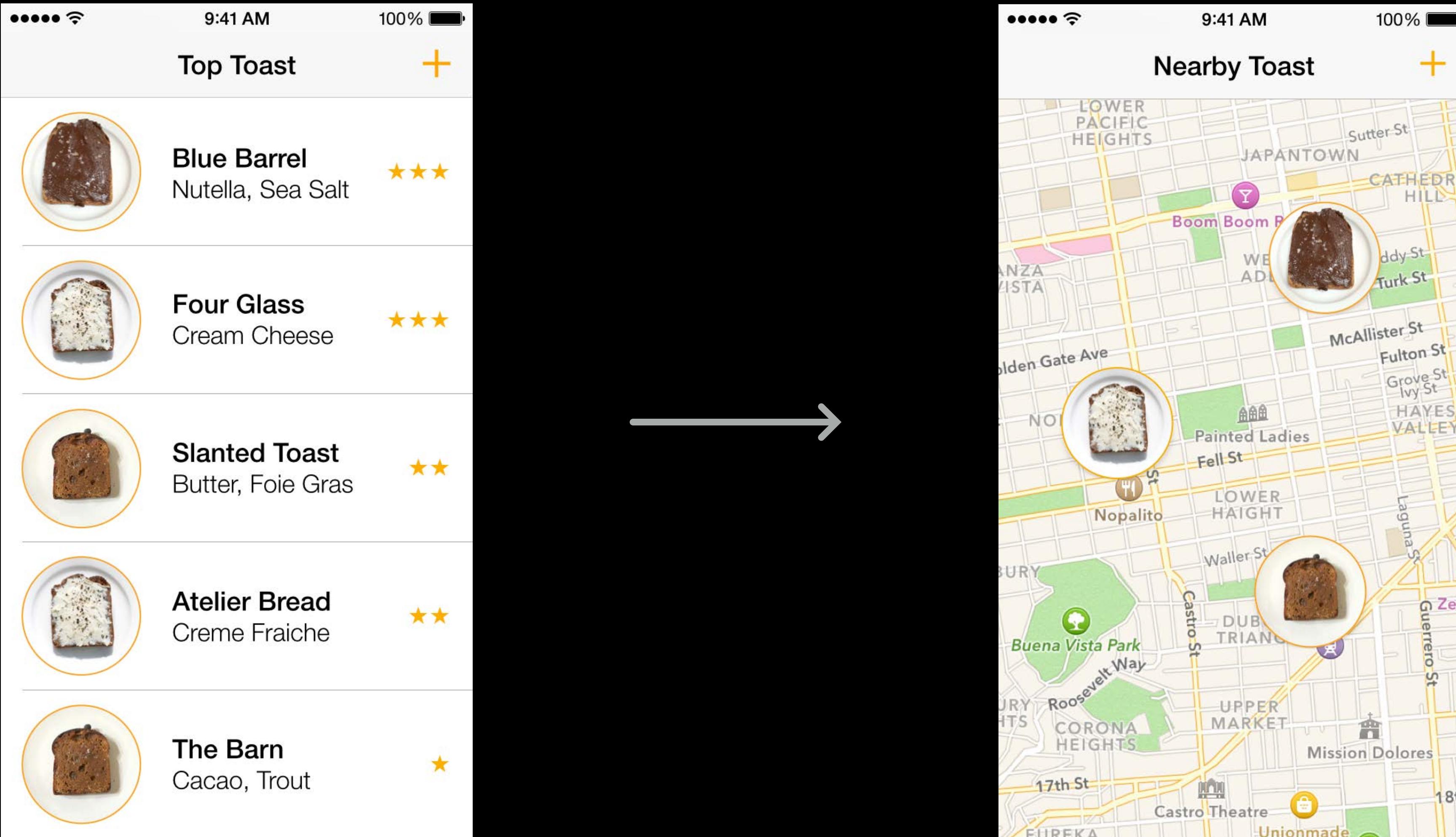
Walking around on a busy sidewalk when we are hungry



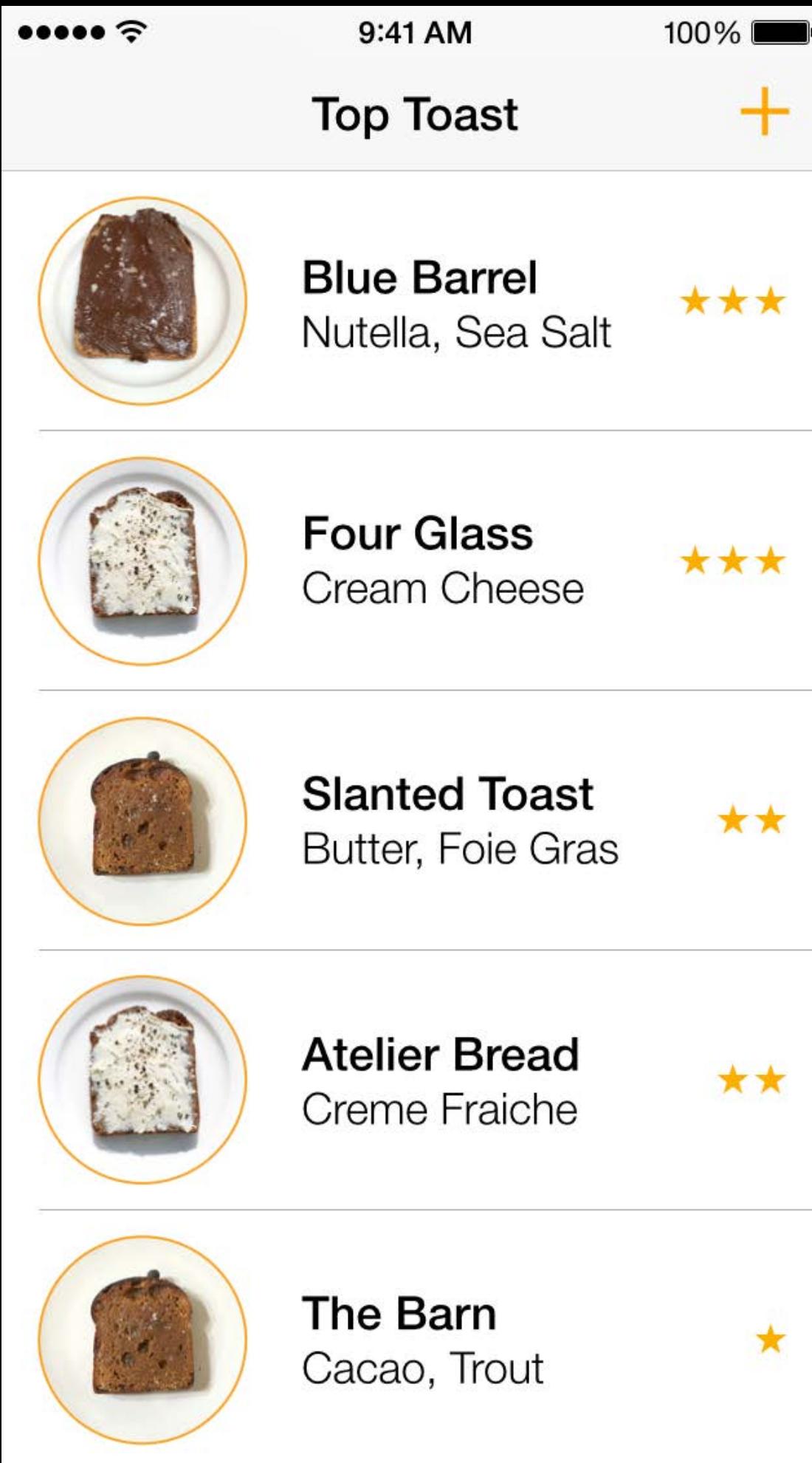
Animation



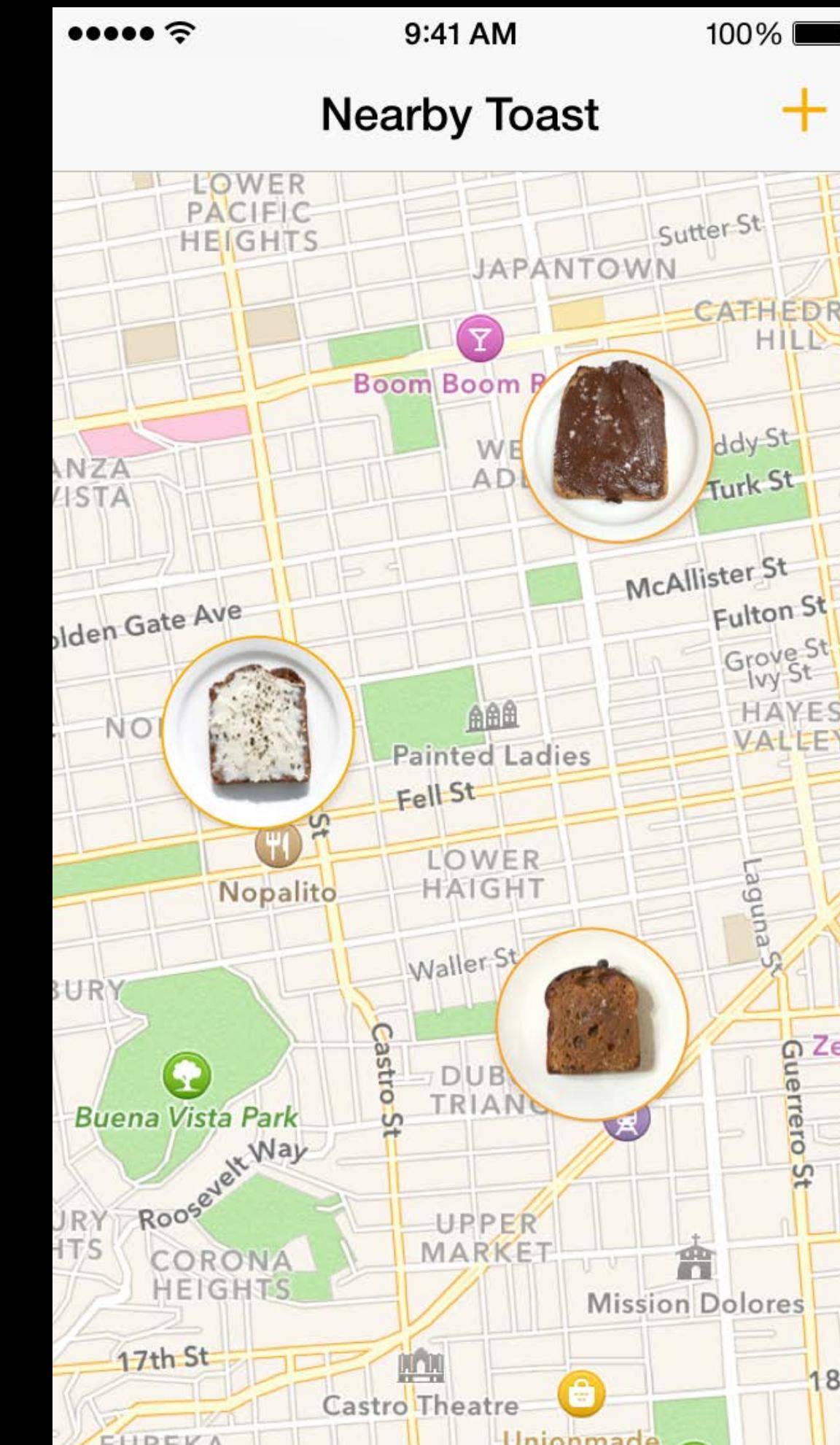
Animation



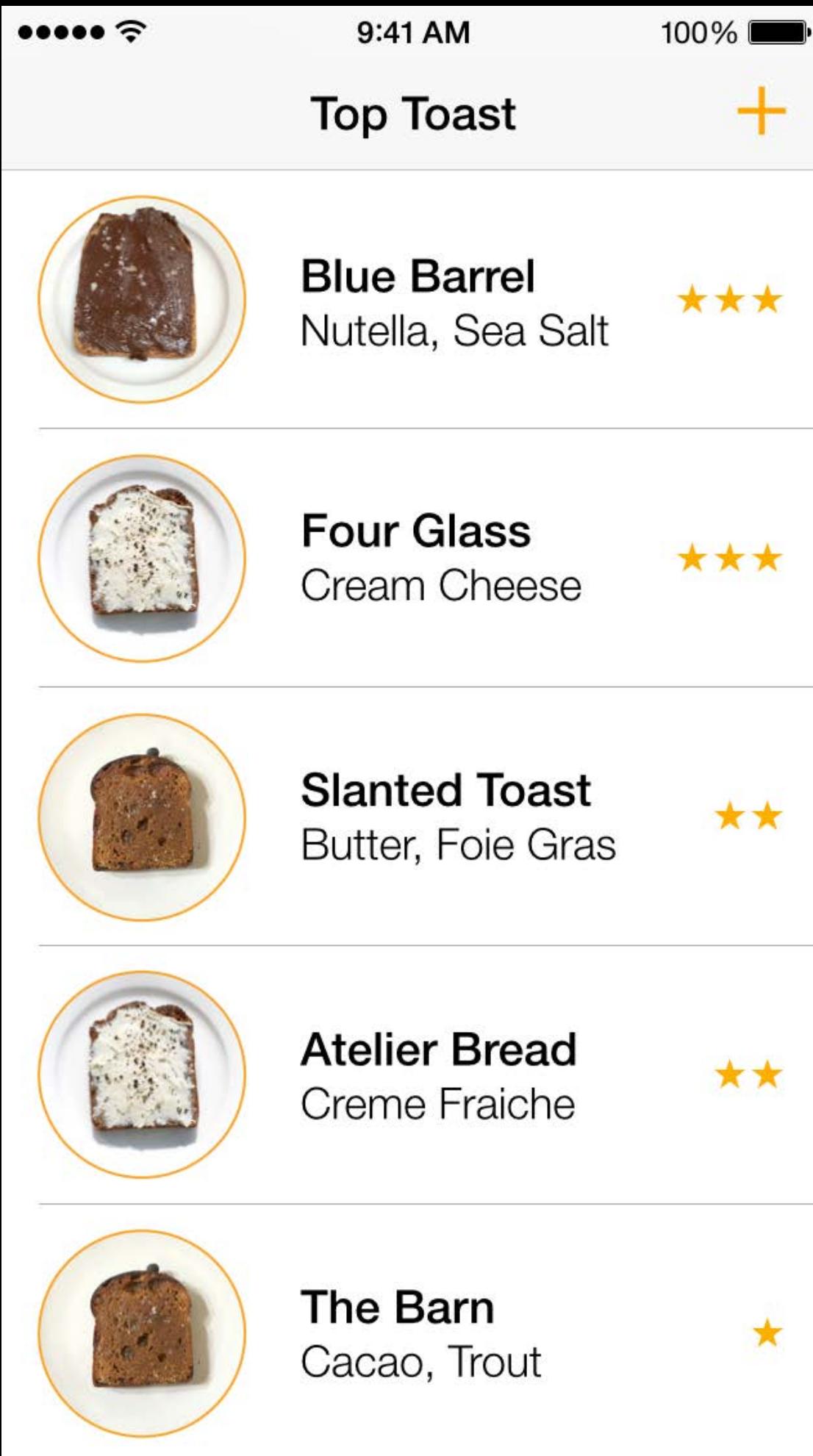
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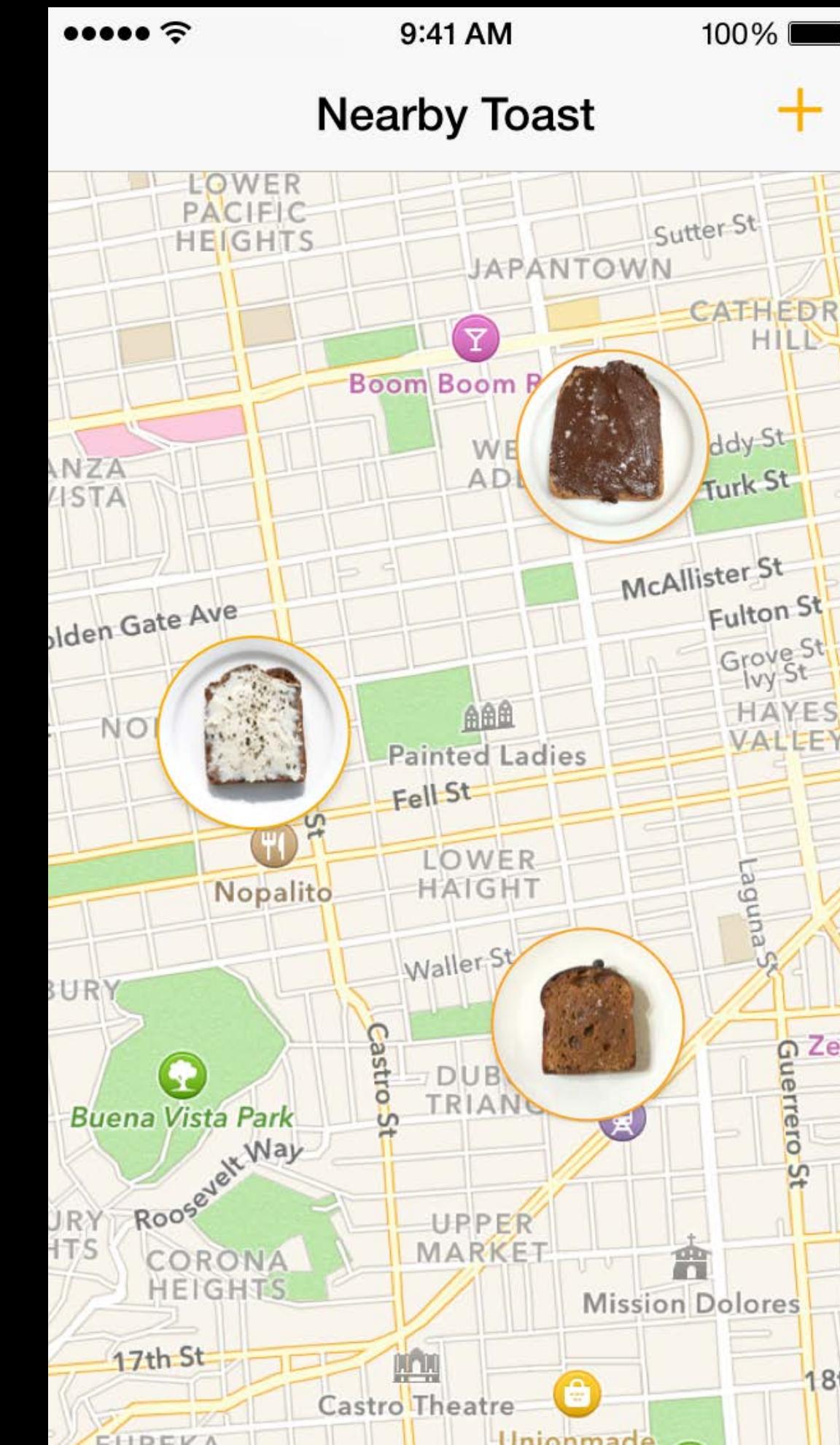
Motion
AfterEffects
Quartz Composer



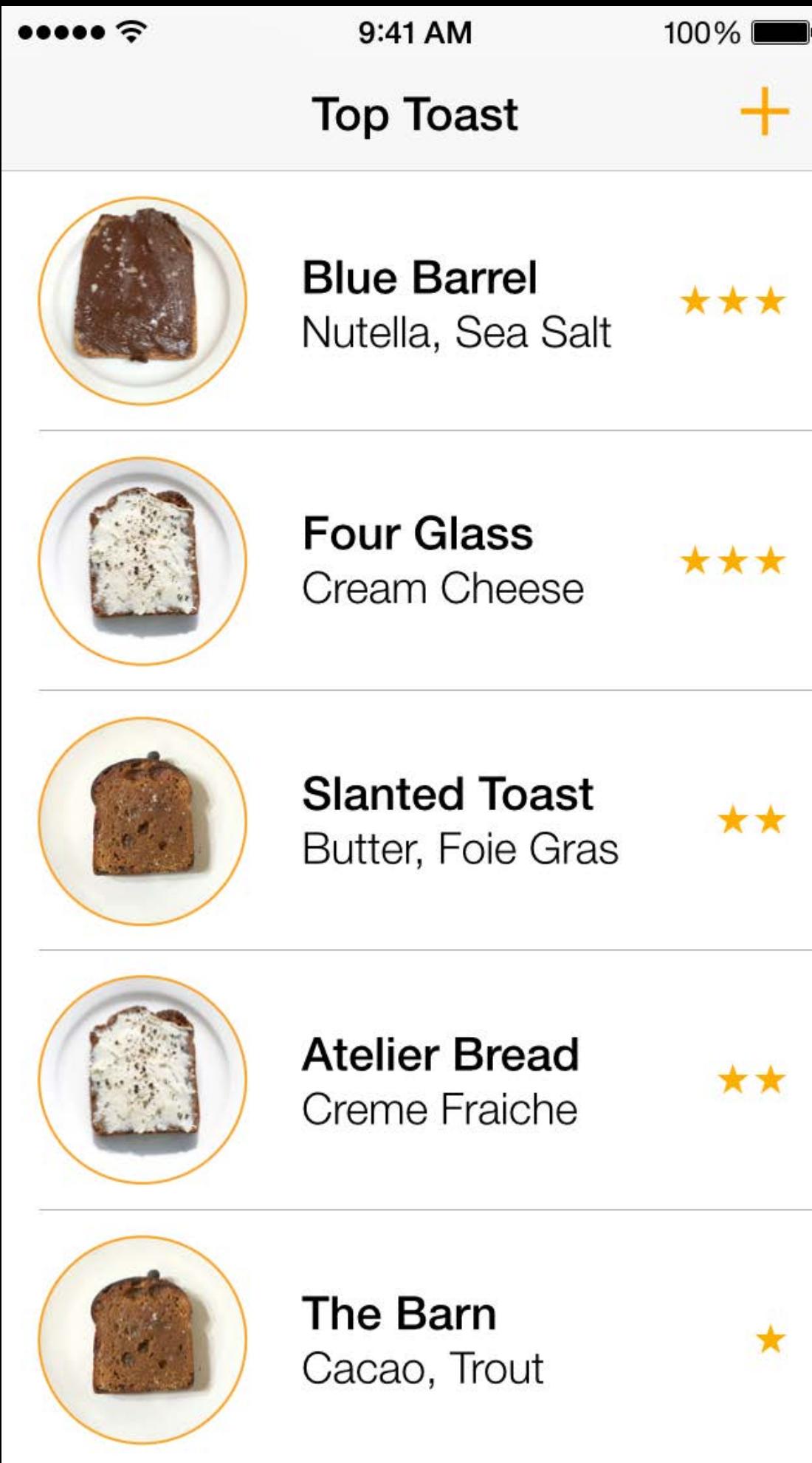
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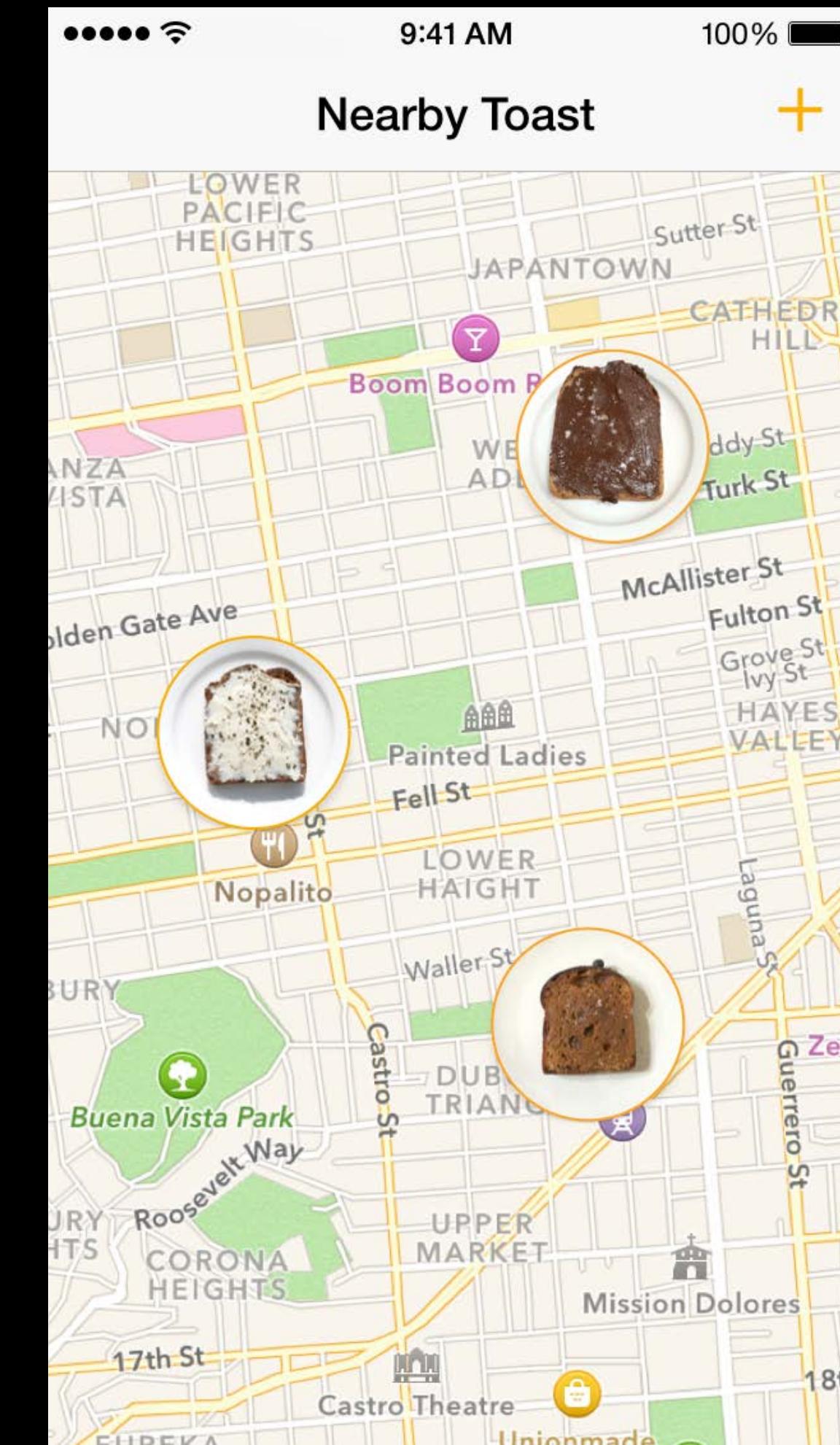
Motion
AfterEffects
Quartz Composer
HTML/CSS
Processing



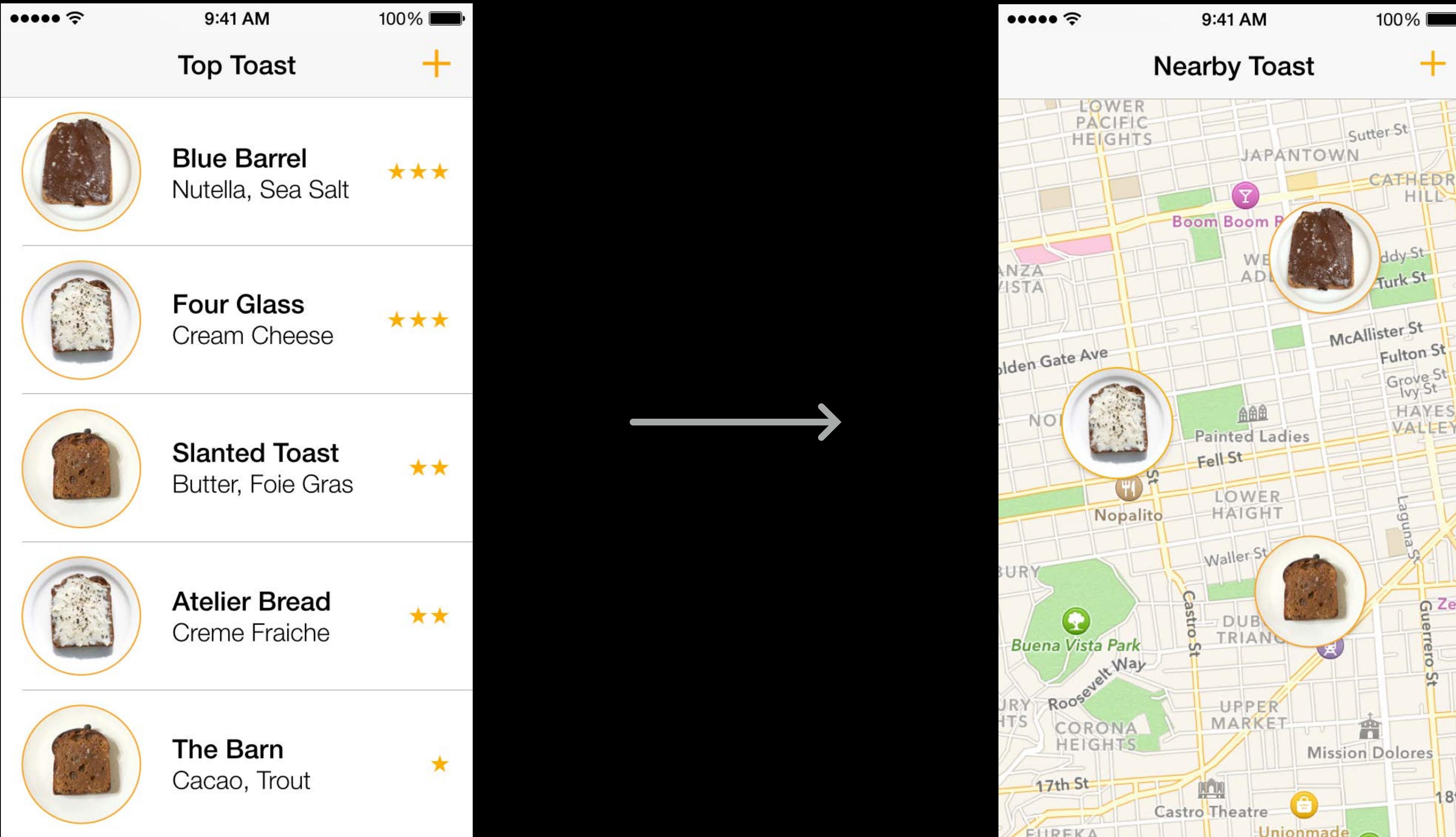
Animation



Motion
AfterEffects
Quartz Composer
HTML/CSS
Processing
Hype
Keynote



Animation



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Slides

1

2

9:41 AM 100%

Top Toast

Blue Barrel
Nutella, Sea Salt

Four Glass
Cream Cheese

Slanted Toast
Butter, Foie Gras

Atelier Bread
Creme Fraiche

The Barn
Cacao, Trout

Transitions

Move In

Change Preview

Duration & Direction

0.60 s

Bottom to Top

Start Transition Delay

On Click 0.50 s

Build Order

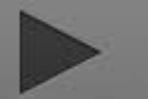


50%



View

Zoom



Play



Table



Chart



Text



Shape



Media



Comment



Share



Tips



Format

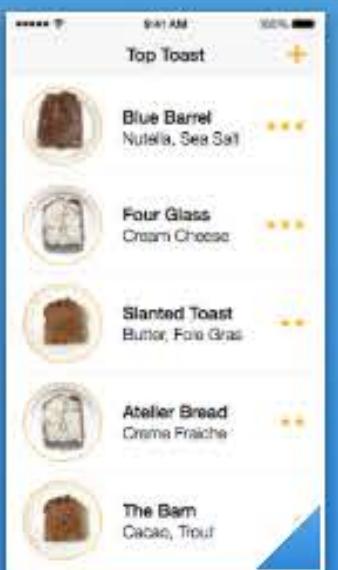


Animate



Document

Slides



1



2

9:41 AM 100%

Top Toast

Blue Barrel Nutella, Sea Salt
Four Glass Cream Cheese
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Build Order

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Slides

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9:41 AM 100%

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Nutella, Sea Salt

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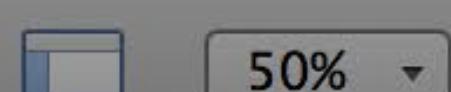
0.60 s

Bottom to Top

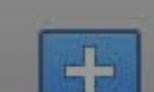
Start Transition Delay

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50%



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Table



Chart



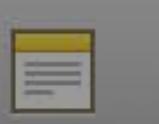
Text



Shape



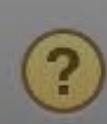
Media



Comment



Share



Tips



Format

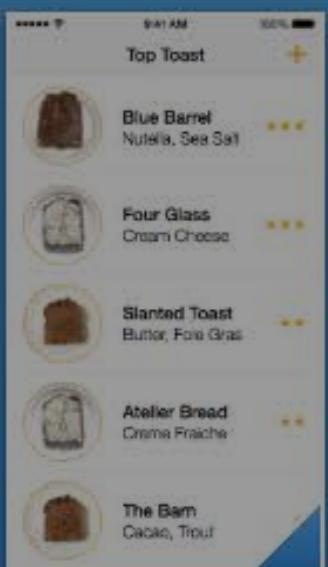


Animate



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Slides



1



2

9:41 AM 100%

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Preview

Duration & Direction

0.60 s

Bottom to Top

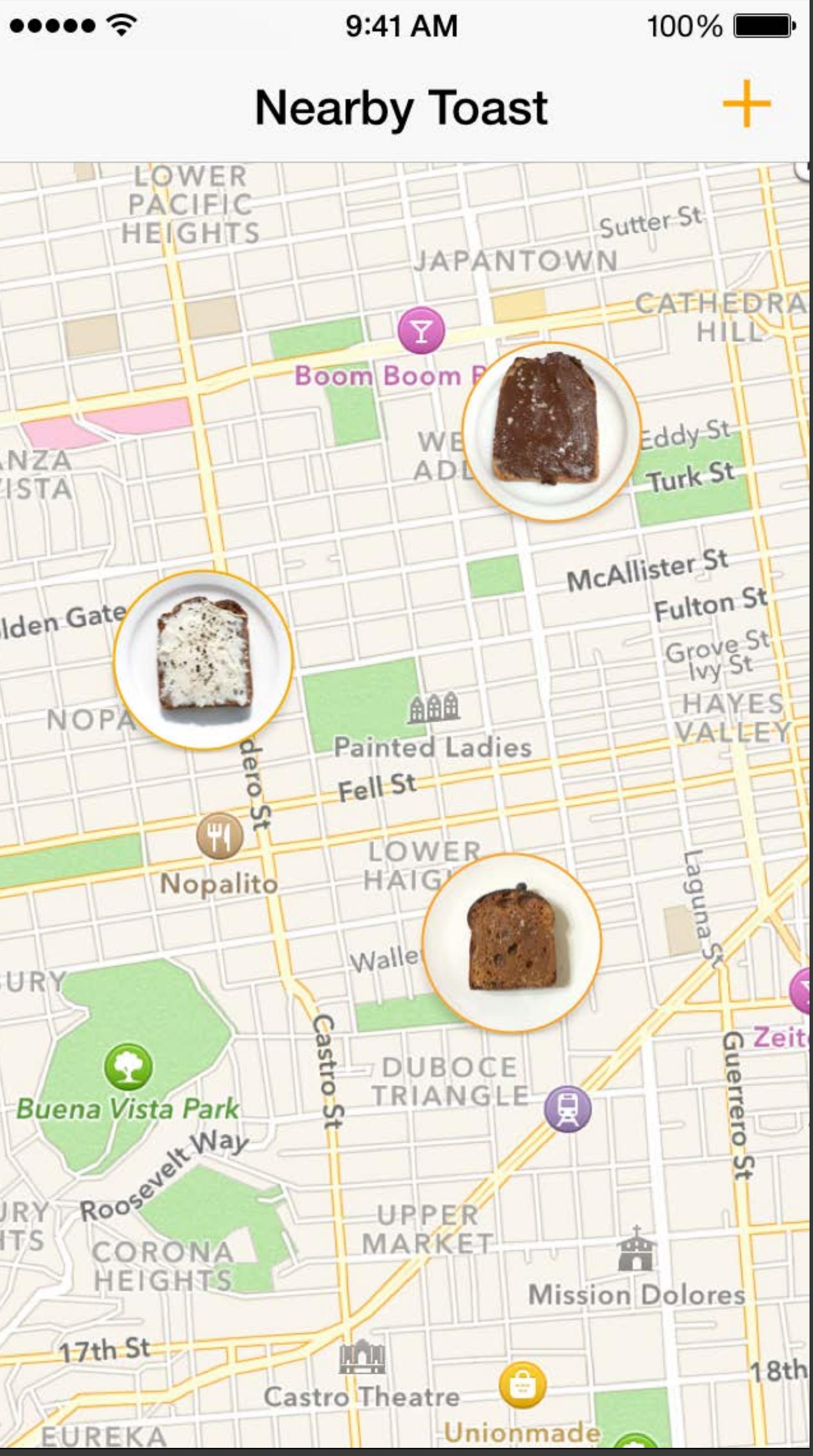
Start Transition

On Click 0.50 s

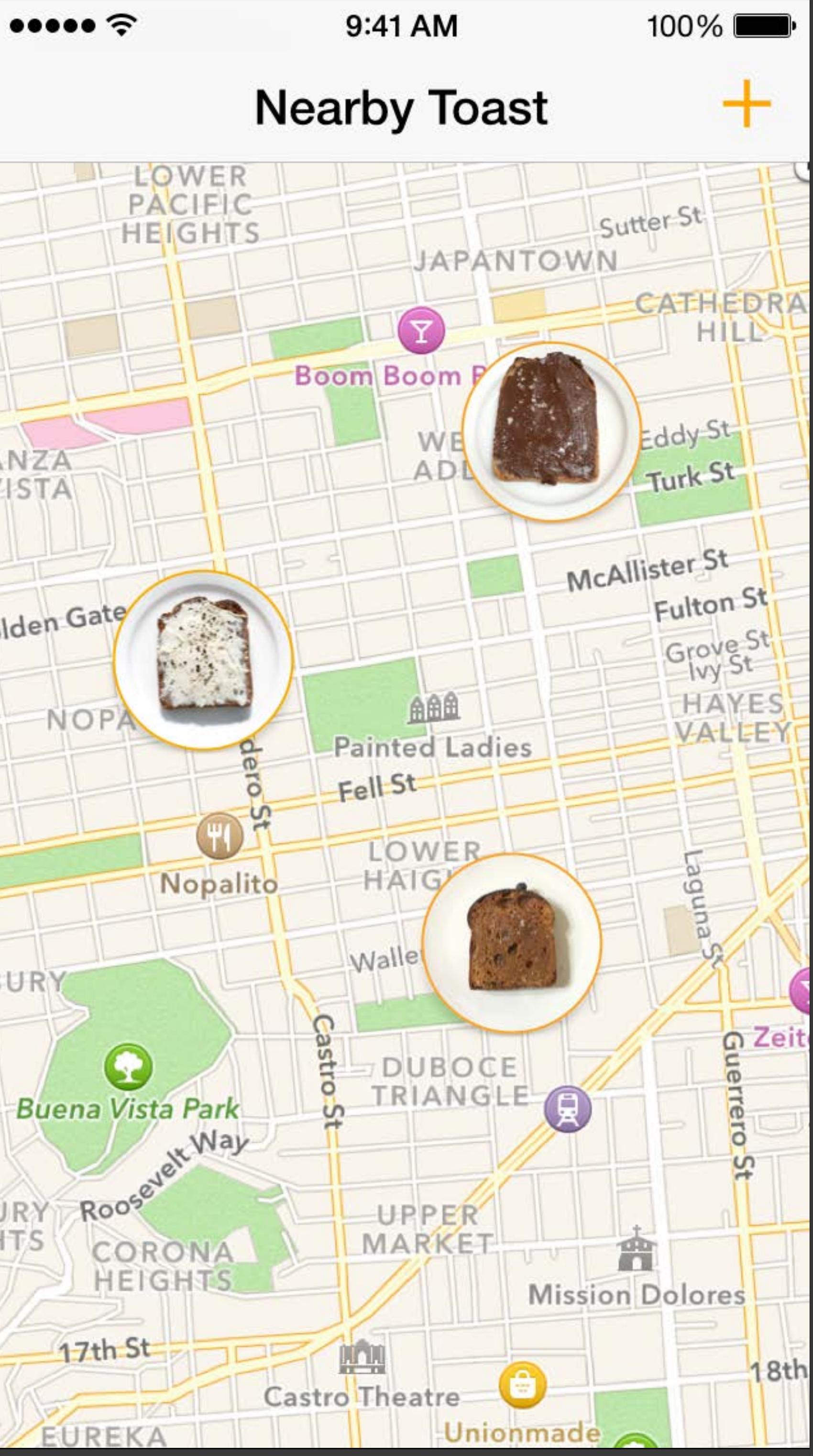
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Build Order

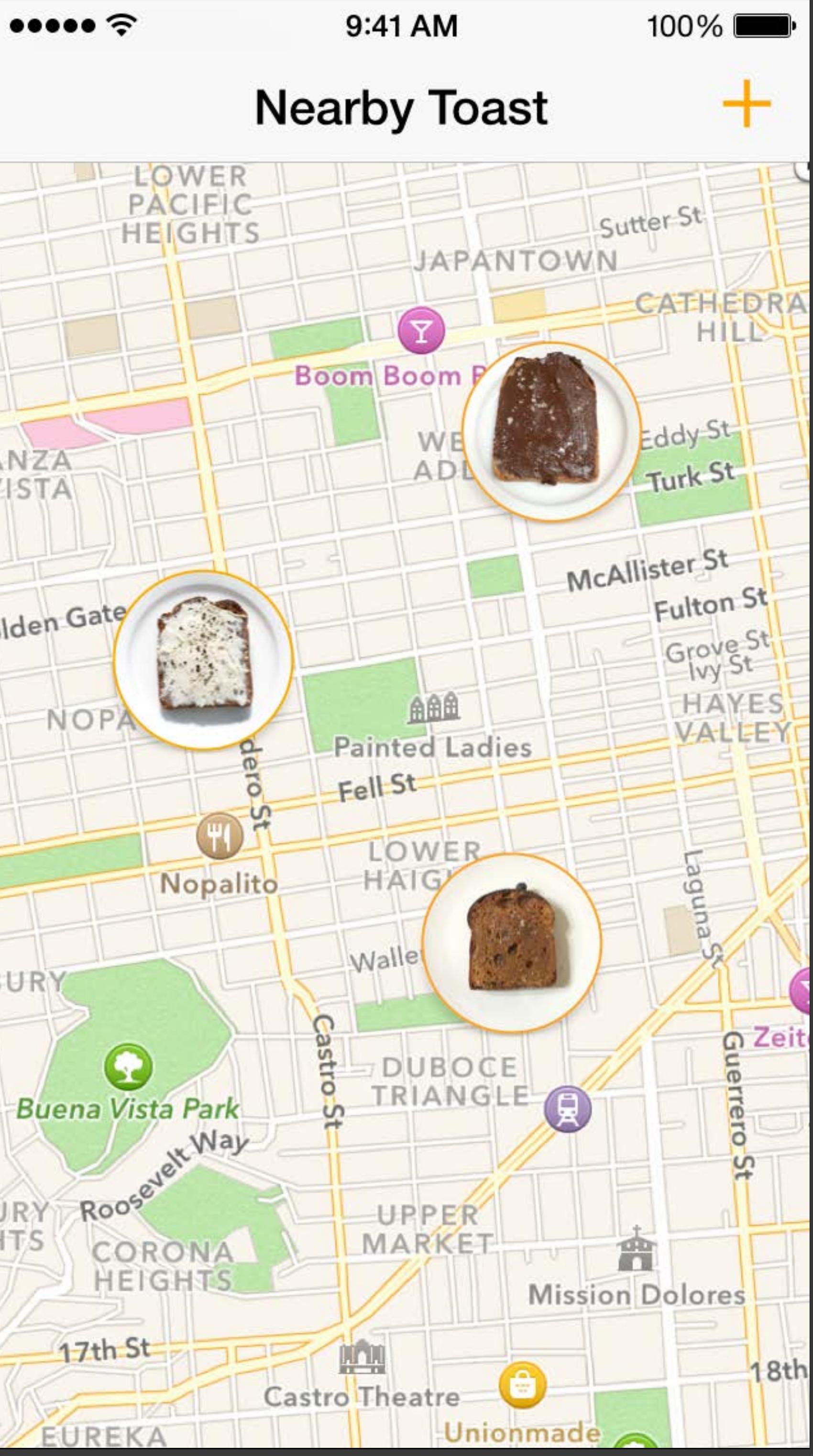
- 9:41 AM 100% 
- Top Toast 
-
-  **Blue Barrel** 
Nutella, Sea Salt
-
-  **Four Glass** 
Cream Cheese
-
-  **Slanted Toast** 
Butter, Foie Gras
-
-  **Atelier Bread** 
Creme Fraiche
-
-  **The Barn** 
Cacao, Trout



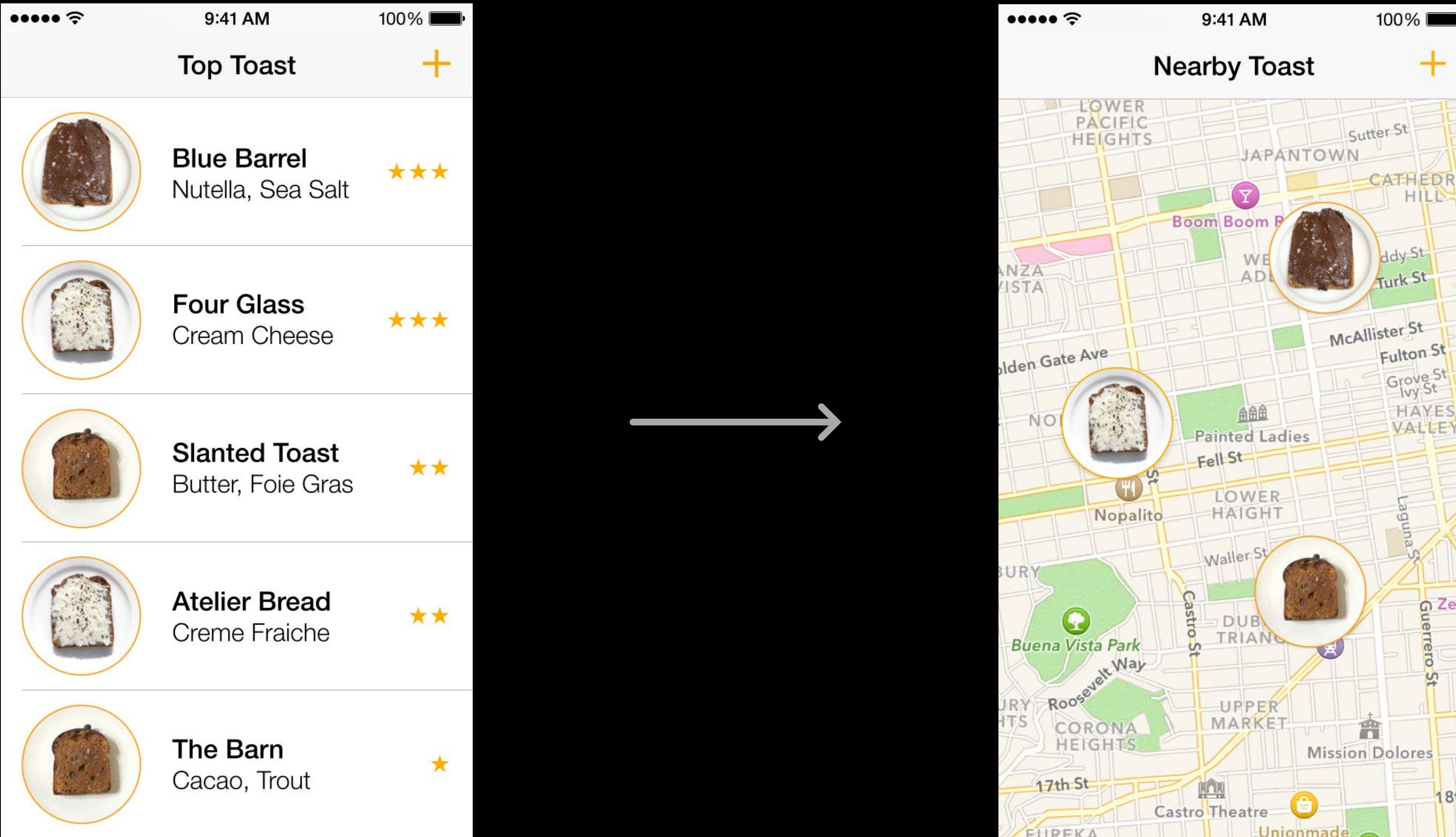
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- Top Toast 
-
-  **Blue Barrel** 
Nutella, Sea Salt
-
-  **Four Glass** 
Cream Cheese
-
-  **Slanted Toast** 
Butter, Foie Gras
-
-  **Atelier Bread** 
Creme Fraiche
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Cacao, Trout



