

#WWDC19

Introducing Parameters for Shortcuts

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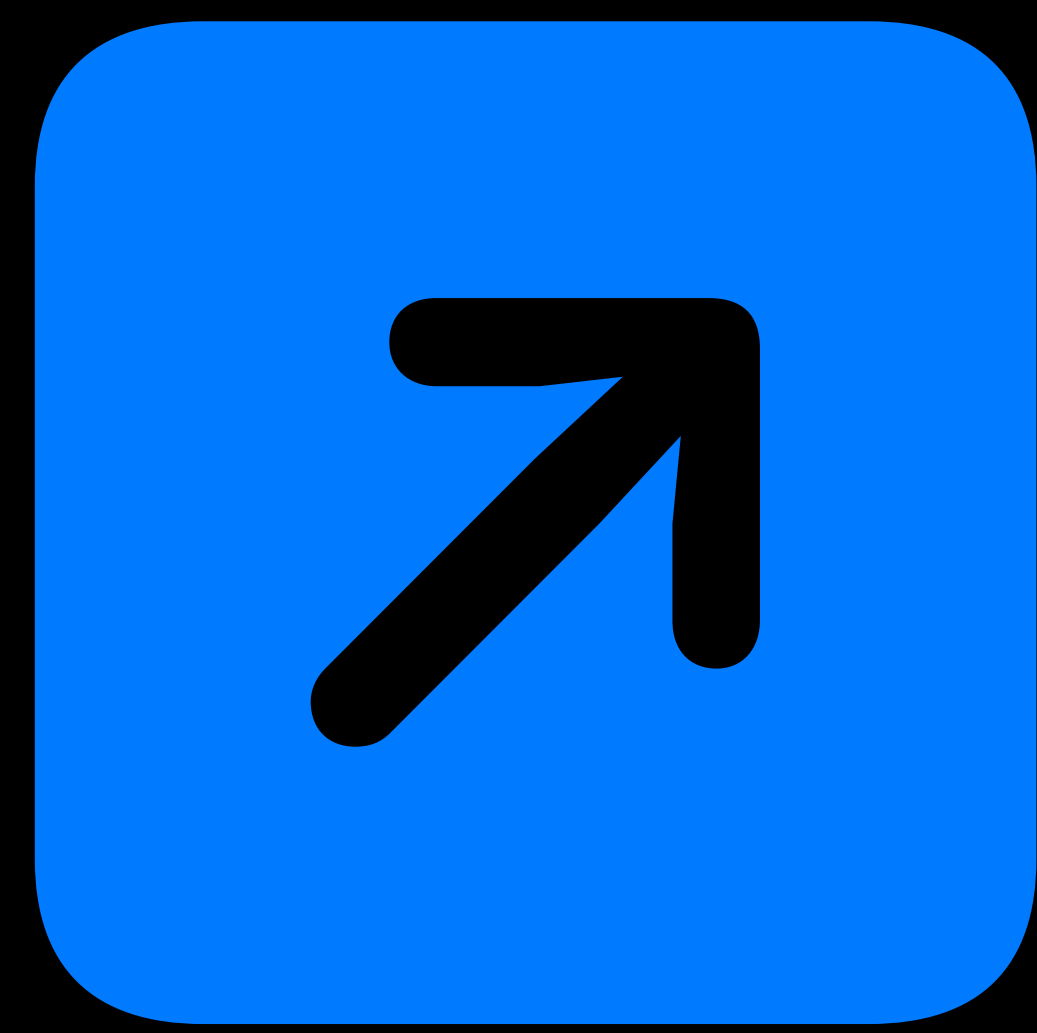
Suggestions



Suggestions



Voice



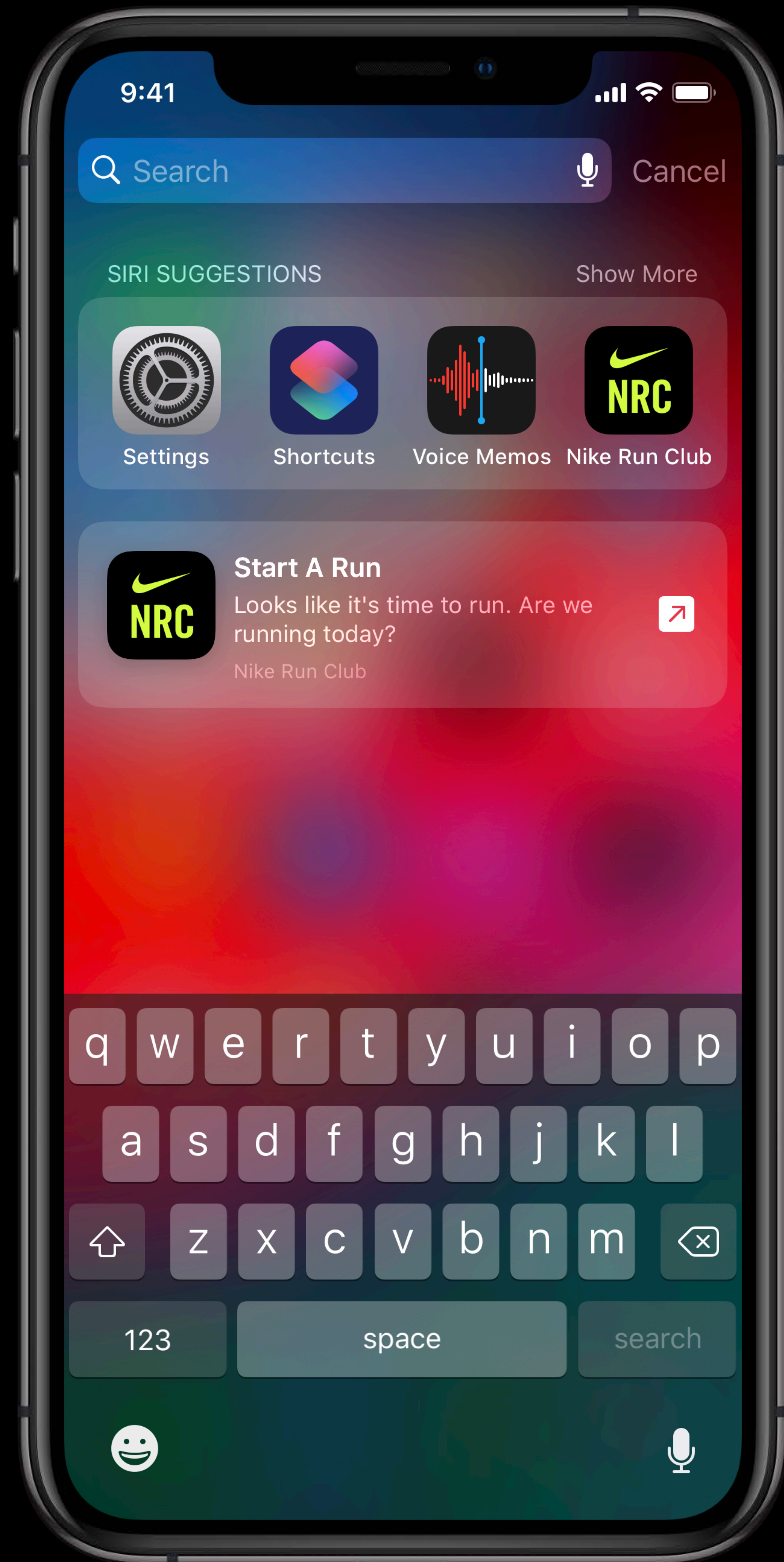
Suggestions

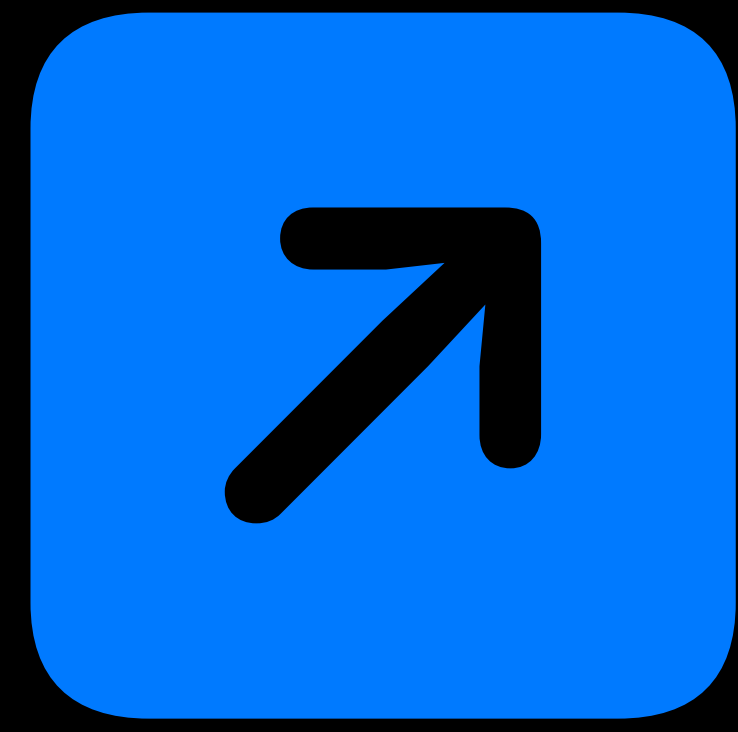


Voice



Multi-step





Suggestions



Voice



Multi-step





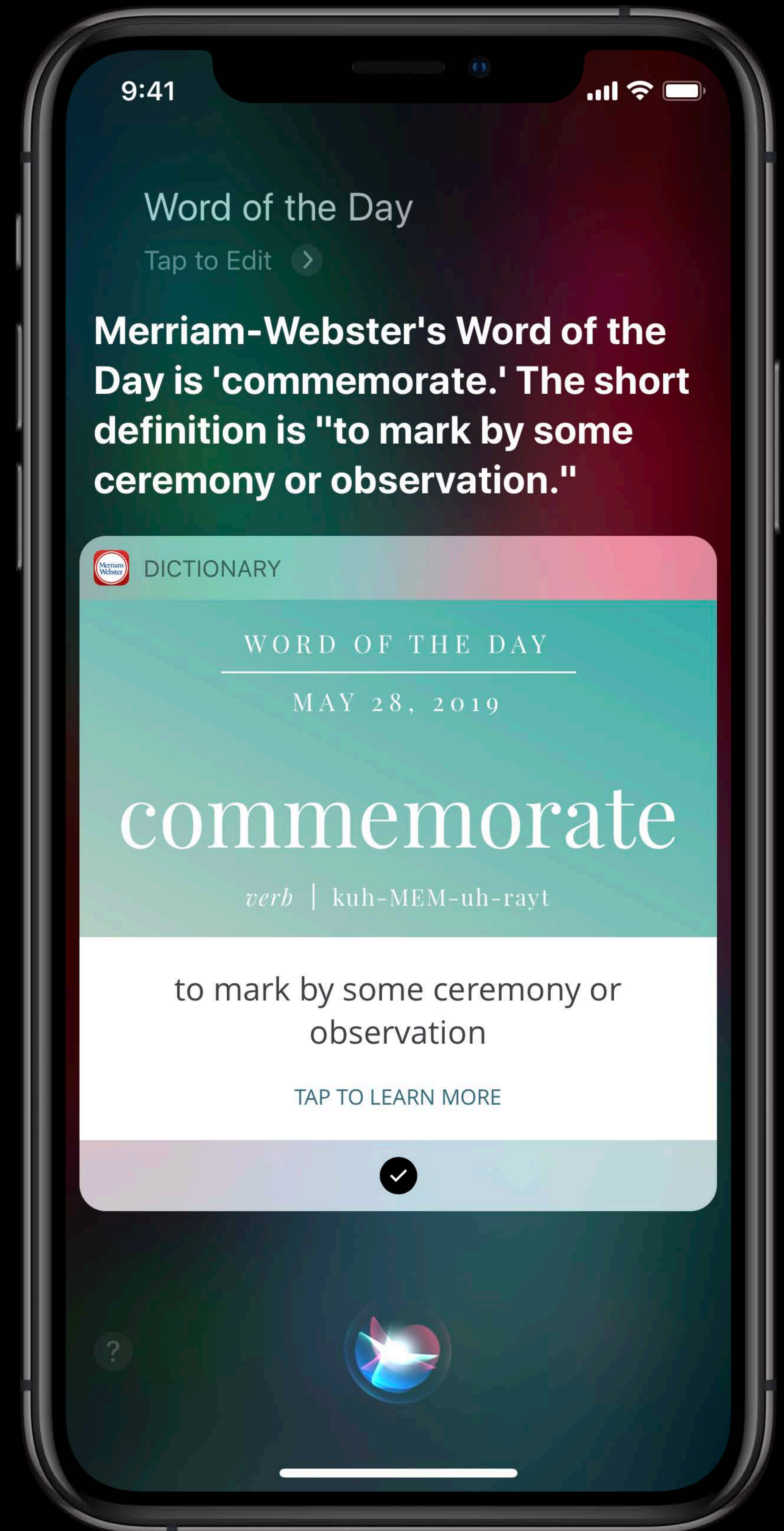
Suggestions



Voice



Multi-step





Suggestions



Voice



Multi-step



Suggestions



Voice



Multi-step





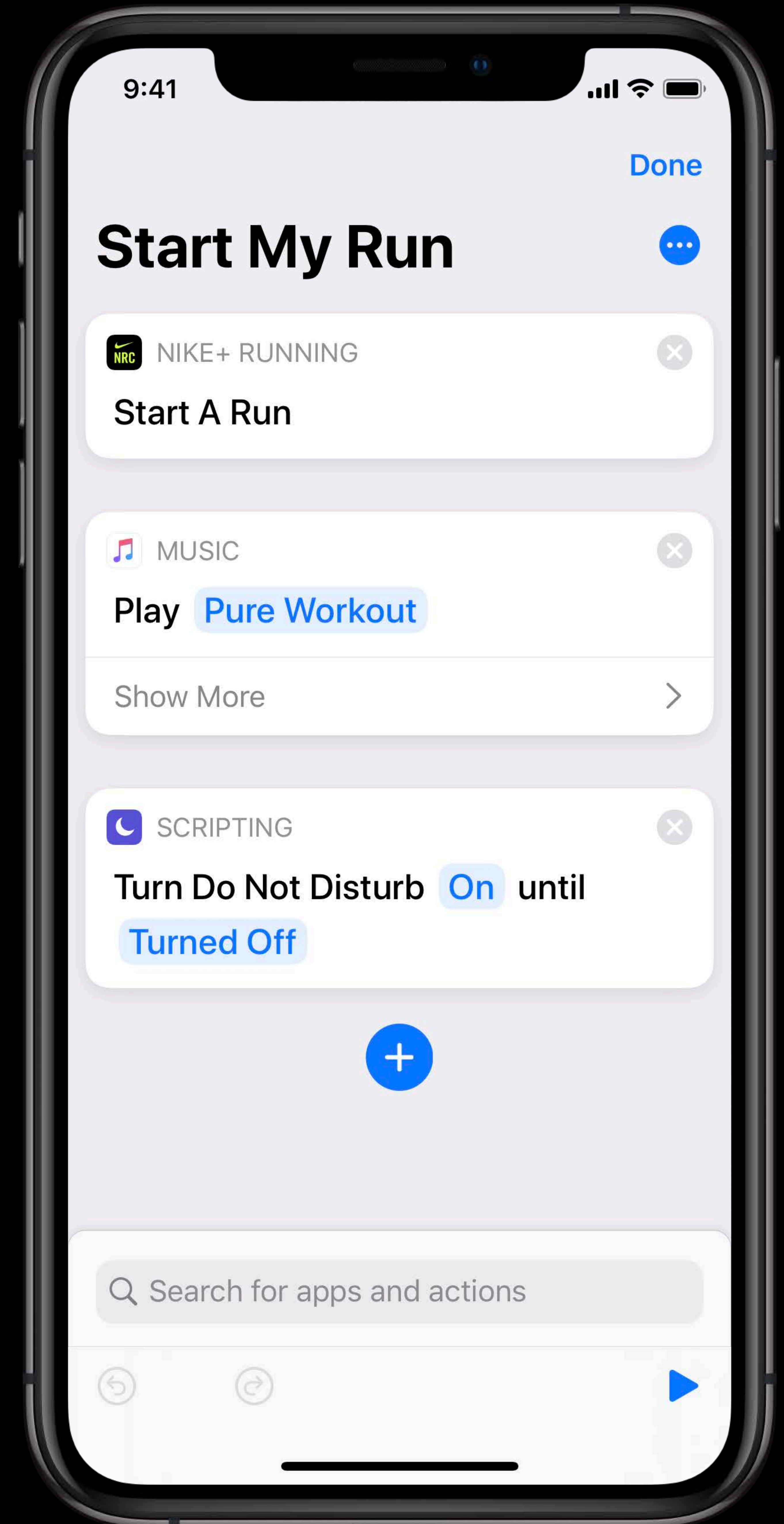