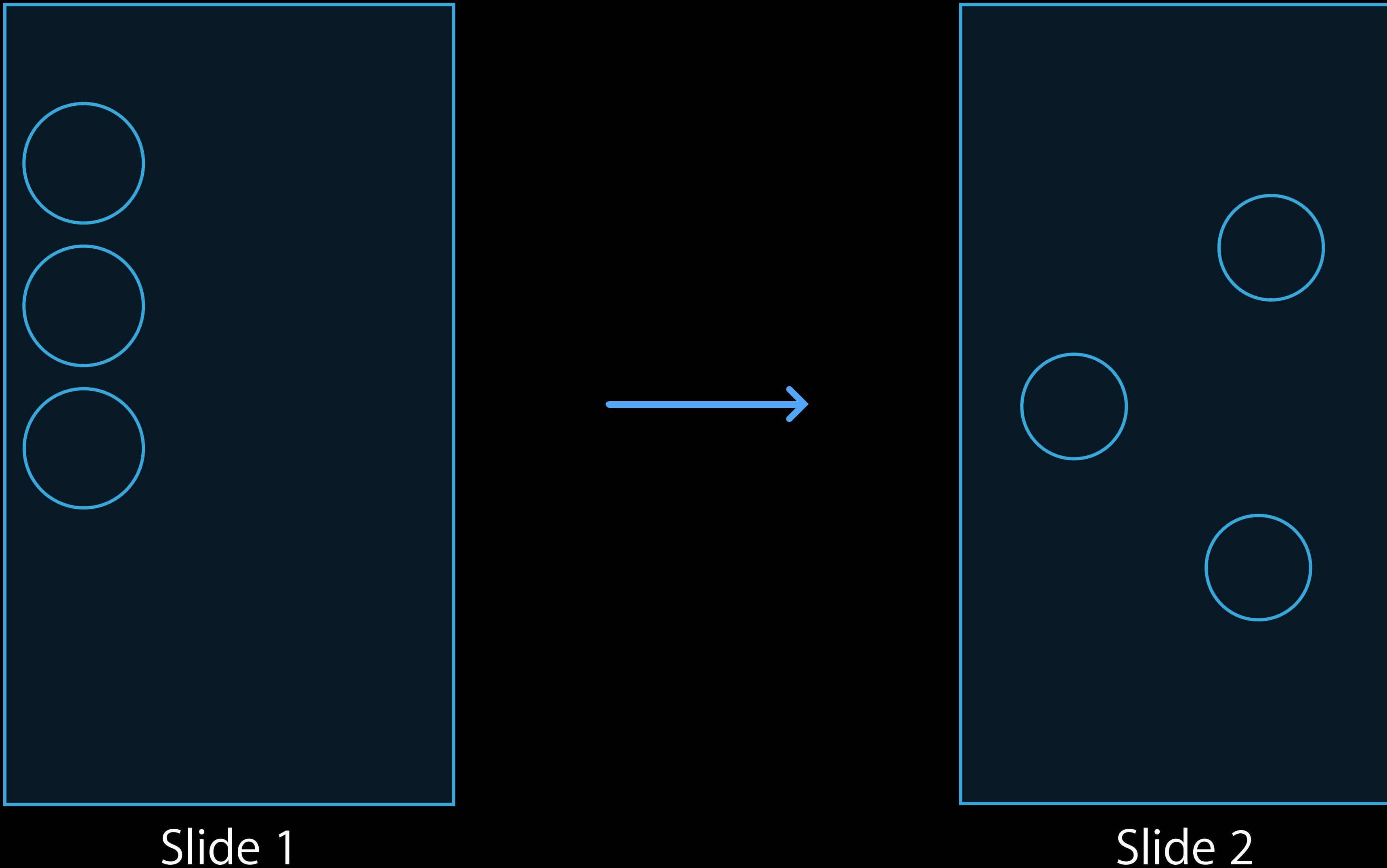
- 9:41 AM 100% 
- Top Toast 
-
-  **Blue Barrel** 
Nutella, Sea Salt
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-  **The Barn** 
Cacao, Trout



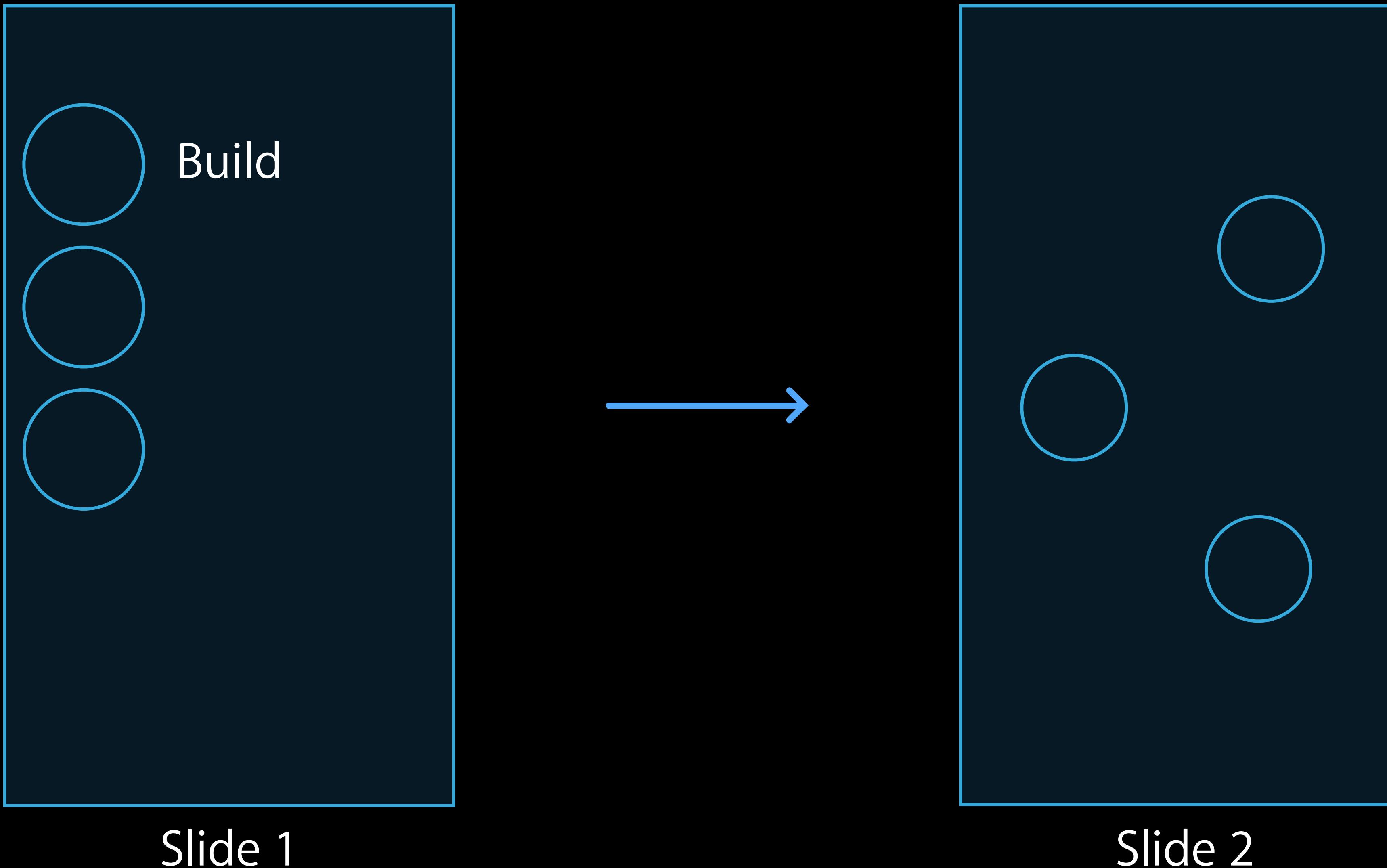
Animation



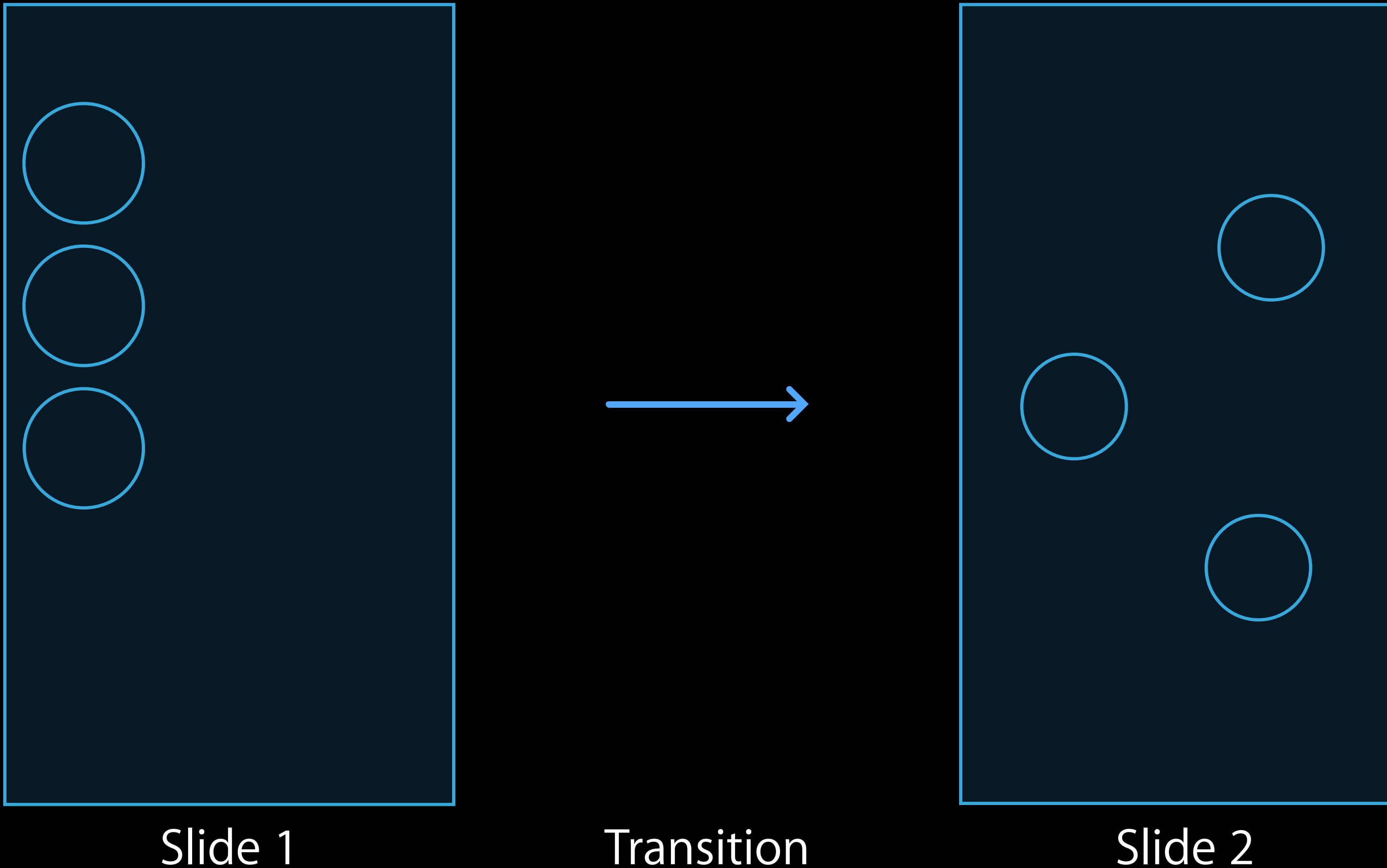
Keynote Animation



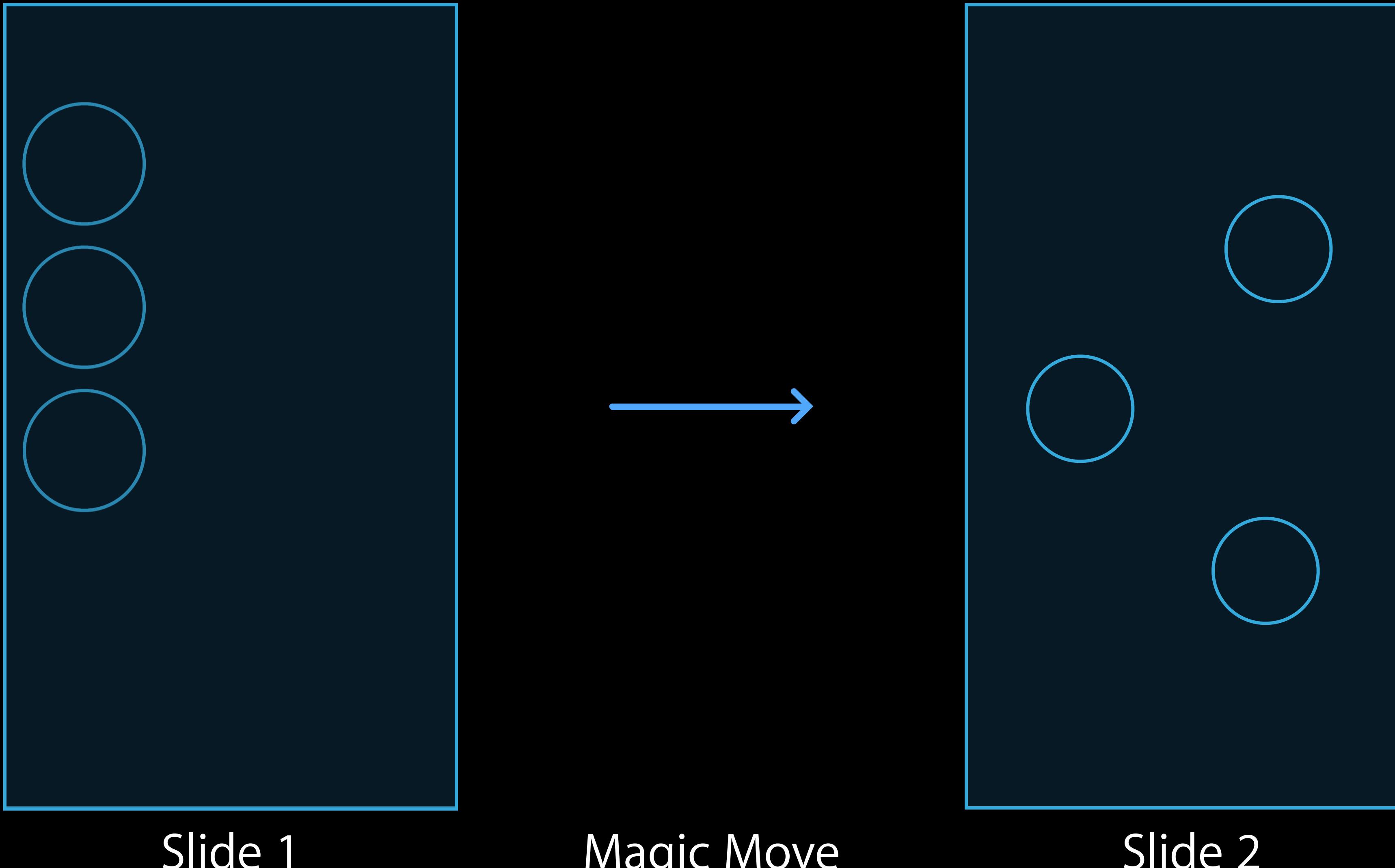
Keynote Animation



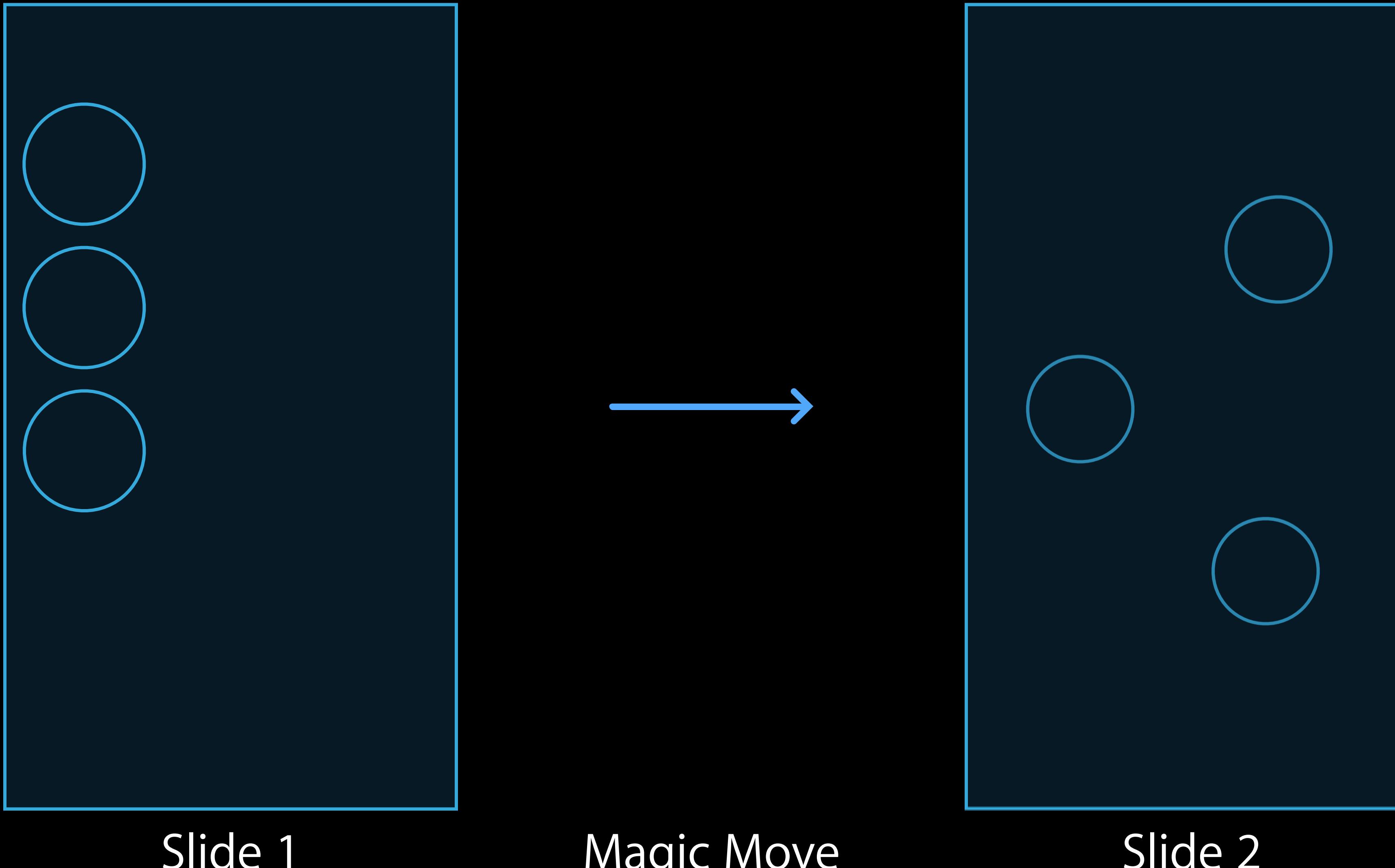
Keynote Animation



Keynote Animation



Keynote Animation



View Zoom Add Slide Play Table Chart Text Shape Media Comment Share Tips Format Animate Document

Slides

1

2

9:41 AM 100%

Top Toast

Blue Barrel Nutella, Sea Salt

Four Glass Cream Cheese

Slanted Toast Butter, Foie Gras

Atelier Bread Creme Fraiche

The Barn Cacao, Trout

Transitions

Magic Move

Change Preview ►

Duration 0.60 s

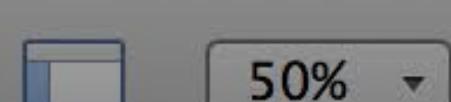
Fade Unmatched Objects

Match

Acceleration

Start Transition Delay

Build Order



50%



View

Zoom



Play



Table



Chart



Text



Shape



Media



Comment



Share



Tips



Format

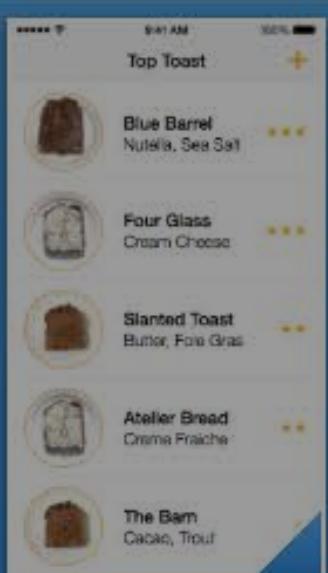


Animate



Document

Slides



1



2

9:41 AM 100%

Top Toast

Blue Barrel Nutella, Sea Salt
Four Glass Cream Cheese
Slanted Toast Butter, Foie Gras
Atelier Bread Creme Fraiche
The Barn Cacao, Trout

Transitions



Magic Move

Change

Preview

Duration

0.60 s

 Fade Unmatched Objects

Match

 By Object By Word By Character

Acceleration

Ease In & Ease Out

Start Transition

On Click 0.50 s

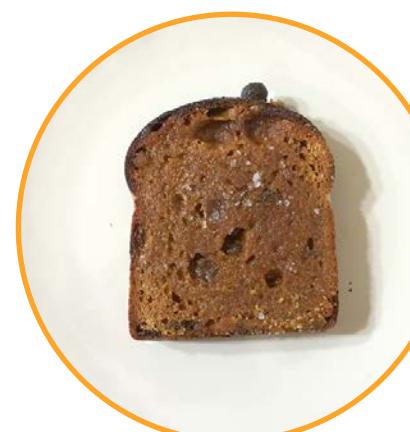
Build Order

- 9:41 AM 100%
- ## Top Toast
- +
-
- 

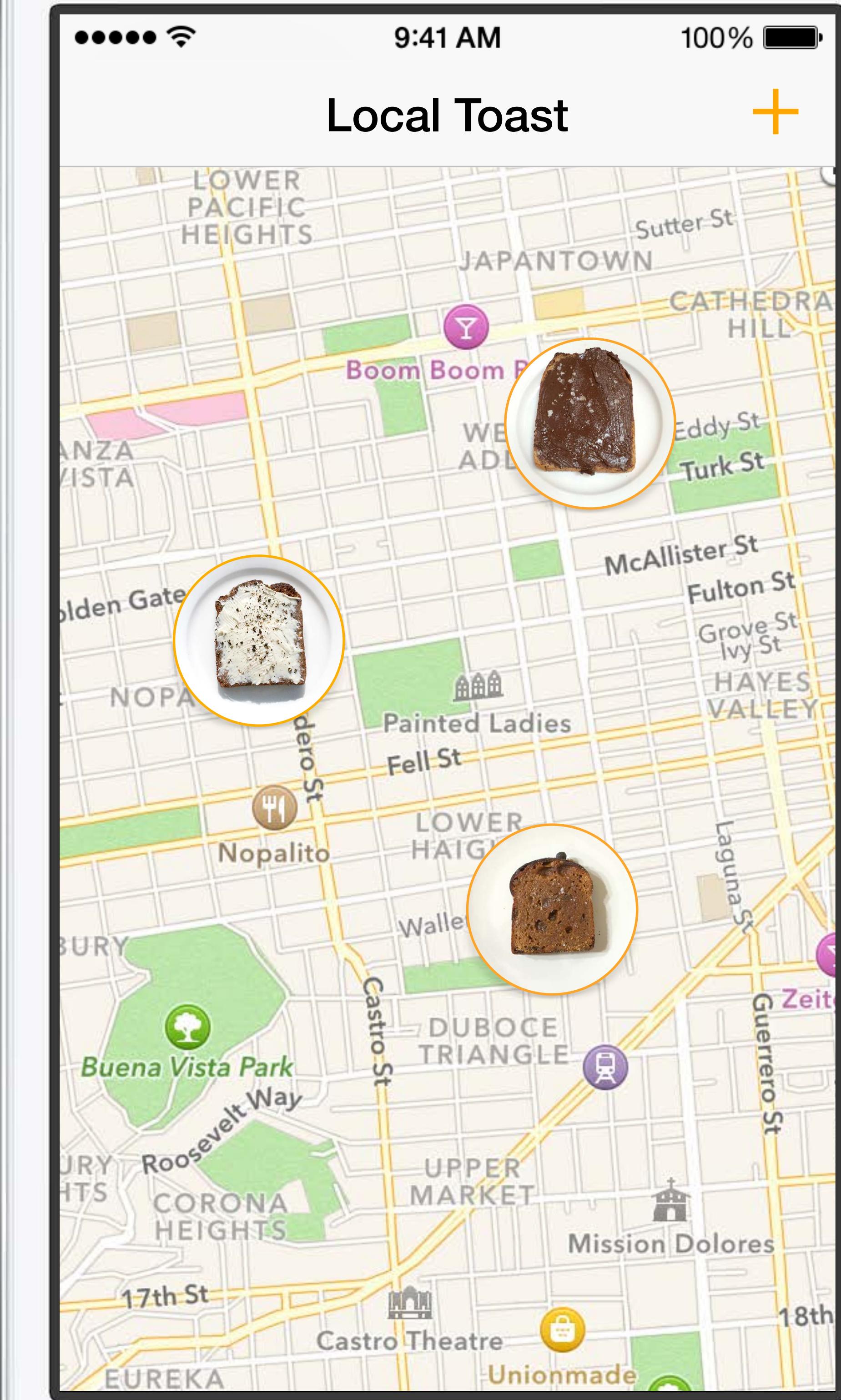
Blue Barrel
Nutella, Sea Salt ★★★
-
- 

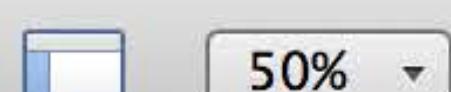
Four Glass
Cream Cheese ★★★
-
- 

Slanted Toast
Butter, Foie Gras ★★
-
- 

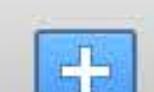
Atelier Bread
Creme Fraiche ★★
-
- 

The Barn
Cacao, Trout ★





50%



View

Zoom



Add Slide

Table

Chart

Text

Shape

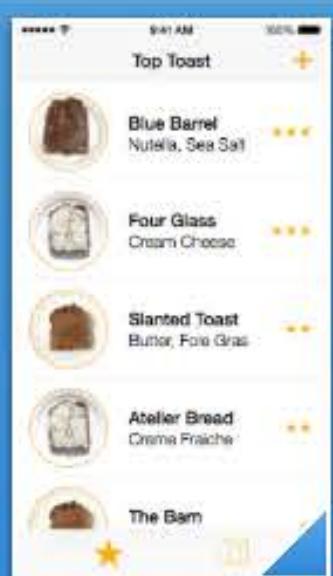
Media

Comment

Share

Tips

Slides



1



2

9:41 AM

100%

Top Toast

**Blue Barrel**
Nutella, Sea Salt**Four Glass**
Cream Cheese**Slanted Toast**
Butter, Foie Gras**Atelier Bread**
Creme Fraiche**The Barn**

Style

Text

Arrange

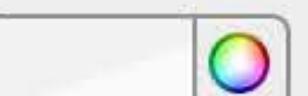


Shape Styles



Fill

Color Fill



Border



Shadow



Reflection

Opacity



View Zoom Add Slide Play Table Chart Text Shape Media Comment Share Tips Format Animate Document

Slides

1

2

Search or enter an address

9:41 AM 100% Top Toast +

Blue Barrel Nutella, Sea Salt ★★★

Four Glass Cream Cheese ★★★

Slanted Toast Butter, Foie Gras ★★

Atelier Bread Creme Fraiche ★★

The Barn ★

Style Image Arrange

Back Front Backward Forward

Align Distribute

Size 862 pt 1530 pt Width Height Constrain proportions Original Size

Position -111 pt -155 pt X Y

Rotate Angle Flip

Lock Unlock

Group Ungroup

The screenshot shows a presentation slide titled "Top Toast" at 9:41 AM with 100% battery. The slide lists five toast toppings with their descriptions and ratings:

- Blue Barrel: Nutella, Sea Salt (★★★)
- Four Glass: Cream Cheese (★★★)
- Slanted Toast: Butter, Foie Gras (★★)
- Atelier Bread: Creme Fraiche (★★)
- The Barn: (★)

Each topping has a small image of the toast in a white plate. The background of the slide features a map of San Francisco with street names like Franklin St, Hayes St, and Valencia St visible.

9:41 AM 100%

Top Toast

+



Blue Barrel
Nutella, Sea Salt ★★★



Four Glass
Cream Cheese ★★★



Slanted Toast
Butter, Foie Gras ★★

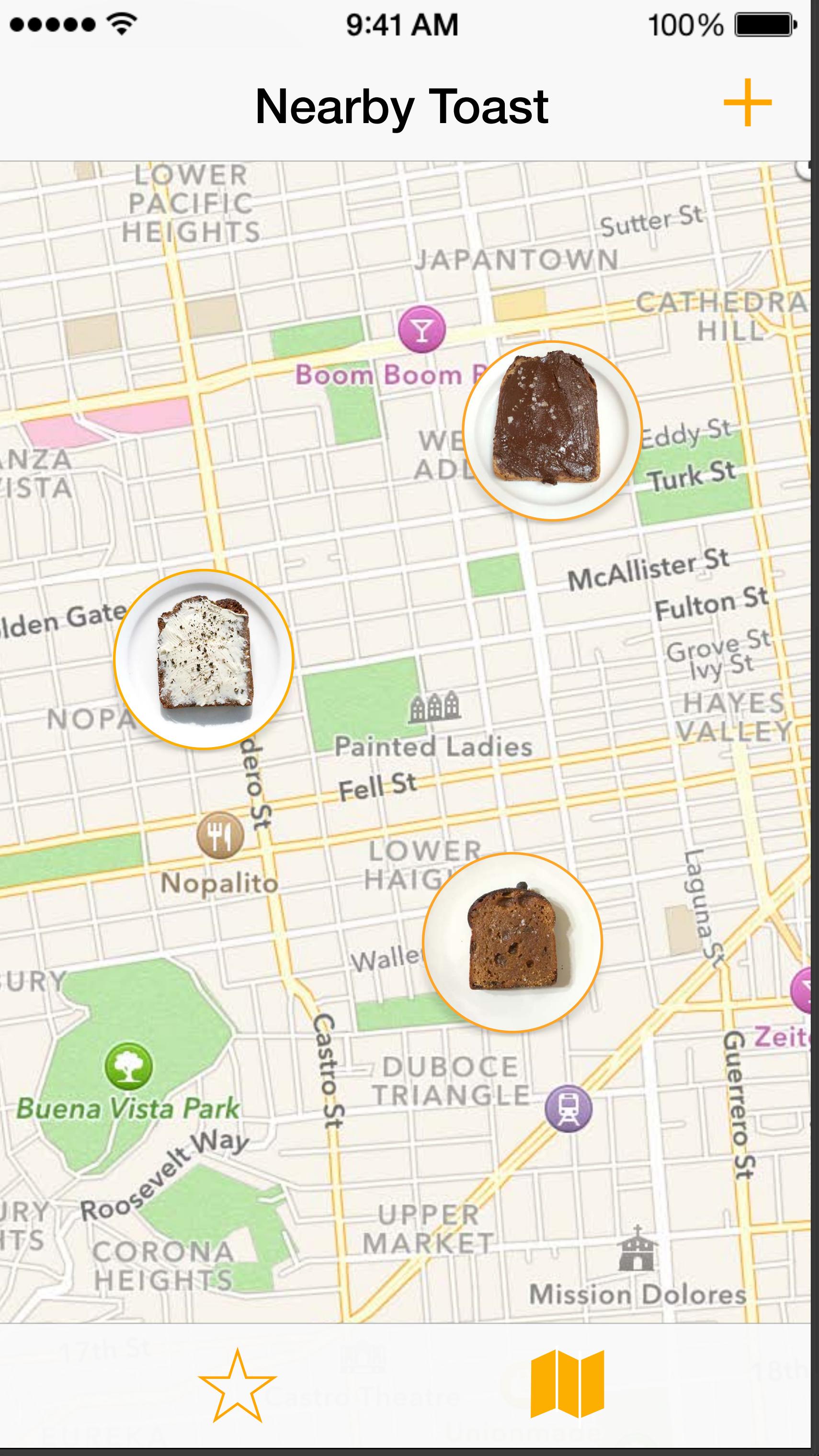


Atelier Bread
Creme Fraiche ★★



The Barn
Cacao, Trout ★

★ Map icon



View Zoom Add Slide Play Table Chart Text Shape Media Comment Share Tips Format Animate Document

50% + 9:41 AM 100%

Slides

1

2

Nearby Toast

LOWER PACIFIC HEIGHTS JAPANTOWN CATHEDRAL HILL ANZA VISTA WE ADD McAllister St Fulton St Golden Gate NOPA Painted Ladies Ivy St HAYES VALLEY Nopalito FLL St LOWER HAIGH Buena Vista Park Zeitgeist DUBOCE TRIANGLE Castro St Guerrero St Roosevelt Way CORONA HEIGHTS UPPER MARKET Mission Dolores

Blue Barrel Nutella, Sea Salt Four Glass Cream Cheese Slanted Toast Butter, Rosemary Atelier Bread Crème Fraîche The Barn

Style Text Arrange

Text Text Text

Text Text Text

Shape Styles

Fill

No Fill

Border

Shadow

Reflection

Opacity 34%

The image shows a presentation slide titled "Nearby Toast" displayed on a mobile device screen. The slide features a map of San Francisco with three specific locations highlighted by orange circles, each containing an image of a piece of toast. The locations are labeled as "Blue Barrel Nutella, Sea Salt", "Four Glass Cream Cheese", and "Slanted Toast Butter, Rosemary". The map also shows various neighborhoods and streets. On the left side, there is a sidebar with two slide thumbnails, one of which is the current slide. The top of the screen has a toolbar with various icons for View, Zoom, Add Slide, Play, Table, Chart, Text, Shape, Media, Comment, Share, Tips, Format, Animate, and Document. The right side of the screen has a "Style" panel with options for Text, Text, Text, Text, Text, Text, and Text, as well as sections for Fill, Border, Shadow, Reflection, and Opacity.

View Zoom Add Slide Play Table Chart Text Shape Media Comment Share Tips Format Animate Document

Slides

1

2

Nearby Toast

9:41 AM 100%

LOWER PACIFIC HEIGHTS JAPANTOWN CATHEDRAL HILL

Blue Barrel Nutella, Sea Salt

Four Glass Cream Cheese

Slanted Toast Butter, Feta, Gras

Atelier Bread Crème Fraîche

The Barn Cacao, Trout

Blue Barrel Nutella, Sea Salt

Four Glass Cream Cheese

Slanted Toast Butter, Feta, Gras

Atelier Bread Crème Fraîche

The Barn Cacao, Trout

Style Text Arrange

Back Front Backward Forward

Align Distribute

Size 247 pt Width 89 pt Height Constrain proportions

Position 729 pt X 185 pt Y

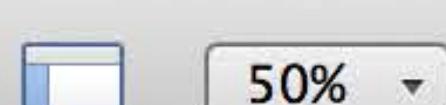
Rotate Angle 0° Flip

Lock Unlock

Group Ungroup

Unite Intersect Subtract Exclude

The slide displays a map of San Francisco with various neighborhoods labeled: LOWER PACIFIC HEIGHTS, JAPANTOWN, CATHEDRAL HILL, ANZA VISTA, McAllister St, Fulton St, Ivy St, HAYES VALLEY, NOPA, Painted Ladies, Fell St, LOWER HAIGH, Buena Vista Park, Roosevelt Way, CORONA HEIGHTS, DUBOCE TRIANGLE, UPPER MARKET, and Mission Dolores. Overlaid on the map are several circular icons containing images of different types of toast, each accompanied by a text box. The icons are located in various parts of the city, such as Japantown, the Castro, and the Mission. The text boxes list the names of the toast types and their ingredients. The right side of the slide features a sidebar with various presentation tools and settings.



50%



View

Zoom



Add Slide



Table



Chart



Text



Shape



Media



Comment



Share



Tips



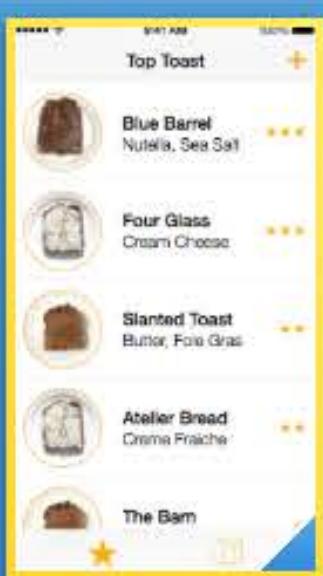
Format



Animate



Slides



1



2



3

9:41 AM 100%

Top Toast

Blue Barrel
Nutella, Sea Salt

Four Glass
Cream Cheese

Slanted Toast
Butter, Foie Gras

Atelier Bread
Creme Fraiche

The Barn

•••••

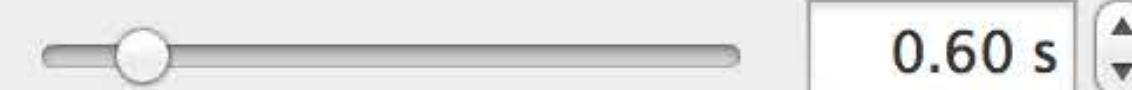
Transitions

**Magic Move**

Change

Preview

Duration

 Fade Unmatched Objects

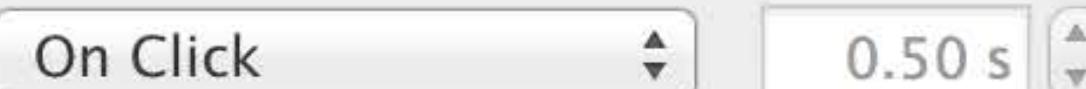
Match

 By Object By Word By Character

Acceleration



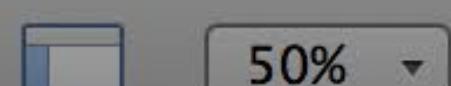
Start Transition



Delay



Build Order



50%



View

Zoom



Play



Table



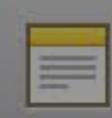
Chart



Text



Shape



Media



Comment



Share



Tips



Format



Animate



Slides



1



2



3

9:41 AM 100%

Top Toast

Blue Barrel
Nutella, Sea Salt

Four Glass
Cream Cheese

Slanted Toast
Butter, Foie Gras

Atelier Bread
Creme Fraiche

The Barn

Magic Move

Change

Preview

Duration

0.60 s

 Fade Unmatched Objects

Match

 By Object By Word By Character

Acceleration

Ease In & Ease Out

Start Transition

On Click

Delay

0.50 s

Build Order

9:41 AM 100%

Top Toast

+ 



Blue Barrel
Nutella, Sea Salt 



Four Glass
Cream Cheese 



Slanted Toast
Butter, Foie Gras 

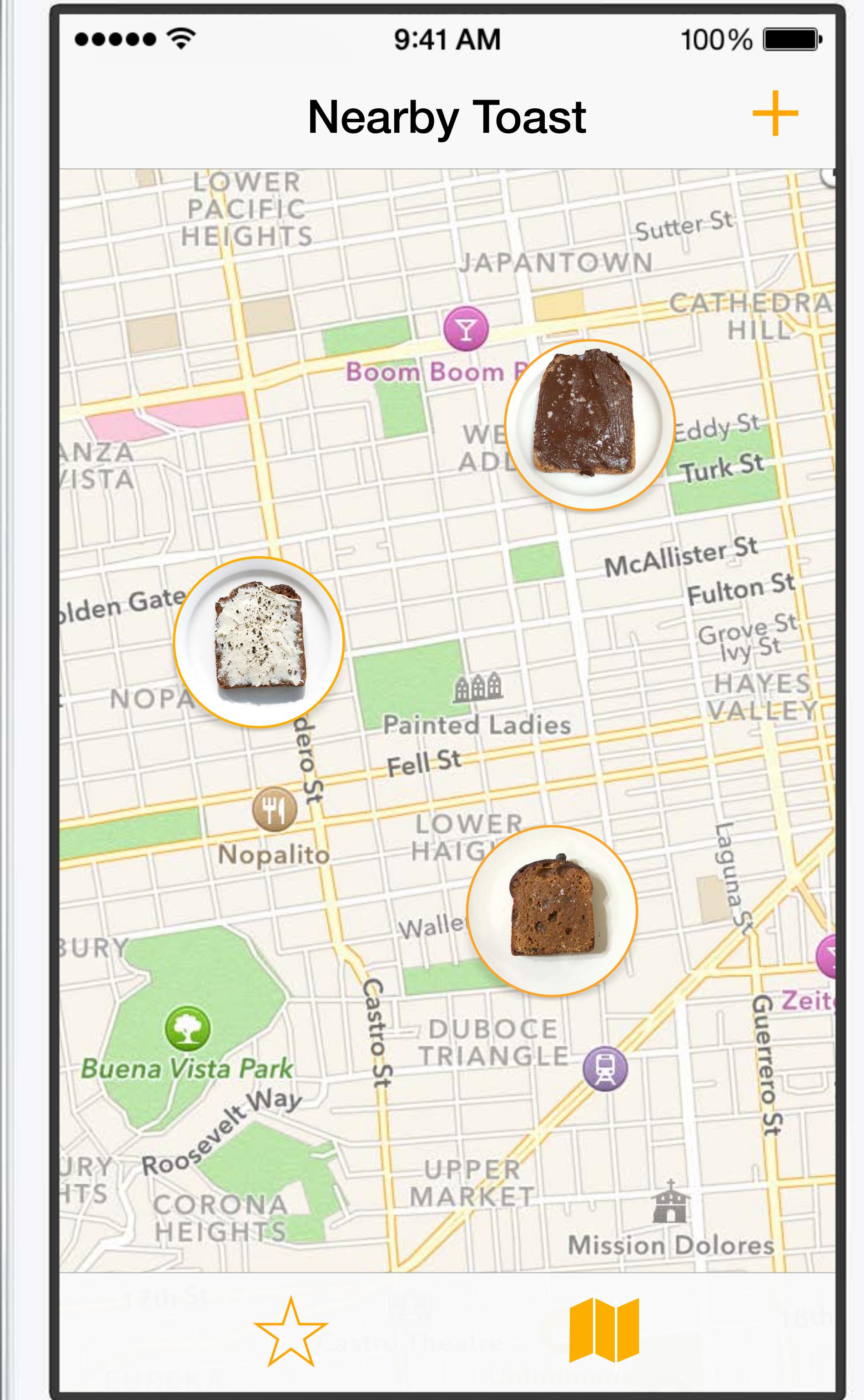


Atelier Bread
Creme Fraiche 



The Barn
Cacao, Trout 



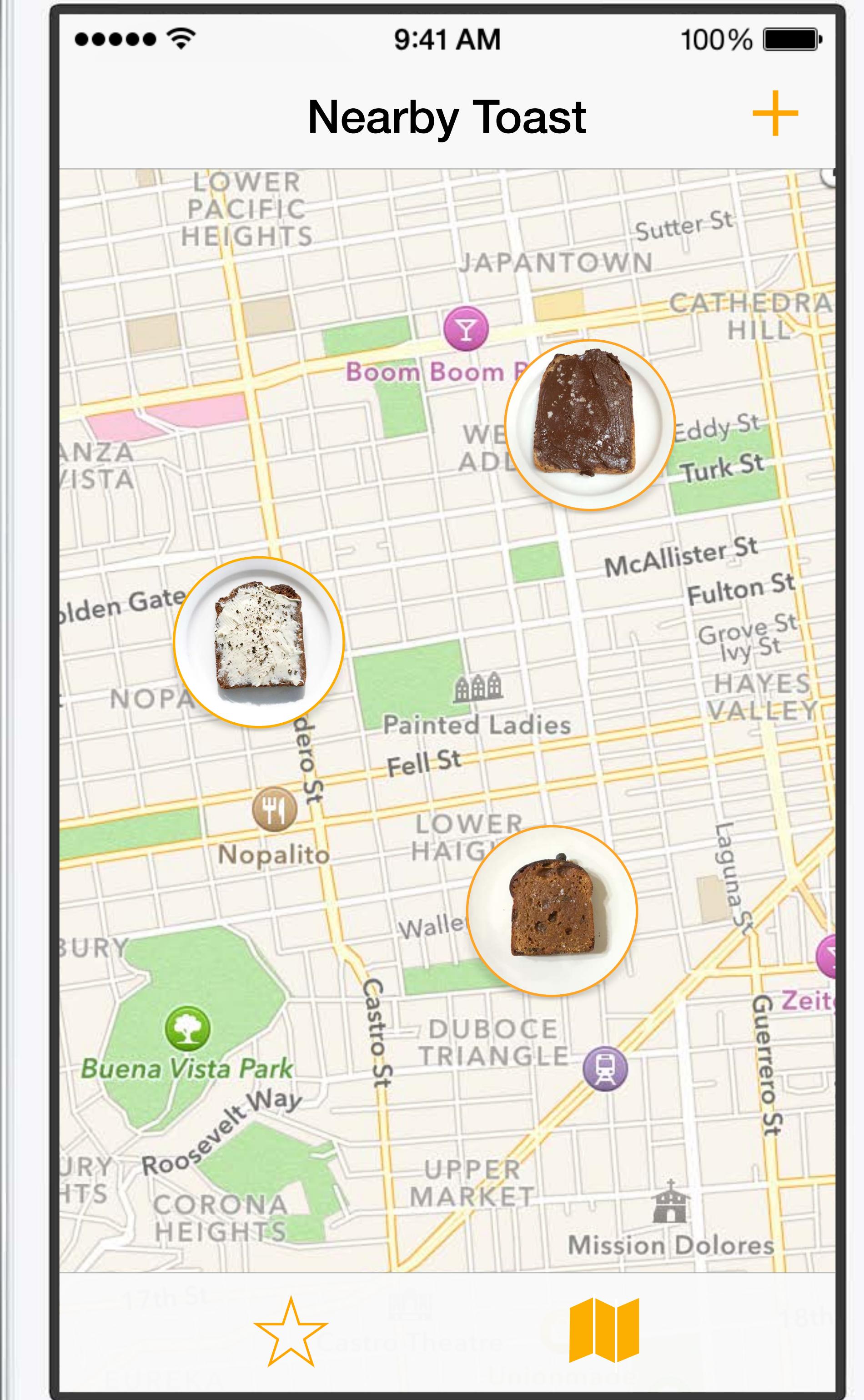
9:41 AM 100%

Top Toast

+

	Blue Barrel Nutella, Sea Salt	★★★
	Four Glass Cream Cheese	★★★
	Slanted Toast Butter, Foie Gras	★★
	Atelier Bread Creme Fraiche	★★
	The Barn Cacao, Trout	★