Suggestions



Voice



Multi-step

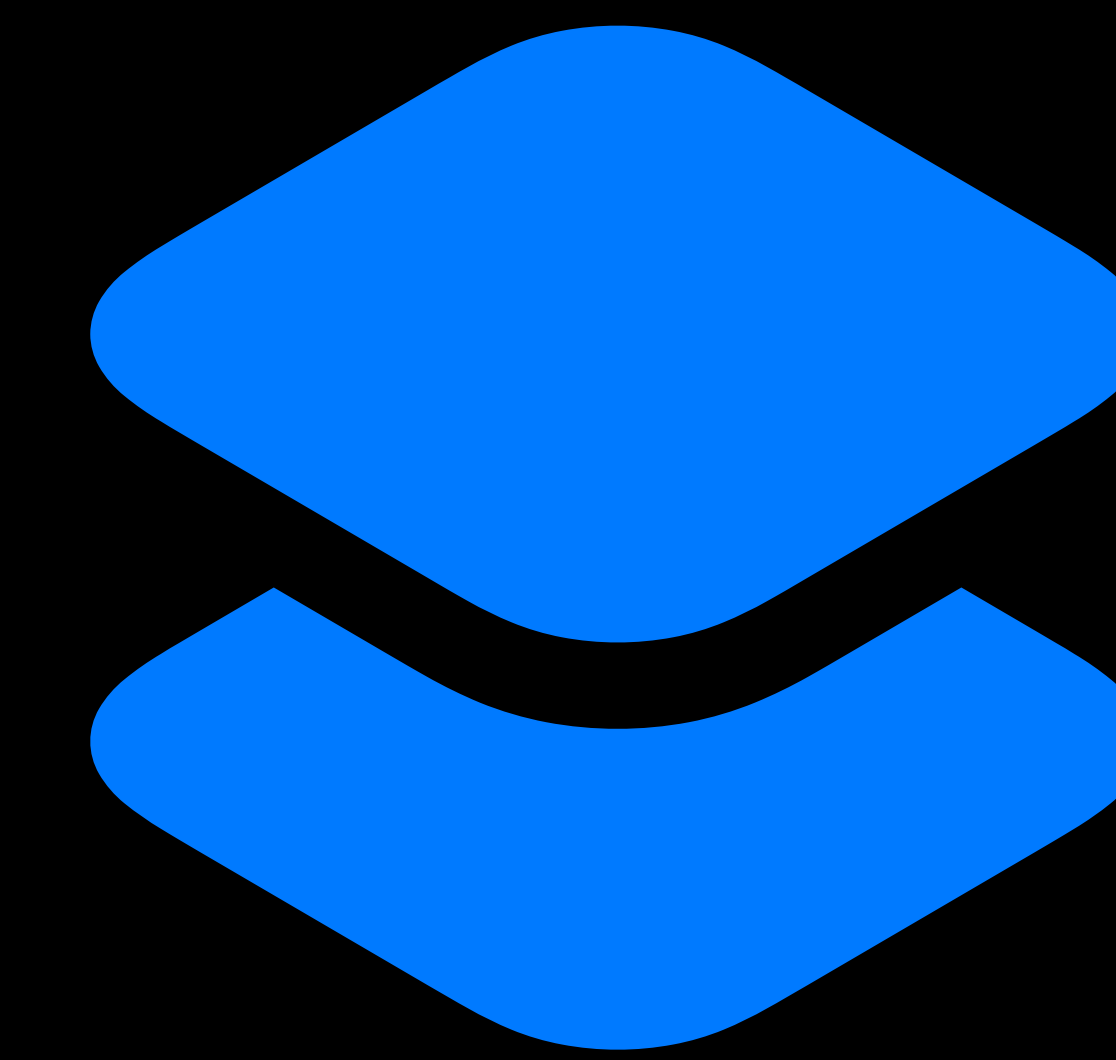




Suggestions



Voice



Multi-step

New in iOS 13



New in iOS 13



Shortcuts app built-in to iOS

New in iOS 13



Shortcuts app built-in to iOS

Parameters enable conversational shortcuts

New in iOS 13



Shortcuts app built-in to iOS

Parameters enable conversational shortcuts

Users can customize the behavior of your shortcuts

New in iOS 13



Shortcuts app built-in to iOS

Parameters enable conversational shortcuts

Users can customize the behavior of your shortcuts

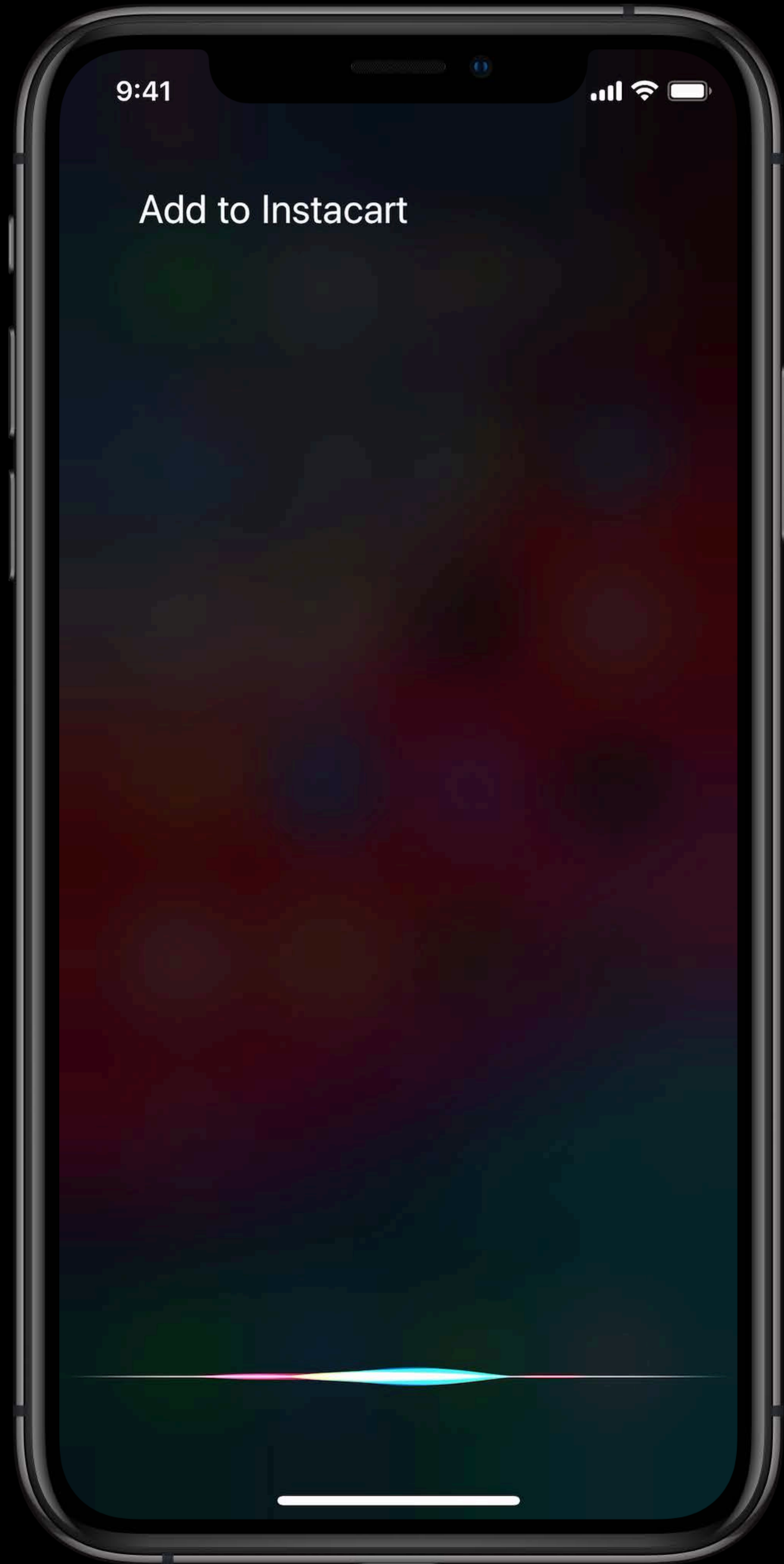
Updated Add to Siri



9:41



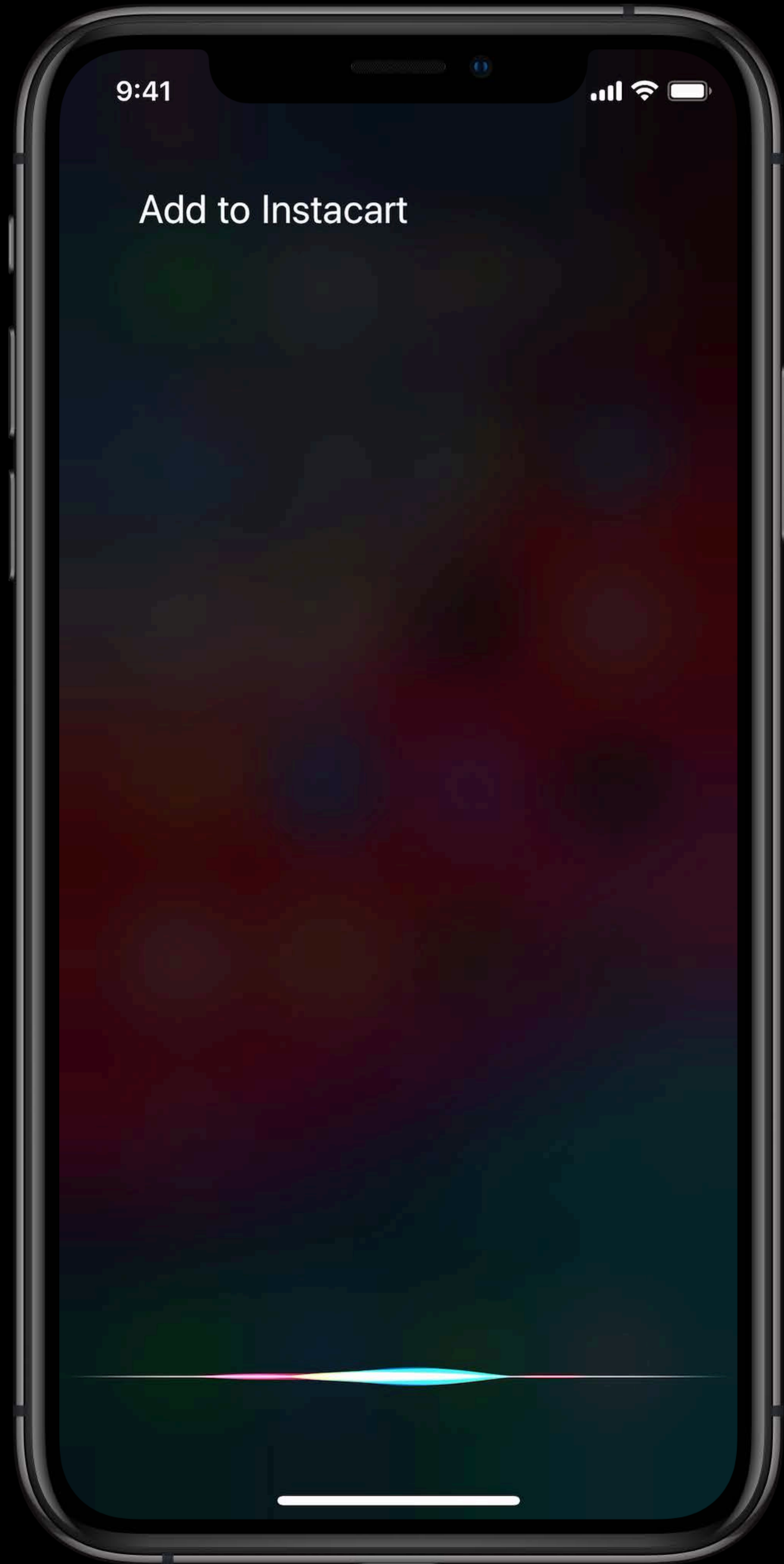
Add to Instacart



9:41



Add to Instacart