★ 



9:41 AM 100%

Top Toast

+



Blue Barrel
Nutella, Sea Salt ★★★



Four Glass
Cream Cheese ★★★



Slanted Toast
Butter, Foie Gras ★★

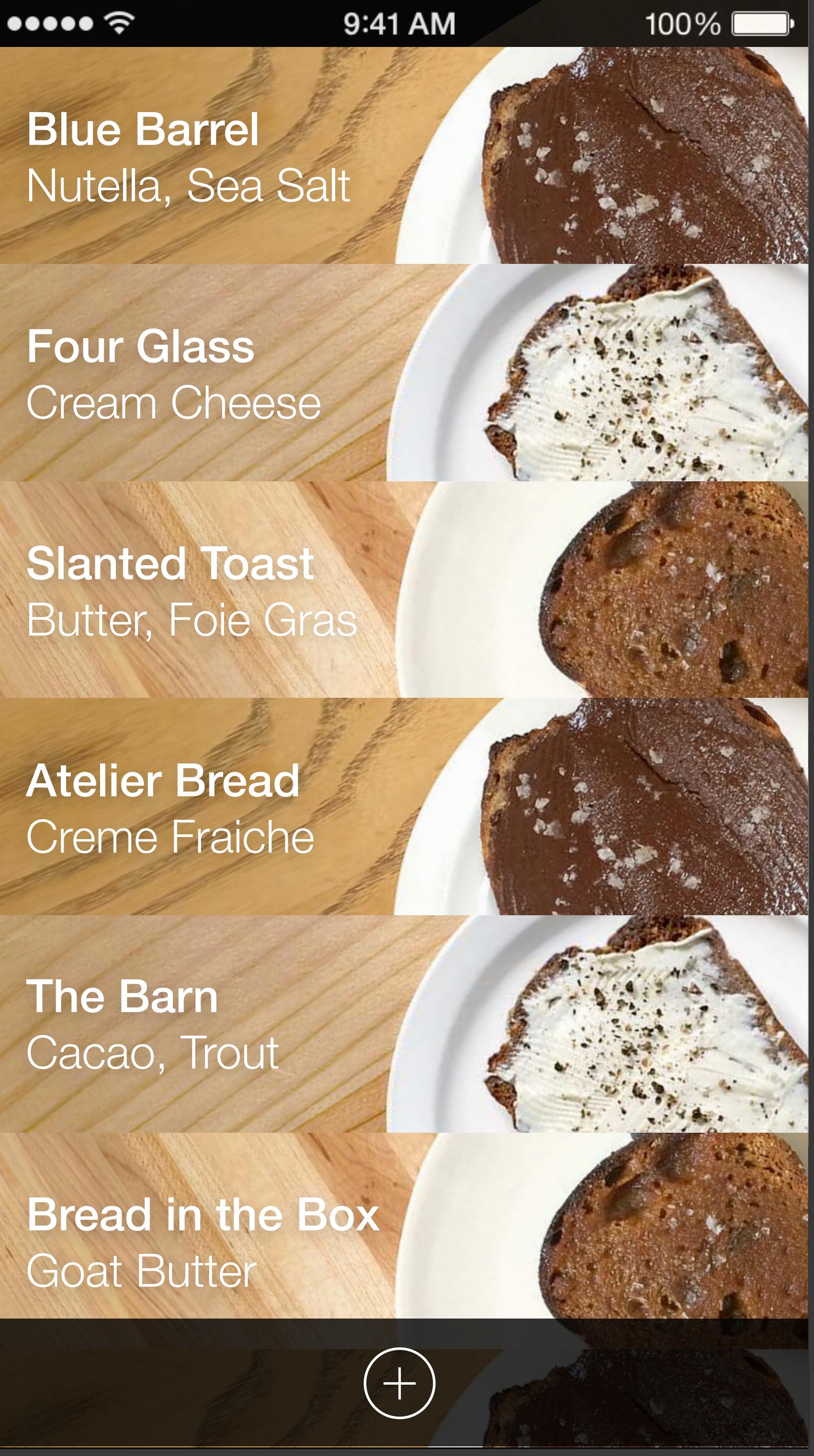


Atelier Bread
Creme Fraiche ★★



The Barn
Cacao, Trout ★

★ Map icon

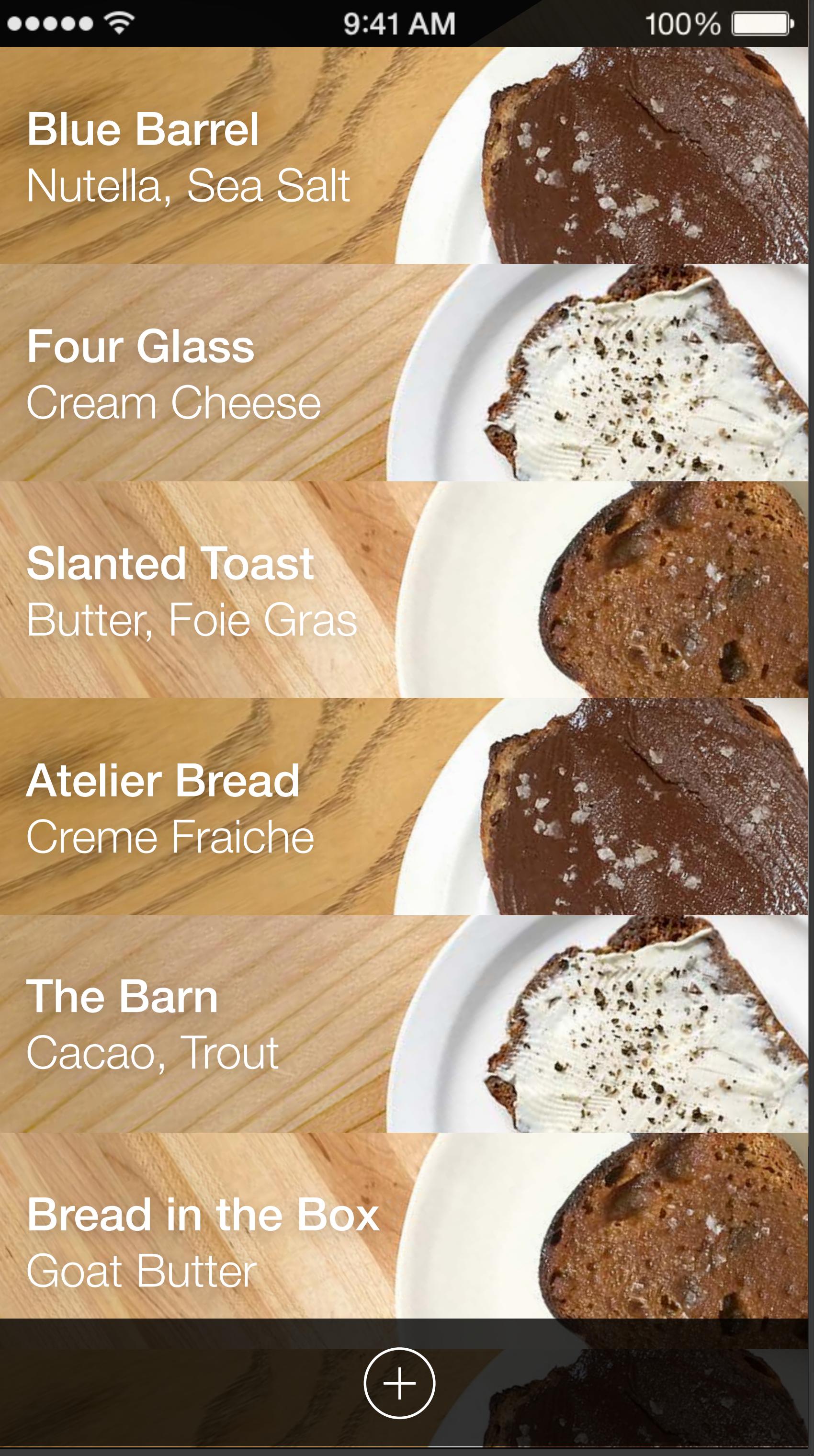


••••• 9:41 AM 100%

< Top Toast



Slanted Toast
Butter, Foie Gras

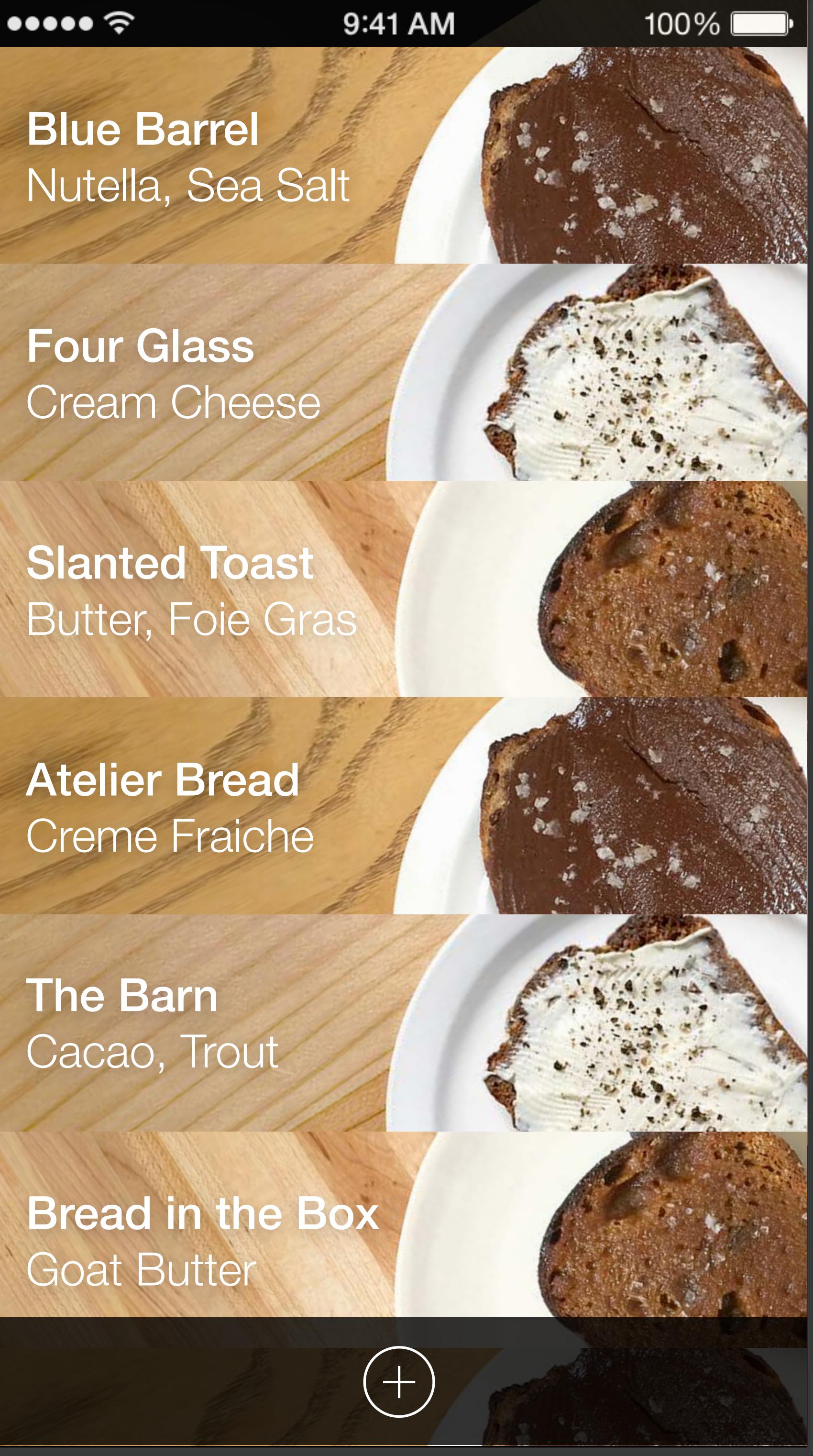


••••• 9:41 AM 100%

< Top Toast



Slanted Toast
Butter, Foie Gras



A screenshot of a presentation slide editor interface, likely from a Mac application like Keynote or Prezi. The main workspace shows a collage of six toast samples with various toppings. The top navigation bar includes View, Zoom, Add Slide, Play, Table, Chart, Text, Shape, Media, Comment, Share, Tips, Format, Animate, and Document. The left sidebar lists three slides: 1, 2, and 3, each containing a preview of the toast collage. The right sidebar contains a toolbar for arranging objects, with tabs for Style, Text, and Arrange (which is selected). The arrangement tools include Back, Front, Backward, Forward, Align, Distribute, Size (width 640 pt, height 109 pt), Constrain proportions, Position (X 0 pt, Y -360 pt), Rotate (Angle 0°, Flip), Lock, Unlock, Group, and Ungroup.

Blue Barrel
Nutella, Sea Salt

Four Glass
Cream Cheese

Slanted Toast
Butter, Foie Gras

Atelier Bread
Creme Fraiche

The Barn
Cacao, Trout

Bread in the Box
Goat Butter

A screenshot of a presentation slide editor interface, likely from a Mac application like Keynote or Prezi. The main canvas shows a collage of six bread samples with their names and descriptions overlaid. The 'Slanted Toast Butter, Foie Gras' card is highlighted with a blue border. The right side features a floating sidebar with various tools and settings.

Top Bar:

- View
- Zoom (30%)
- Add Slide
- Play
- Table
- Chart
- Text
- Shape
- Media
- Comment
- Share
- Tips
- Format
- Animate
- Document

Slides Panel:

- Slide 1: Shows a collage of bread samples.
- Slide 2: Shows a single piece of Slanted Toast with Butter, Foie Gras.
- Slide 3: Shows a collage of bread samples.

Canvas:

The collage includes the following cards:

- Blue Barrel Nutella, Sea Salt
- Four Glass Cream Cheese
- Slanted Toast Butter, Foie Gras (highlighted)
- Atelier Bread Creme Fraiche
- The Barn Cacao, Trout
- Bread in the Box Goat Butter

Right Sidebar (Arrange Tab):

- Style, Text, Arrange (selected)
- Back, Front, Backward, Forward
- Align, Distribute
- Size: 640 pt (Width), 109 pt (Height), Constrain proportions checked
- Position: 0 pt (X), -360 pt (Y)
- Rotate: 0° (Angle), Flip (horizontal/vertical)
- Lock, Unlock
- Group, Ungroup

A screenshot of a presentation slide editor interface, likely from a Mac application like Keynote or Prezi. The main canvas displays a collage of six bread toast images, each with a caption. The top row includes "Blue Barrel Nutella, Sea Salt", "Four Glass Cream Cheese", "Slanted Toast Butter, Foie Gras", and "Atelier Bread Creme Fraiche". The bottom row includes "The Barn Cacao, Trout" and "Bread in the Box Goat Butter". The interface features a toolbar at the top with icons for View, Zoom, Add Slide, Play, Table, Chart, Text, Shape, Media, Comment, Share, Tips, Format, Animate, and Document. A sidebar on the left shows a list of slides numbered 1, 2, and 3. On the right, a floating "Arrange" panel is open, showing options for Style, Text, and Arrange. The "Arrange" tab is selected, displaying buttons for Back, Front, Backward, Forward, Align, Distribute, Size (Width: 640 pt, Height: 109 pt), Constrain proportions, Position (X: 0 pt, Y: -360 pt), Rotate (Angle: 0°, Flip), Lock, Unlock, Group, and Ungroup.

Blue Barrel
Nutella, Sea Salt

Four Glass
Cream Cheese

Slanted Toast
Butter, Foie Gras

Atelier Bread
Creme Fraiche

The Barn
Cacao, Trout

Bread in the Box
Goat Butter

View Zoom Add Slide Play Table Chart Text Shape Media Comment Share Tips Format Animate Document

Slides

1

2

3

Blue Barrel Nutella, Sea Salt
Four Glass Cream Cheese
Slanted Toast Butter, Foie Gras
Atelier Bread Creme Fraiche
The Barn Cacao, Truf

Blue Barrel Nutella, Sea Salt
Four Glass Cream Cheese
Slanted Toast Butter, Foie Gras
Atelier Bread Creme Fraiche
The Barn Cacao, Truf

Blue Barrel Nutella, Sea Salt
Four Glass Cream Cheese
Slanted Toast Butter, Foie Gras
Atelier Bread Creme Fraiche
The Barn Cacao, Truf

9:41 AM 100% Top Toast

Slanted Toast Butter, Foie Gras

Atelier Bread Creme Fraiche
The Barn Cacao, Truf

Style Image Arrange

Back Front Backward Forward

Align Distribute

Size 1471 pt 1437 pt Width Height Constrain proportions Original Size

Position -535 pt -250 pt X Y

Rotate Angle Flip

Lock Unlock

Group Ungroup

View Zoom Add Slide Play Table Chart Text Shape Media Comment Share Tips Format Animate Document

Slides

1 Blue Barrel Nutella, Sea Salt
Four Glass Cream Cheese
Slanted Toast Butter, Foie Gras
Atelier Bread Creme Fraiche
The Barn Cacao, Truf
Bread in the Box Foie Gras

2 Slanted Toast Butter, Foie Gras

3 Blue Barrel Nutella, Sea Salt
Four Glass Cream Cheese
Slanted Toast Butter, Foie Gras
Atelier Bread Creme Fraiche
The Barn Cacao, Truf

Blue Barrel Nutella, Sea Salt
Four Glass Cream Cheese

Top Toast

Slanted Toast Butter, Foie Gras

Atelier Bread Creme Fraiche
The Barn Cacao, Truf

Style Image Arrange

Back Front Backward Forward

Align Distribute

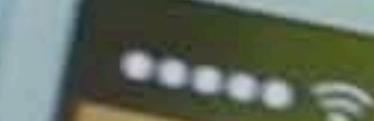
Size 1471 pt 1437 pt Width Height Constrain proportions Original Size

Position -535 pt -250 pt X Y

Rotate Angle 0° Flip

Lock Unlock

Group Ungroup



9:41 AM

100%

Blue Barrel
Nutella, Sea Salt

Four Glass
Cream Cheese

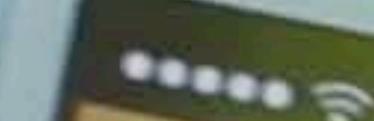
Slanted Toast
Butter, Foie Gras

Atelier Bread
Creme Fraiche

The Barn
Cacao, Trout

Bread in the Box
Goat Butter





9:41 AM

100%

Blue Barrel
Nutella, Sea Salt

Four Glass
Cream Cheese

Slanted Toast
Butter, Foie Gras

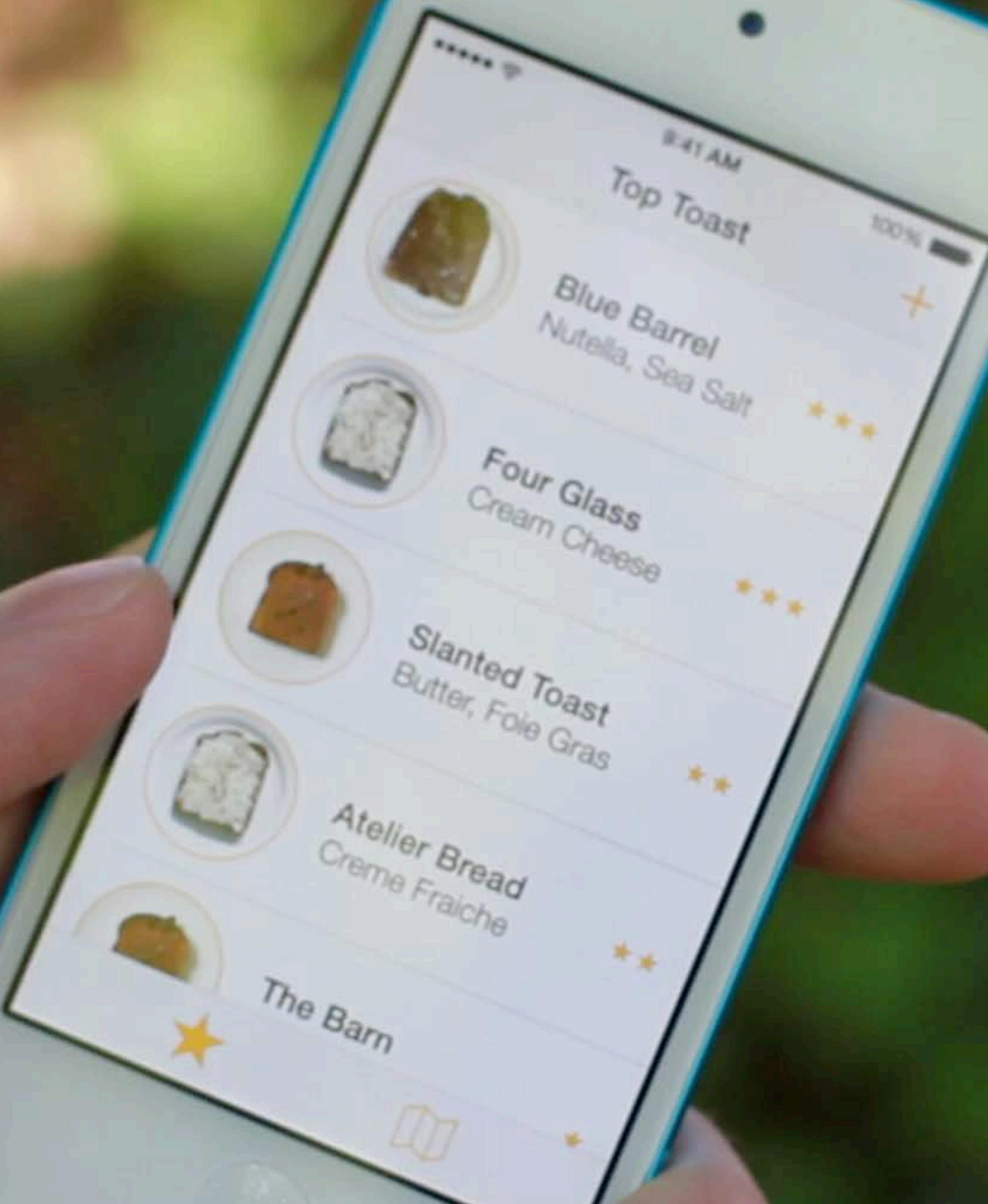
Atelier Bread
Creme Fraiche

The Barn
Cacao, Trout

Bread in the Box
Goat Butter







Show People

Show People

Do you know how to find nearby toast?

Show People

Do you know how to find nearby toast?

"I don't know what these icons are supposed to mean, but I can find toast!"

Show People

Do you know how to find nearby toast?

"I don't know what these icons are supposed to mean, but I can find toast!"

Is it easy to switch between top toast and nearby toast?

Show People

Do you know how to find nearby toast?

“I don’t know what these icons are supposed to mean, but I can find toast!”

Is it easy to switch between top toast and nearby toast?

“It’s really easy to switch. I just tap right there”

Show People

Do you know how to find nearby toast?

“I don’t know what these icons are supposed to mean, but I can find toast!”

Is it easy to switch between top toast and nearby toast?

“It’s really easy to switch. I just tap right there”

How can we make this better?

Show People

Do you know how to find nearby toast?

“I don’t know what these icons are supposed to mean, but I can find toast!”

Is it easy to switch between top toast and nearby toast?

“It’s really easy to switch. I just tap right there”

How can we make this better?

“Maybe I should be able to see restaurant names when looking at the map”

Show People

Do you know how to find nearby toast?

“I don’t know what these icons are supposed to mean, but I can find toast!”

Is it easy to switch between top toast and nearby toast?

“It’s really easy to switch. I just tap right there”

How can we make this better?

“Maybe I should be able to see restaurant names when looking at the map”

“I wish I could see the map while looking at ratings”

Learn from Feedback

Learn from Feedback

What's working?

Learn from Feedback

What's working?

Transitioning between the map and the list feels great

Learn from Feedback

What's working?

Transitioning between the map and the list feels great

What's not working?

Learn from Feedback

What's working?

Transitioning between the map and the list feels great

What's not working?

People have to switch between two screens to get all the information

Learn from Feedback

What's working?

Transitioning between the map and the list feels great

What's not working?

People have to switch between two screens to get all the information

What other ideas does this give us?

Learn from Feedback

What's working?

Transitioning between the map and the list feels great

What's not working?

People have to switch between two screens to get all the information

What other ideas does this give us?

Maybe we can put the map and the list on the screen

Learn from Feedback

What's working?

Transitioning between the map and the list feels great

What's not working?

People have to switch between two screens to get all the information

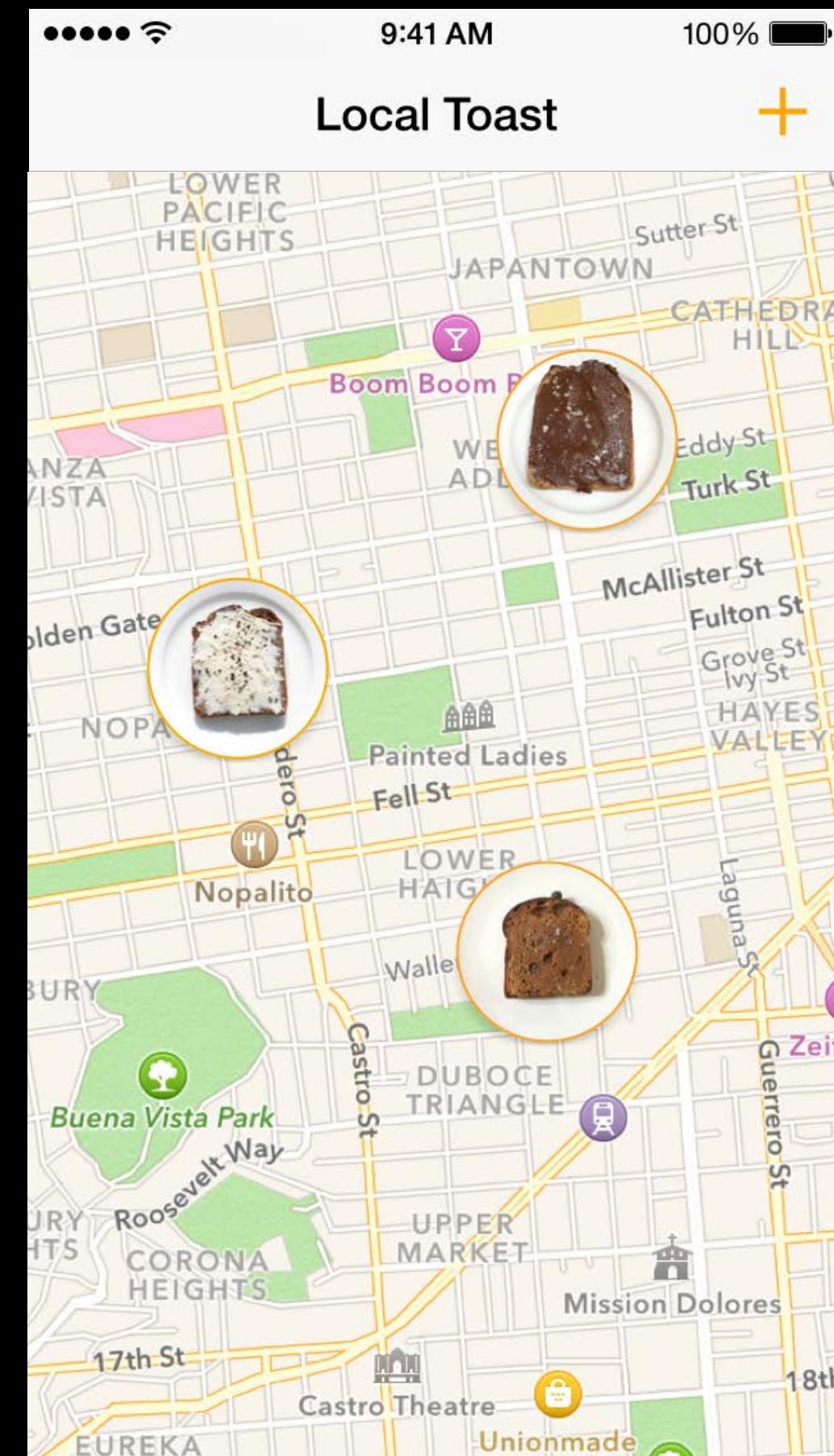
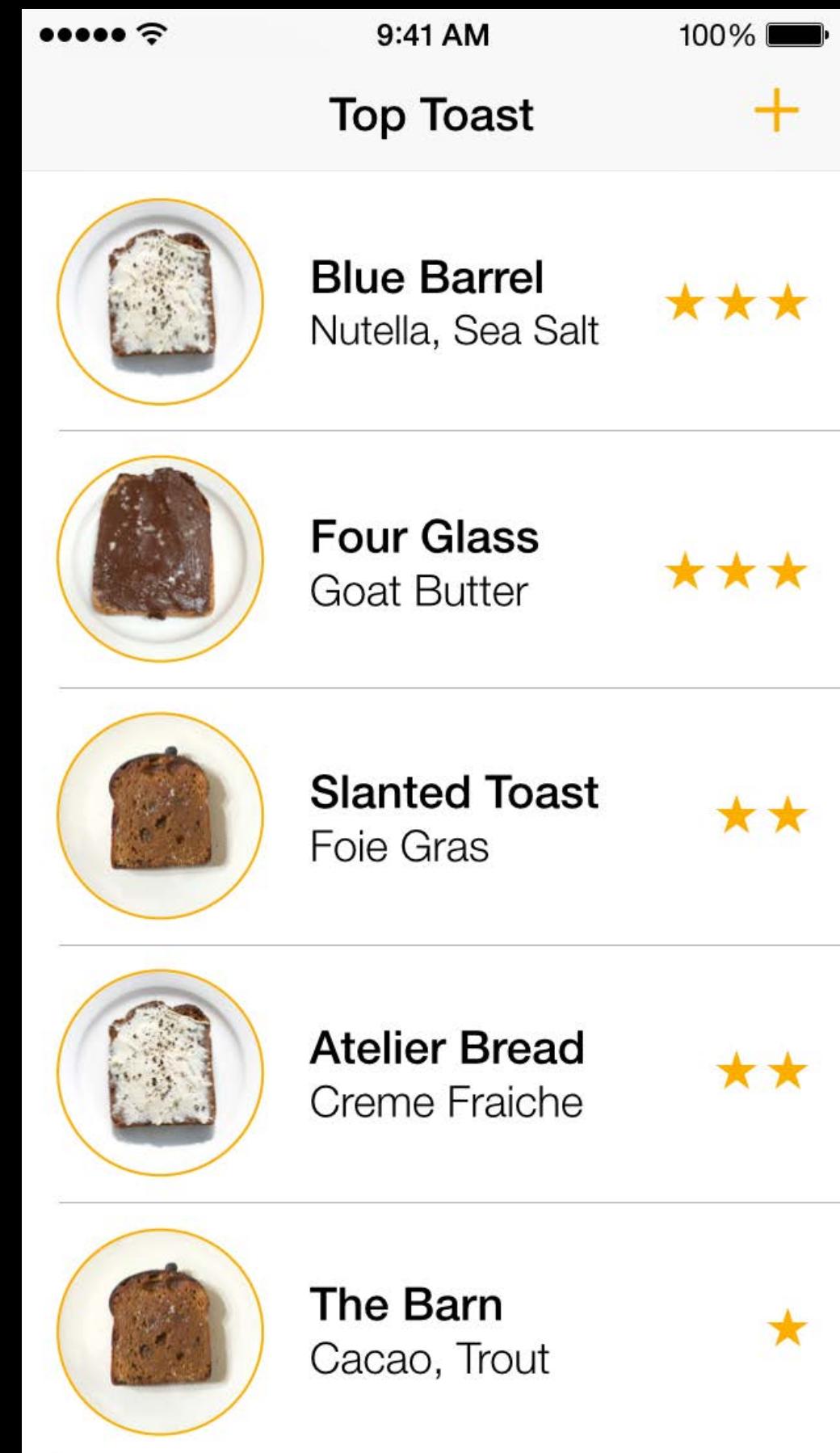
What other ideas does this give us?

Maybe we can put the map and the list on the screen—at the same time!

9:41 AM 100%

Top Toast +

	Blue Barrel Nutella, Sea Salt	★★★
	Four Glass Goat Butter	★★★
	Slanted Toast Foie Gras	★★
	Atelier Bread Creme Fraiche	★★
	The Barn Cacao, Trout	★



••••• ⌂ 9:41 AM 100% 🔋

Toast Modern +

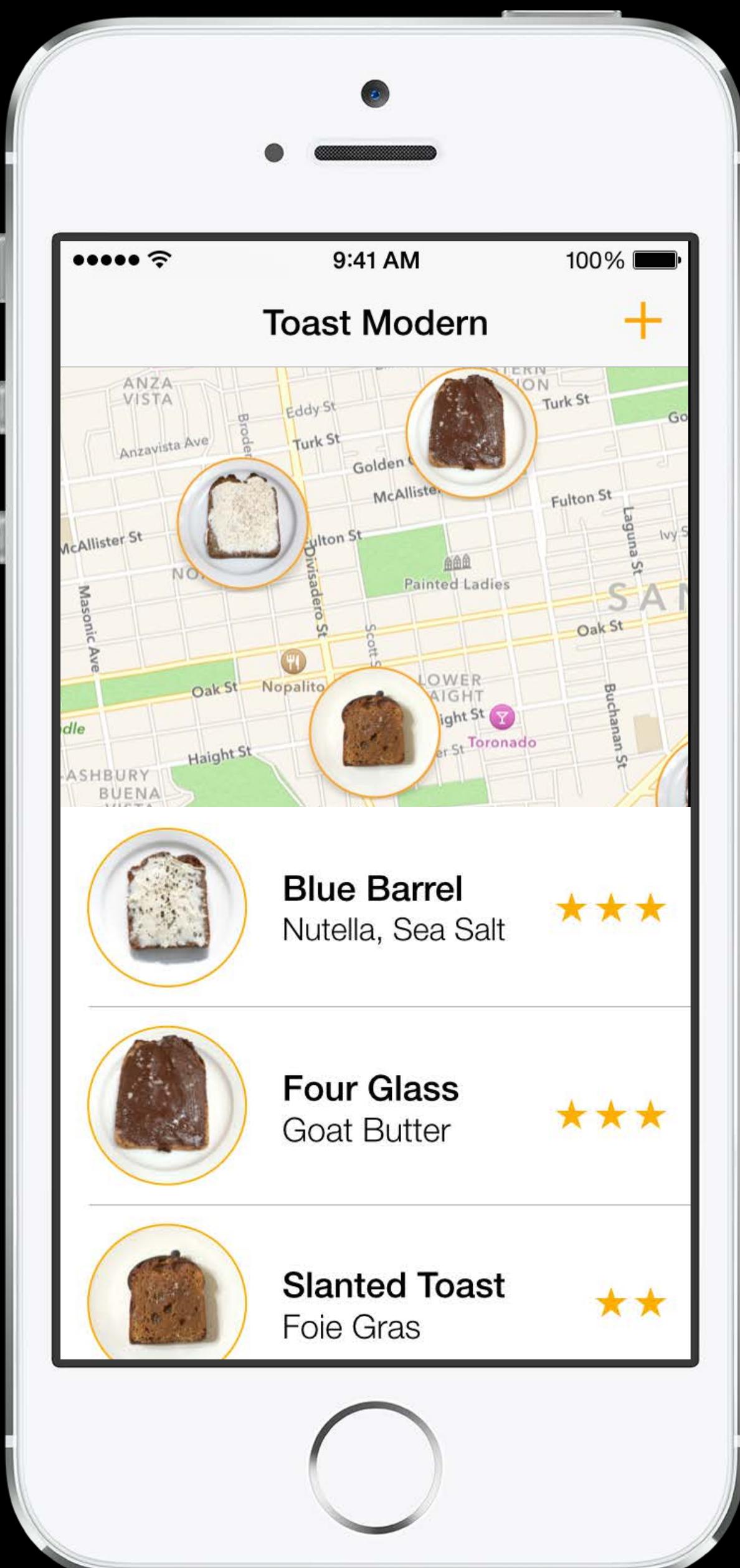
The map displays the San Francisco city grid with various neighborhoods labeled: LOWER PACIFIC HEIGHTS, JAPANTOWN, CATHEDRAL HILL, HAYES VALLEY, and NOPA. A purple location pin marks the position of Toast Modern in Japantown. Two toast samples are shown on the map, one near the pin and another further west.

Blue Barrel ★★★
Nutella, Sea Salt

Four Glass ★★★
Goat Butter

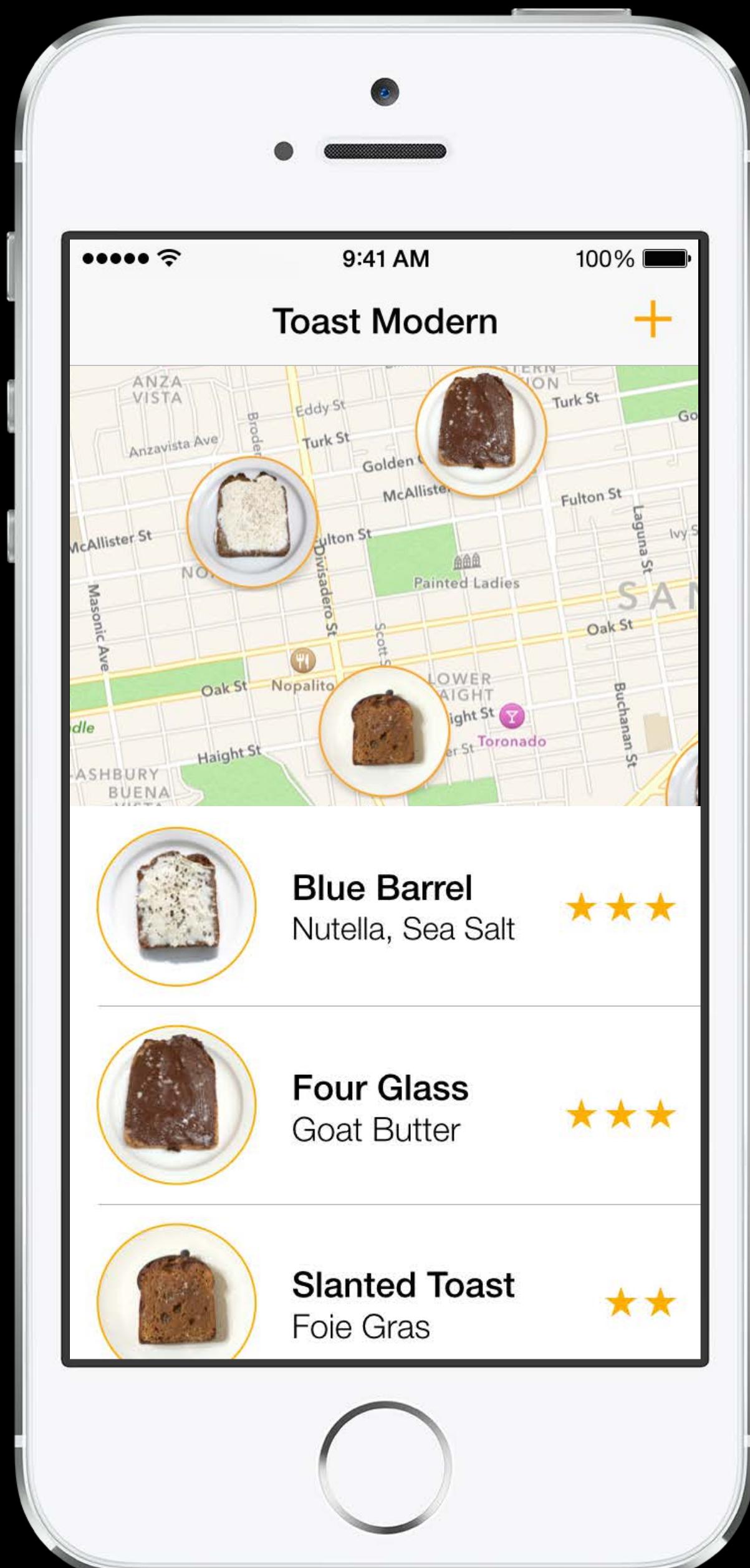
Slanted Toast ★★
Egg

Make Fake Apps



Make Fake Apps

What needs to be more real?

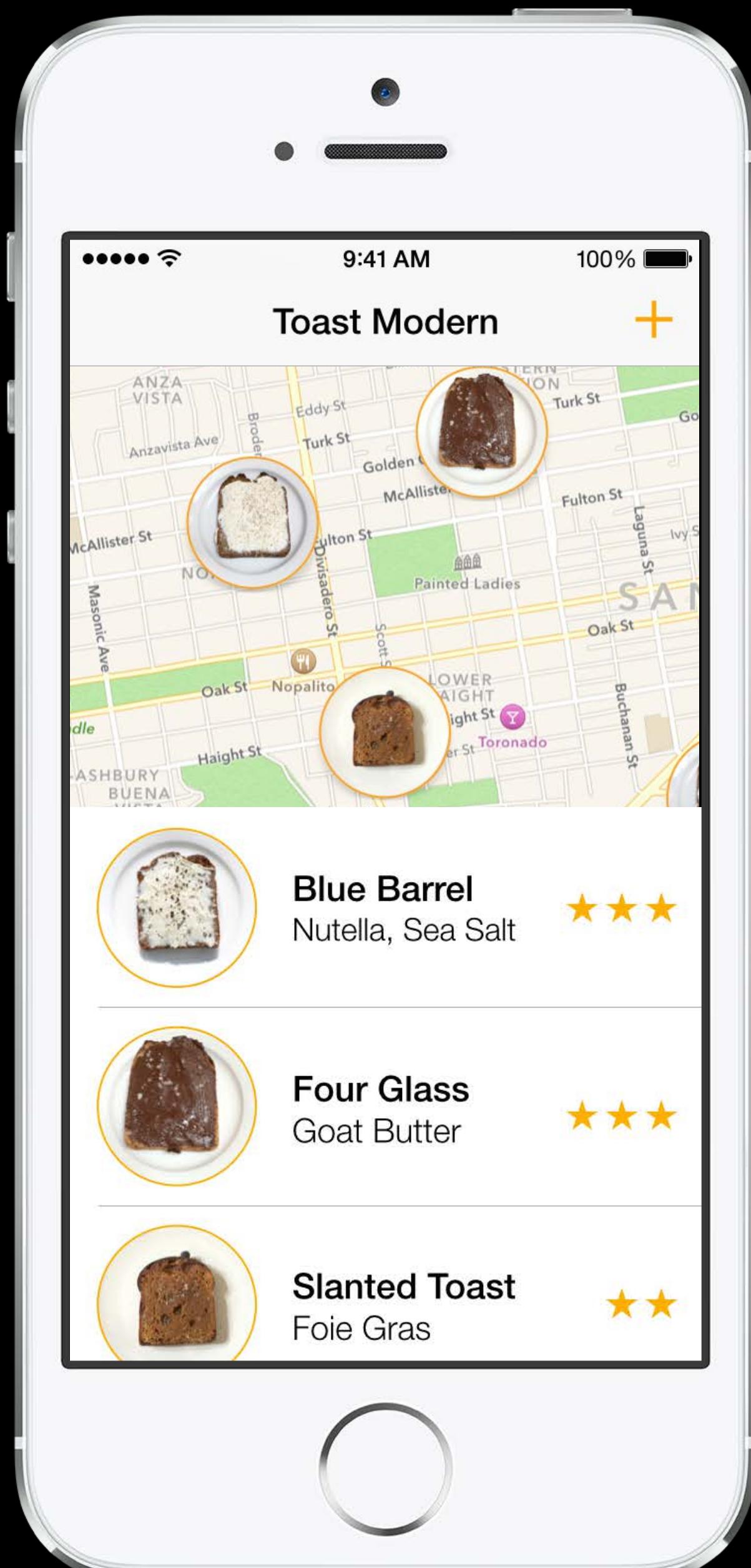


Make Fake Apps

What needs to be more real?

Finding nearby toast on the map

Scanning the list for the best toast



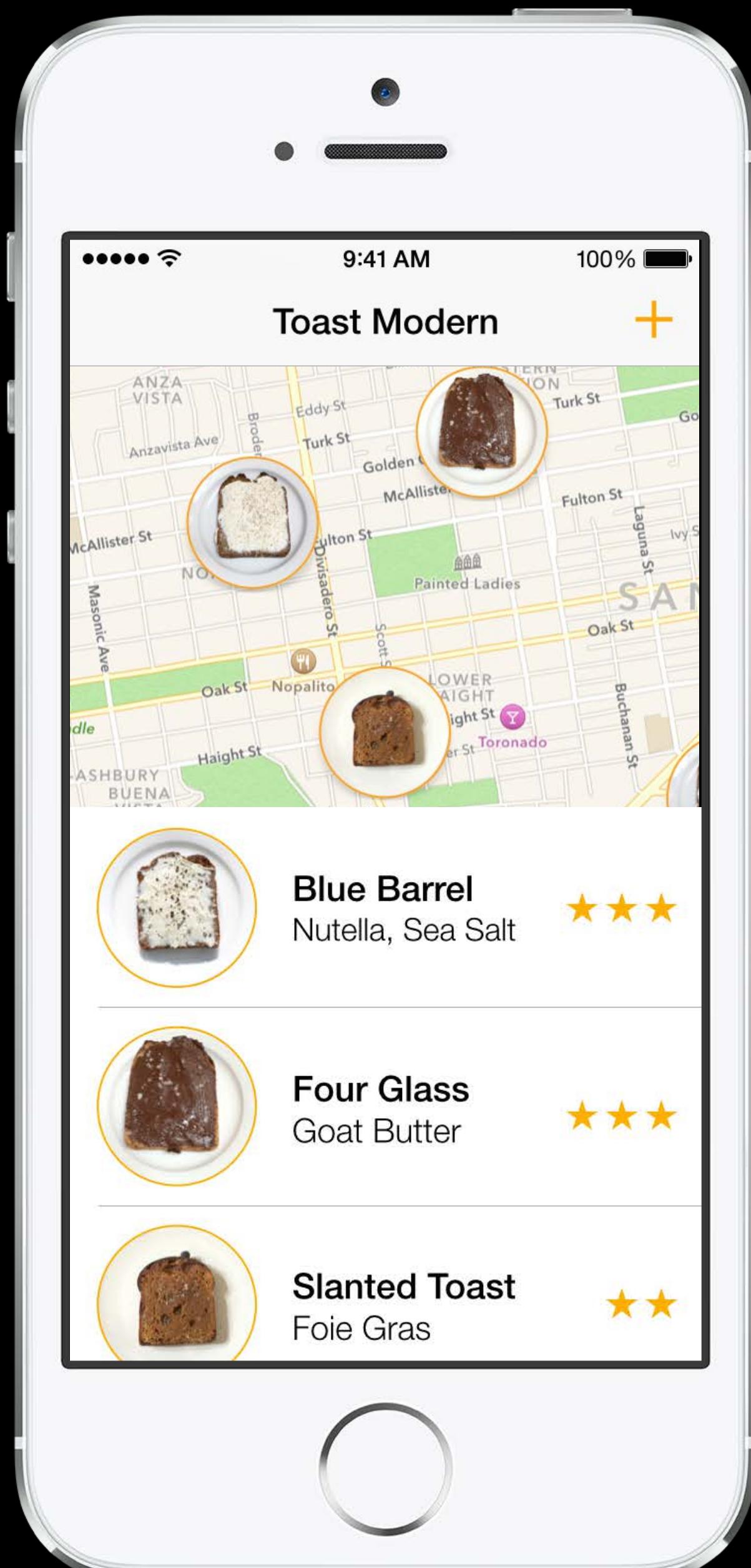
Make Fake Apps

What needs to be more real?