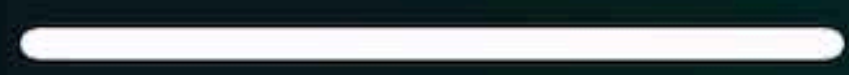


9:41

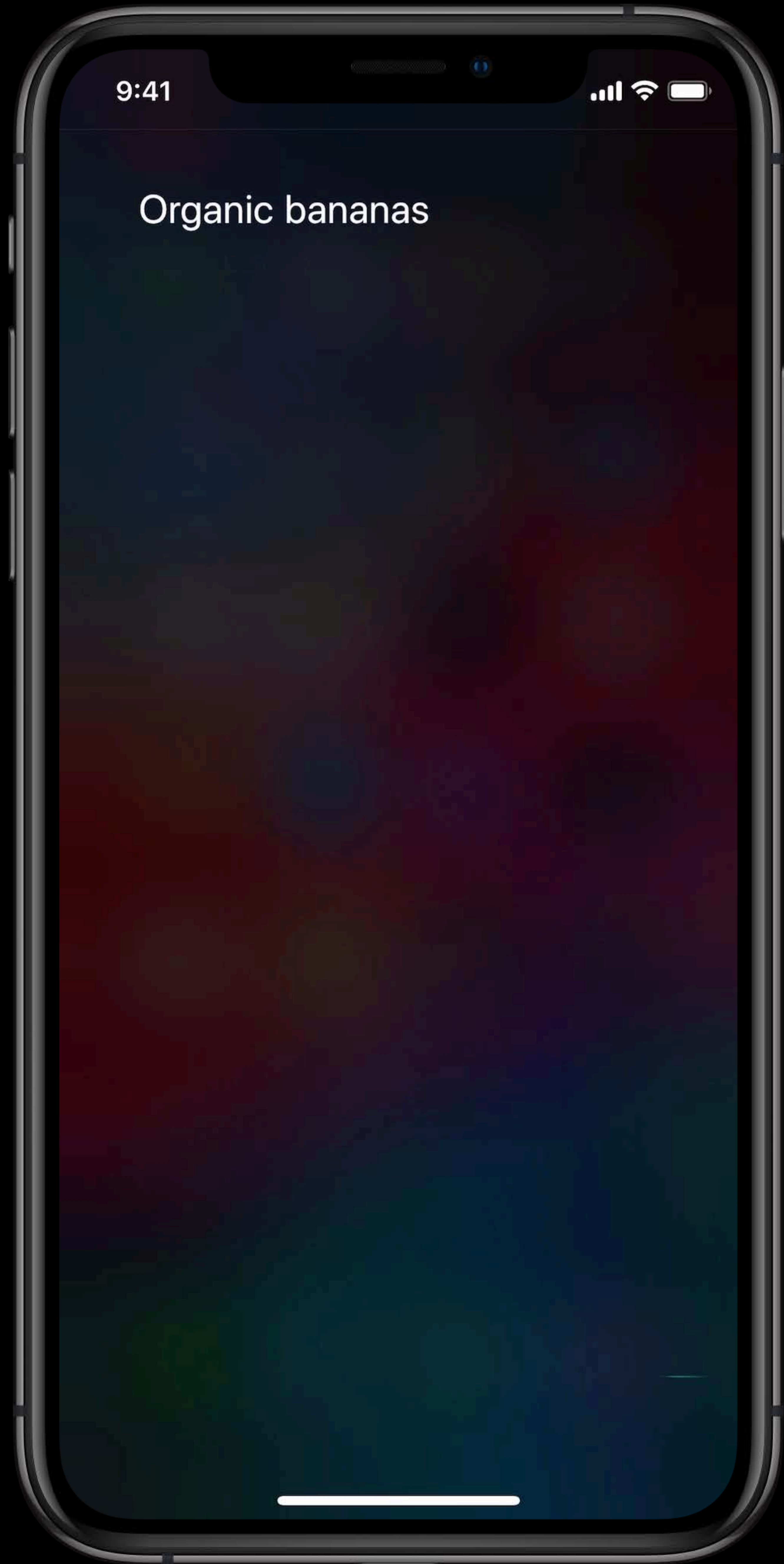


Bananas

Tap to Edit >



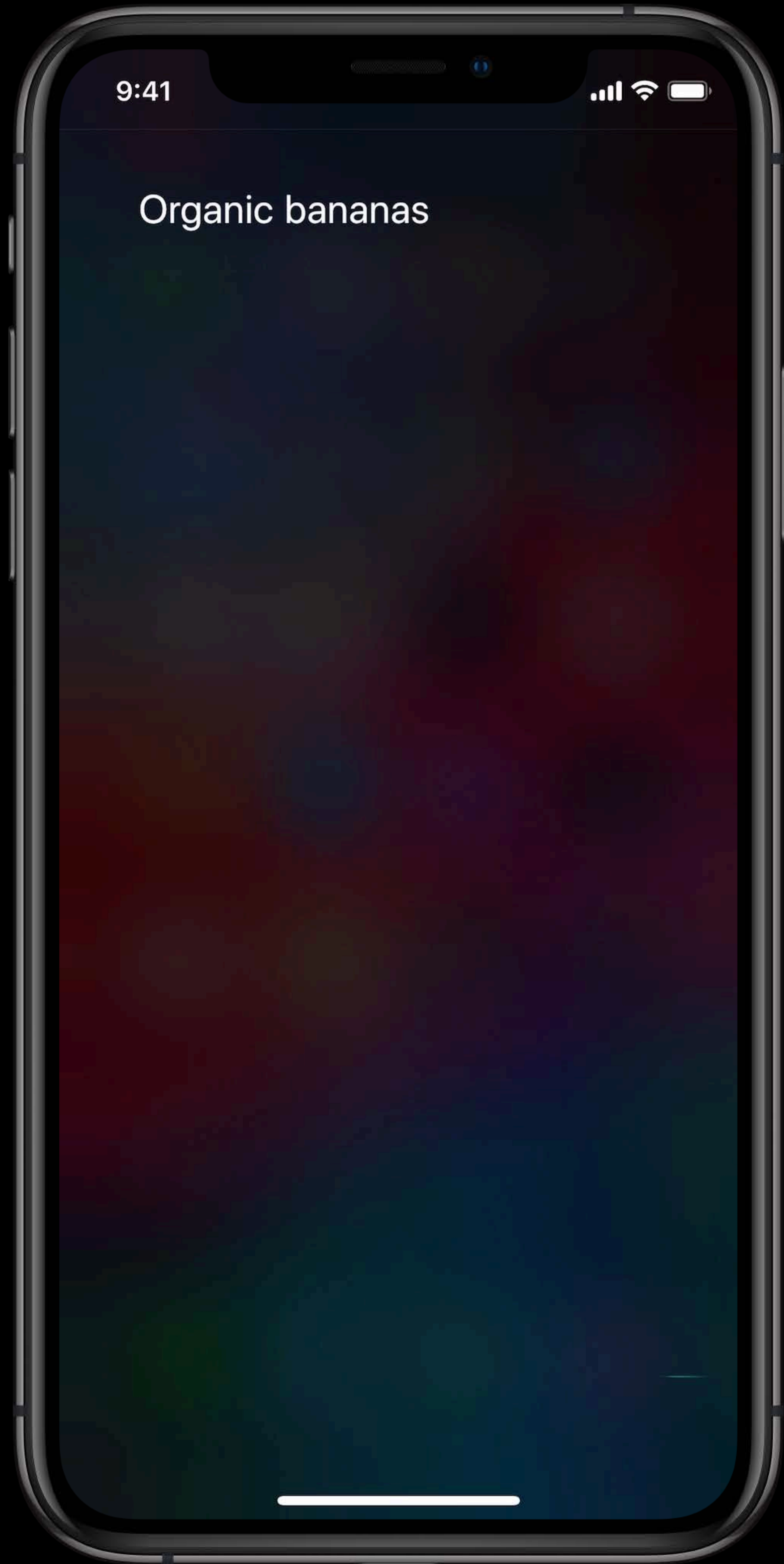




9:41



Organic bananas

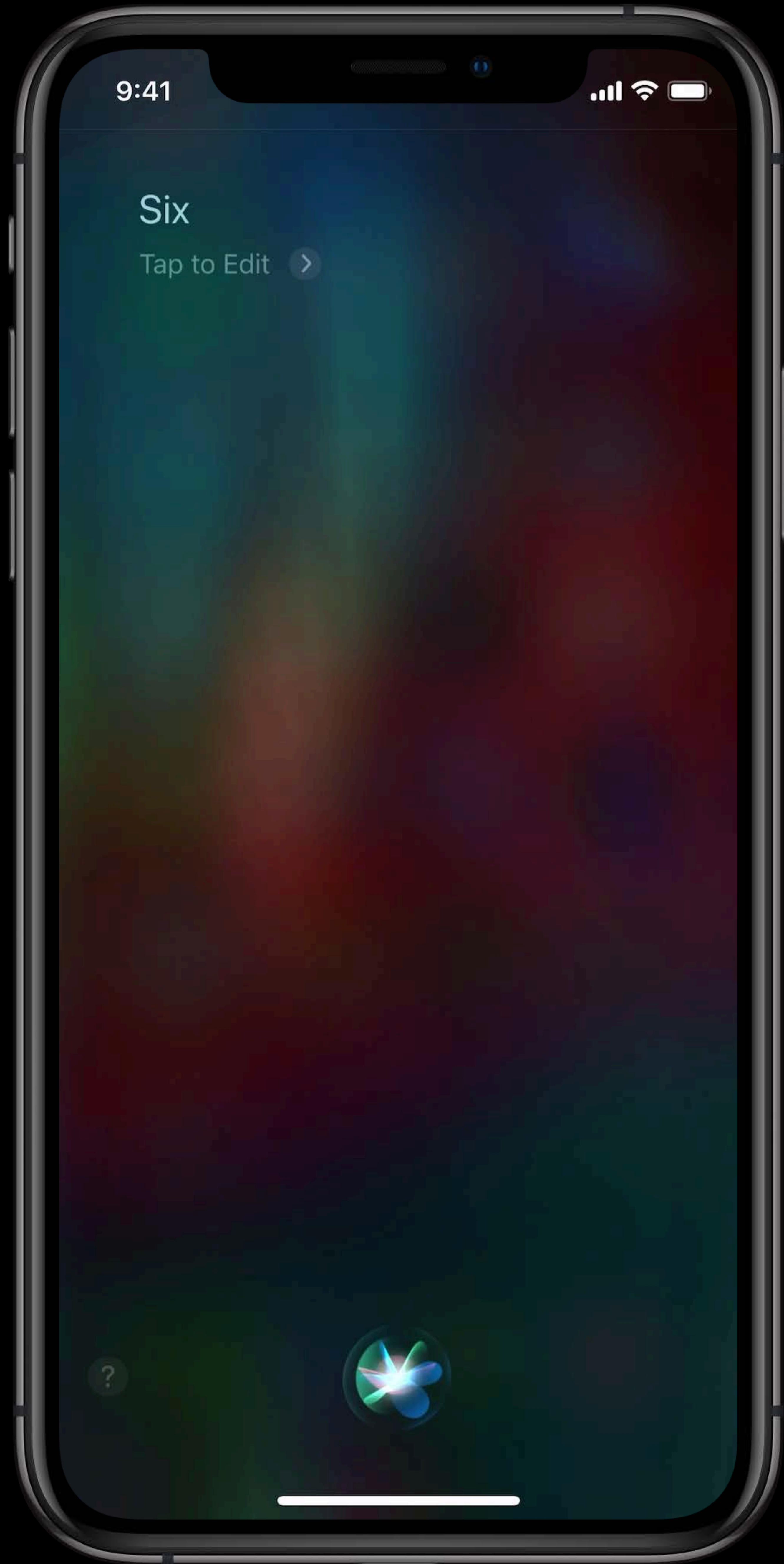


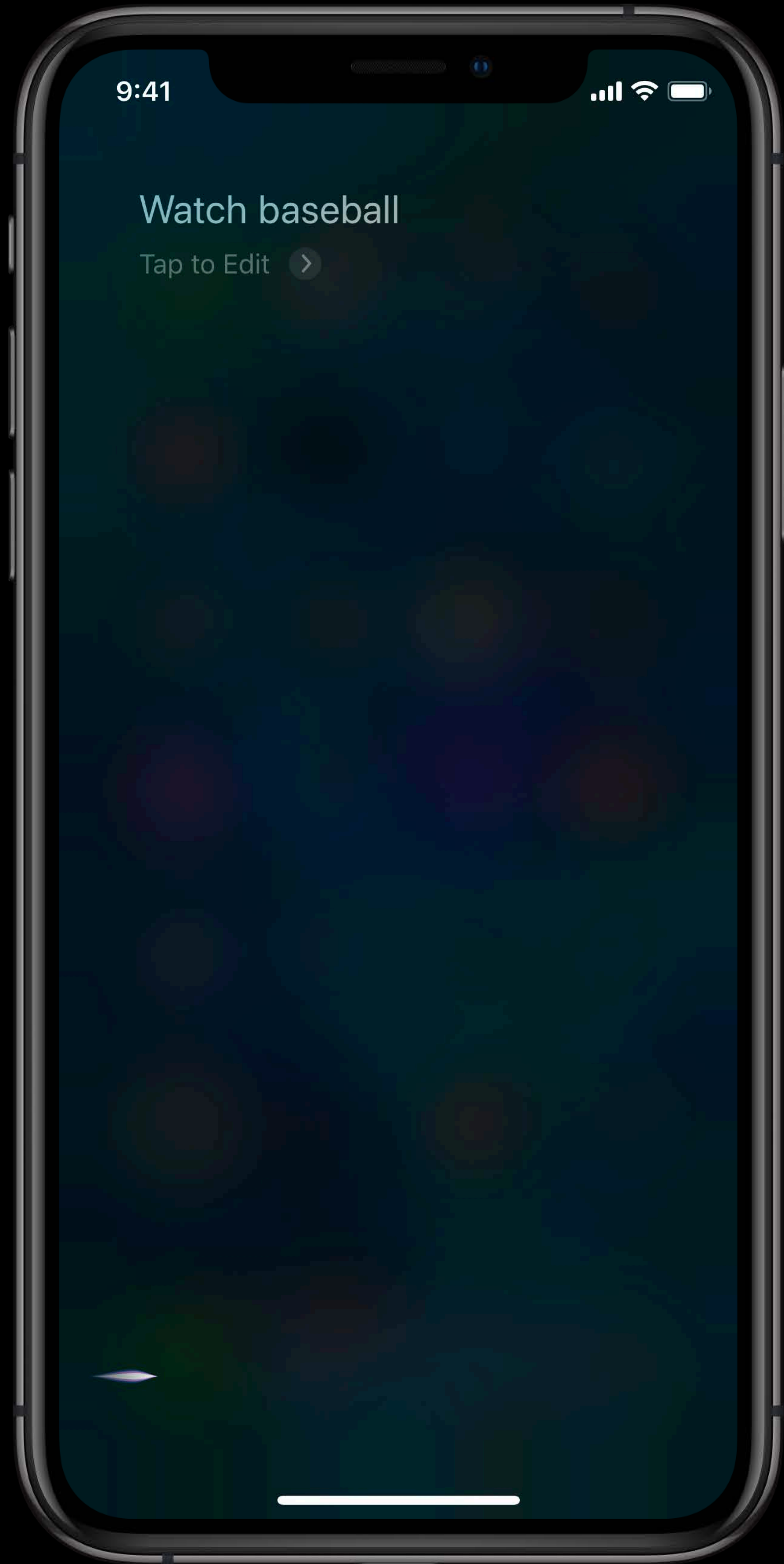
9:41



Organic bananas







9:41



Watch baseball

Tap to Edit >

9:41



The Phillies aren't playing right now. Watch one of the following from the previous game?

Live Stream

Archive Game

Game Recap

Condensed Game

Game Highlights





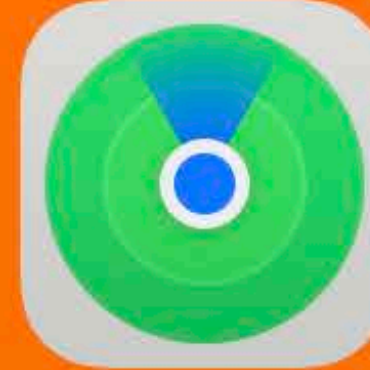




9:41



Files



Find My



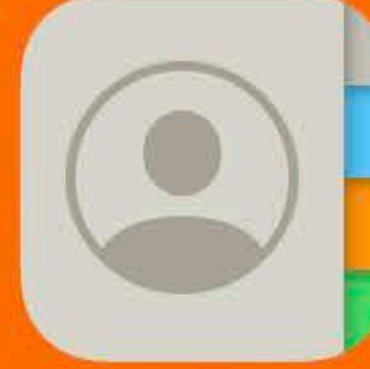
Shortcuts



iTunes Store



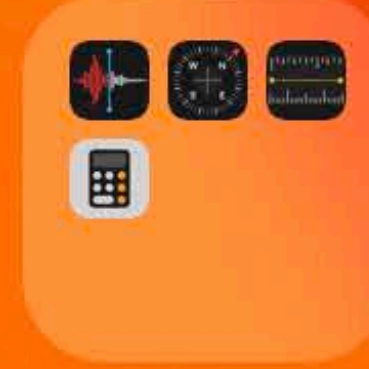
Tips



Contacts



Watch



Utilities



9:41





Edit





My Shortcuts

Q Search







Home ETA
2 actions



Directions to Event
3 actions



Upload Last Photo
4 actions



Play Playlist
1 action


Walk to Coffee
3 actions

Log My Weight
2 actions


Make PDF
2 actions



Create Shortcut


My Shortcuts


Automation


Gallery

9:41



Automation

Have your devices react to changes in conditions.