Finding nearby toast on the map

Scanning the list for the best toast

What can we fake?



Make Fake Apps

What needs to be more real?

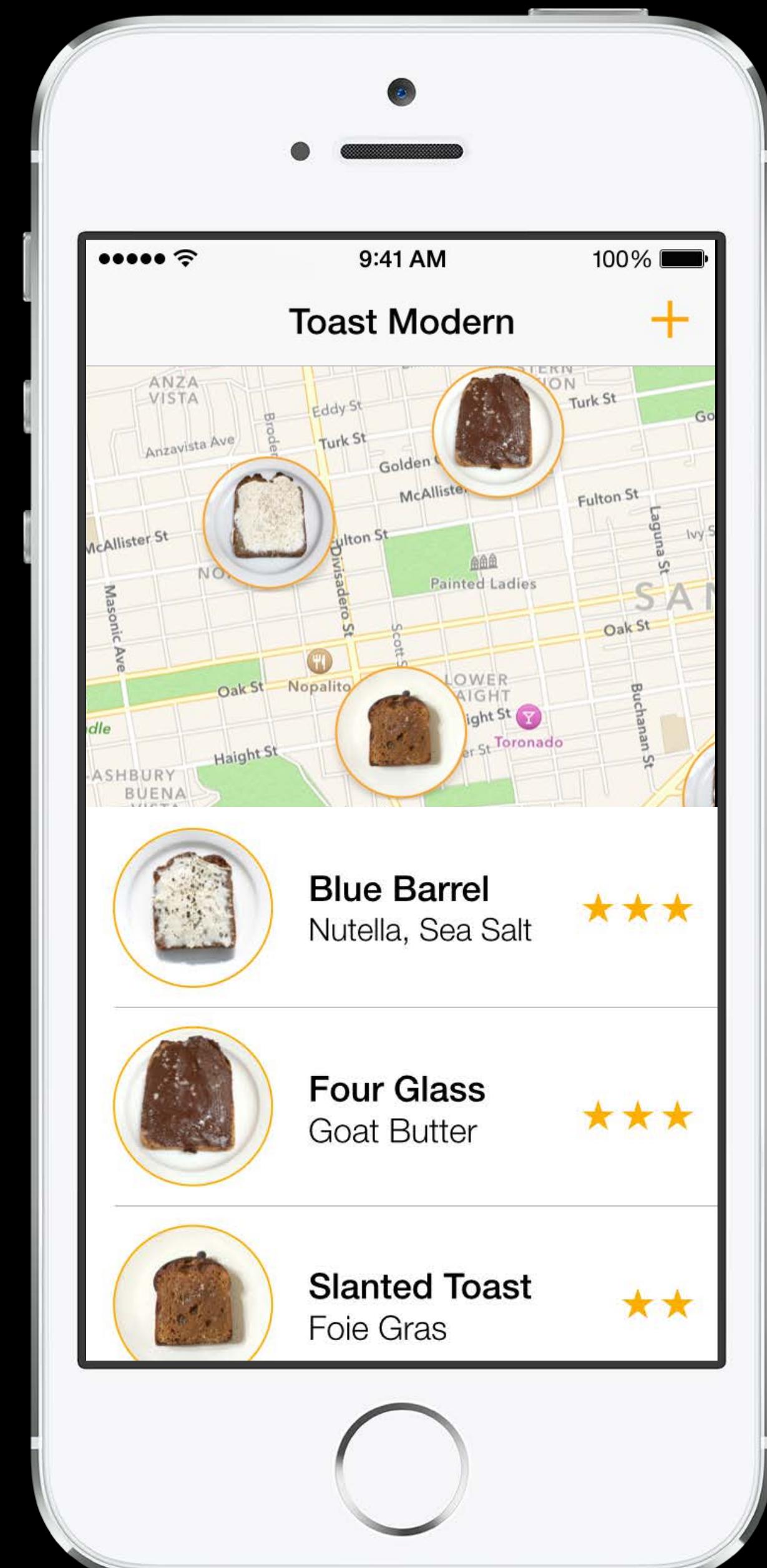
Finding nearby toast on the map

Scanning the list for the best toast

What can we fake?

The map

The list



Make Fake Apps

What needs to be more real?

Finding nearby toast on the map

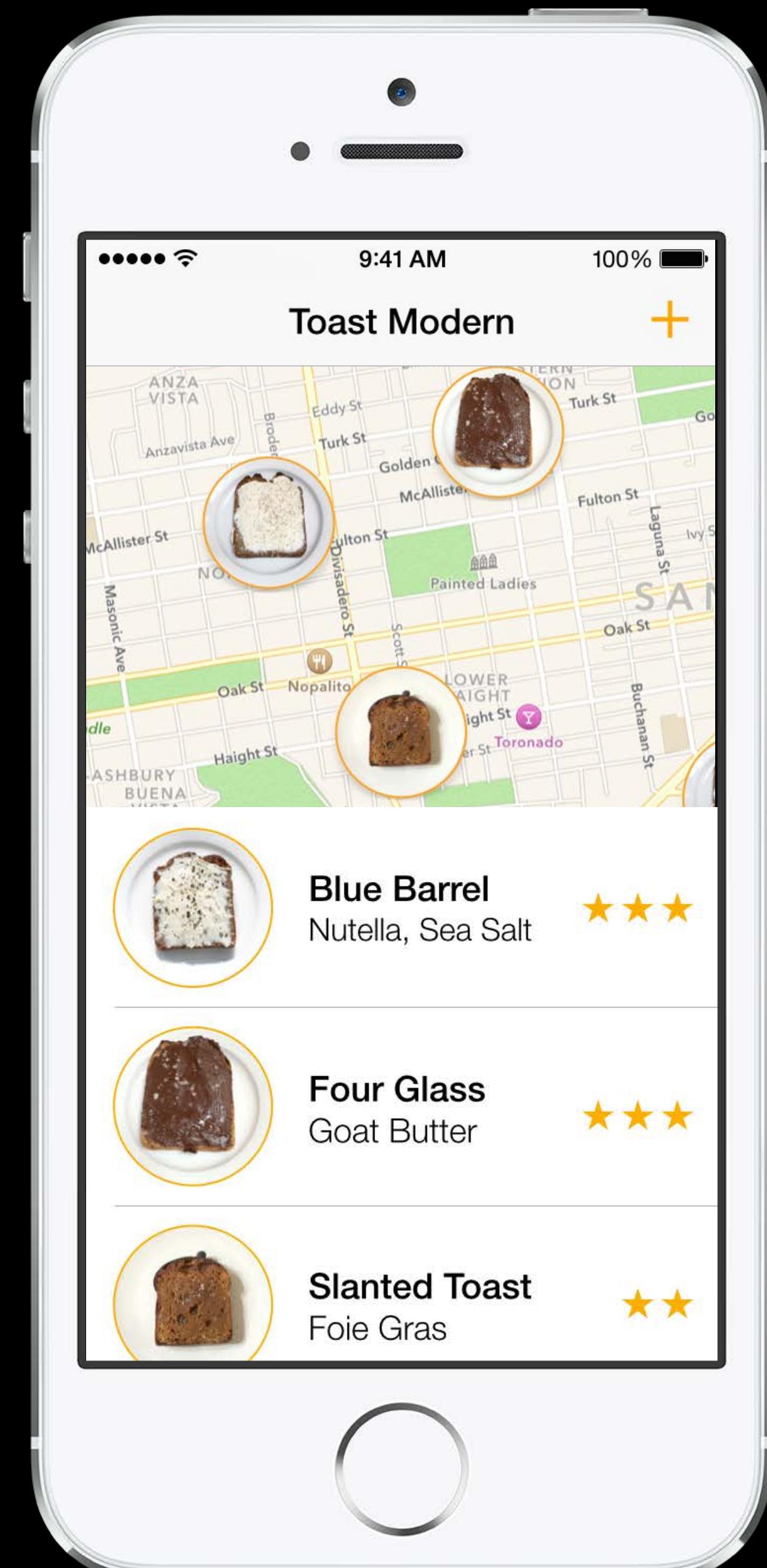
Scanning the list for the best toast

What can we fake?

The map

The list

Where will they use it?



Make Fake Apps

What needs to be more real?

Finding nearby toast on the map

Scanning the list for the best toast

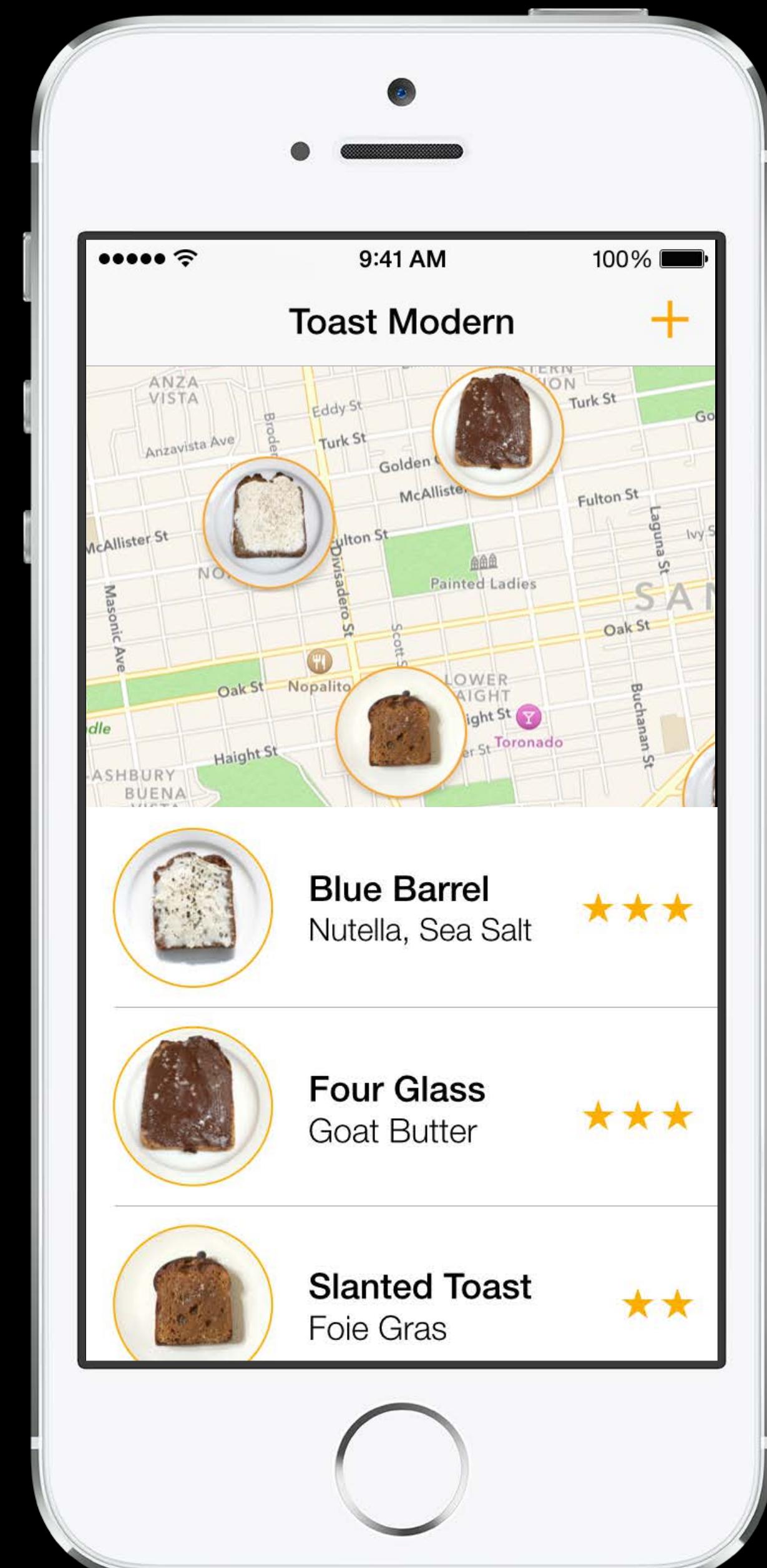
What can we fake?

The map

The list

Where will they use it?

On the street walking around



Make Fake Apps

Make Fake Apps

Make pictures move in response to touches

Make Fake Apps

Make pictures move in response to touches
on the device that you are prototyping for

Make Fake Apps

Make pictures move in response to touches
on the device that you are prototyping for

Use whatever you want that can do this

Make Fake Apps

Make pictures move in response to touches
on the device that you are prototyping for

Use whatever you want that can do this
Today we're going to use [Core Animation](#) and [Xcode](#)

Make Fake Apps

Make pictures move in response to touches
on the device that you are prototyping for

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Don't engineer it—hack it

Make Fake Apps

Make pictures move in response to touches
on the device that you are prototyping for

Use whatever you want that can do this
Today we're going to use [Core Animation](#) and [Xcode](#)

Don't engineer it—hack it
It doesn't have to be good or reusable code

Three Steps

Three Steps

1. Put the picture on device

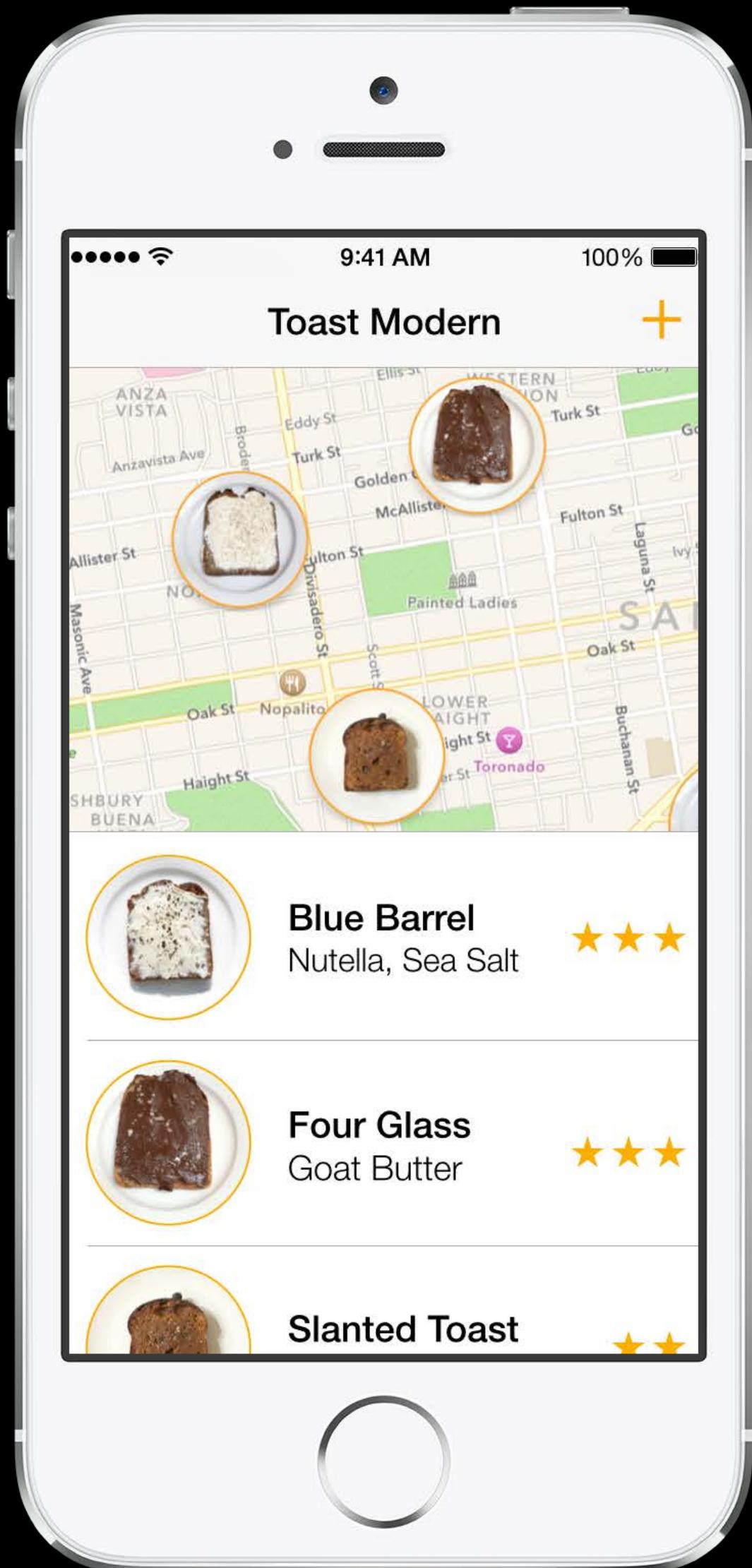
Three Steps

1. Put the picture on device
2. Break up the picture

Three Steps

1. Put the picture on device
2. Break up the picture
3. Move the pictures when you touch them

1. Put the Picture on the Device



Map and List — Edited

View Zoom Add Slide Play Table Chart Text Shape Media Comment Share Tips Format Animate Document

Slides

1

9:41 AM 100%

Toast Modern

ANZA VISTA
NE ITAIN
TENDERLOIN
WESTERN
PAINTED LADIES
LOWER HAIGHT
HAIRBY ASBURY BUENA
COLE VALLEY
MISSION DISTRICT
TACOELICIOUS

Blue Barrel
Nutella, Sea Salt

Four Glass
Goat Butter

Slanted Toast
Feta Cheese

Document Audio

Theme Black Change Theme

Slideshow Settings

Automatically play upon open

Loop slideshow
Press 'Esc' key to exit

Restart show if idle for
15 m

Presentation Type

Normal Delay: 5.0 s 2.0 s
Transitions Builds

Slide Size

Custom (640 x 1136)

Require password to open

Map and List — Edited

View Zoom Add Slide Play Table Chart Text Shape Media Comment Share Tips Format Animate Document

Slides

1

9:41 AM 100%

Toast Modern

ANZA VISTA
TURK ST
WESTERN
FULTON ST
LAGUNA ST
OAK ST
BUCHANAN ST
Haight St
Nopalito
LOWER HAIGHT
Toronado
Painted Ladies
McAllister St
Golden Gate Ave
Fulton St
Gough St
Ivy St
Hayes St
Masonic Ave
Divisadero St
Scott St
Buchanan St
15th St
16th St
17th St
18th St
20th St
Mission St
Folsom St
101
Tenderloin
San Francisco City Hall
UC Hastings College of the Law
Panhandle
HAIGHT-ASHBURY BUENA
Cole Valley
Parnassus Ave
Gratton St
Alma St
Roxhill St
Shroder St
Clarendon Heights
RELIGHTS
BARRY BLVD
Anza St
NE TAIN
Turk St
Golden Gate Ave
University of Law
Fell St
Page St
Haight St
Waller St
1st Street
COLE VALLEY
Parnassus Ave
Gratton St
Alma St
Roxhill St
Shroder St
CLARENDON HEIGHTS
Blue Barrel Nutella, Sea Salt
Four Glass Goat Butter
Slanted Toast Feta Grist

Document **Audio**

Theme **Black** **Change Theme**

Slideshow Settings

Automatically play upon open

Loop slideshow
Press 'Esc' key to exit

Restart show if idle for
15 m

Presentation Type

Normal **Delay:** 5.0 s **Transitions** 2.0 s **Builds**

Slide Size

Custom (640 x 1136)

Require password to open **Change Password...**

Toast Modern.xcodeproj — Screen.m

Build Toast Modern: Succeeded | Today at 9:21 AM No Issues

iPhone Retina (4...)

File | View | Editor | Project Navigator | Recent Files | Help

Toast Modern > Code > Screen.m > -setup

```
#import "ToastKit.h"
#import "Screen.h"

@implementation Screen

- (void) setup
{
    Layer* screen = [Screen layer];
    Layer* picture = [Layer layerWithParent:screen];
    [picture loadImage:@"toast.png"];
}

//=====
// screen initialization
//

static Screen* gScreen; // global screen layer

+ (void) initWithWindow:(UIWindow*)window
{
    gScreen = [Screen layerWithParent:window];
    gScreen.size = window.frame.size;
    [gScreen setup];
}

+ (Layer*) layer {
    return gScreen;
}

@end
```

1. Put the Picture on the Device

```
- (void) setup {  
    Layer* screen = [Screen layer];  
  
    Layer* picture = [Layer layerWithParent:screen];  
  
    [picture loadImage:@"toast.png"];  
}
```

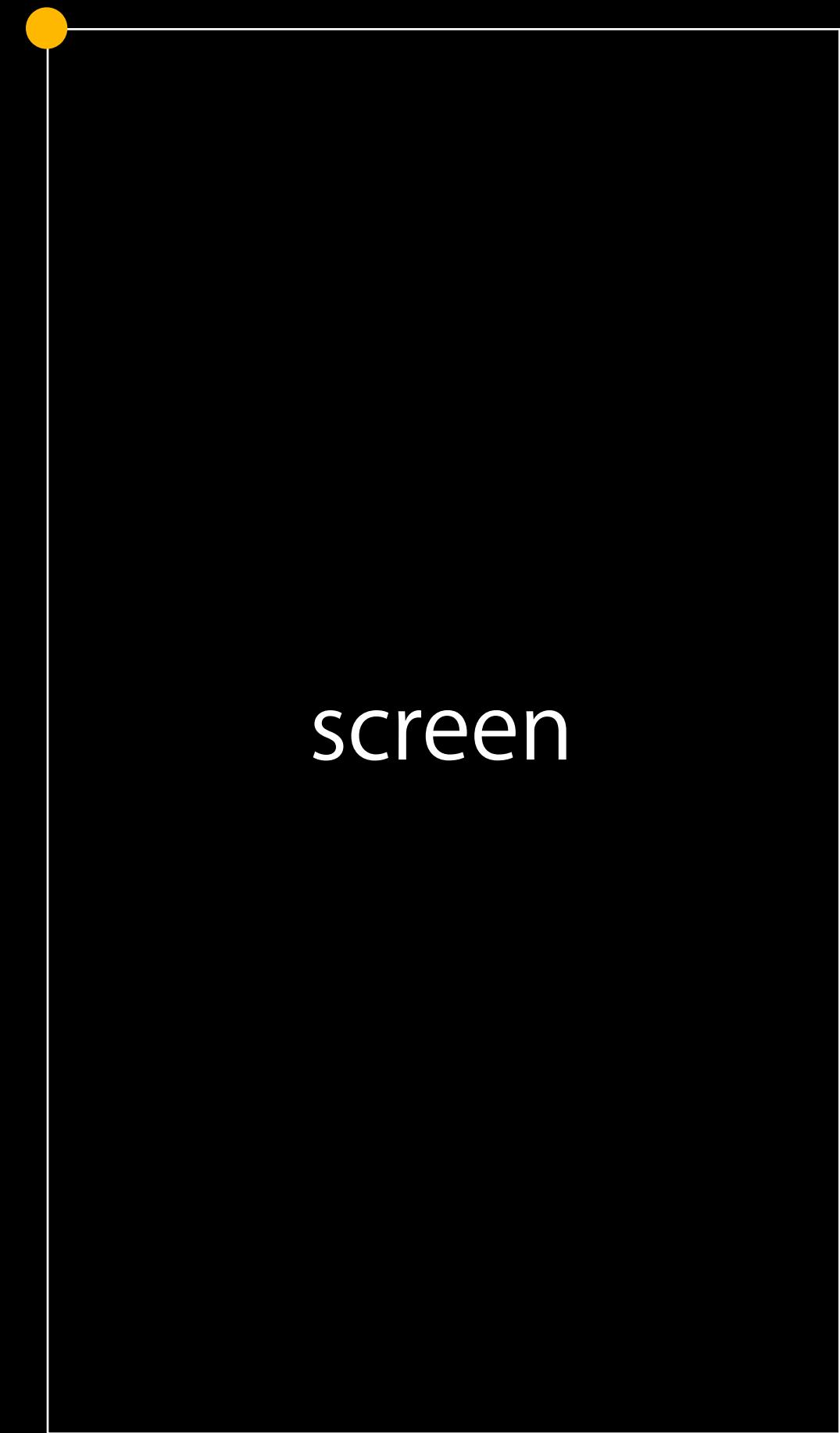
1. Put the Picture on the Device

```
- (void) setup {  
  
    Layer* screen = [Screen layer];  
  
    Layer* picture = [Layer layerWithParent:screen];  
  
    [picture loadImage:@"toast.png"];  
  
}
```

screen

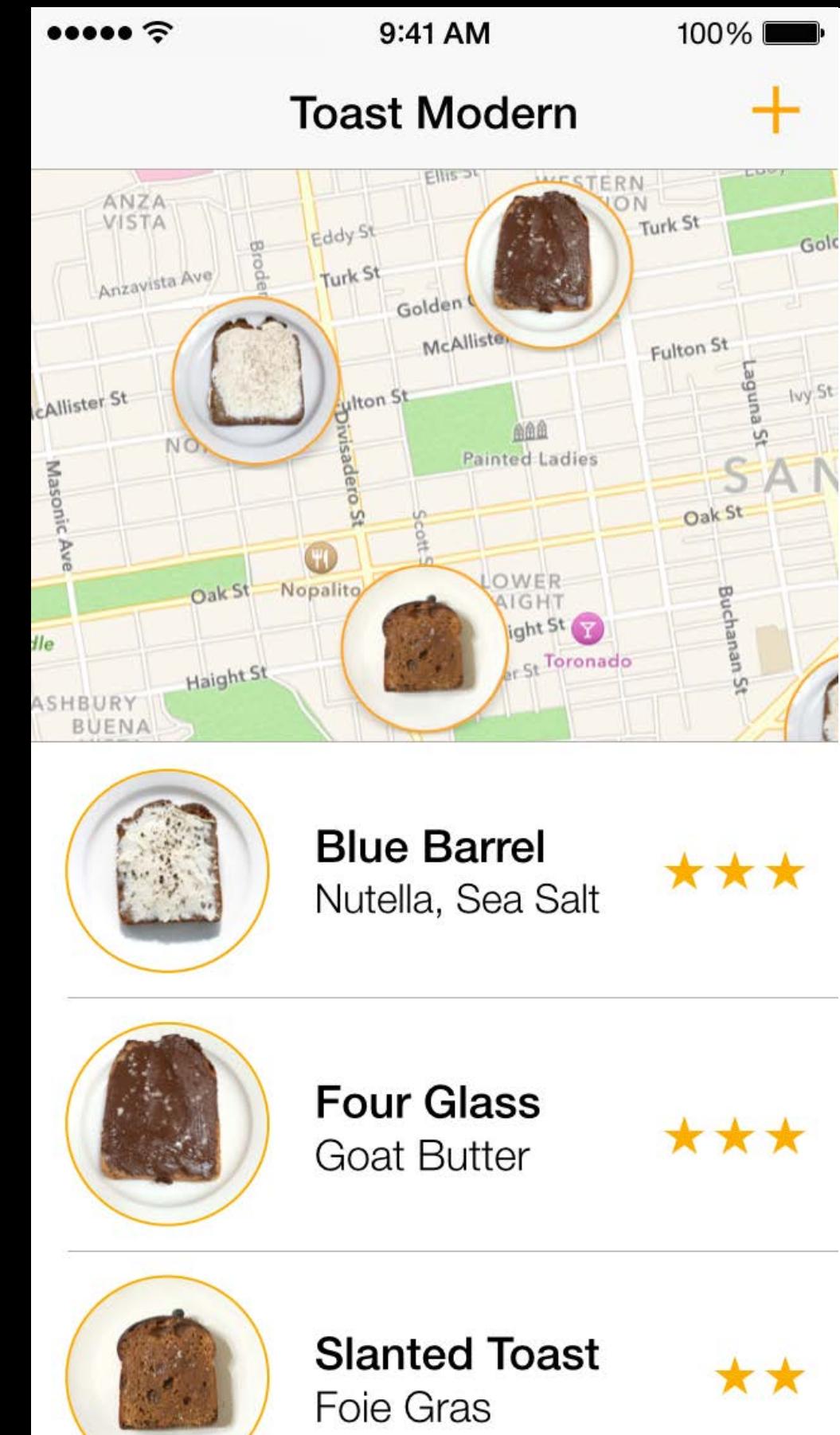
1. Put the Picture on the Device

```
- (void) setup {  
  
    Layer* screen = [Screen layer];  
  
    Layer* picture = [Layer layerWithParent:screen];  
  
    [picture loadImage:@"toast.png"];  
  
}
```



1. Put the Picture on the Device

```
- (void) setup {  
    Layer* screen = [Screen layer];  
  
    Layer* picture = [Layer layerWithParent:screen];  
  
    [picture loadImage:@"toast.png"];  
}
```



Toast Modern.xcodeproj — Screen.m

Build Toast Modern: Succeeded | Today at 9:21 AM No Issues

iPhone Retina (4-...)

File View Editor Search Assistant Navigator Document

Toast Modern > Code > Screen.m > -setup

Toast Modern 1 target, iOS SDK 7.0

Code

- Screen.h
- Screen.m
- ToastKit.h
- ToastKit.m

Images

- toast.png

Supporting Files

Frameworks

Products

```
#import "ToastKit.h"
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    [gScreen setup];
}

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@end
```

Toast Modern.xcodeproj — Screen.m

Build Toast Modern: Succeeded | Today at 9:21 AM No Issues

File | iPhone Retina (4-...) | Toast Modern > Code > Screen.m > -setup

Toast Modern
1 target, iOS SDK 7.0

Code

- Screen.h
- Screen.m
- ToastKit.h
- ToastKit.m

Images

- toast.png

Supporting Files

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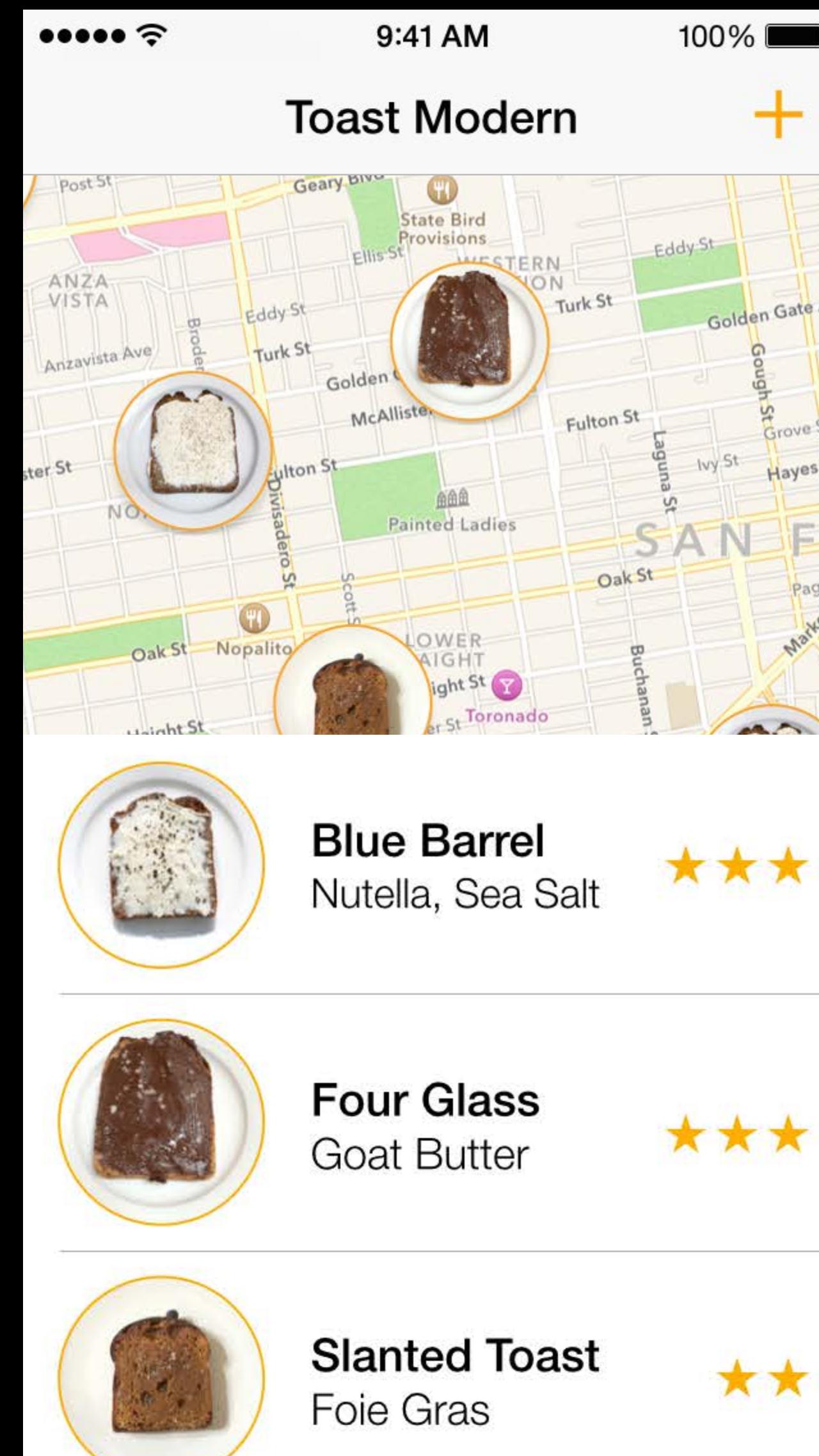
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    gScreen.size = window.frame.size;
    [gScreen setup];
}

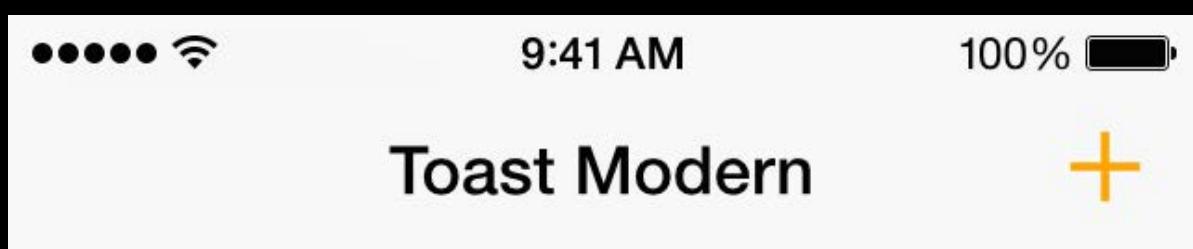
+ (Layer*) layer {
    return gScreen;
}

@end
```

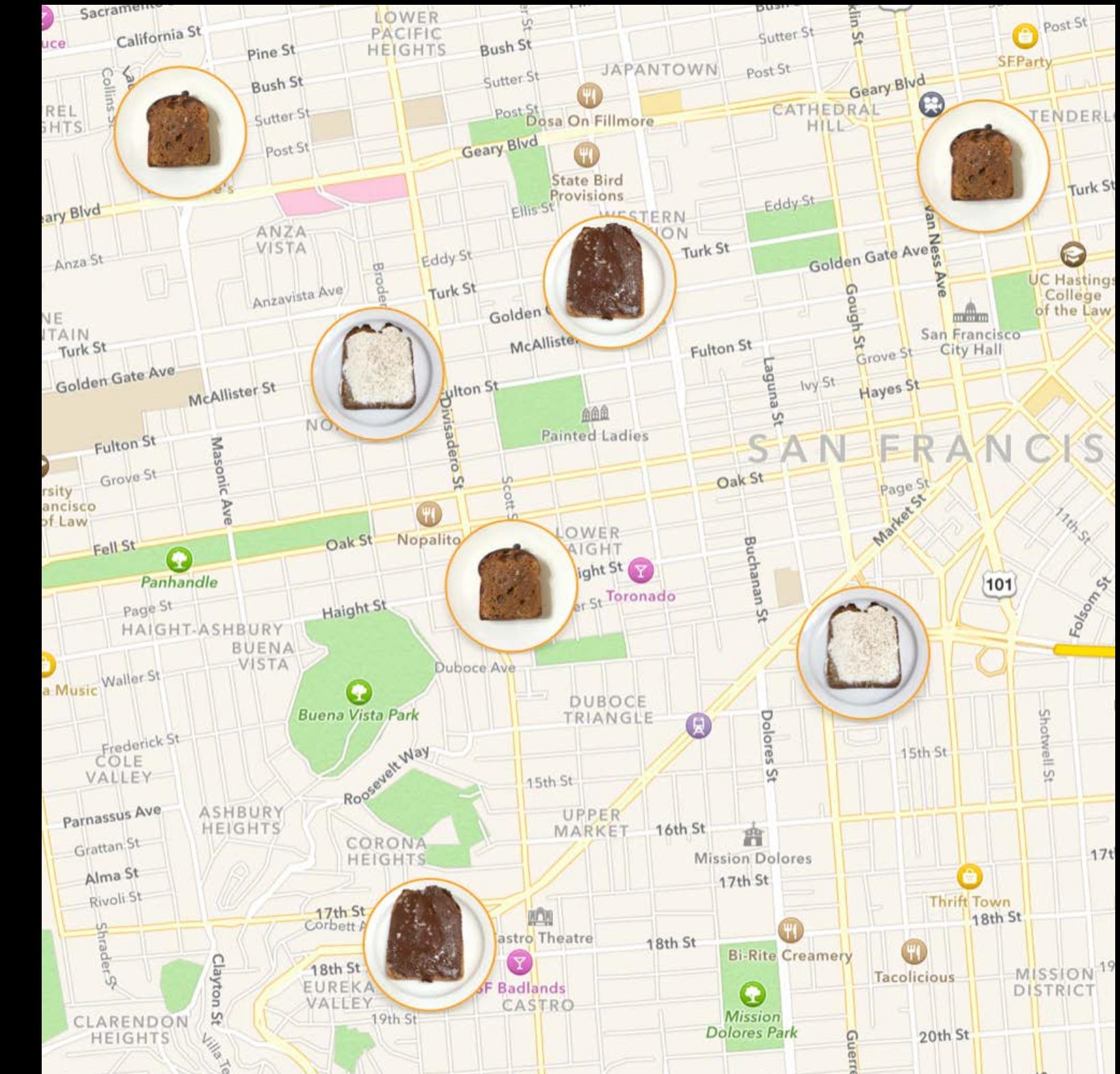

2. Break Up the Picture



2. Break Up the Picture



	Blue Barrel Nutella, Sea Salt	★★★
	Four Glass Goat Butter	★★★
	Slanted Toast Foie Gras	★★
	Atelier Bread Creme Fraiche	★★
	The Barn Cacao, Trout	★
	Blue Barrel Nutella, Sea Salt	★★★
	Four Glass Goat Butter	★★★
	Slanted Toast Foie Gras	★★
	Atelier Bread Creme Fraiche	★★
	The Barn Cacao, Trout	★



Mac OS X application window showing a presentation slide titled "List.key".

The window title is "List.key".

Top menu bar:

- View
- Zoom (25%)
- Add Slide
- Play
- Table
- Chart
- Text
- Shape
- Media
- Comment
- Share
- Tips
- Format
- Animate
- Document

Left sidebar:

Slides

1

Content area:

A list of bread items with small thumbnail images, names, descriptions, and star ratings.

Image	Name	Description	Rating
	Blue Barrel	Nutella, Sea Salt	★★★
	Four Glass	Goat Butter	★★★
	Slanted Toast	Foie Gras	★★
	Atelier Bread	Creme Fraiche	★★
	The Barn	Cacao, Trout	★
	Blue Barrel	Nutella, Sea Salt	★★★
	Four Glass	Goat Butter	★★★
	Slanted Toast	Foie Gras	★★
	Atelier Bread	Creme Fraiche	★★
	The Barn	Cacao, Trout	★

Right sidebar:

Document

Theme White

Change Theme

Slideshow Settings

- Automatically play upon open
- Loop slideshow
Press 'Esc' key to exit
- Restart show if idle for
15 m

Presentation Type

Normal

Delay: 5.0 s

Transitions

Builds: 2.0 s

Slide Size

Custom (640 x 2020)

Require password to open

Change Password...

Mac OS X window title bar: List.key

Top menu bar items: View, Zoom, Add Slide, Play, Table, Chart, Text, Shape, Media, Comment, Share, Tips, Format, Animate, Document.

Left sidebar: Slides, showing a thumbnail of the first slide and the number 1.

Main content area: A list of bread items with small images, names, descriptions, and star ratings.

Image	Name	Description	Rating
	Blue Barrel	Nutella, Sea Salt	★★★
	Four Glass	Goat Butter	★★★
	Slanted Toast	Foie Gras	★★
	Atelier Bread	Creme Fraiche	★★
	The Barn	Cacao, Trout	★
	Blue Barrel	Nutella, Sea Salt	★★★
	Four Glass	Goat Butter	★★★
	Slanted Toast	Foie Gras	★★
	Atelier Bread	Creme Fraiche	★★
	The Barn	Cacao, Trout	★

Right sidebar sections: Document, Audio, Theme White, Change Theme, Slideshow Settings, Presentation Type, Slide Size, and Require password to open.

Slideshow Settings checkboxes: Automatically play upon open, Loop slideshow (disabled), Restart show if idle for 15 m.

Presentation Type dropdown: Normal, Delay: 5.0 s, 2.0 s, Transitions, Builds.

Slide Size dropdown: Custom (640 x 2020).

Require password to open checkbox: Change Password...

Map.key — Edited

View Zoom Add Slide Play Table Chart Text Shape Media Comment Share Tips Format Animate Document

Slides 1

A detailed map of San Francisco, California, showing the city's grid street pattern and numerous neighborhoods. Key areas labeled include LOWER PACIFIC HEIGHTS, JAPANTOWN, CATHEDRAL HILL, TENDERLOIN, WESTERN ADDITION, GOLDEN GATE AVENUE, McALLISTER ST, PAINTED LADIES, LOWER HAIGHT, HAIGHT-ASHBURY, BUENA VISTA, COLE VALLEY, ASHBURY HEIGHTS, CORONA HEIGHTS, DUBoce TRIANGLE, UPPER MARKET, MISSION DISTRICT, and CLARENDON HEIGHTS. Landmarks such as San Francisco City Hall, UC Hastings College of the Law, and the Castro Theatre are also marked. The map features green shaded areas representing parks like Buena Vista Park and Mission Dolores Park, and yellow shaded areas representing commercial or residential zones.

Document Audio

Theme White Change Theme

Slideshow Settings

Automatically play upon open

Loop slideshow
Press 'Esc' key to exit

Restart show if idle for
15 m

Presentation Type

Normal

Delay: 5.0 s Transitions 2.0 s Builds

Slide Size

Custom (1000 x 1000)

Require password to open
Change Password...

Map.key — Edited

View Zoom Add Slide Play Table Chart Text Shape Media Comment Share Tips Format Animate Document

Slides

1

A map of San Francisco showing the city's street grid and neighborhood names. Several locations are marked with icons of bread on plates, which are circled in orange. The locations include: JAPANTOWN (Dosa On Fillmore), CATHEDRAL HILL (State Bird Provisions), TENDERLOIN (Golden Gate Ave), WESTERN SECTION (Painted Ladies), LOWER HAIGHT (Panhandle), HAIGHT-ASHBURY (Buena Vista Park), ASHBURY HEIGHTS (Roosevelt Way), CORONA HEIGHTS (DUBOCE TRIANGLE), CLARENDON HEIGHTS (EUREKA VALLE), and MISSION DISTRICT (Mission Dolores Park). Other icons on the map include AT&T, University of San Francisco School of Law, Bi-Rite Creamery, Tacolicious, and Mission Dolores.

Document Audio

Theme White Change Theme

Slideshow Settings

Automatically play upon open

Loop slideshow
Press 'Esc' key to exit

Restart show if idle for
15 m

Presentation Type

Normal

Delay: 5.0 s Transitions 2.0 s Builds

Slide Size

Custom (1000 x 1000)

Require password to open
Change Password...

Map.key — Edited

View Zoom Add Slide Play Table Chart Text Shape Media Comment Share Tips Format Animate Document

Slides

1

Document

Theme White Change Theme

Slideshow Settings

Automatically play upon open

Loop slideshow
Press 'Esc' key to exit

Restart show if idle for
15 m

Presentation Type

Normal

Delay: 5.0 s Transitions 2.0 s Builds

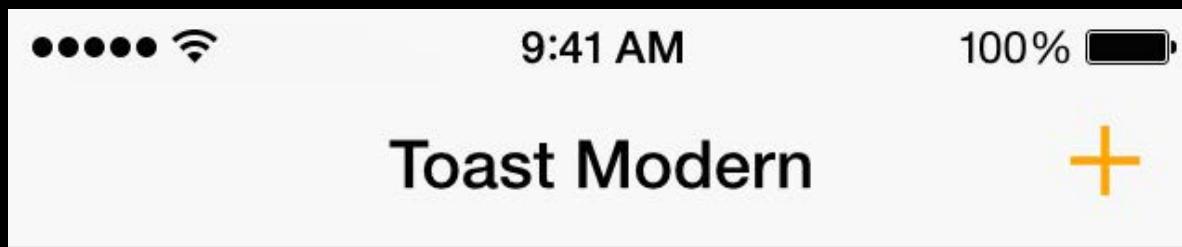
Slide Size

Custom (1000 x 1000)

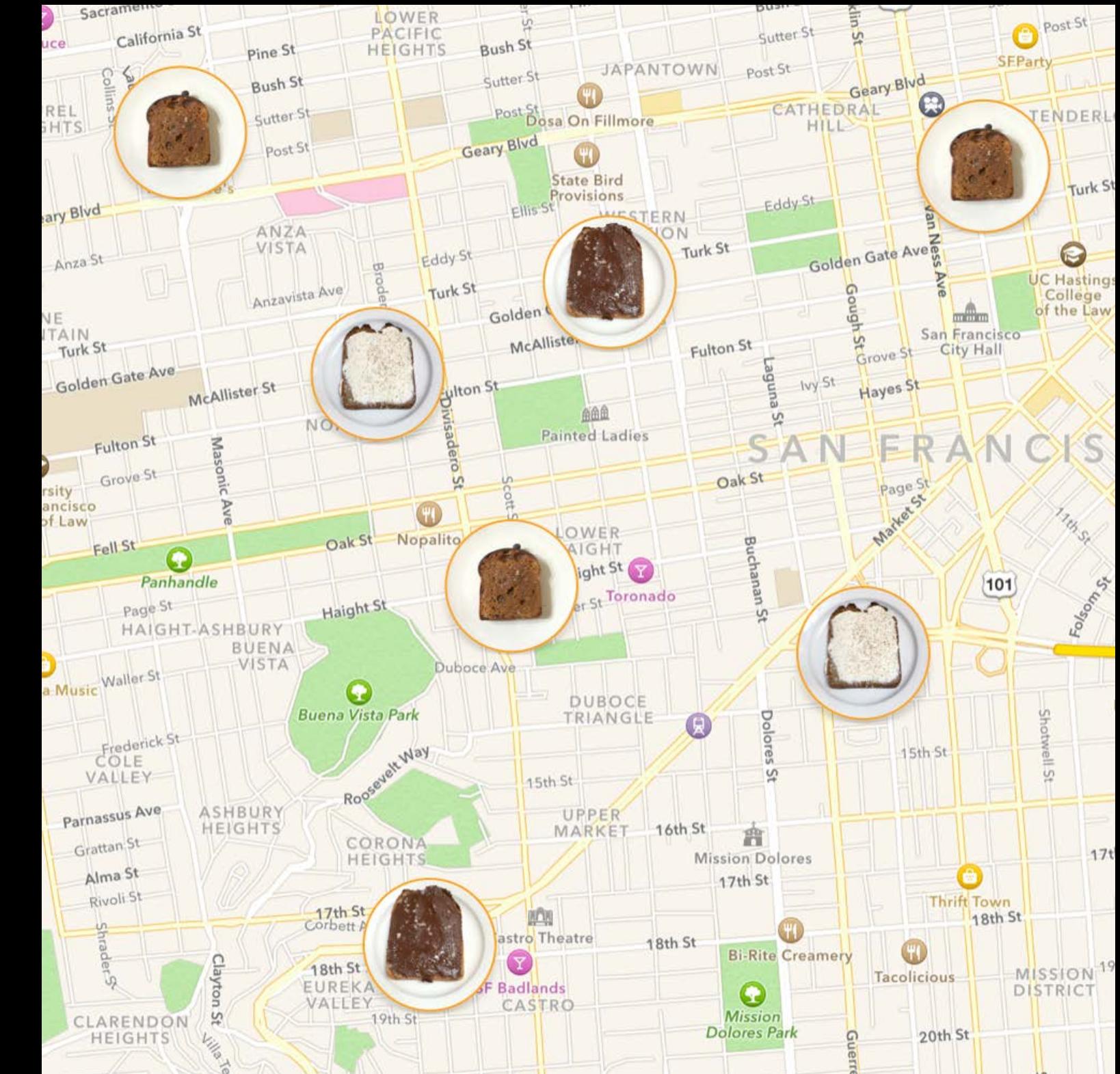
Require password to open

Change Password...

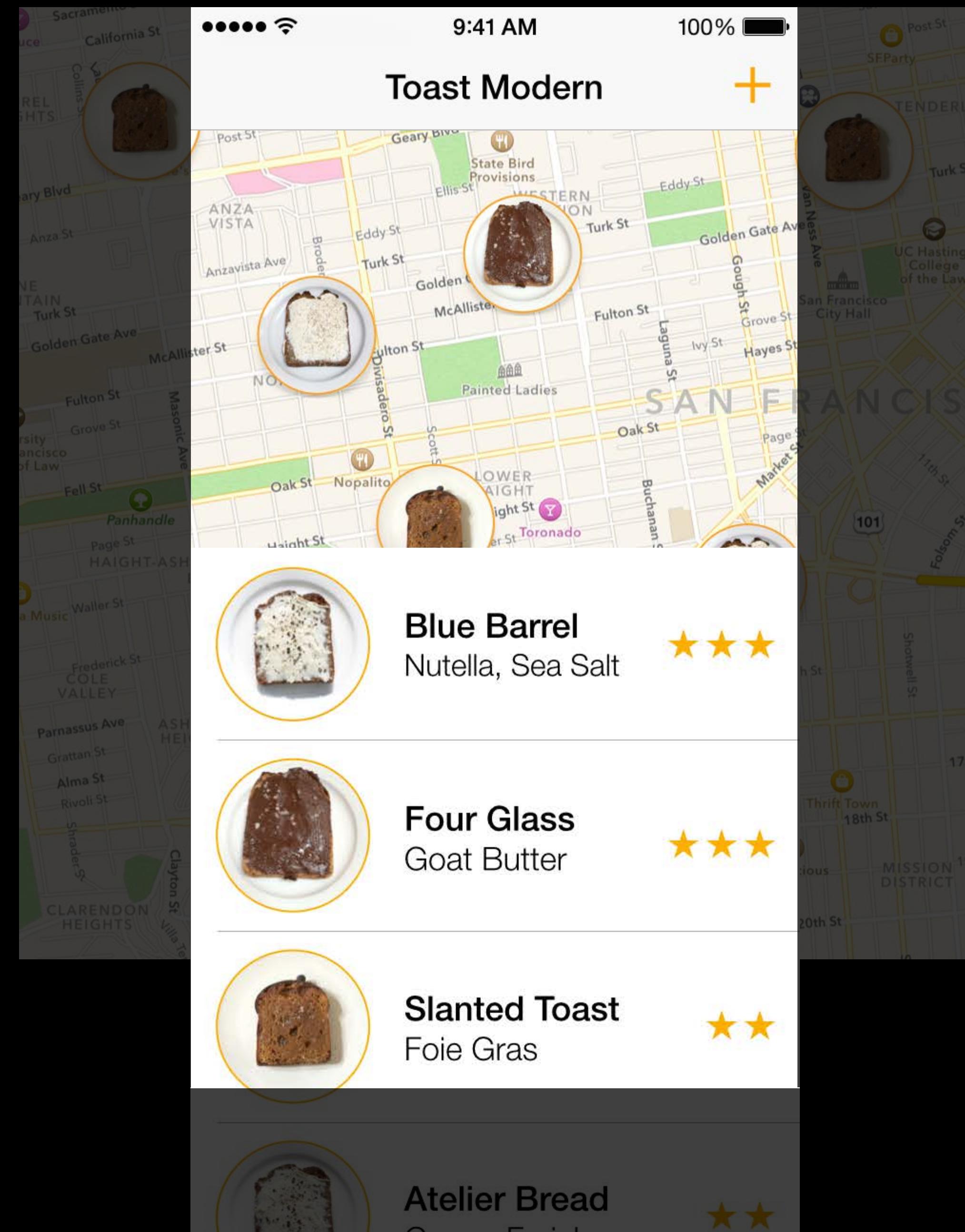
2. Break Up the Picture



	Blue Barrel Nutella, Sea Salt	★★★
	Four Glass Goat Butter	★★★
	Slanted Toast Foie Gras	★★
	Atelier Bread Creme Fraiche	★★
	The Barn Cacao, Trout	★
	Blue Barrel Nutella, Sea Salt	★★★
	Four Glass Goat Butter	★★★
	Slanted Toast Foie Gras	★★
	Atelier Bread Creme Fraiche	★★
	The Barn Cacao, Trout	★



2. Break Up the Picture



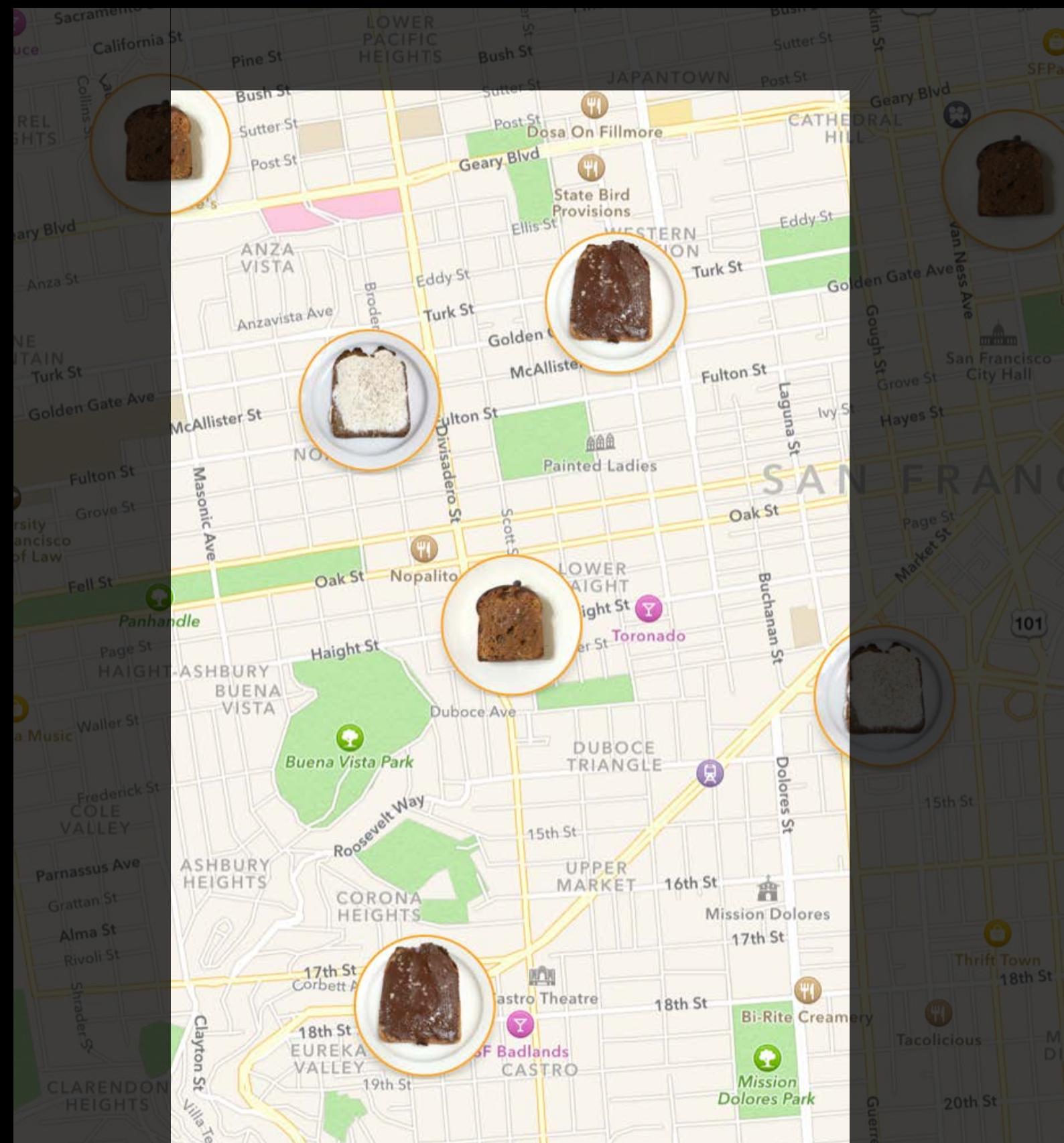
2. Break Up the Picture

```
- (void) setup {  
  
    Layer* screen = [Screen layer];  
  
    Layer* map = [Layer layerWithParent: screen];  
    [map loadImage:@"map.png"];  
    map.x = -100;  
    map.y = -50;  
  
    Layer* list = [Layer layerWithParent:screen];  
    [list loadImage:@"list.png"];  
    list.y = 284;  
  
    Layer* navBar = [Layer layerWithParent: screen];  
    [navBar loadImage:@"navBar.png"];  
}
```

screen

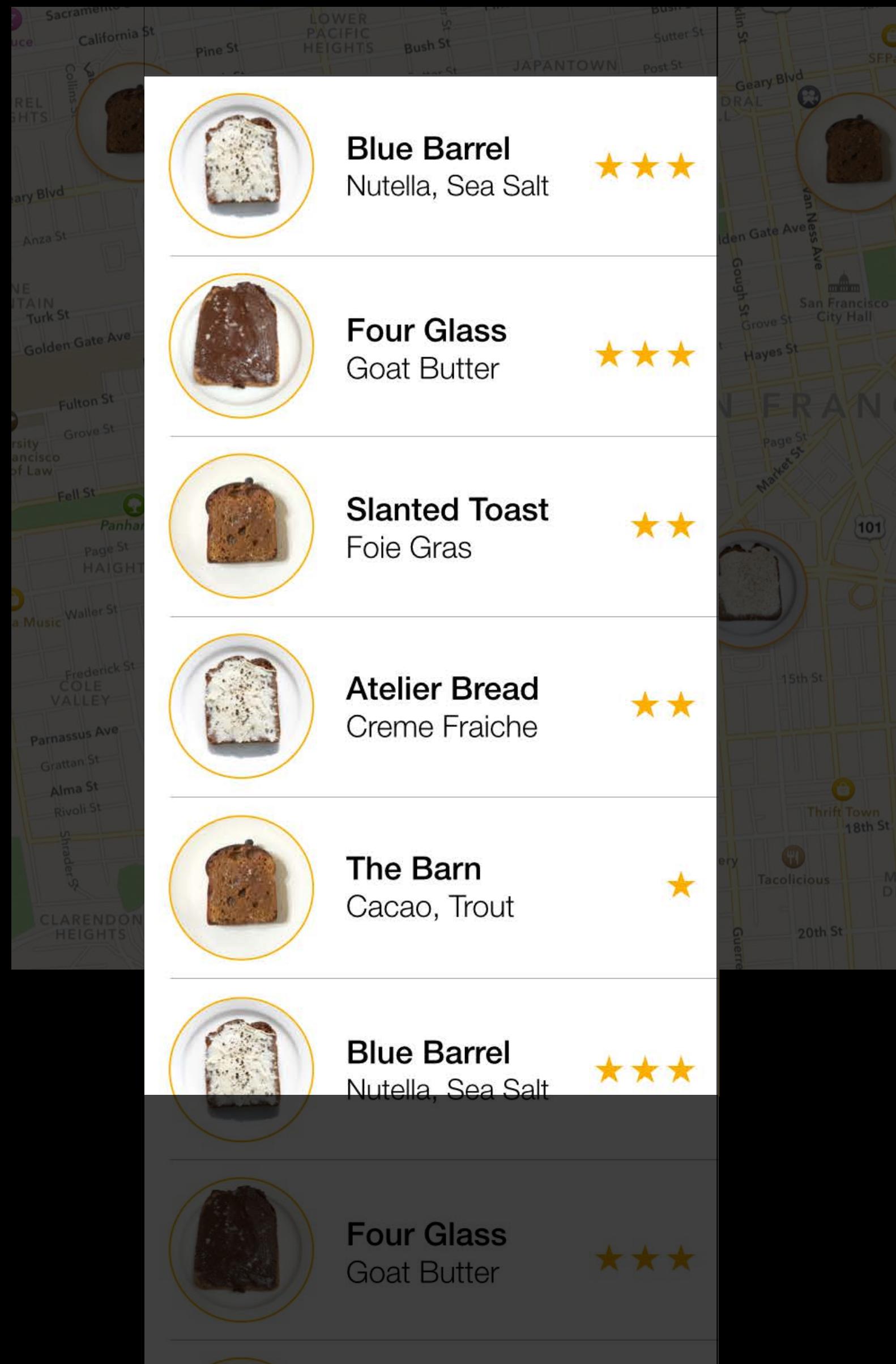
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    map.x = -100;  
    map.y = -50;  
  
    Layer* list = [Layer layerWithParent:screen];  
    [list loadImage:@"list.png"];  
    list.y = 284;  
  
    Layer* navBar = [Layer layerWithParent: screen];  
    [navBar loadImage:@"navBar.png"];  
}
```



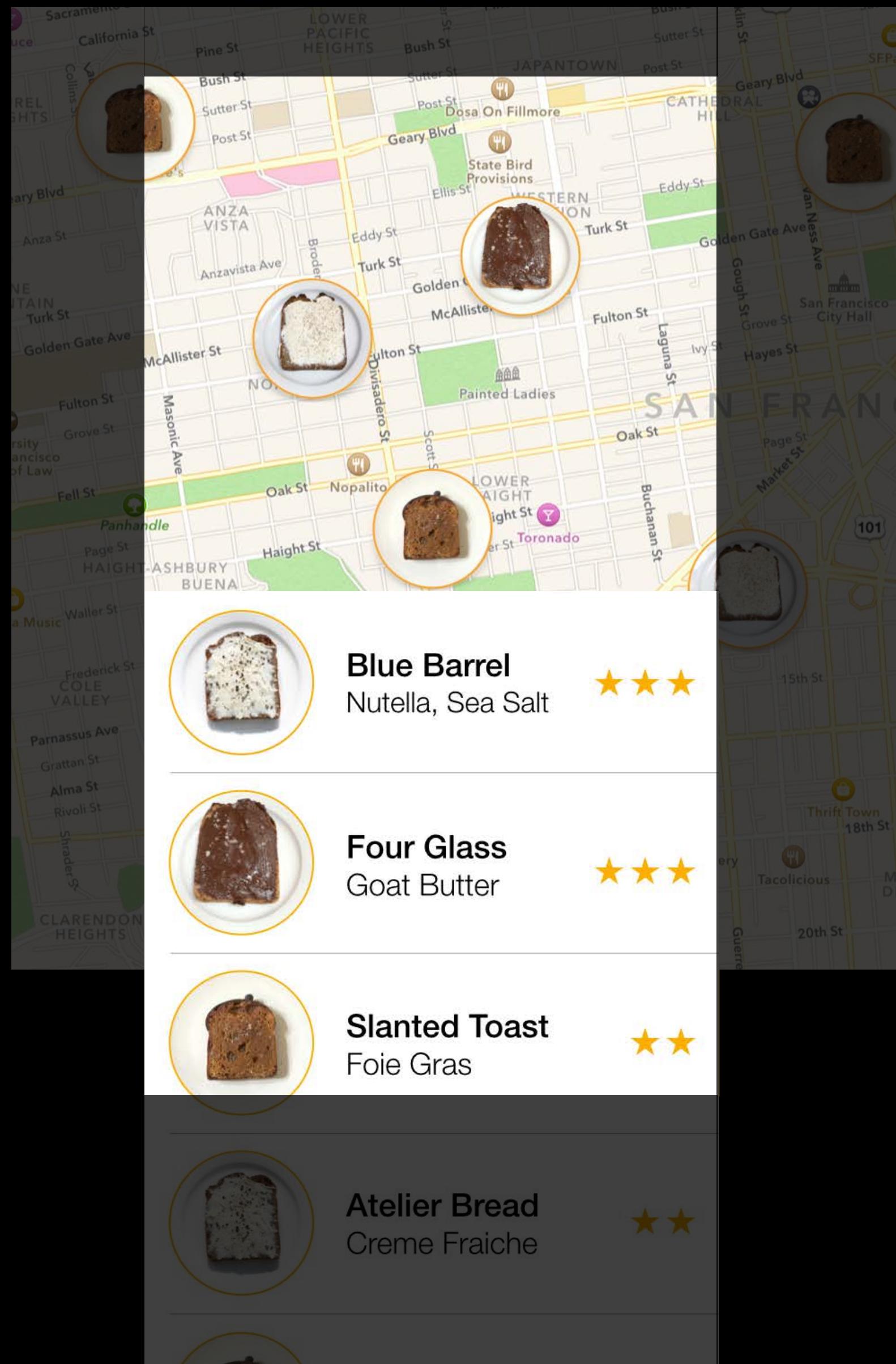
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    [list loadImage:@"list.png"];  
    list.y = 284;  
  
    Layer* navBar = [Layer layerWithParent: screen];  
    [navBar loadImage:@"navBar.png"];  
}
```



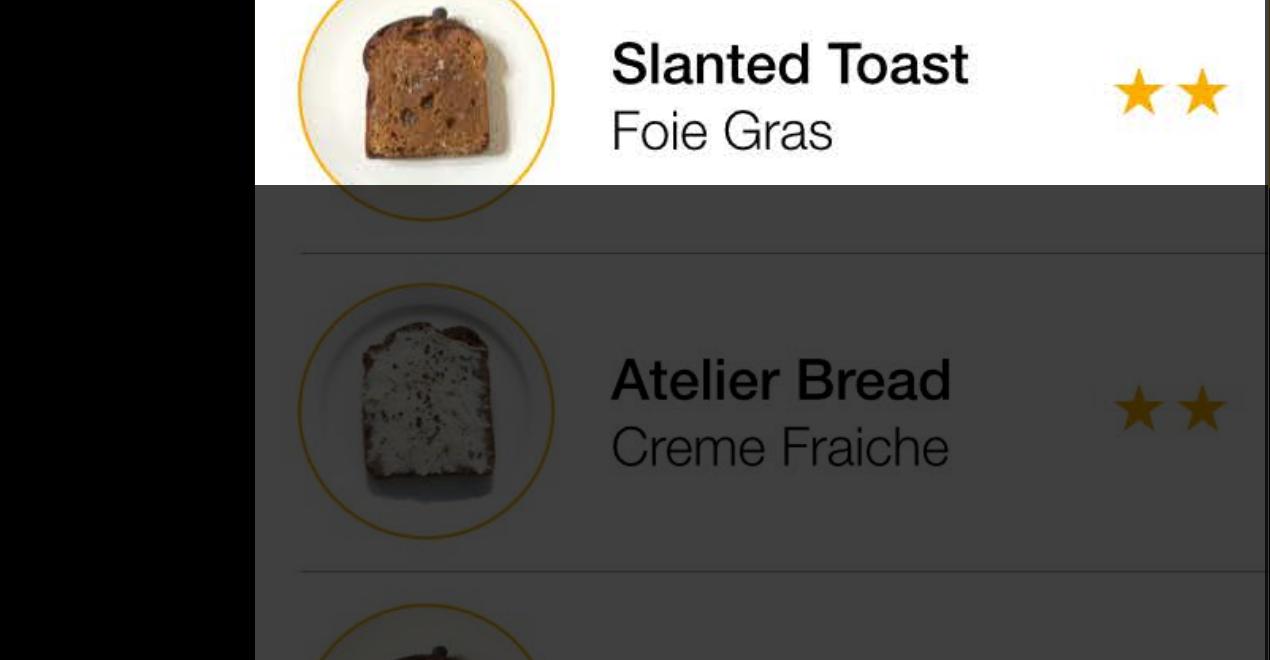
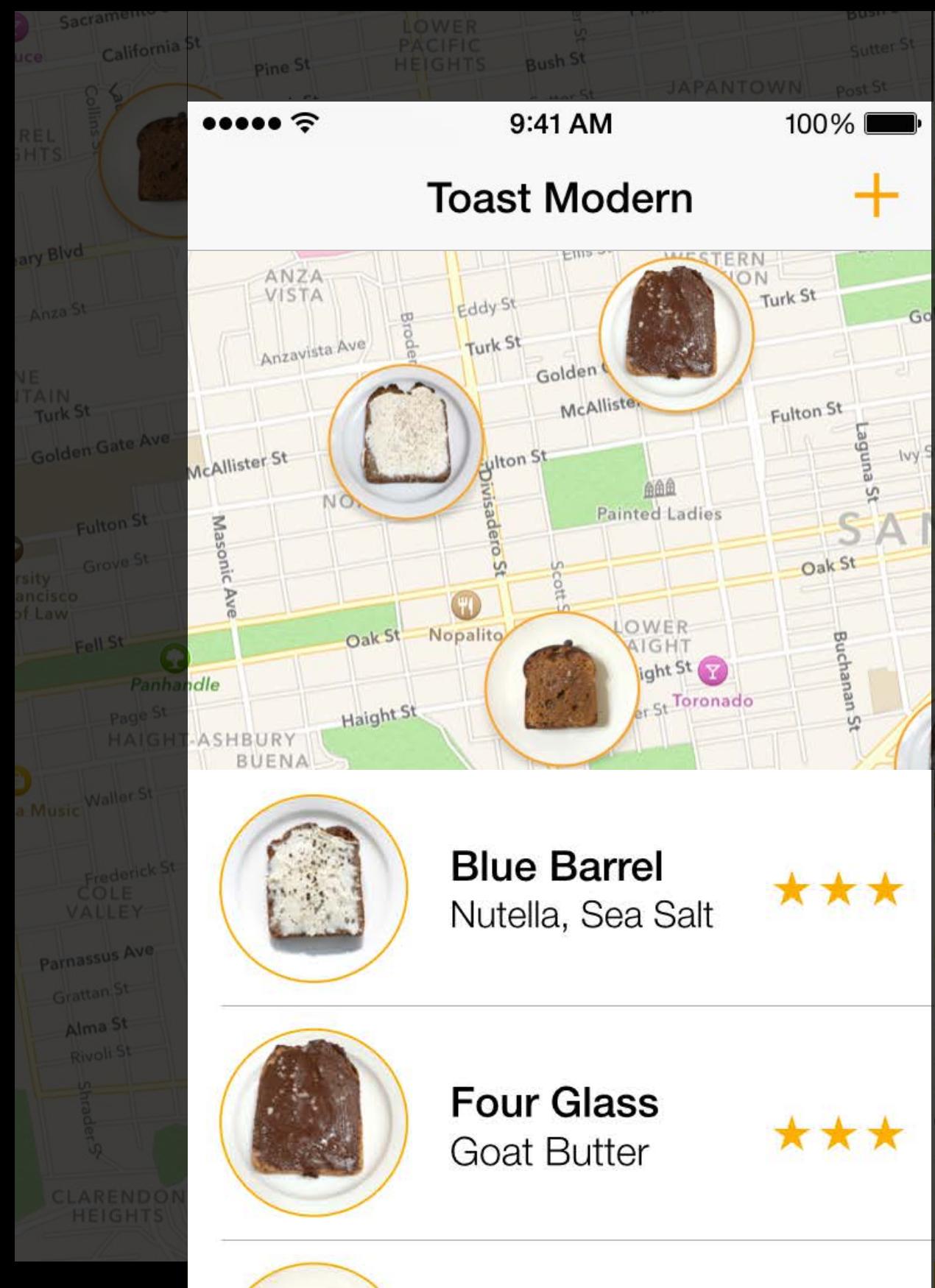
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    Layer* list = [Layer layerWithParent:screen];  
    [list loadImage:@"list.png"];  
    list.y = 284;  
  
    Layer* navBar = [Layer layerWithParent: screen];  
    [navBar loadImage:@"navBar.png"];  
}
```

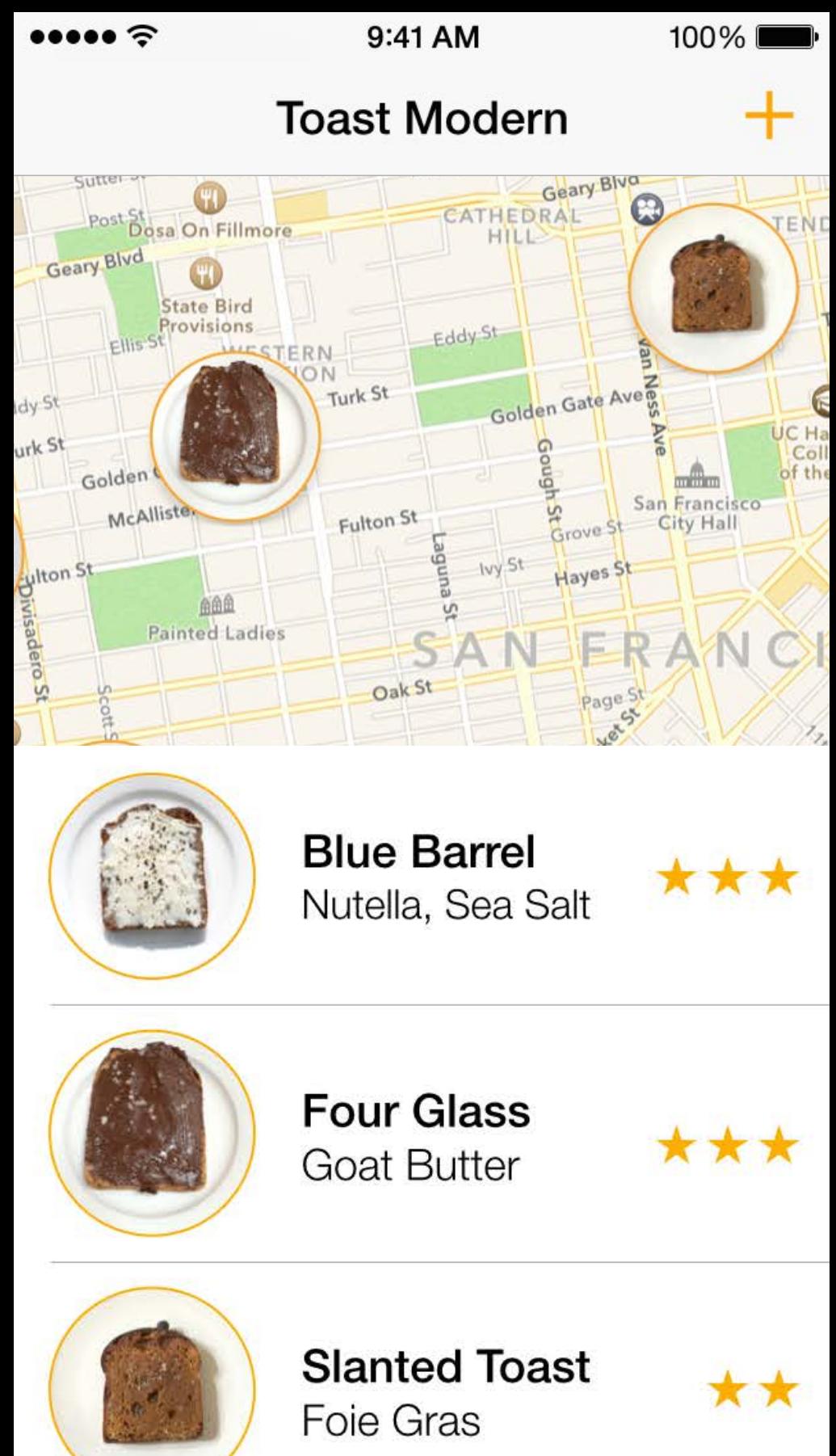


2. Break Up the Picture

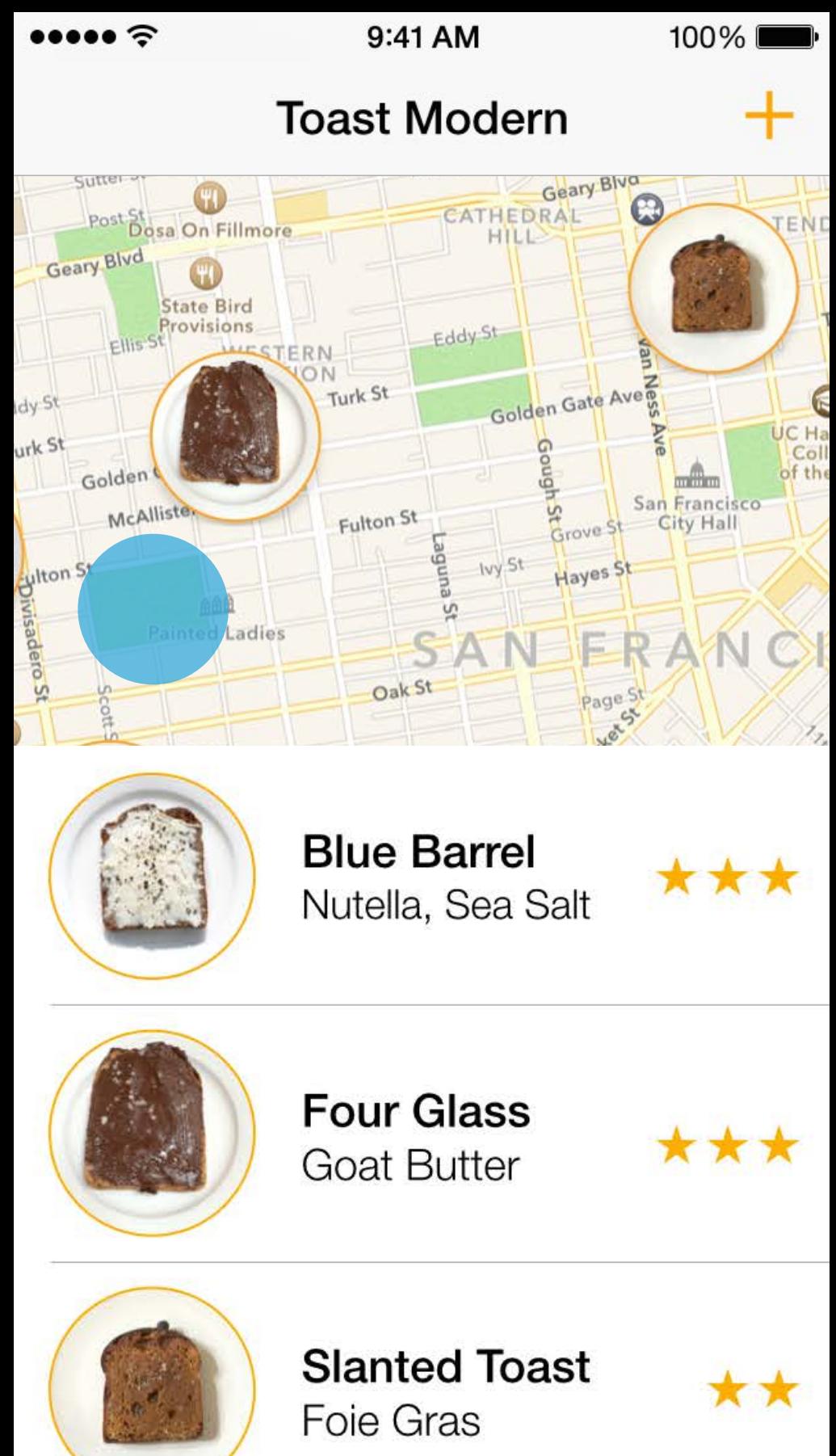
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    map.x = -100;  
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    list.y = 284;  
  
    Layer* navBar = [Layer layerWithParent: screen];  
    [navBar loadImage:@"navBar.png"];  
}
```



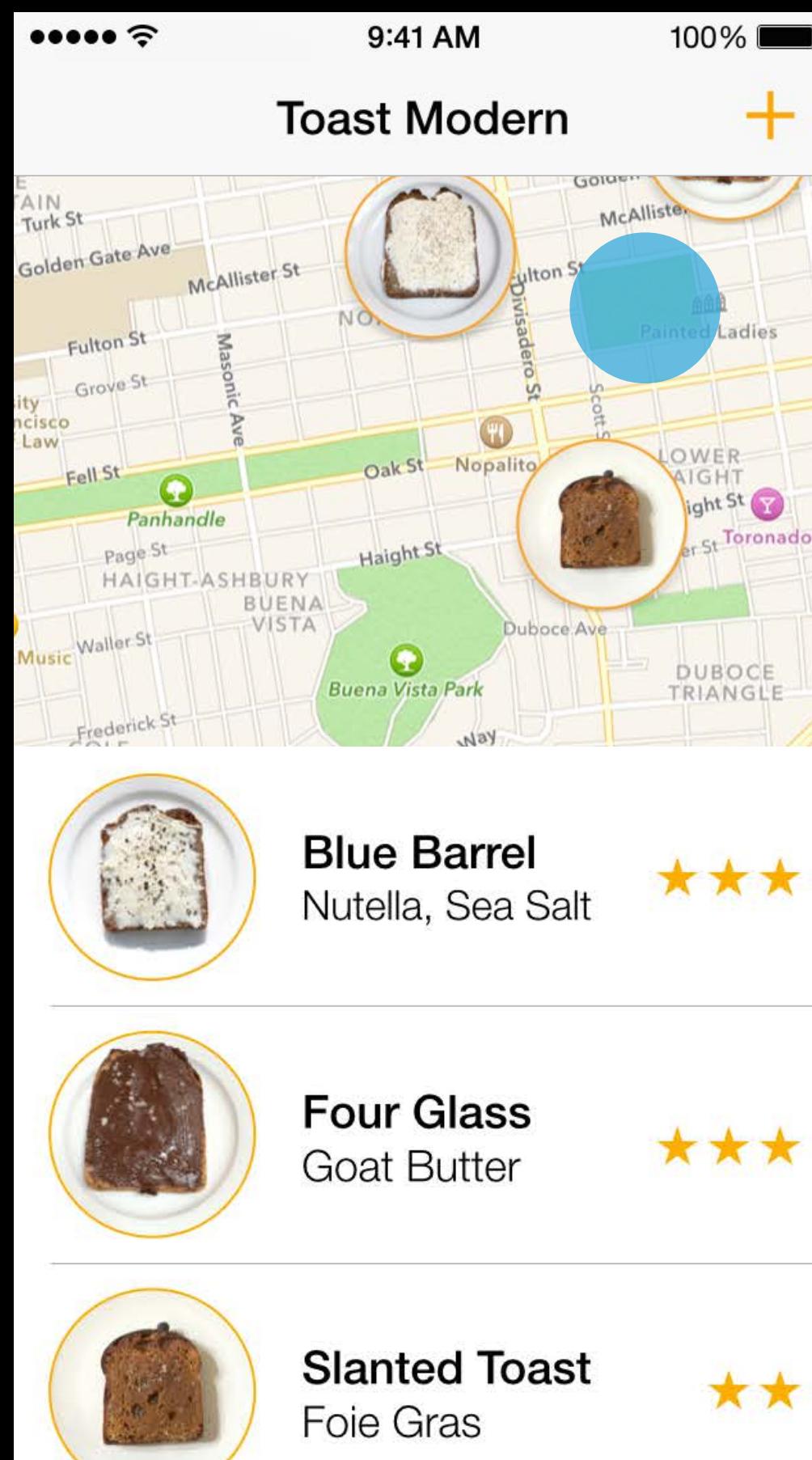
3. Move the Pictures When You Touch Them



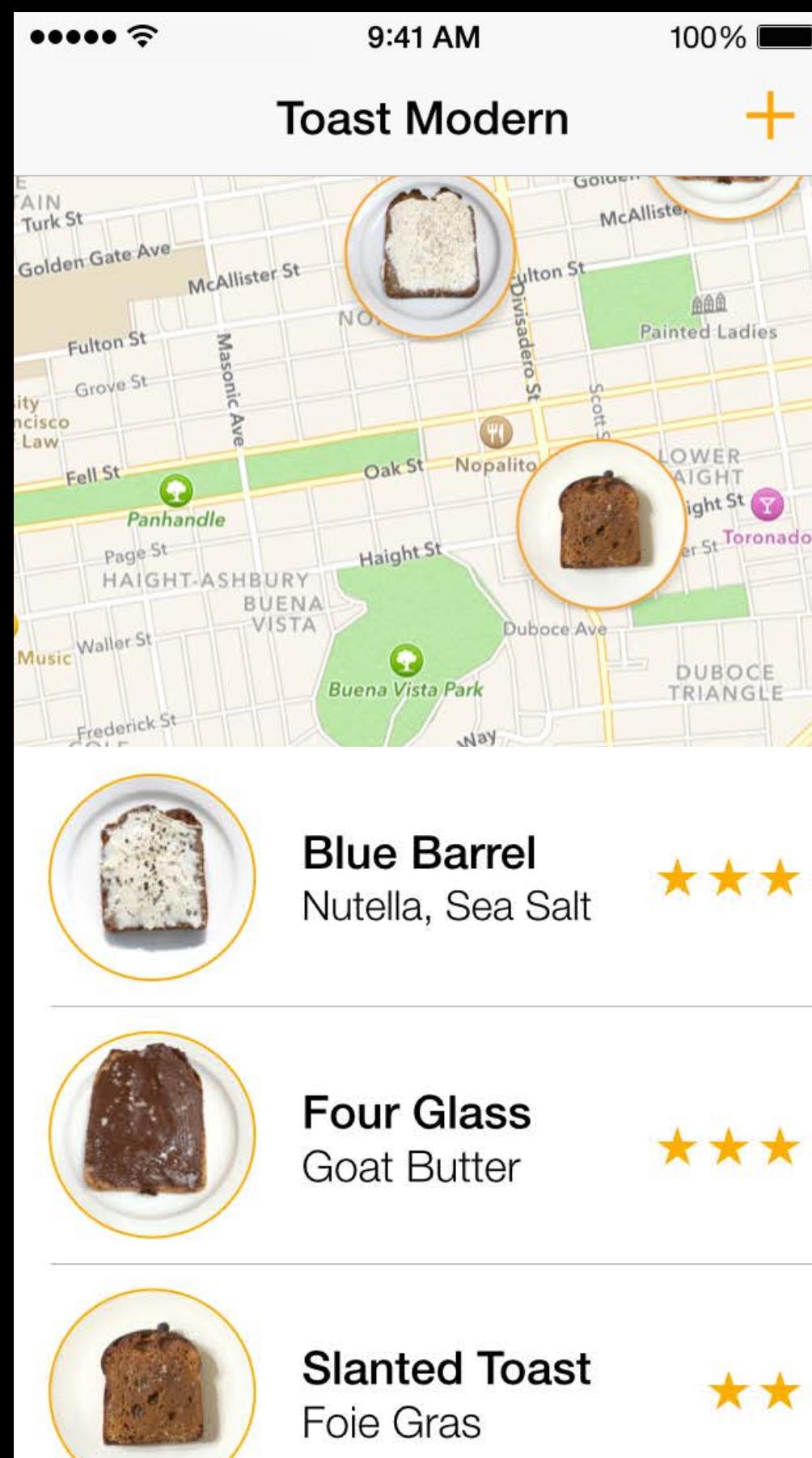
3. Move the Pictures When You Touch Them



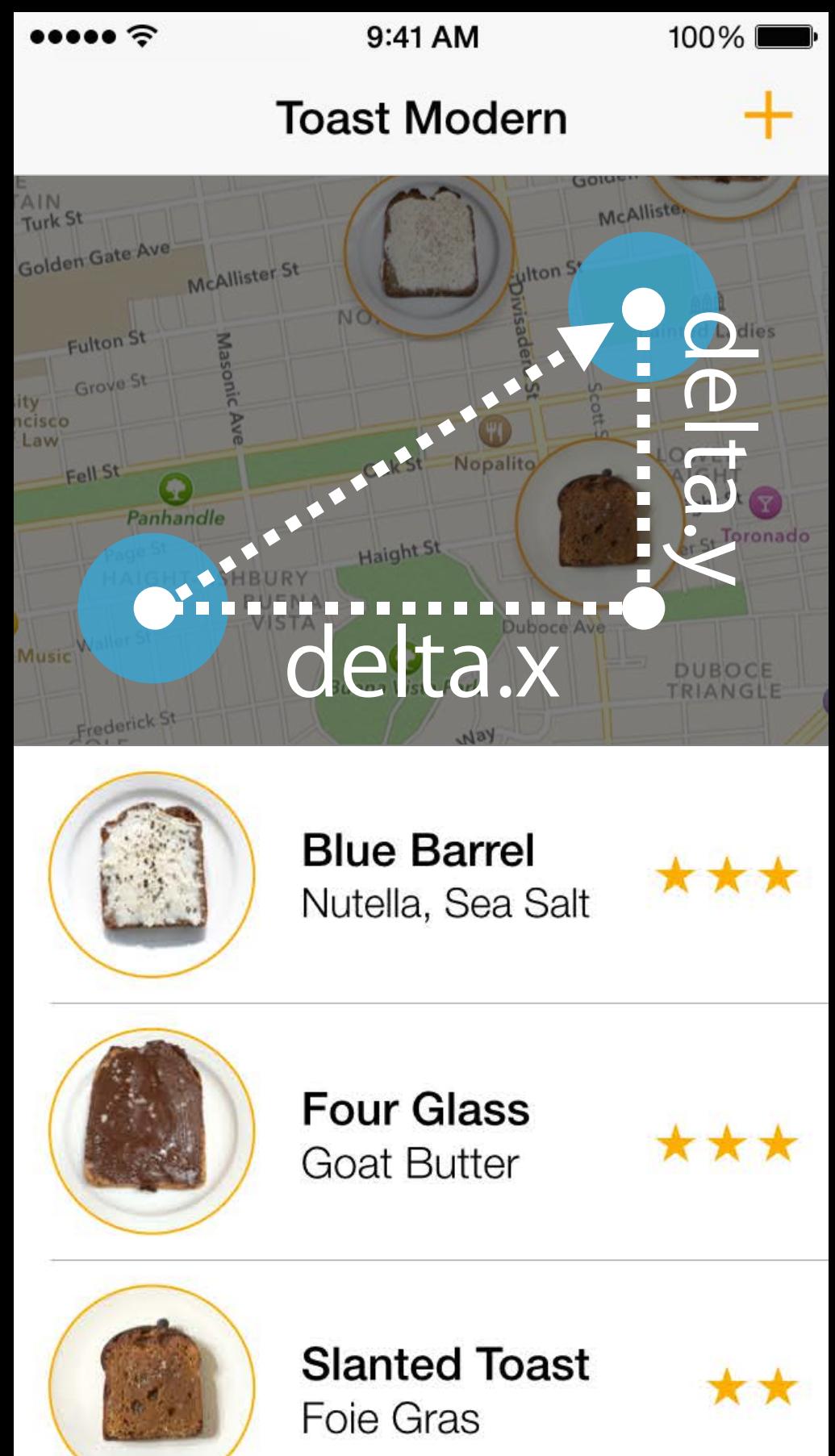
3. Move the Pictures When You Touch Them



3. Move the Pictures When You Touch Them



3. Move the Pictures When You Touch Them



3. Move the Pictures When You Touch Them

```
map.onTouchMove = ^(NSSet* touches)
{
    UITouch* touch = [touches anyObject];
    CGPoint current = [touch locationInView:screen];
    CGPoint previous = [touch previousLocationInView:screen];

    CGPoint delta;
    delta.x = current.x - previous.x;
    delta.y = current.y - previous.y;

    [UIView performWithoutAnimation:^{
        map.x = map.x + delta.x;
        map.y = map.y + delta.y;
    }];
};
```

3. Move the Pictures When You Touch Them

```
map.onTouchMove = ^(NSSet* touches)
{
    UITouch* touch = [touches anyObject];
    CGPoint current = [touch locationInView:screen];
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    CGPoint delta;
    delta.x = current.x - previous.x;
    delta.y = current.y - previous.y;

    [UIView performWithoutAnimation:^{
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        map.y = map.y + delta.y;
    }];
};
```

3. Move the Pictures When You Touch Them

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map.onTouchMove = ^(NSSet* touches)
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        map.x = map.x + delta.x;
        map.y = map.y + delta.y;
    }];
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```

3. Move the Pictures When You Touch Them

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    CGPoint current = [touch locationInView:screen];
    CGPoint previous = [touch previousLocationInView:screen];

    CGPoint delta;
    delta.x = current.x - previous.x;
    delta.y = current.y - previous.y;

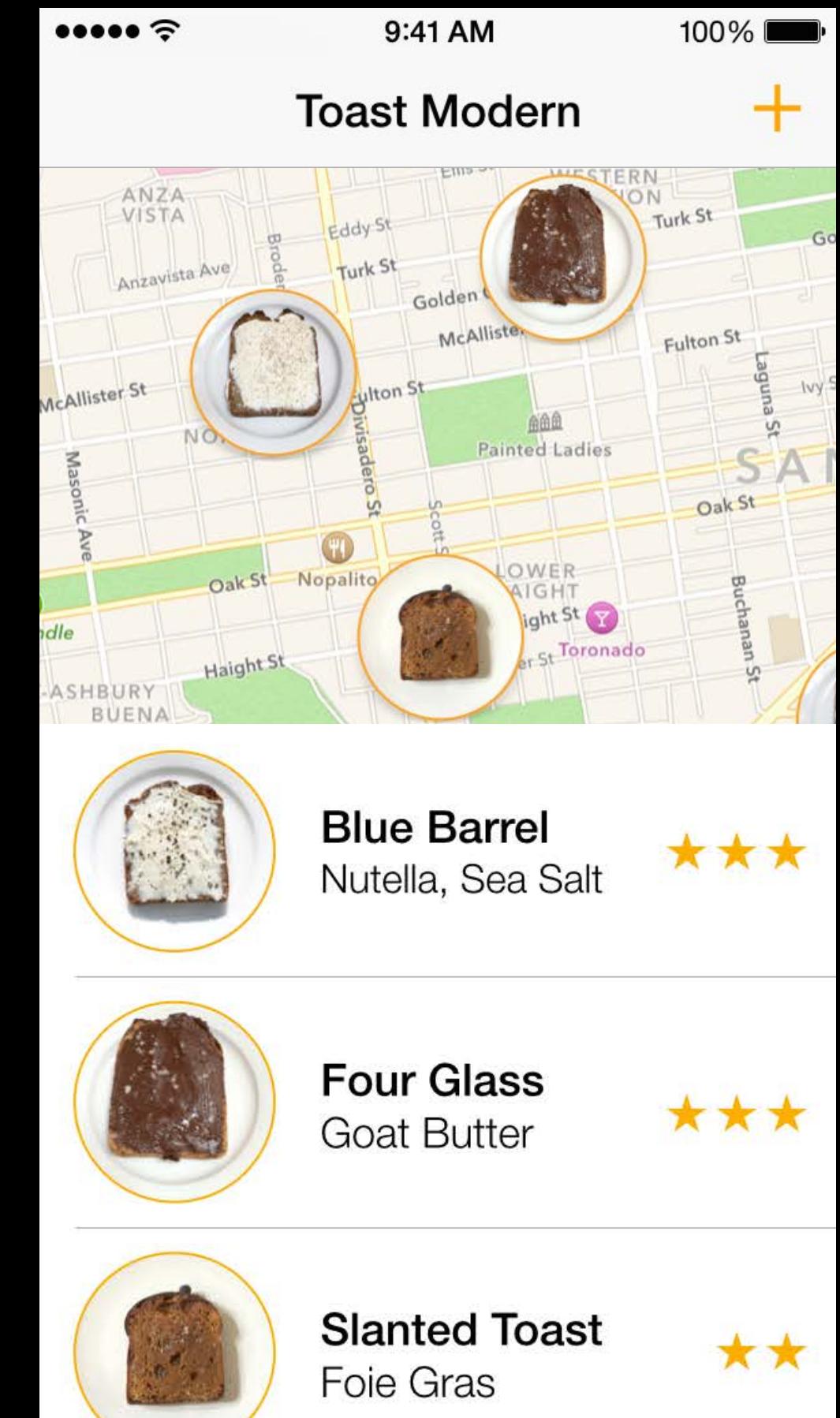
    [UIView performWithoutAnimation:^{
        map.x = map.x + delta.x;
        map.y = map.y + delta.y;
    }];
};
```


3. Move the Pictures When You Touch Them

```
Layer* camera = [Layer layerWithParent:screen];
[camera loadImage:@"camera.png"];

camera.y = screen.height;

navBar.onTouchUp = ^(NSSet* touches)
{
    [UIView animateWithDuration:0.5 animations:^{
        camera.y = 0;
    }];
};
```



3. Move the Pictures When You Touch Them

```
Layer* camera = [Layer layerWithParent:screen];
[camera loadImage:@"camera.png"];

camera.y = screen.height;

navBar.onTouchUp = ^(NSSet* touches)
{
    [UIView animateWithDuration:0.5 animations:^{
        camera.y = 0;
    }];
};
```

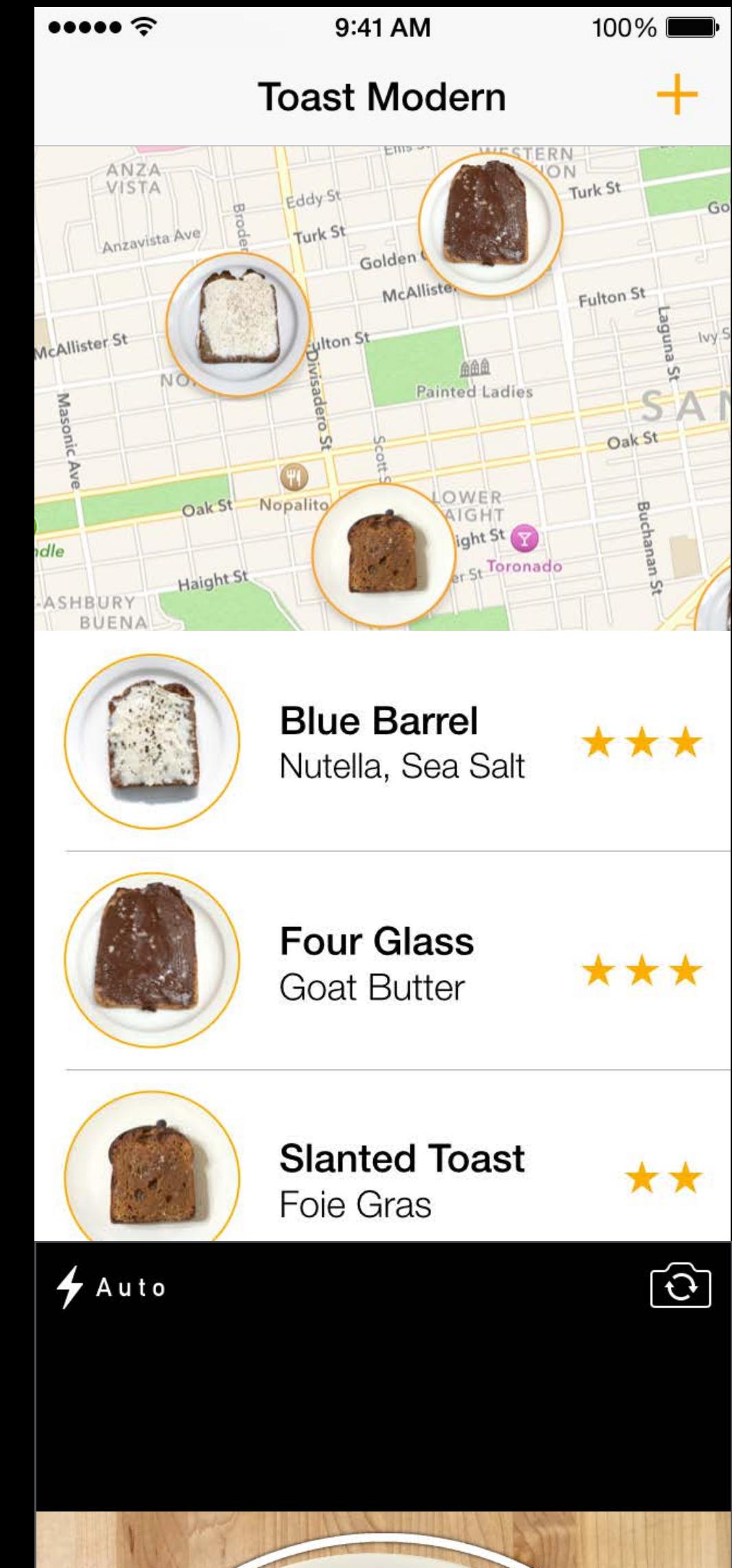


3. Move the Pictures When You Touch Them

```
Layer* camera = [Layer layerWithParent:screen];
[camera loadImage:@"camera.png"];

camera.y = screen.height;

navBar.onTouchUp = ^{
    NSSet* touches
    {
        [UIView animateWithDuration:0.5 animations:^{
            camera.y = 0;
        }];
    };
};
```

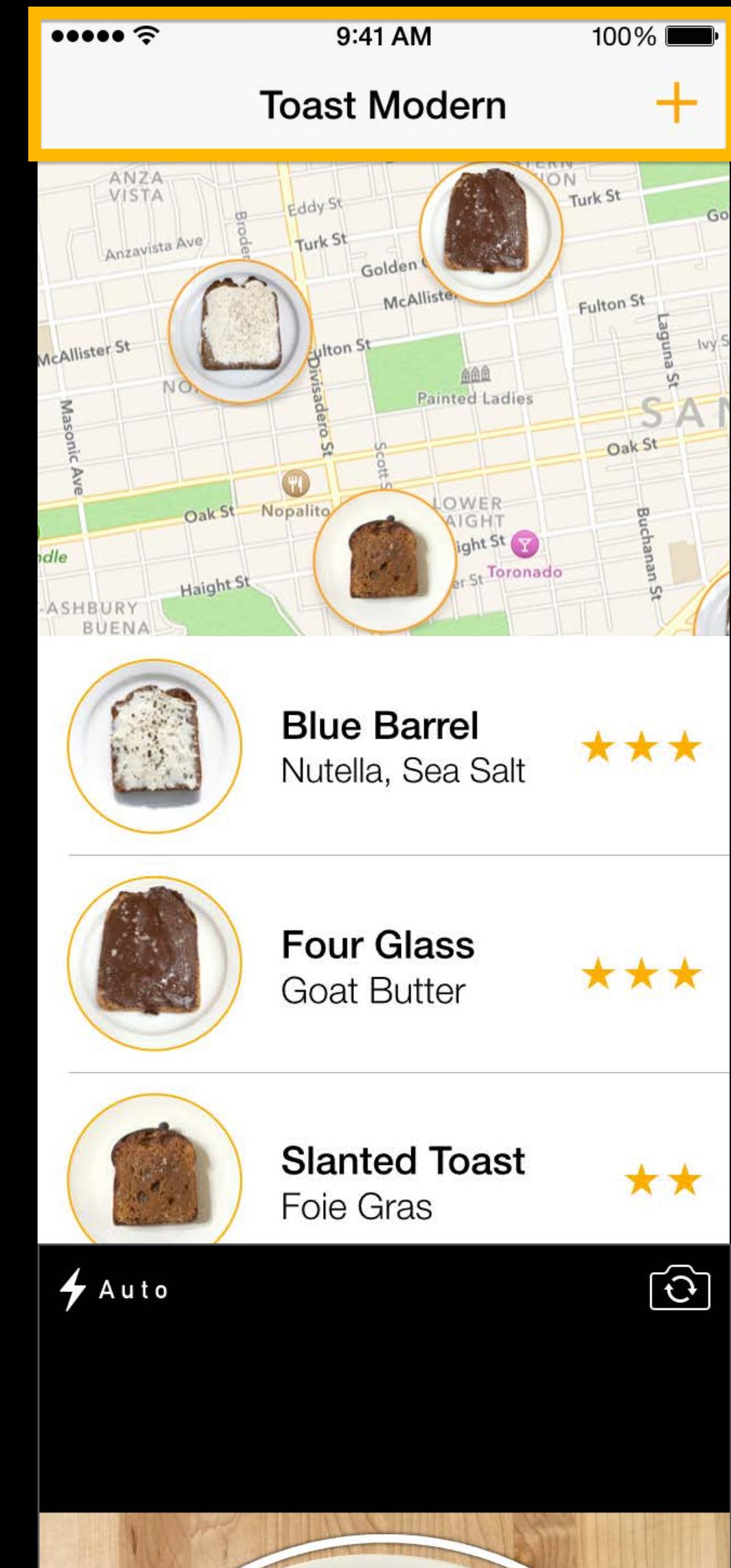


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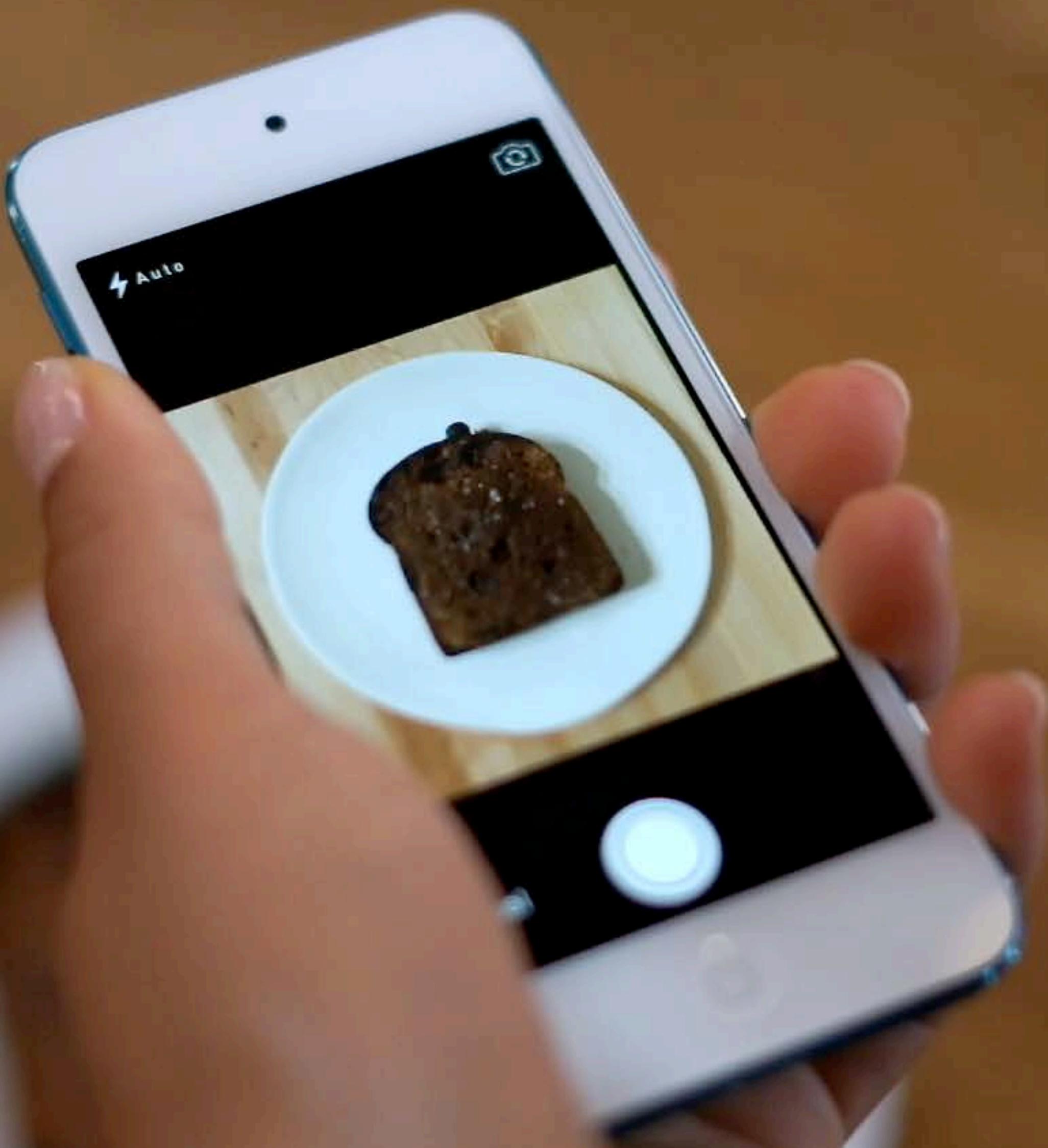
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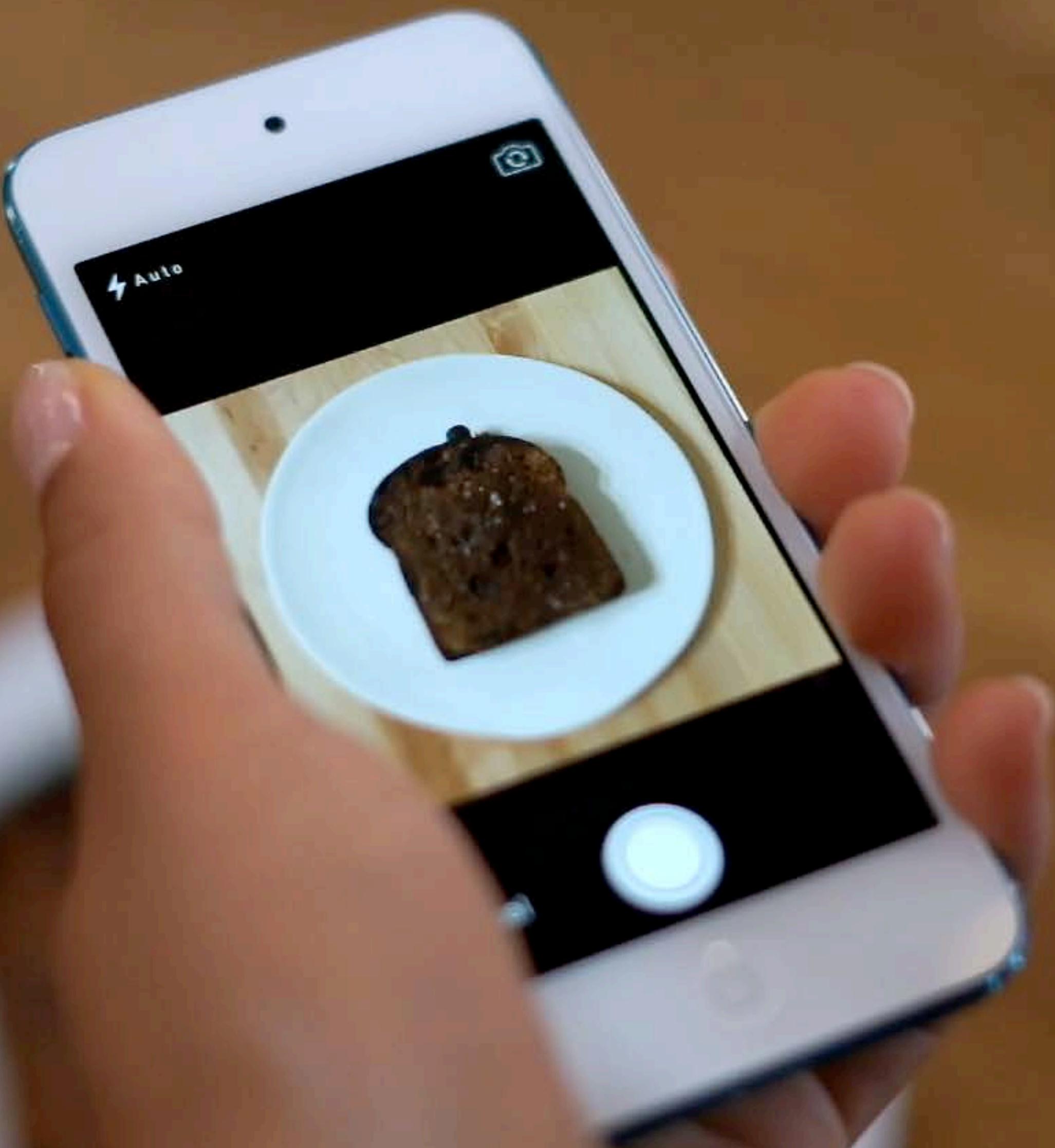
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Layer* camera = [Layer layerWithParent:screen];
[camera loadImage:@"camera.png"];

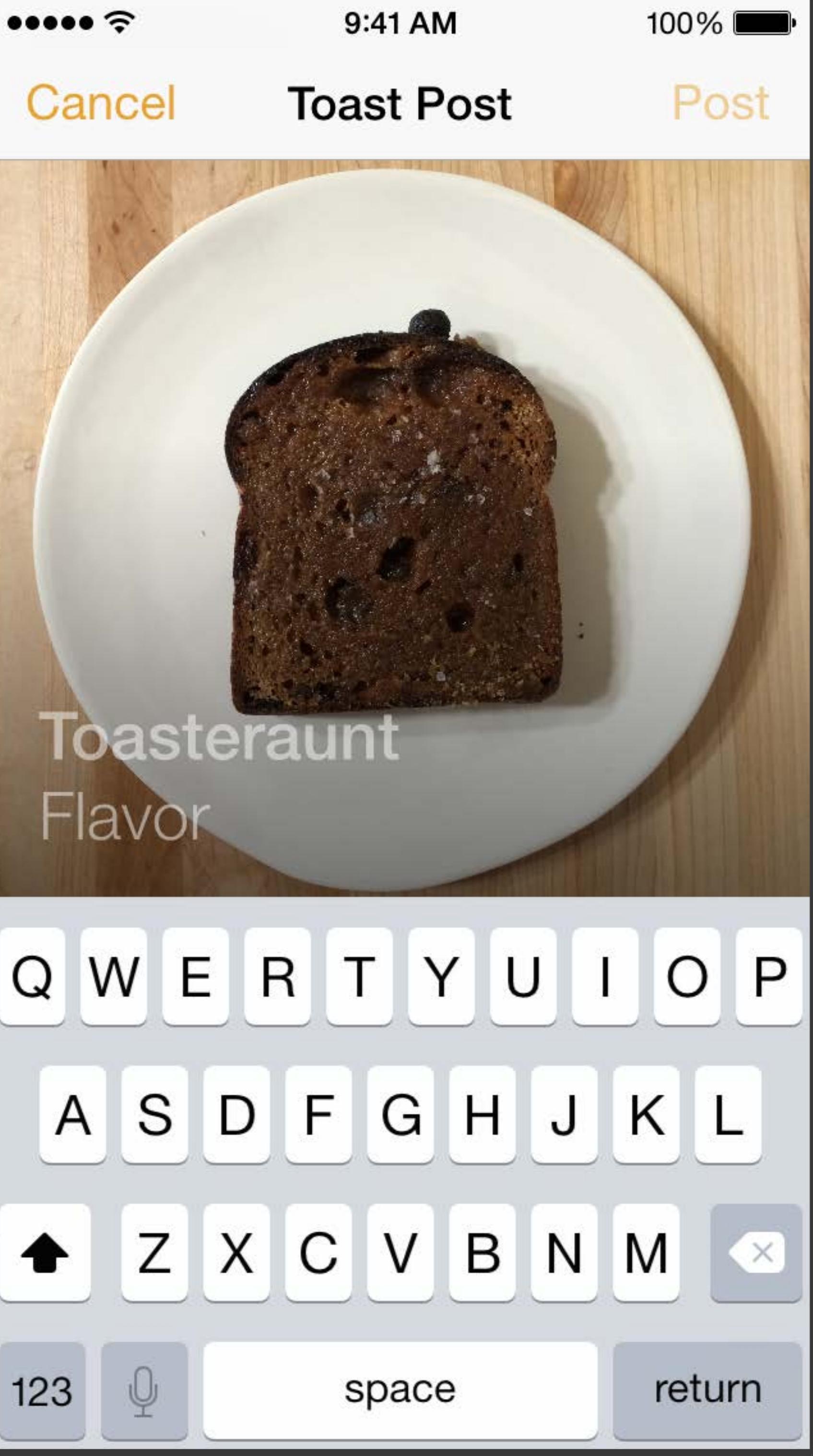
camera.y = screen.height;

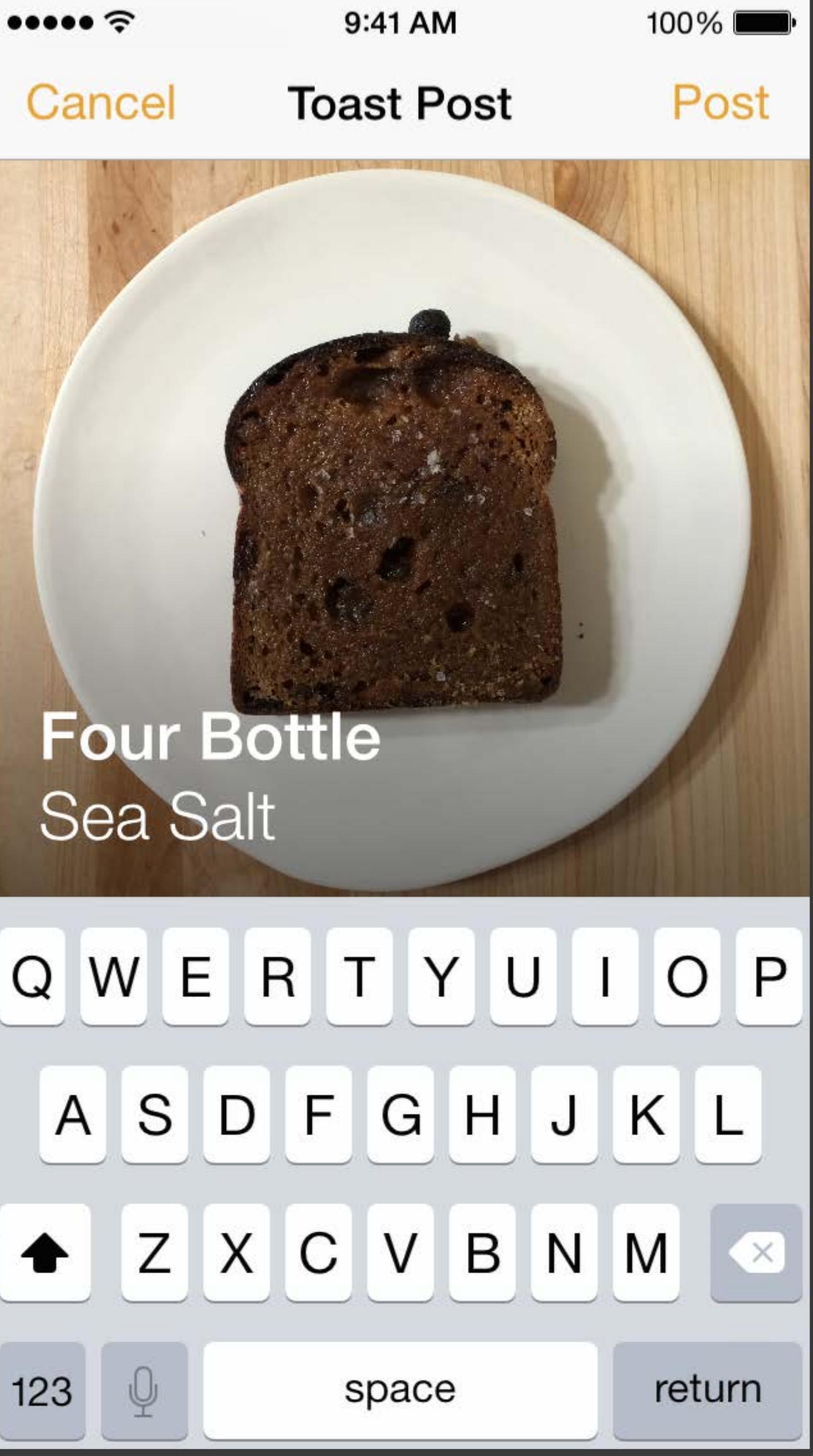
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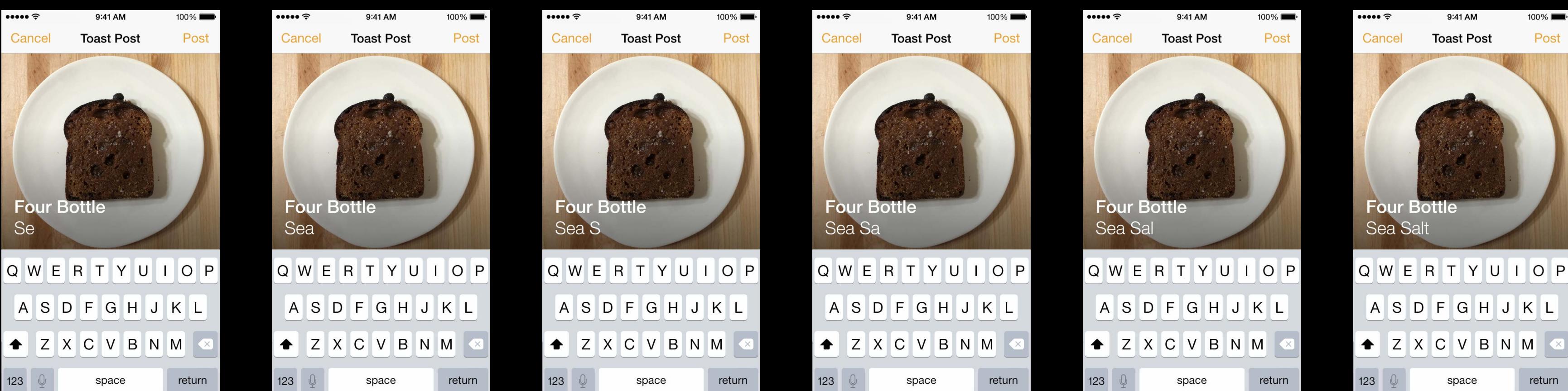
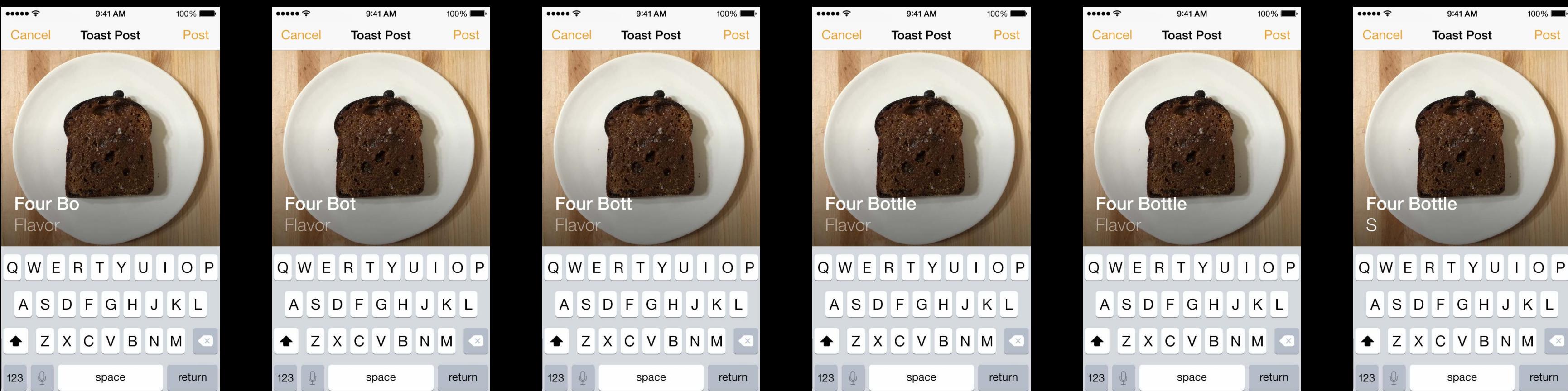
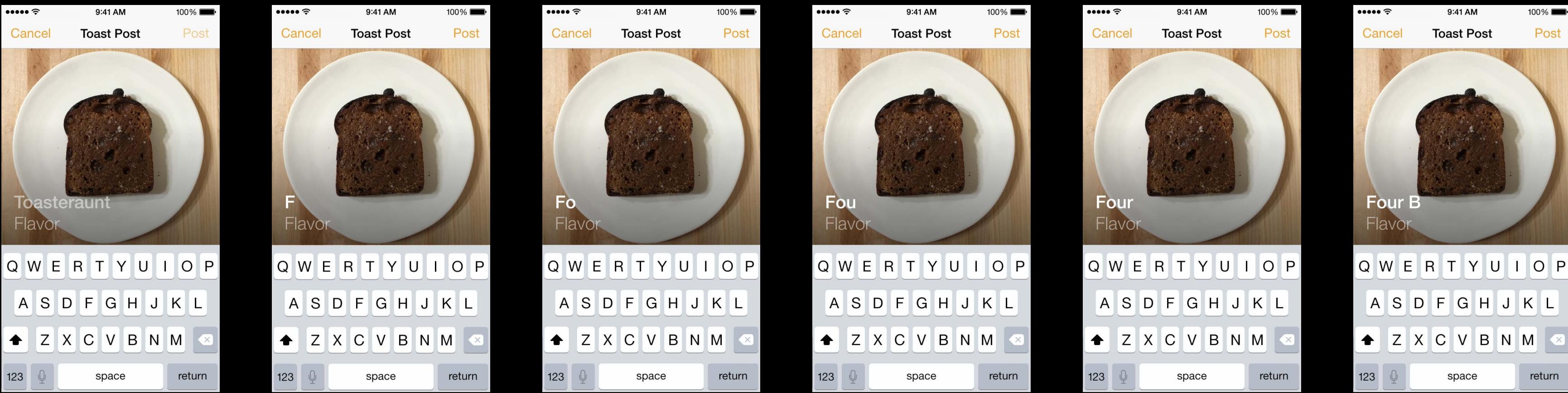












Show People

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Do you know how to find nearby toast / top toast?

"I can find toast in the list and I can pan the map too"

"Is the toast on the map and the list the same?"

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Is it easy to explore toasts?

"I just scroll until I see something I like in the list"

"It's easy to pan the map to find nearby toast but how do I zoom?"

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Is it easy to explore toasts?

"I just scroll until I see something I like in the list"

"It's easy to pan the map to find nearby toast but how do I zoom?"

How can we make this better?

"I wish I could sort the toast in a few more different ways"

Learn from Feedback

Learn from Feedback

What's working?

Learn from Feedback

What's working?

Finding the best toast and nearby toast is pretty quick

Learn from Feedback

What's working?

Finding the best toast and nearby toast is pretty quick

What's not working?

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Filter the list using the map

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What other ideas does this give us?

Filter the list using the map

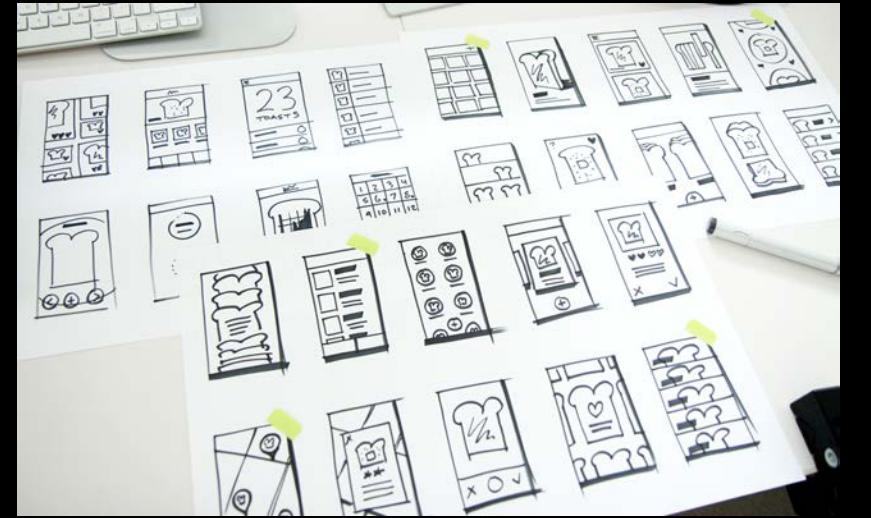
Add a way to sort the list by rating or cost

Recap

Recap

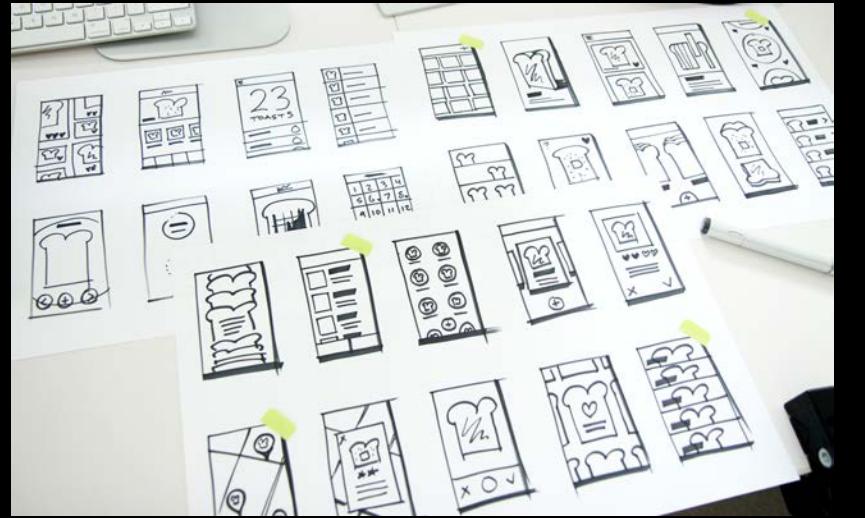
Pictures

Recap



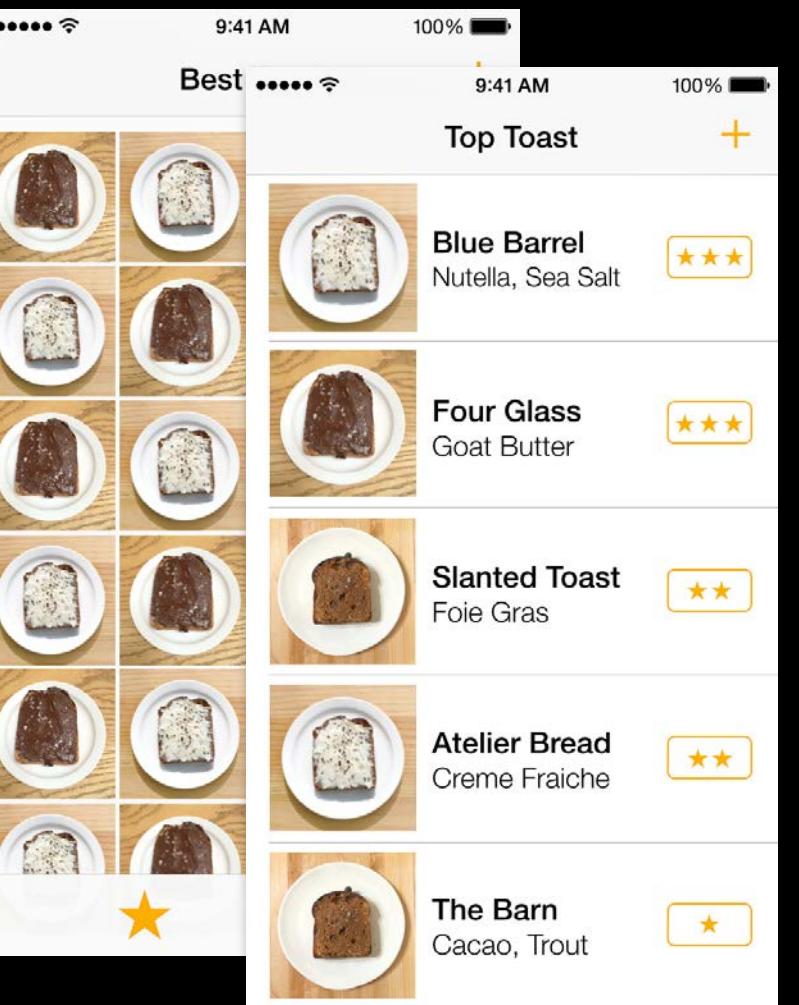
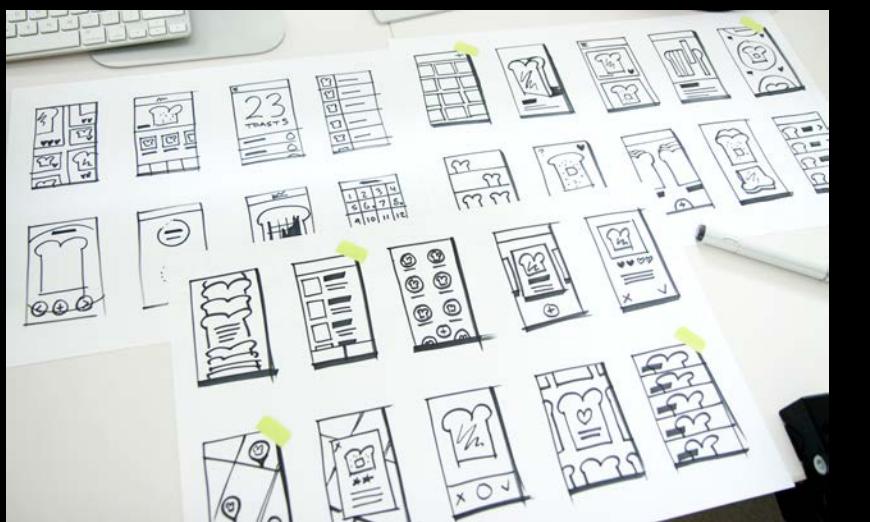
Pictures

Recap



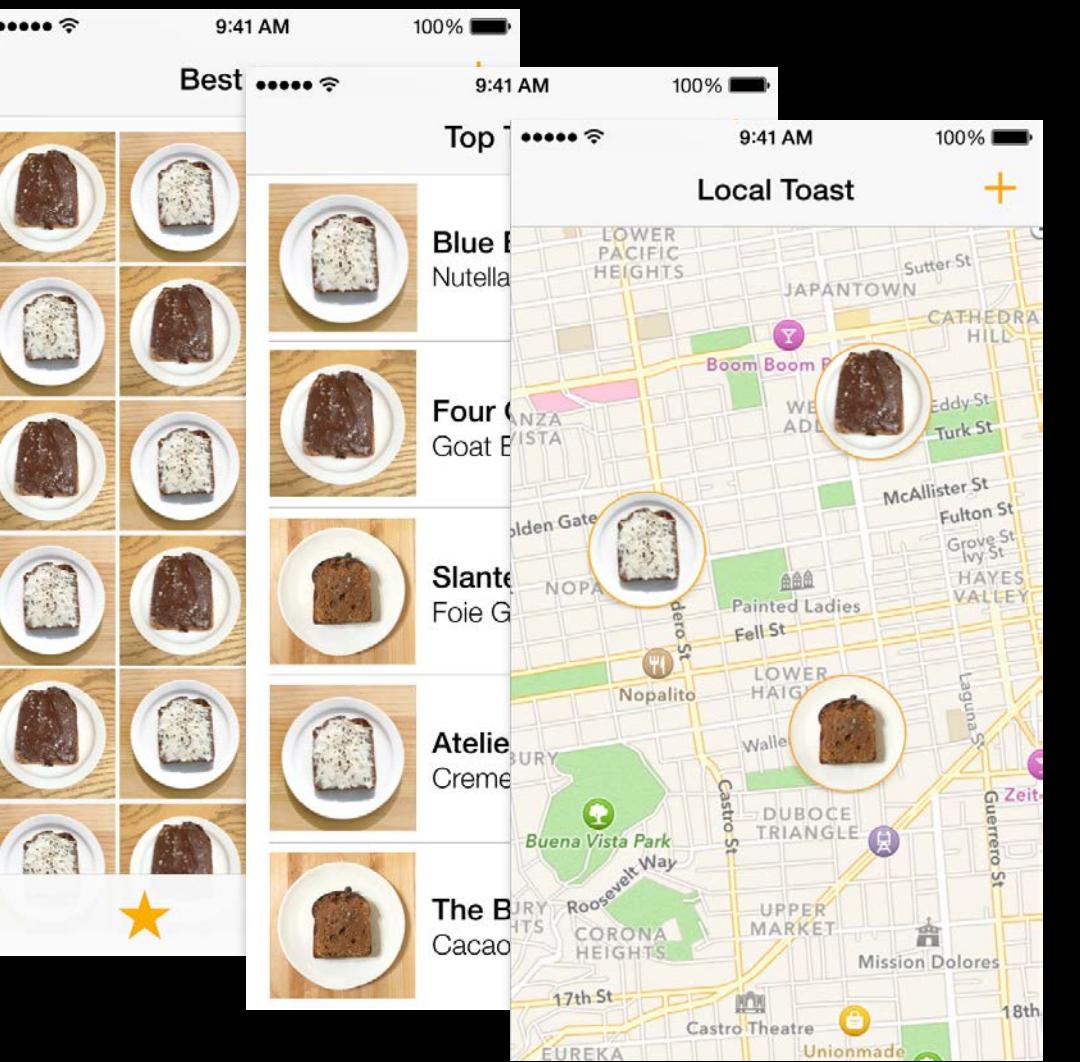
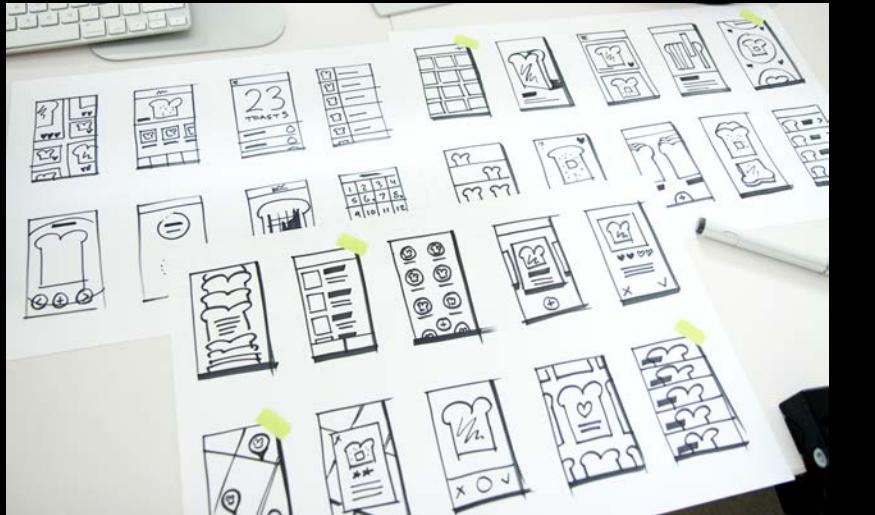
Pictures

Recap



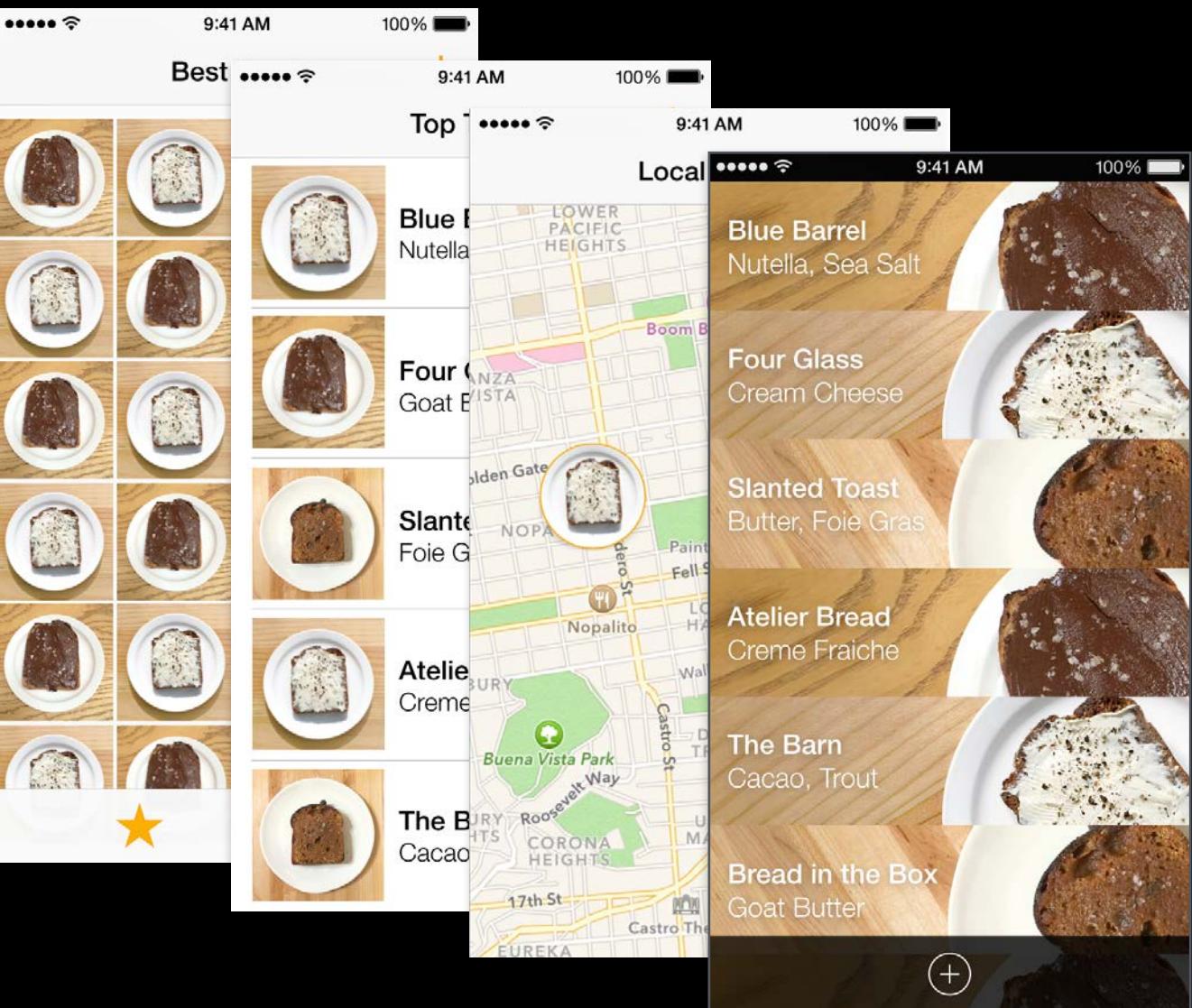
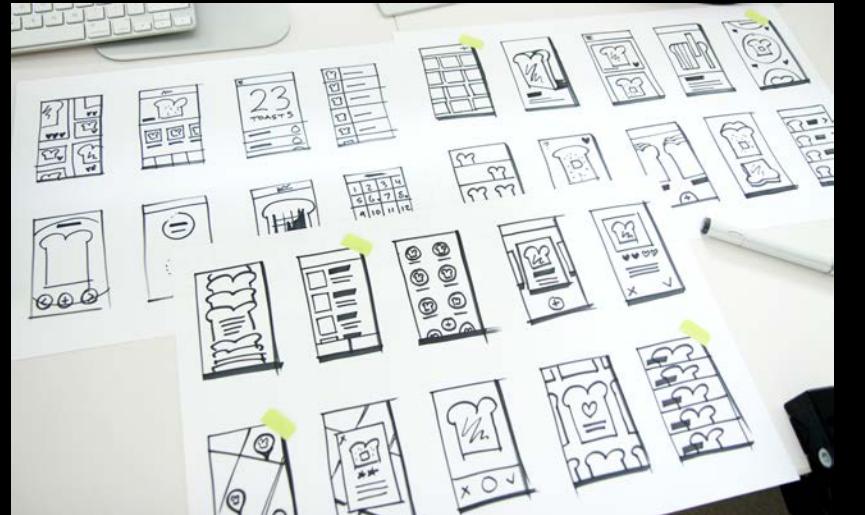
Pictures

Recap



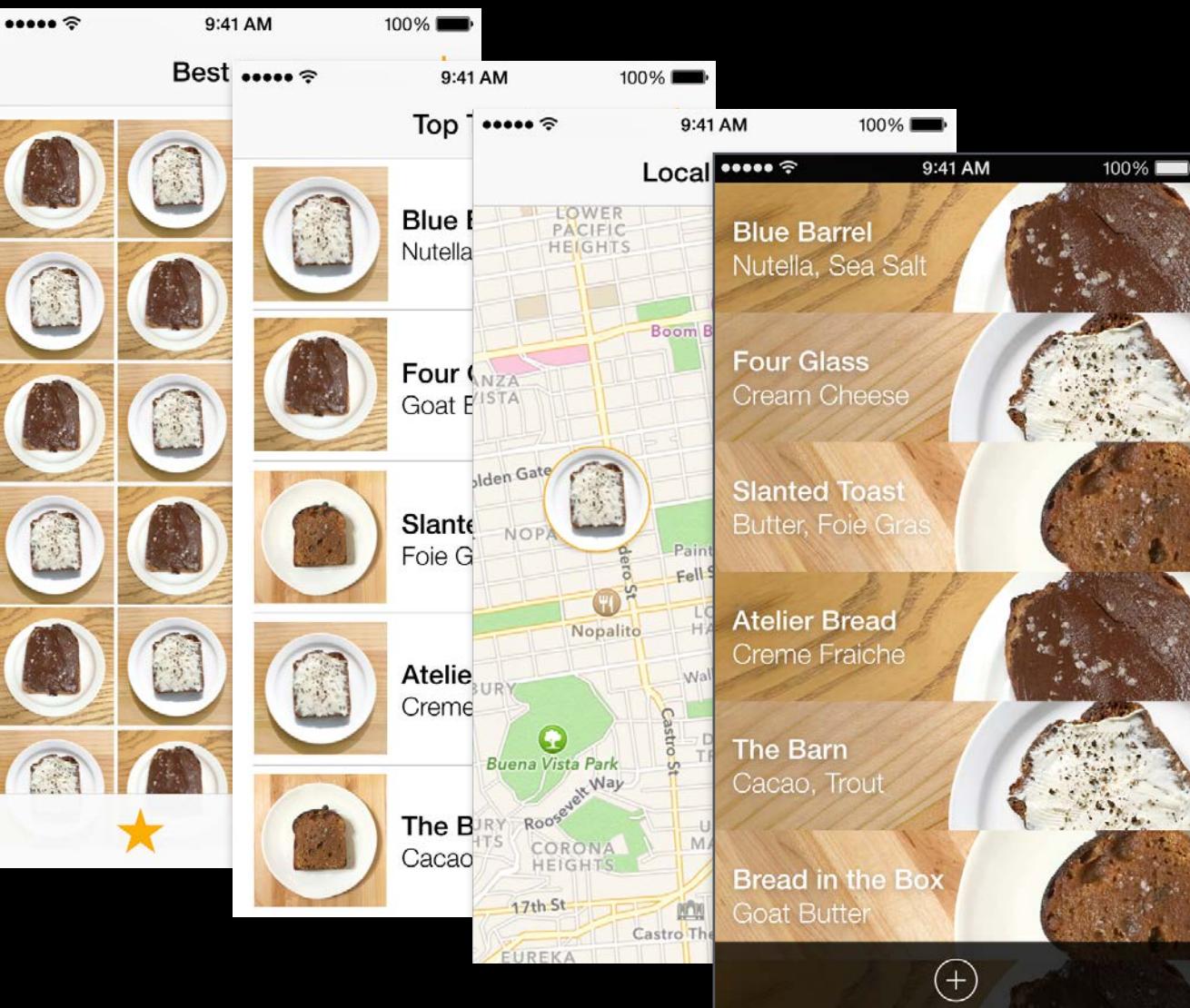
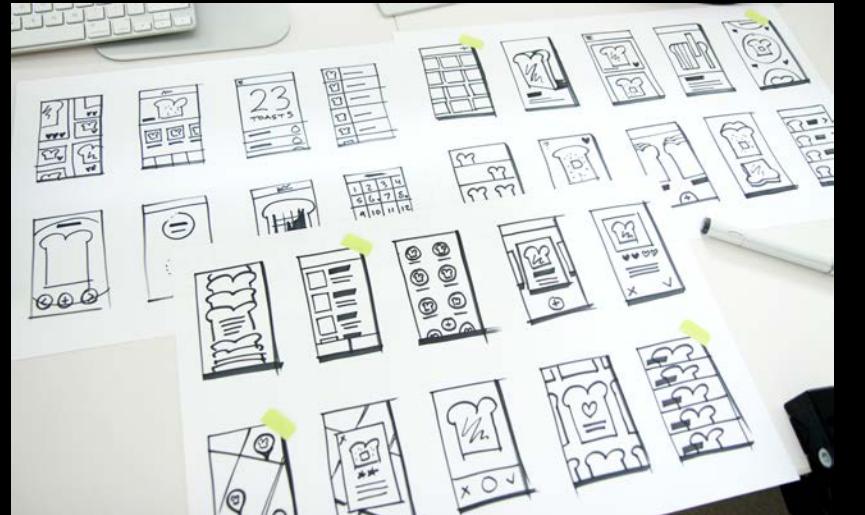
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Recap



Pictures

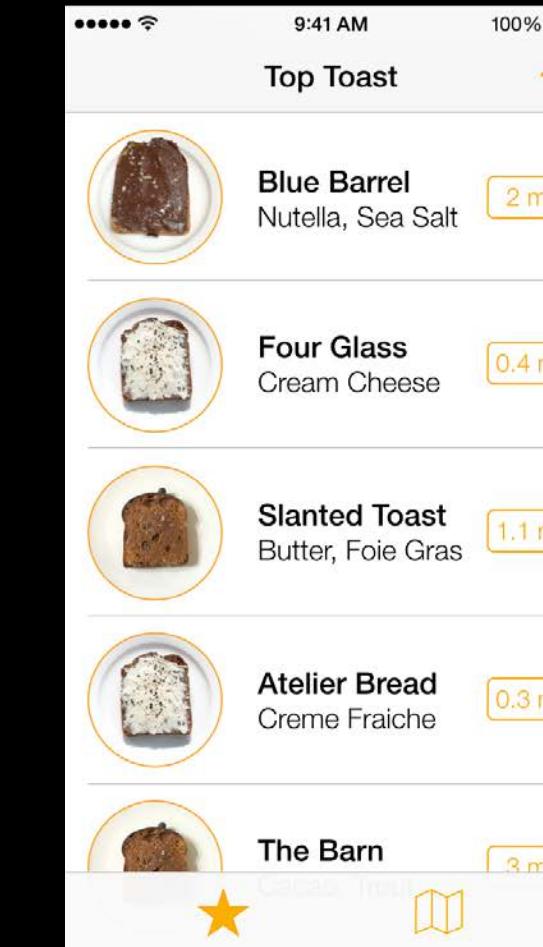
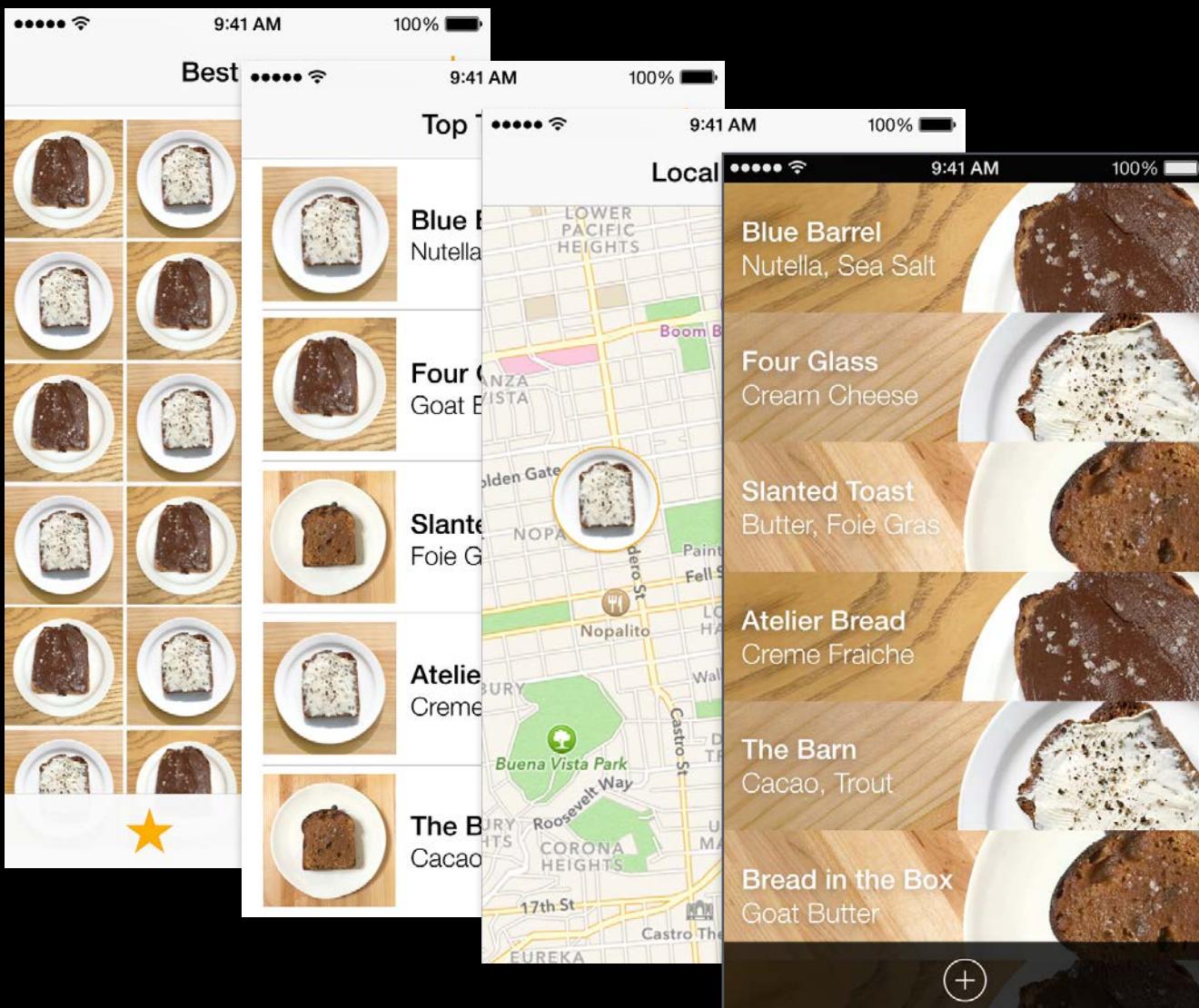
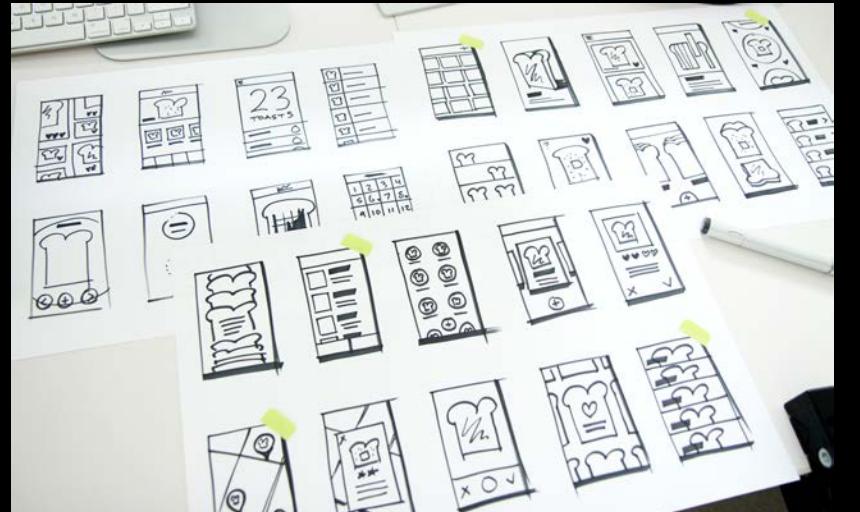
Recap



Pictures

Animation

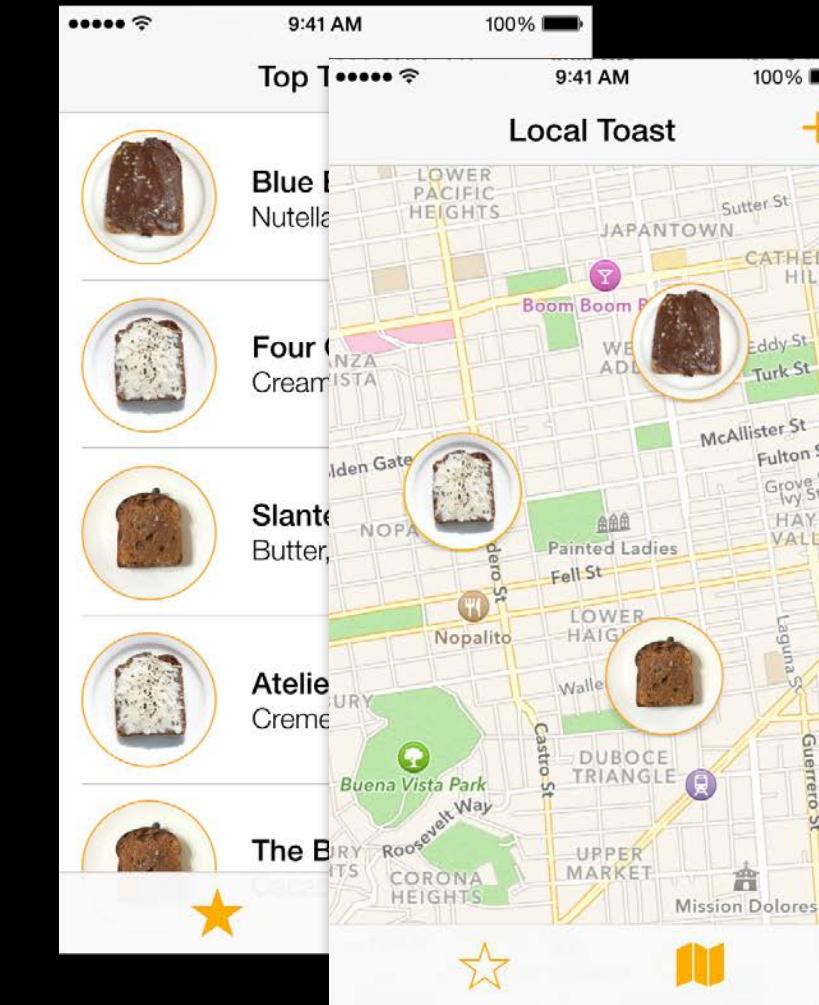
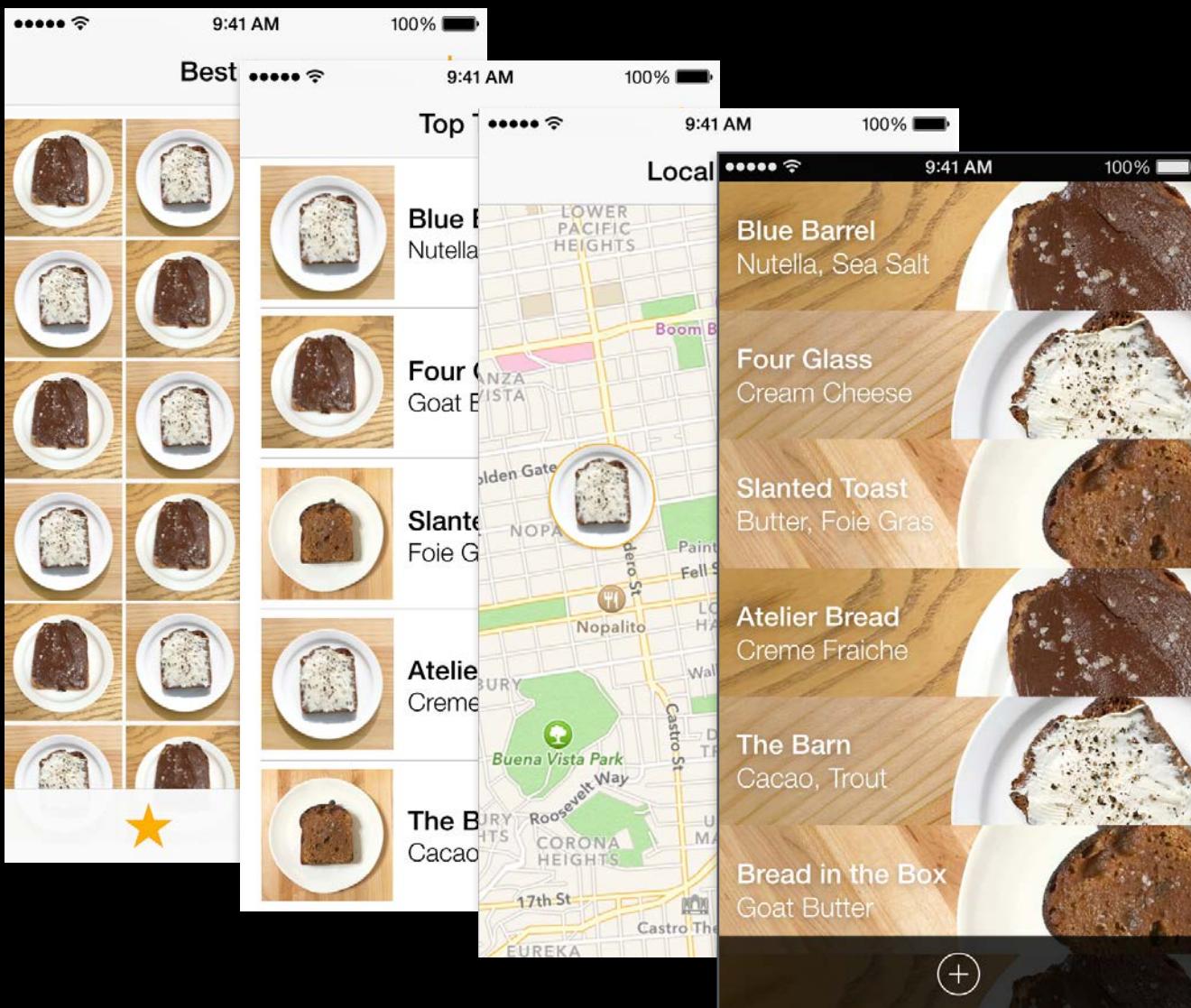
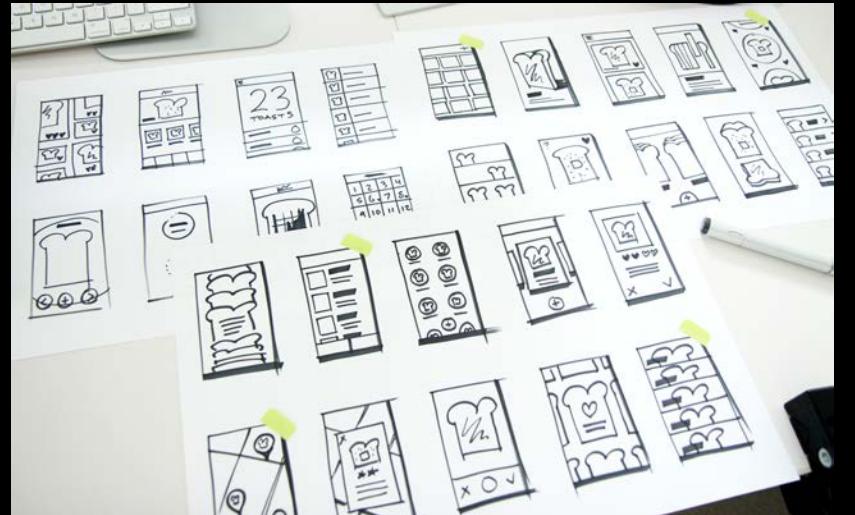
Recap



Pictures

Animation

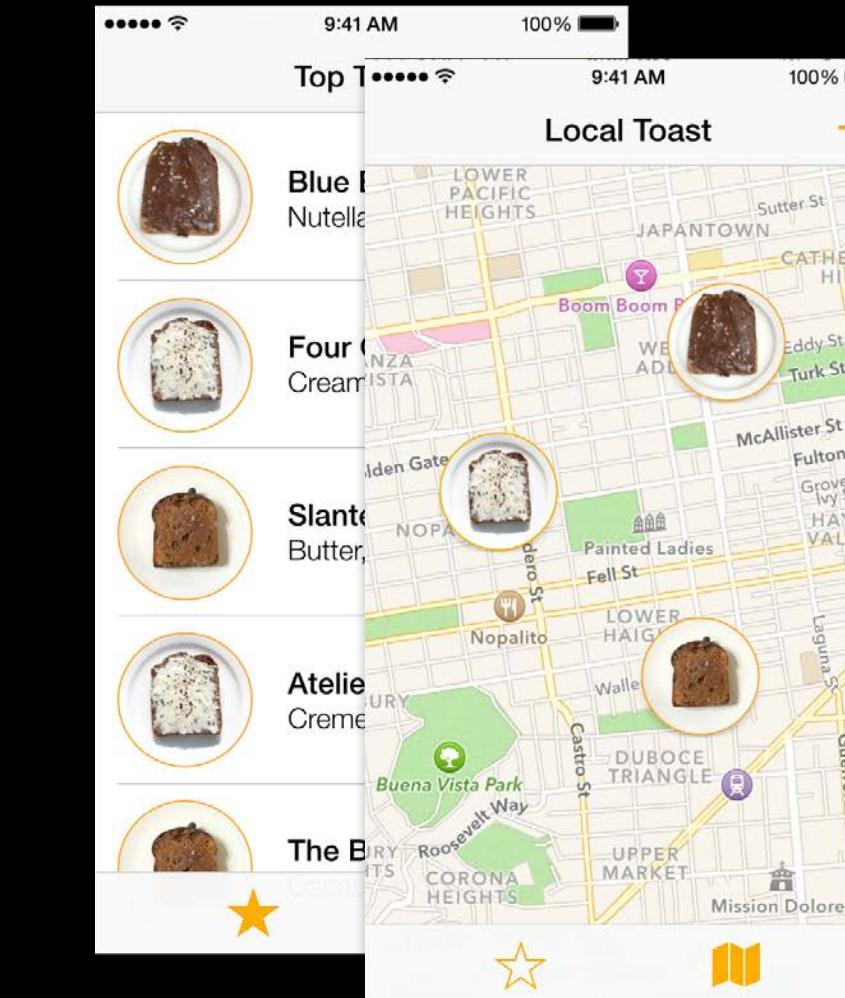
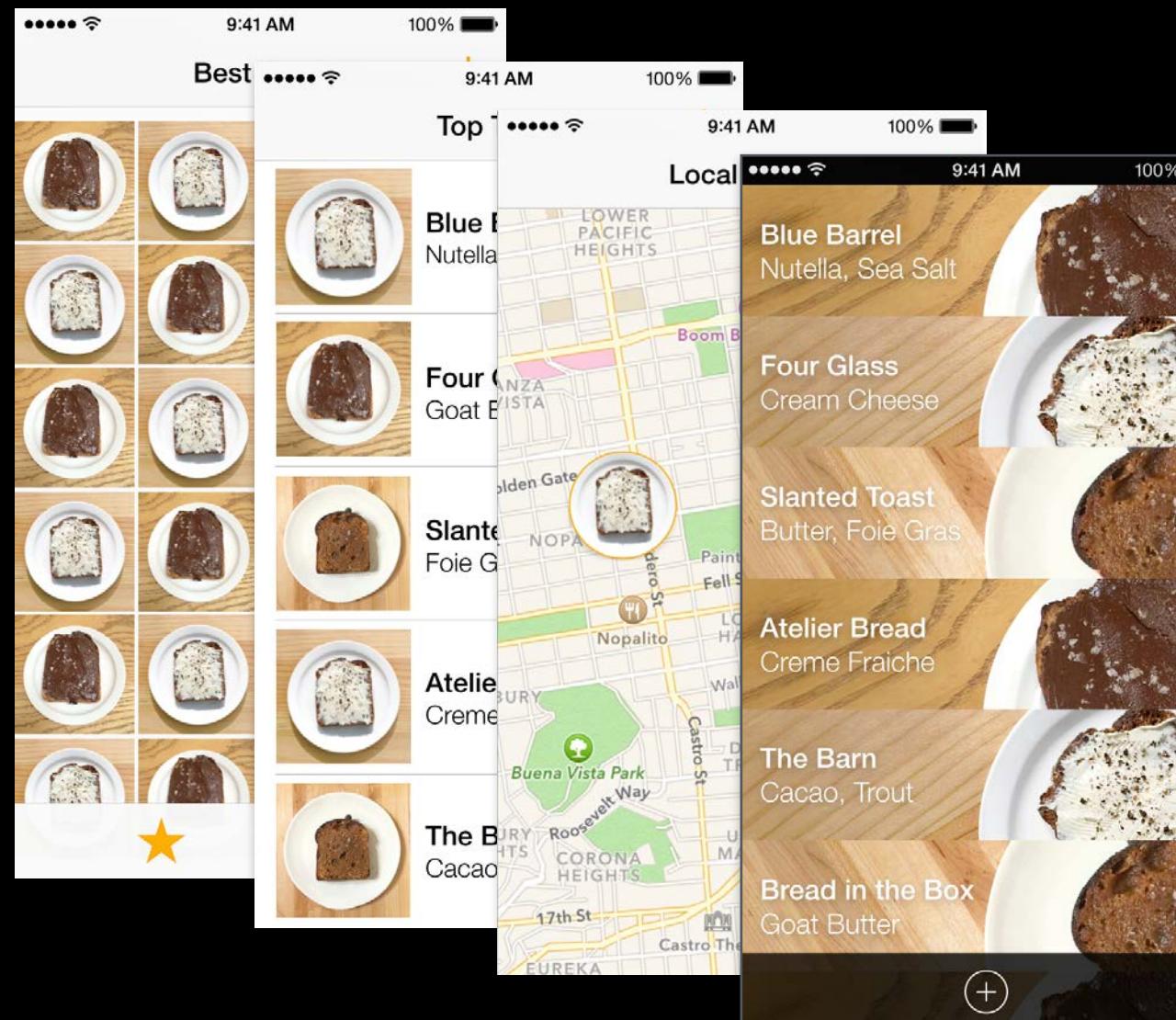
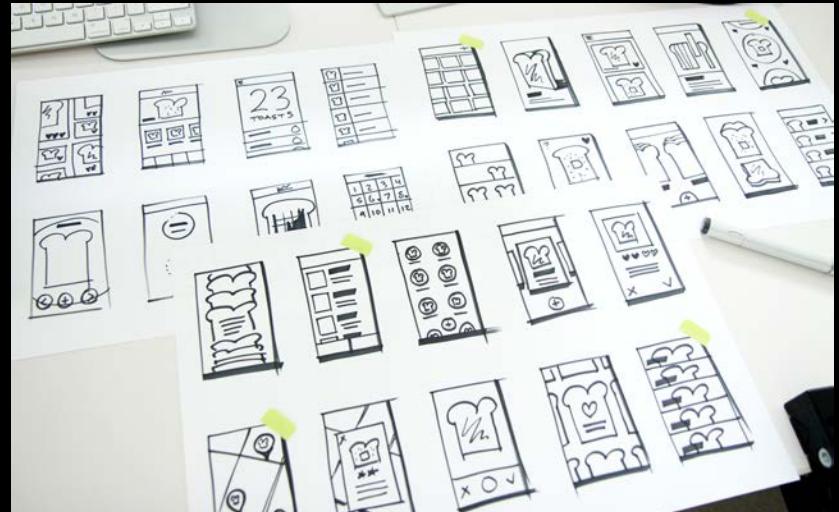
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Animation

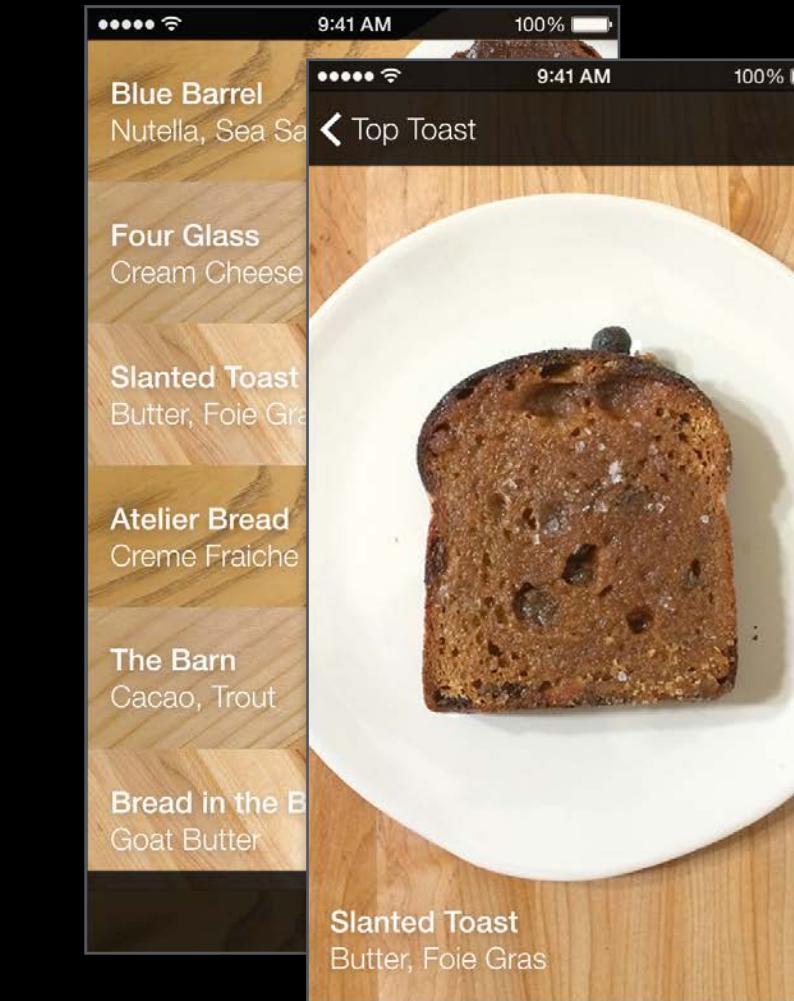
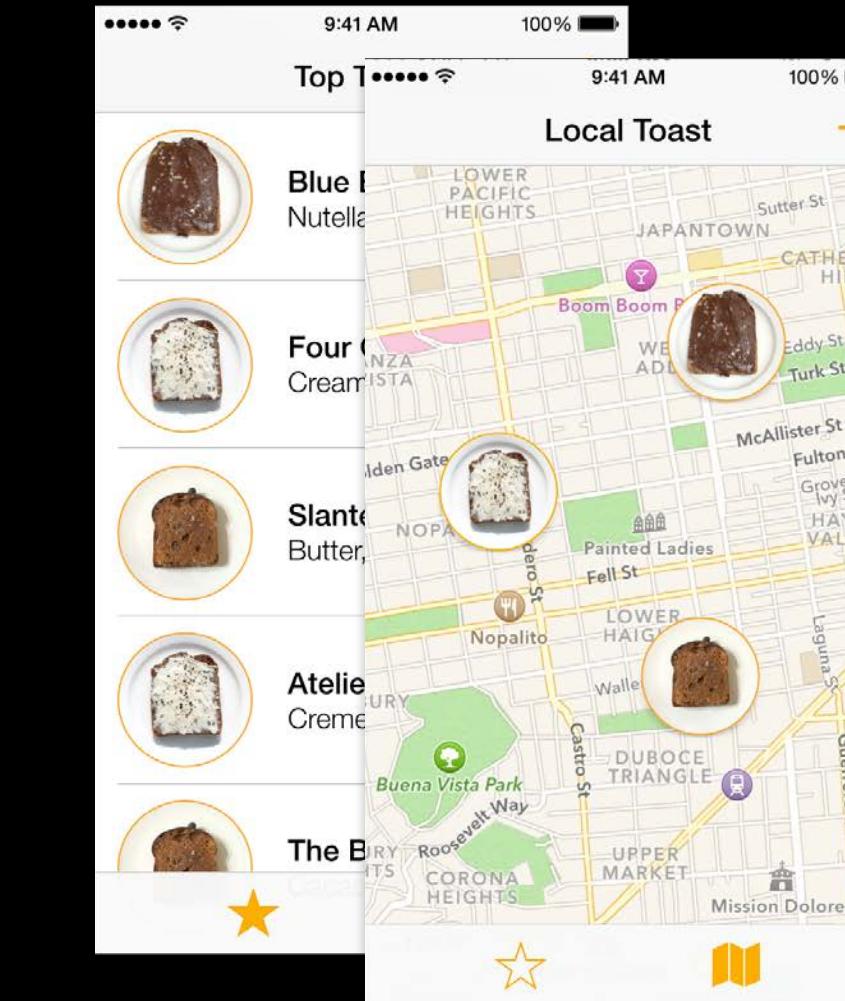
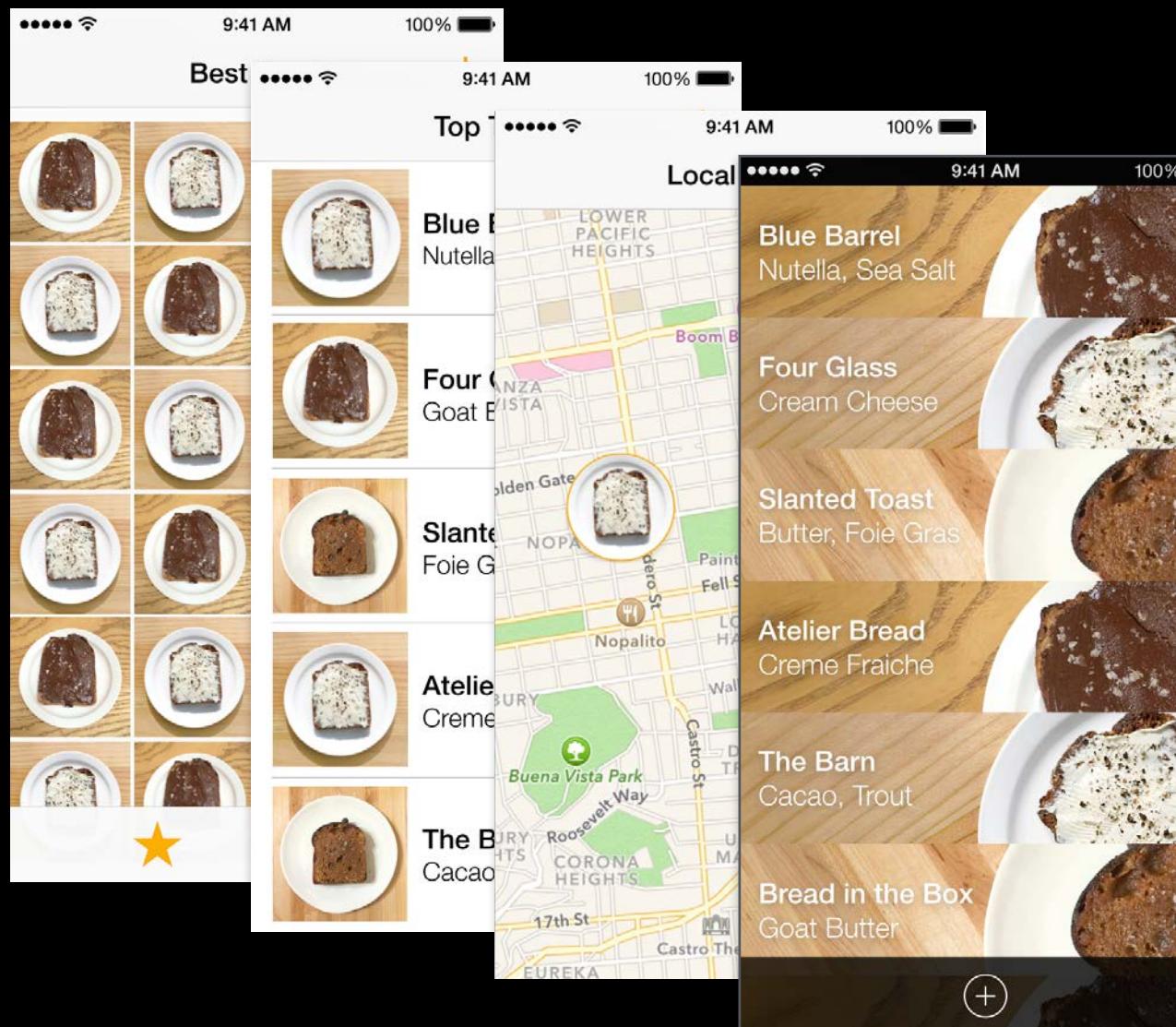
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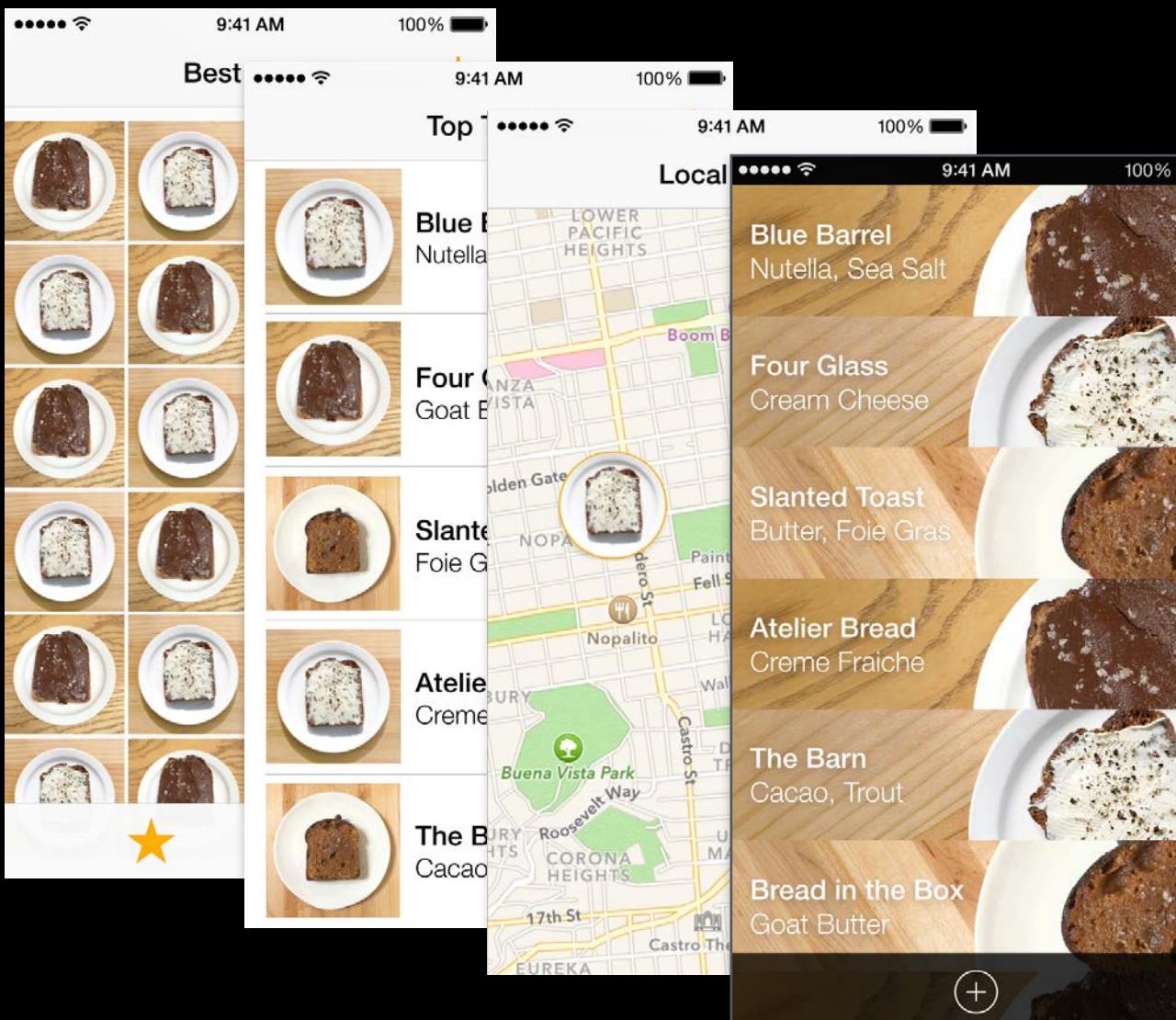
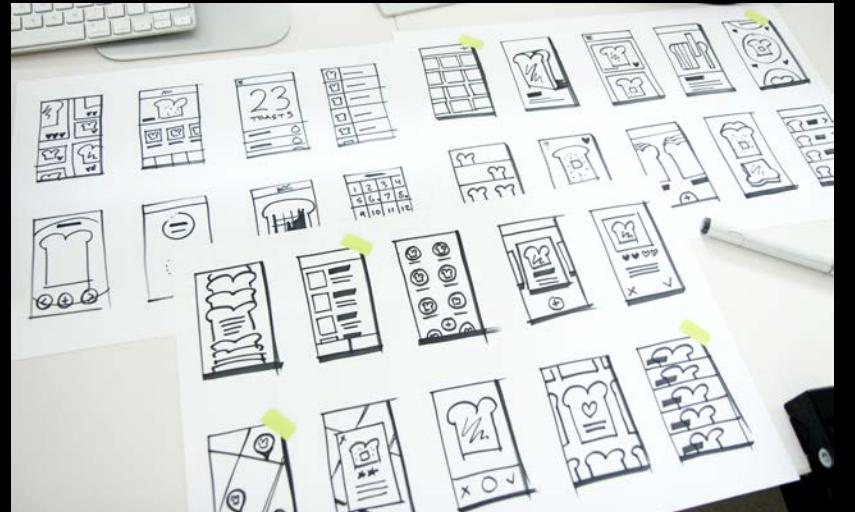
Recap



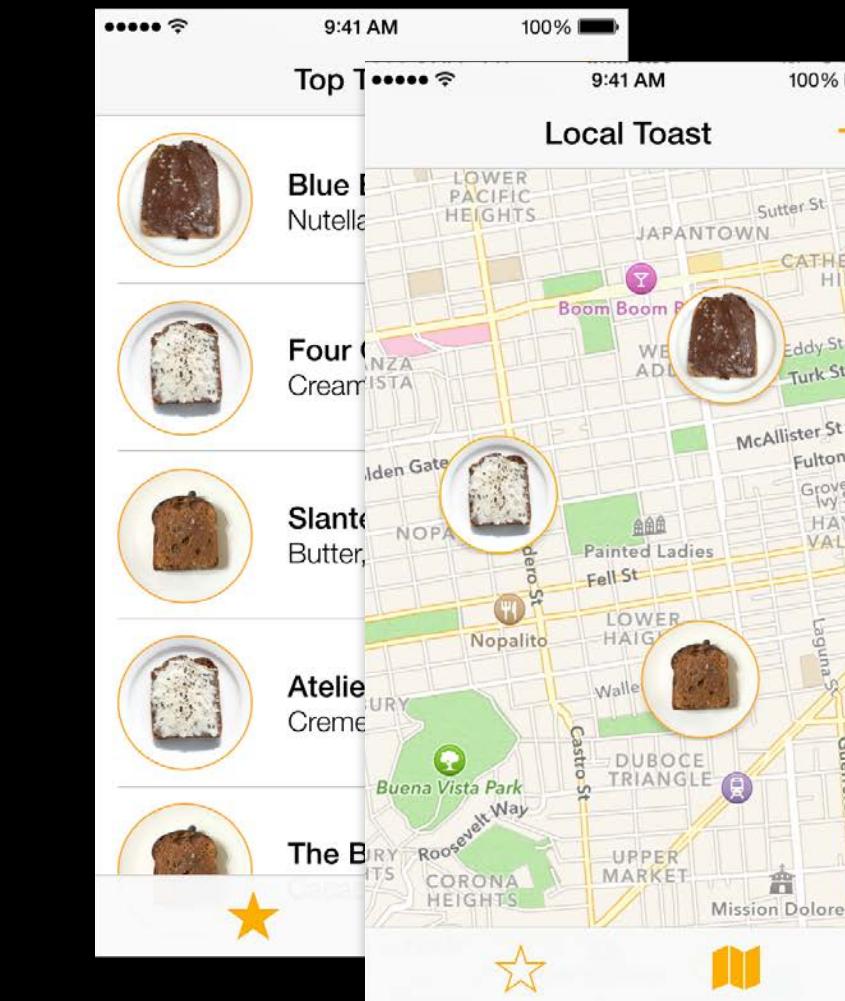
Pictures

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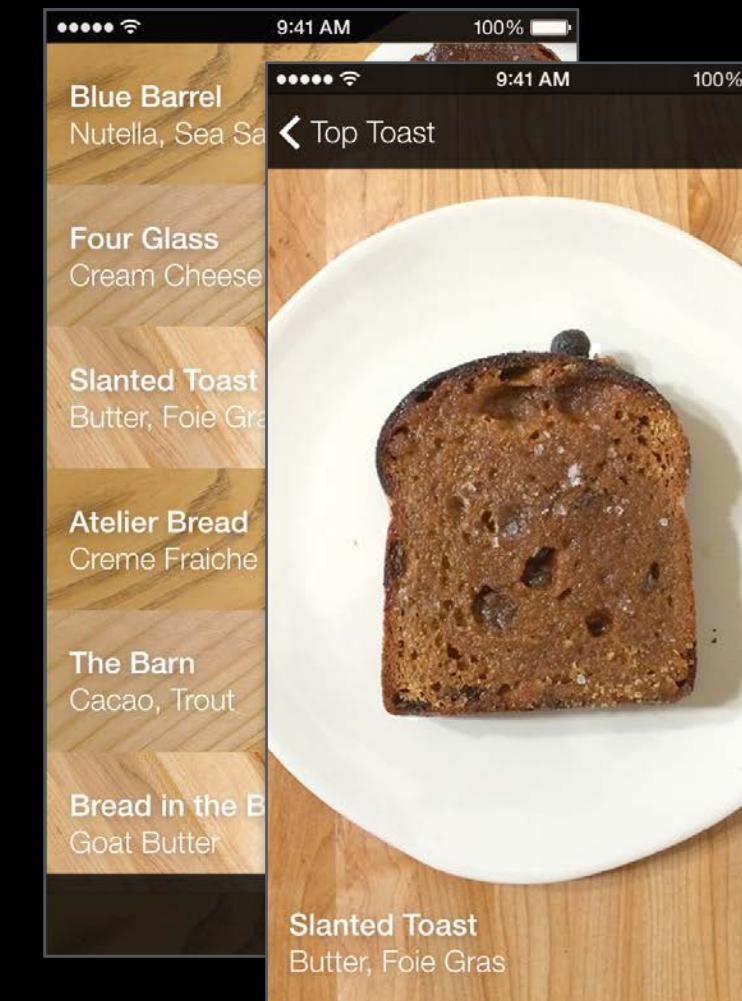
Recap



Pictures

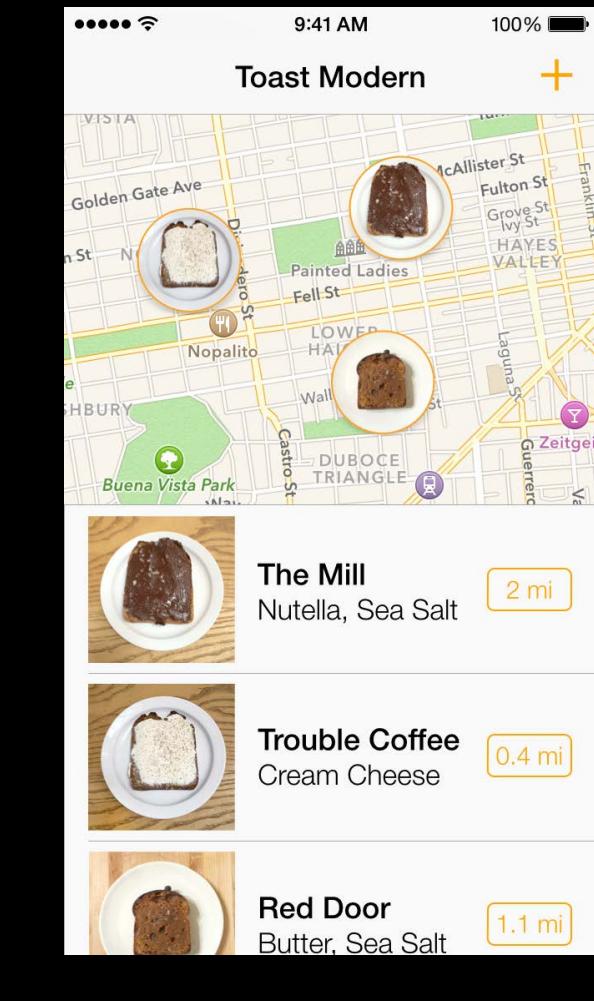
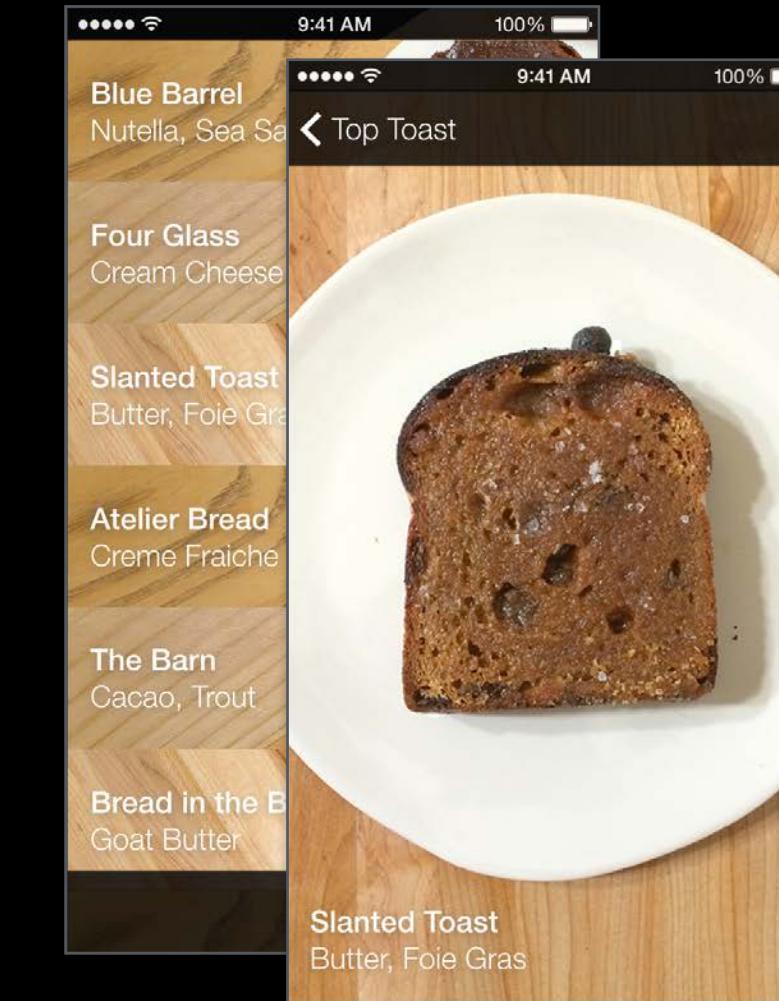
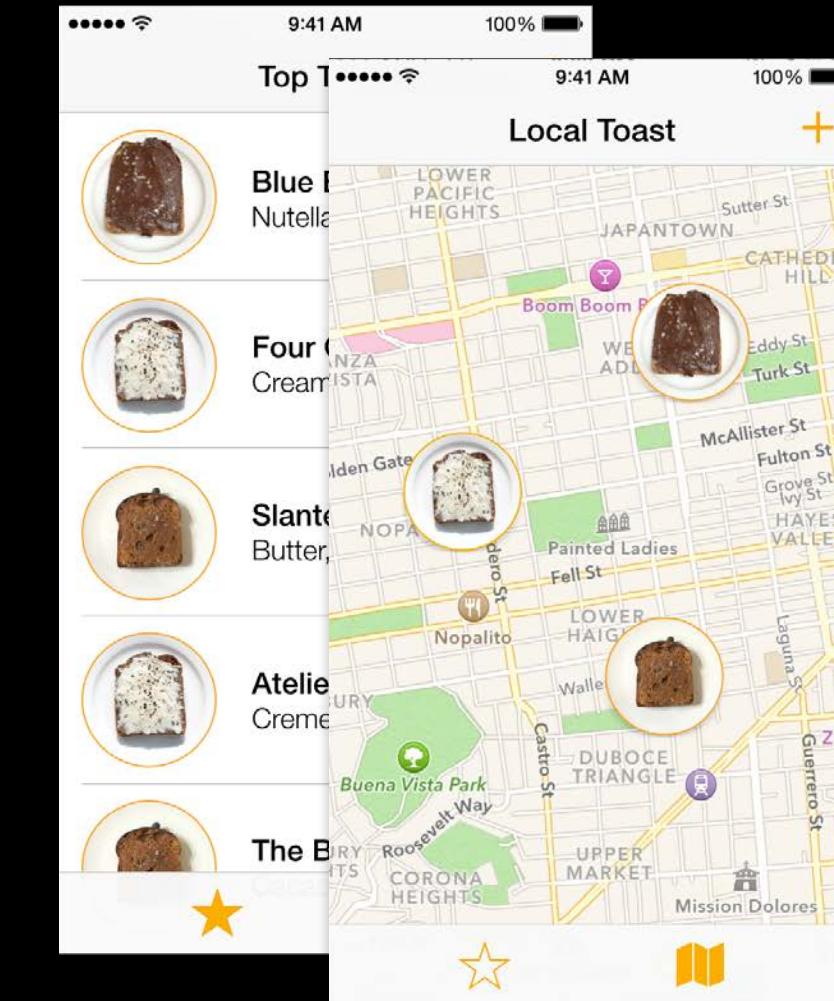
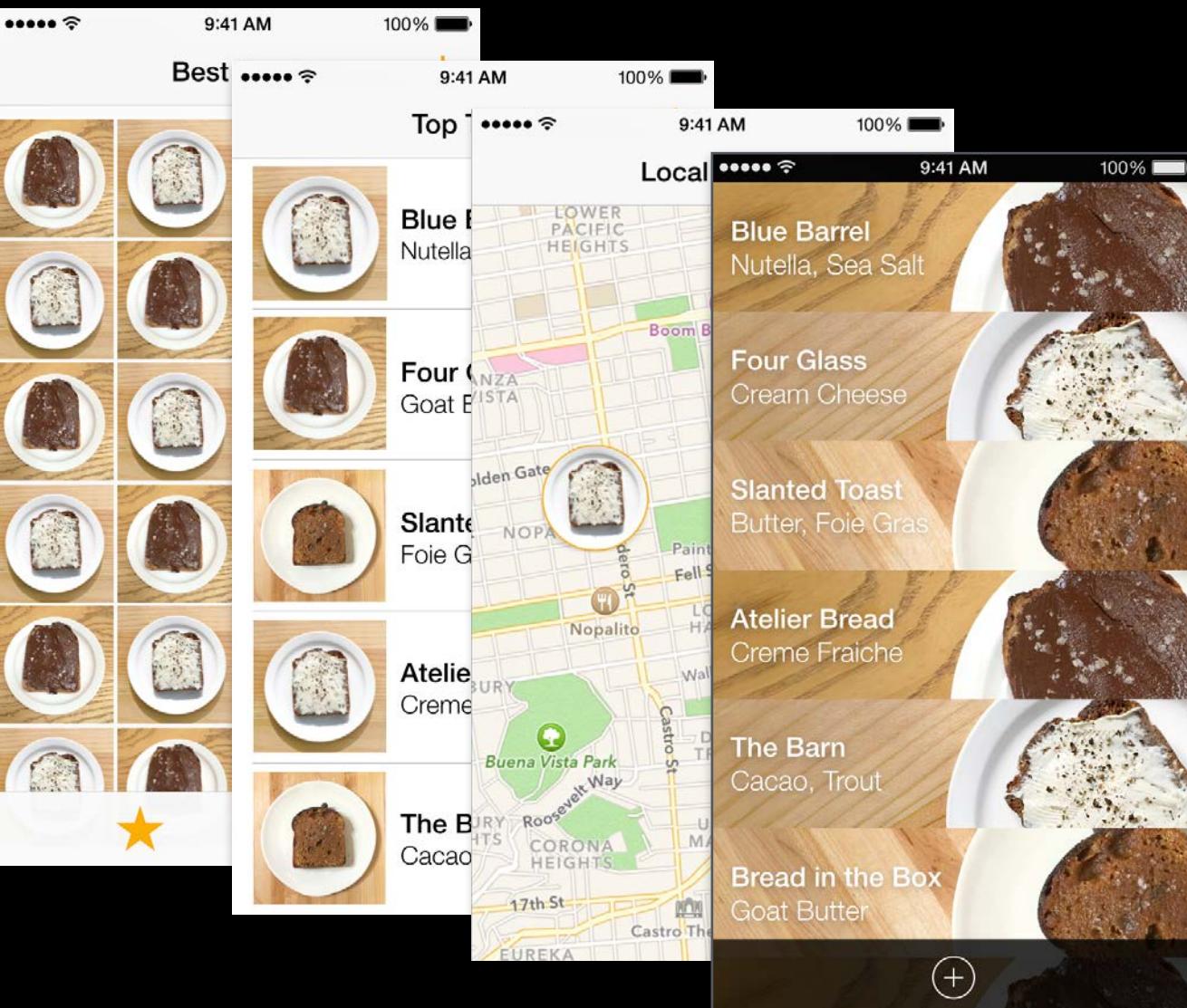
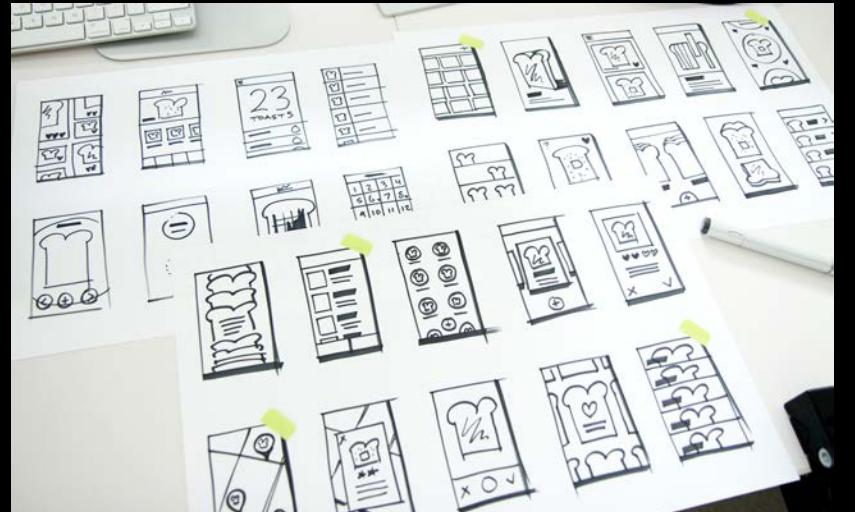


Animation



Interaction

Recap

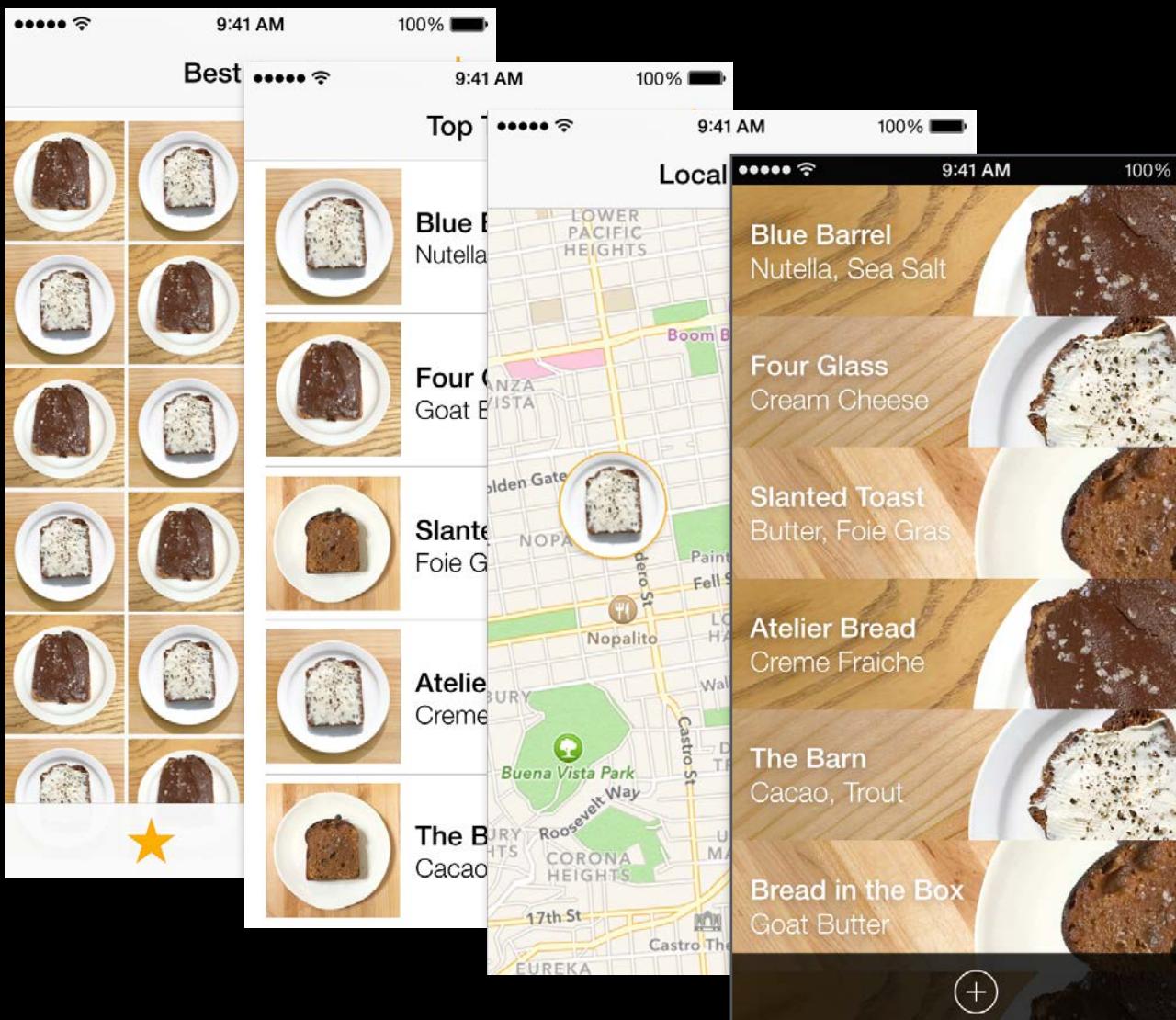
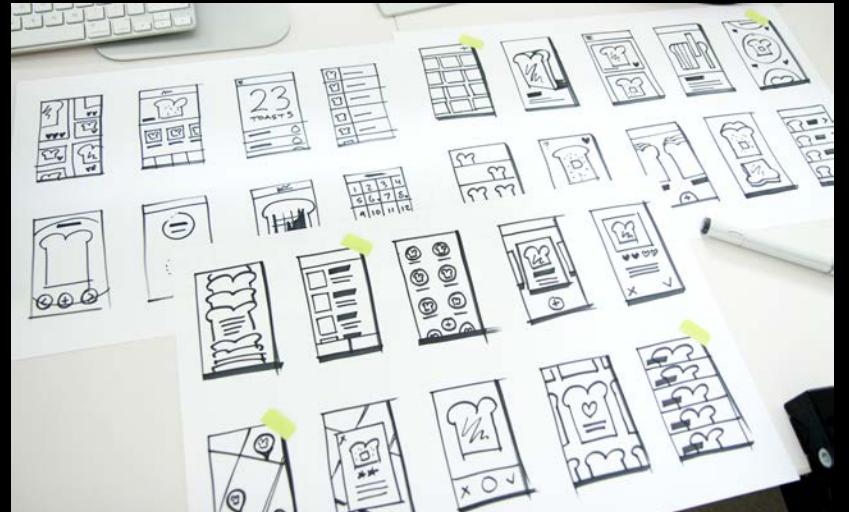


Pictures

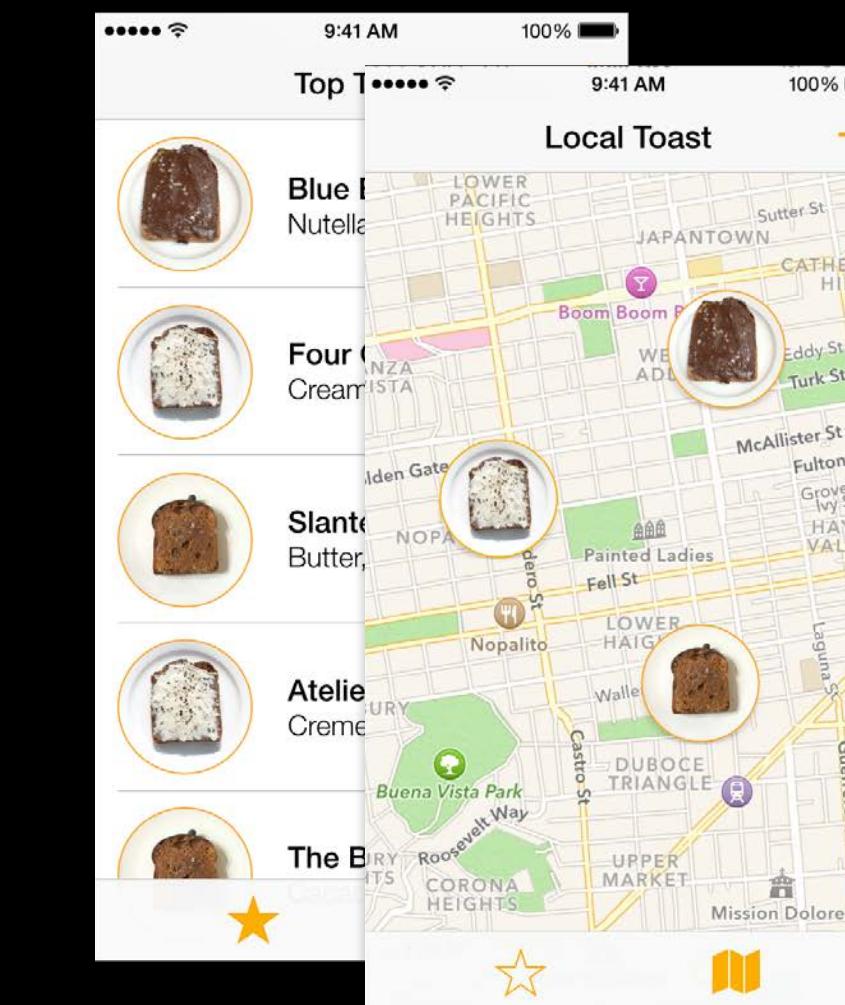
Animation

Interaction

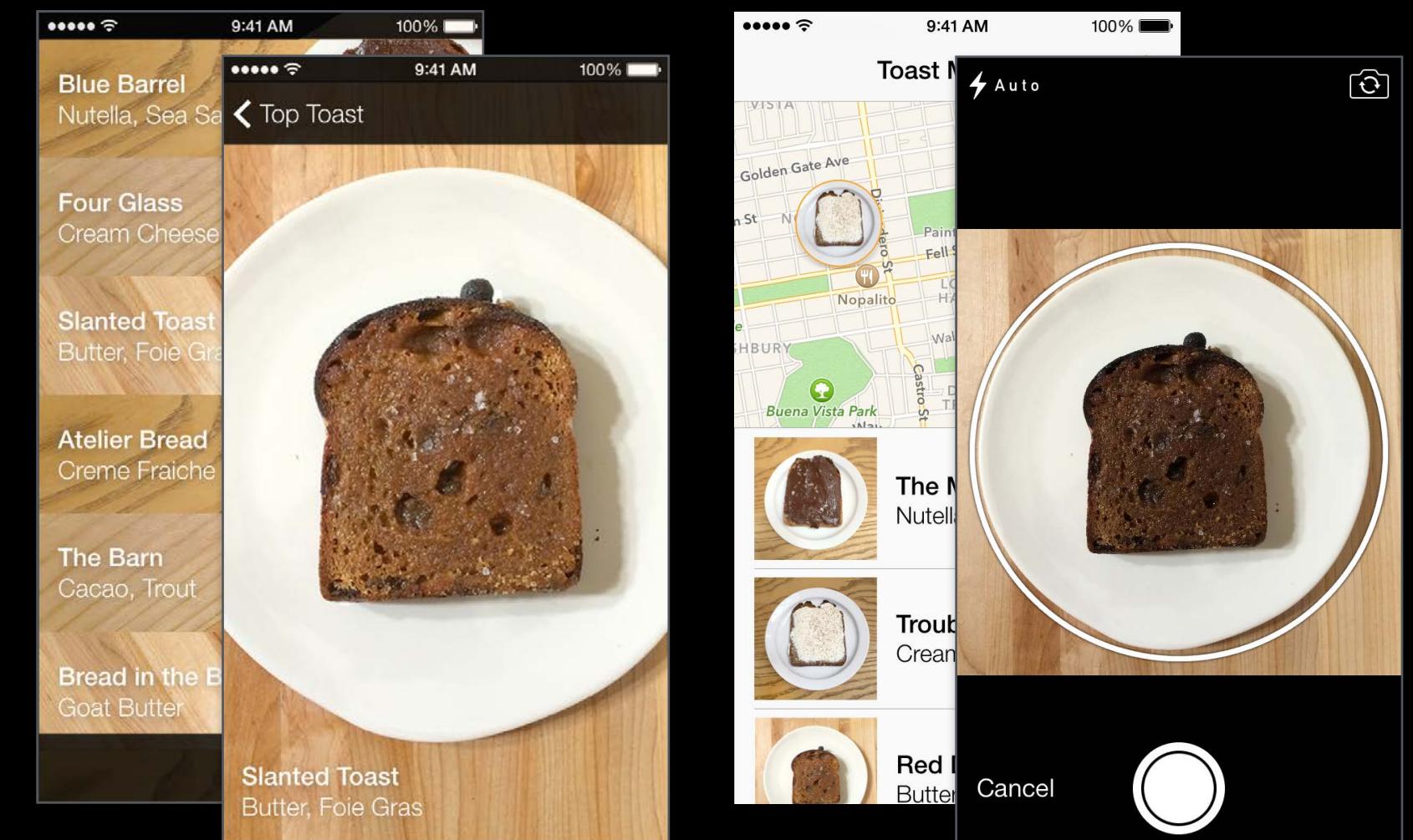
Recap



Pictures



Animation

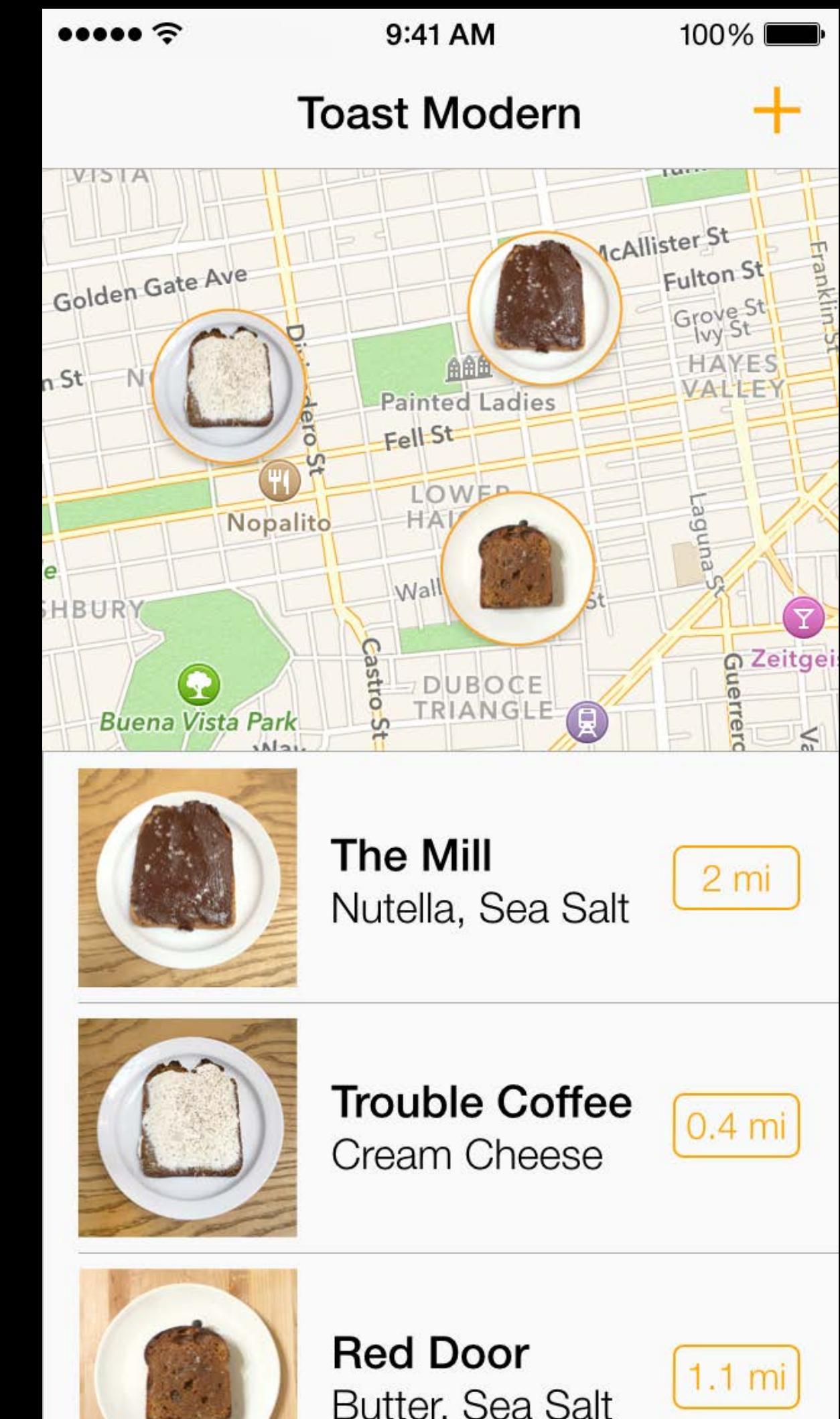


Interaction

Comparison

Real Code

Prototype



Comparison

Real Code

MapKit, set type, zoom

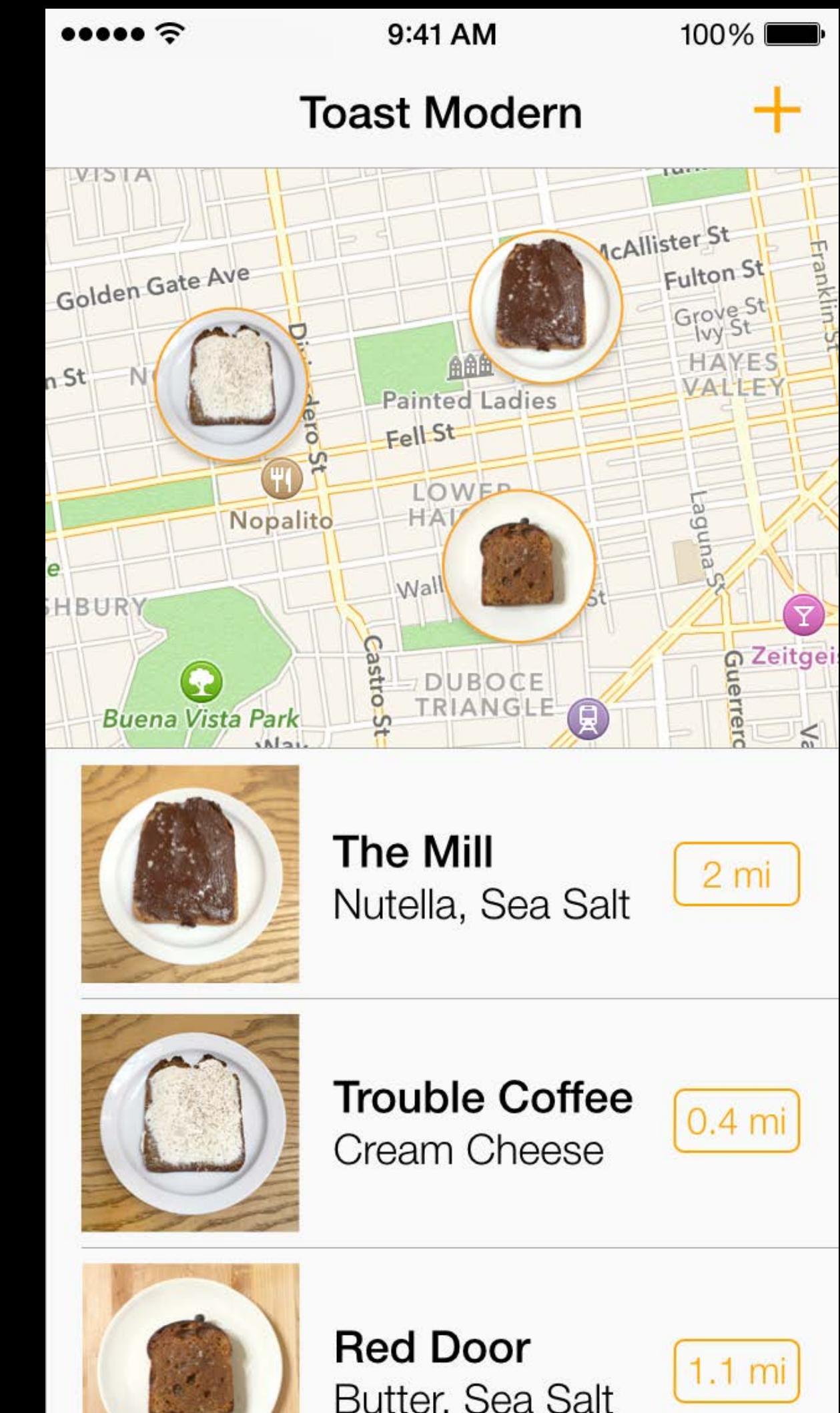
Place toasts at specific lat/longs

UITableView

Create cell class with spot for image, name, and description

Populate list with database of toast restaurant information

Prototype



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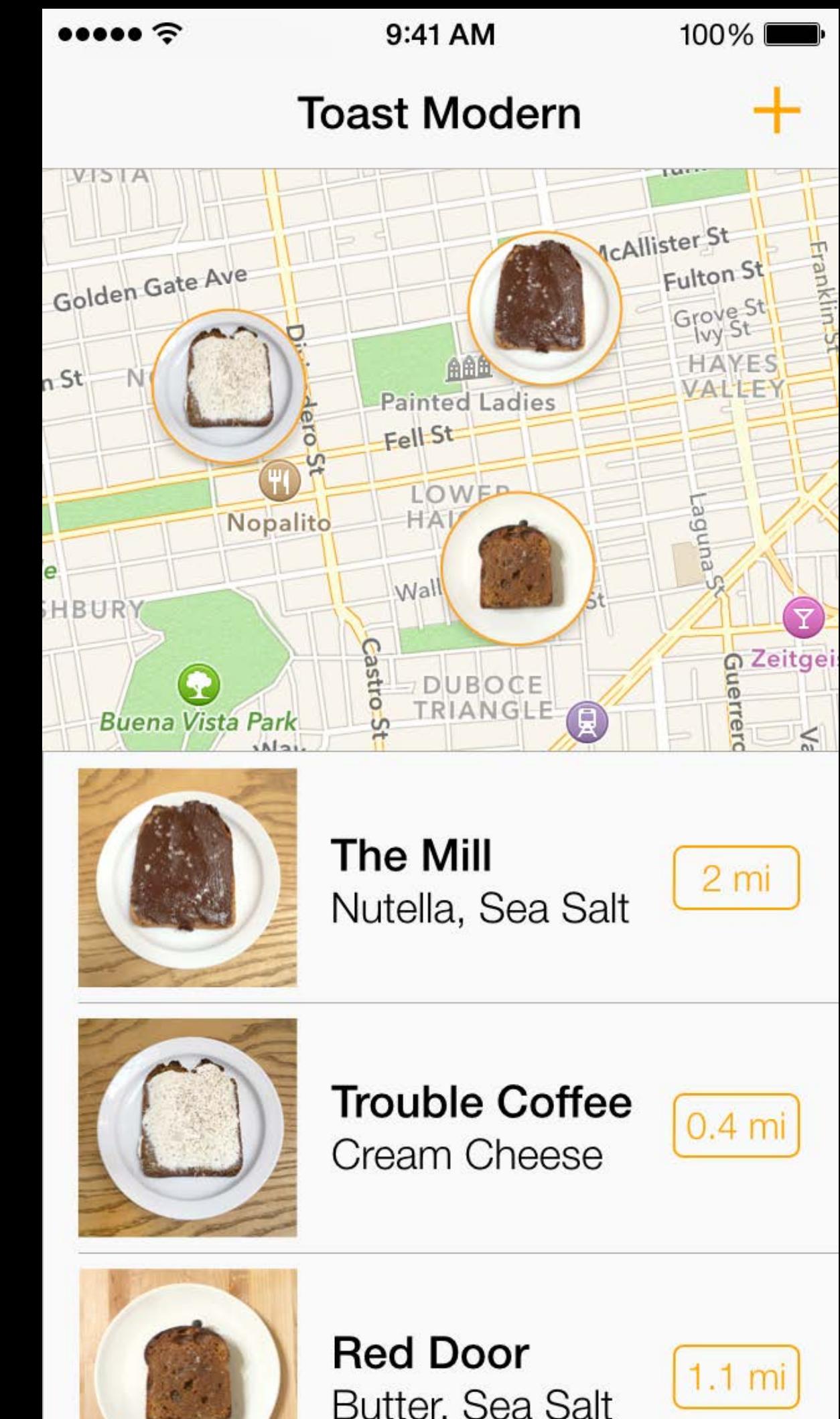
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Prototype

Move a picture in 2D

Move a picture up + down



Comparison Two

Real Code

Prototype



Comparison Two

Real Code

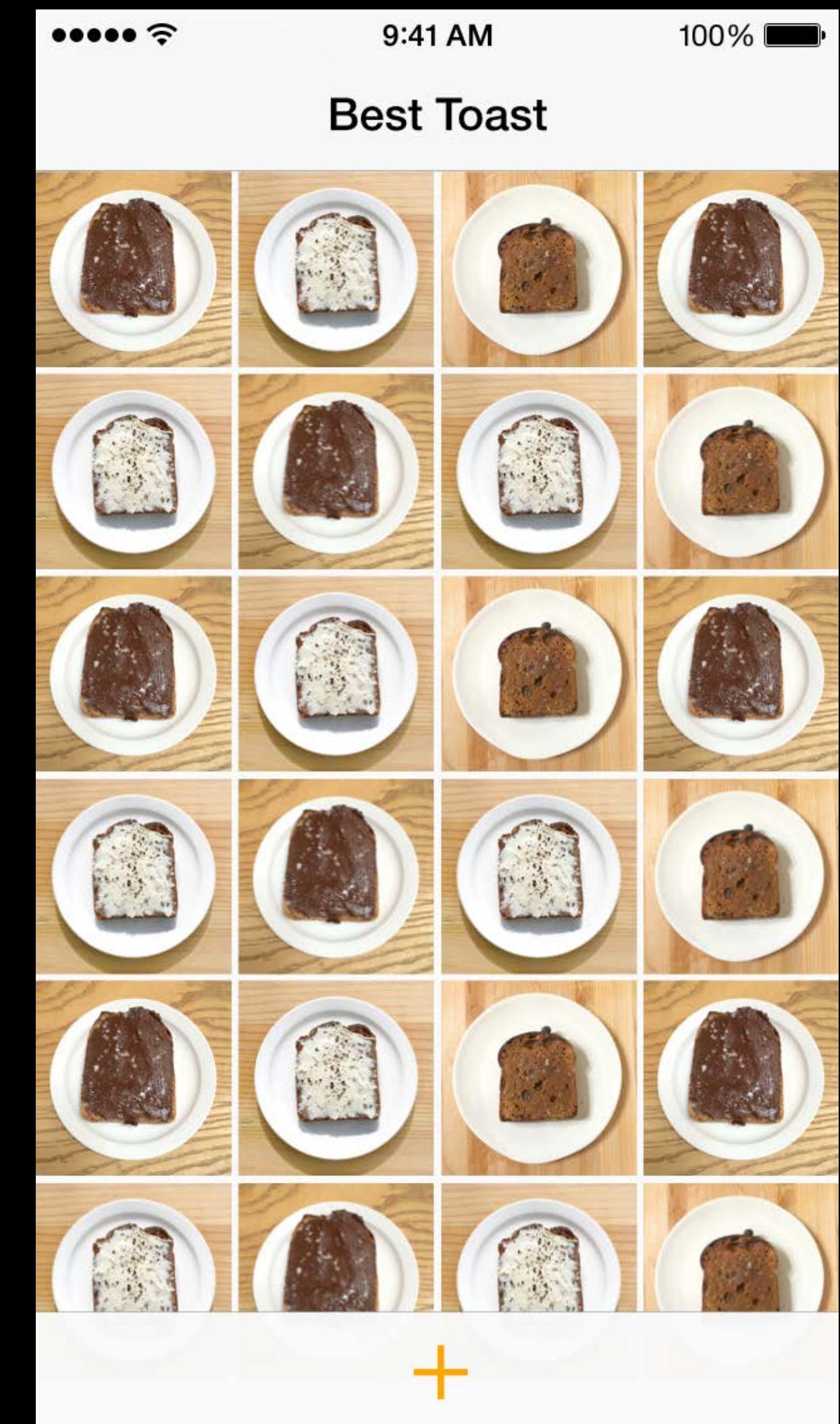
UICollectionView

Populate with toast pictures

UITabView

Add plus button

Prototype



Comparison Two

Real Code

UICollectionView

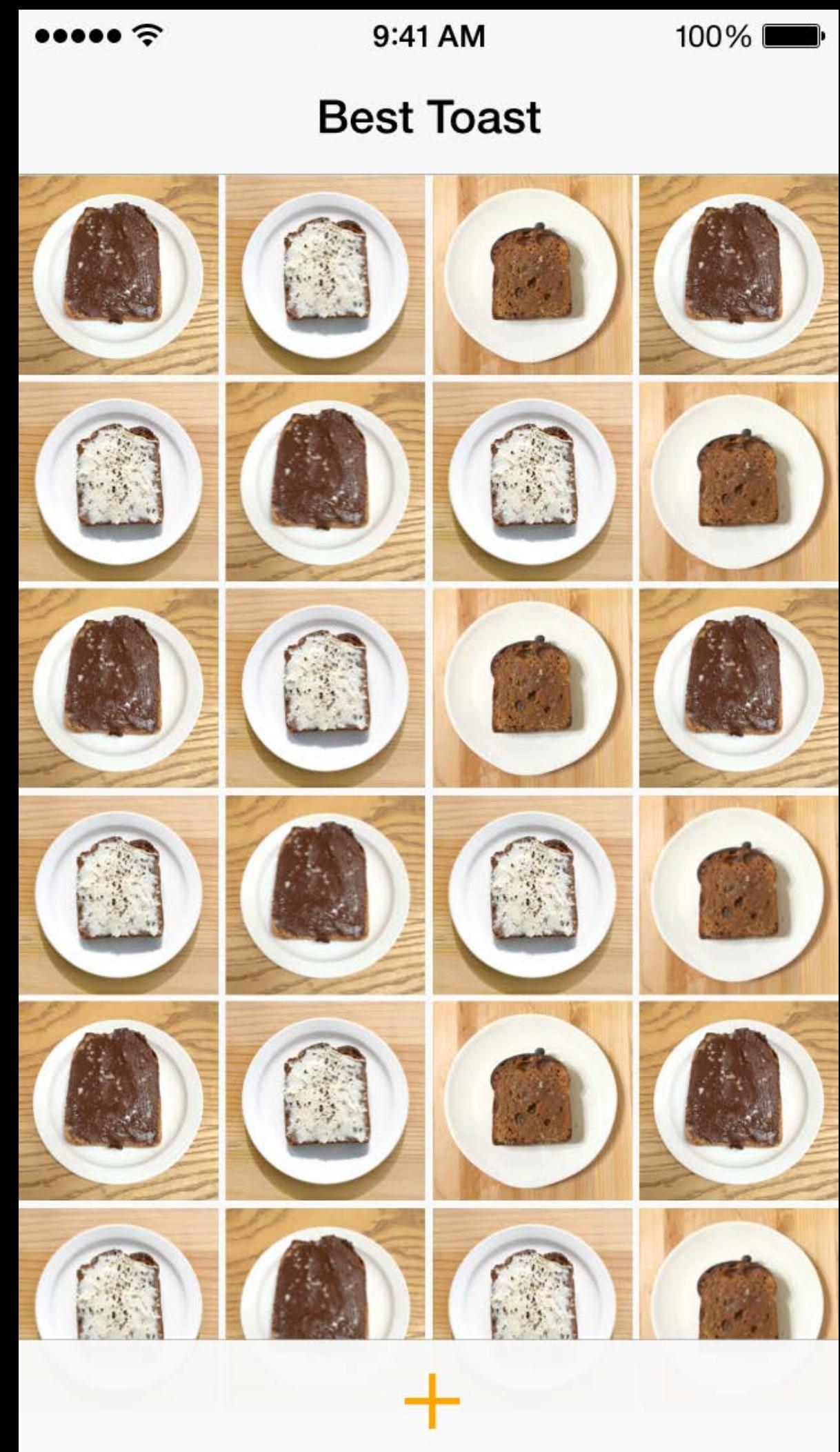
Populate with toast pictures

UITabView

Add plus button

Prototype

Just a quick drawing



What We Learned

We learned how to

So we could

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Pictures

We learned how to

Take screenshots, mask, and
rearrange them

So we could

Make lots of different options

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See how screens work together

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Interaction

Make pictures move on screen in response to touches

See how it feels

Why

How

Why

Test ideas

Save time and money building
the right things

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How

Get new ideas

Make the experience of your
product even better

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How

Make fake apps

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Make fake apps

Show people

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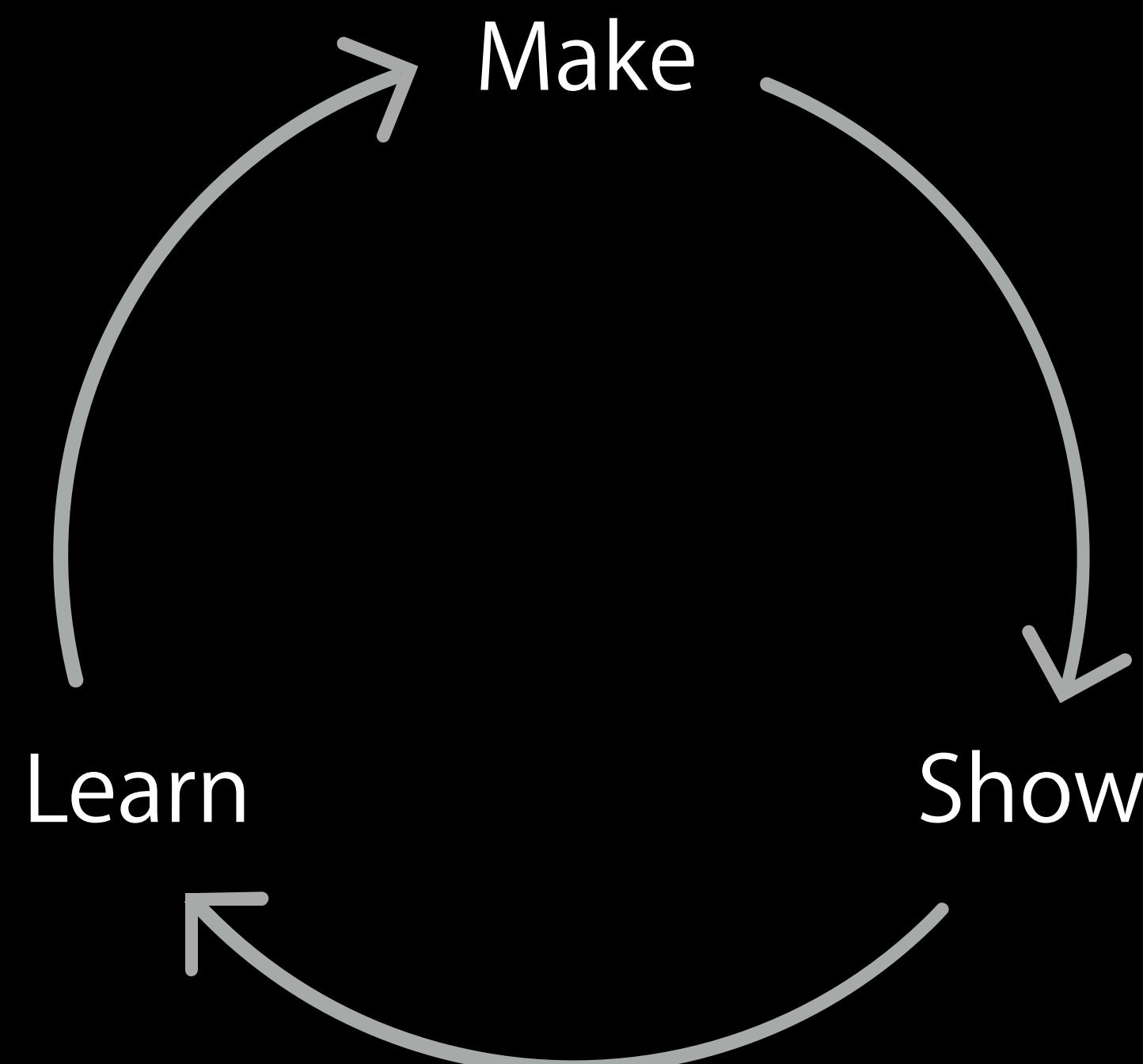
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Learn from their feedback

Make

Learn

Show



What We Want You to Do

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Developers at
companies

Tell your management that prototyping saves time and
money by helping you build the right things

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Solo developers

Draw, animate, and hack before you build something

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Can't code

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Designers

Make animated and interactive things

Management

Make time for designers and engineers to prototype

More Information

Rachel Roth
User Experience Evangelist
rroth@apple.com

Designing Great Apps
<http://developer.apple.com/design>

Keynote Files and Toast Code
https://developer.apple.com/library/ios/toastmodern_sample

Labs

- Prototyping Lab Services Lab A Thursday 10:15 AM
 - User Interface Design Lab UI Design Lab Daily 9:00 AM



WWDC14