Personal



When I arrive at Work

Set Do Not Disturb



When my wake-up alarm is stopped

Control My Home, Set Playback Destination, and Play Podcast



When I connect to CarPlay

Get Upcoming Events and Show Directions



My Shortcuts



Automation



Gallery

9:41



Gallery

Search



Shortcuts for Accessibility

Shortcuts from Your Apps [See All](#)



Order 1 Clam Chowder
Get a tasty soup in minutes



Add "Do laundry" to Reminders



Add to Instacart
Add item to grocery list



Great Shortcuts for Siri [See All](#)

Add these shortcuts to Siri to get things done with your voice.



My Shortcuts



Automation



Gallery

9:41



Done

Order Soup



SOUP CHEF



Order 1 Clam Chowder

Show More



Search for apps and actions



9:41



Search for apps and actions  Cancel



Apps



Favorites



Scripting



Media



Location



Documents



Sharing



Web

Suggestions

Based on how you use your iPhone.

Order Soup



Tomato
Soup



Clam
Chowder



Soup

Send Message



Amy Frost



Adam
Gooseff



Karla
Gonzales



Blair
Lockhart

9:41



Done

Order Soup

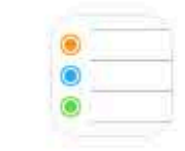


SOUP CHEF



Order 1 Clam Chowder

Show More



REMINDERS



Add Pick up soup! to To-Do with
Alert At Time Pickup Time

Show More



Search for apps and actions







Add to Siri

9:41



Cancel



Add to Siri

Add a custom phrase Siri can use to tell Soup Chef to run this shortcut.

When I say:

Soup Time



Do:



Order Soup



Add to Siri

9:41



[← Back](#)

Edit Action



SOUP CHEF

Order **1** **Clam Chowder**

Show More



Shortcut customization

Shortcut customization

Parameter resolution

Shortcut customization

Parameter resolution

Related parameters

Shortcut customization

Parameter resolution

Related parameters

Dynamic options

Shortcut customization

Parameter resolution

Related parameters

Dynamic options

Outputs

Shortcut Customization

9:41



Done

Order Soup



SOUP CHEF



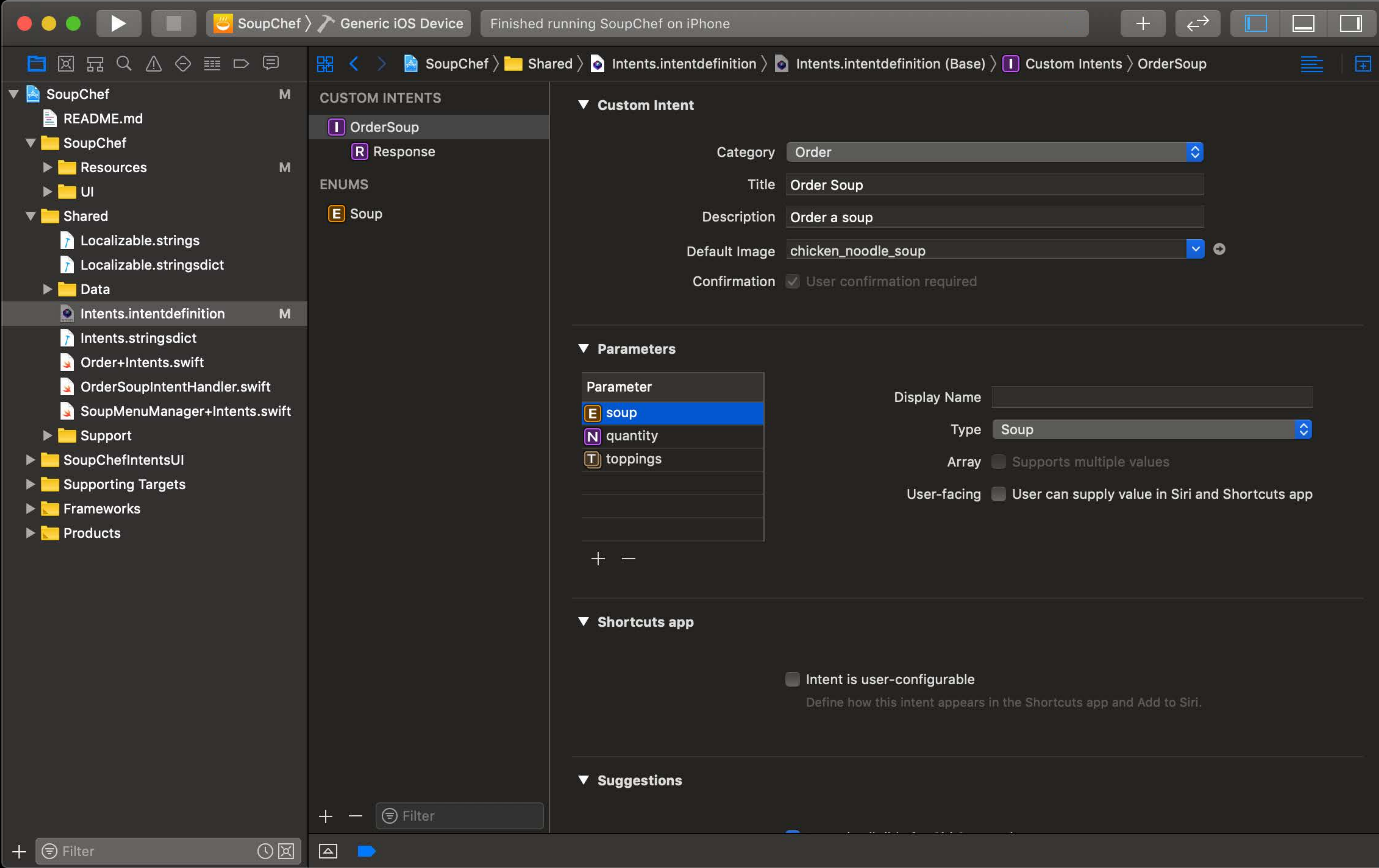
Order 1 Clam Chowder

Show More



Search for apps and actions





- SoupChef
 - README.md
 - SoupChef
 - Resources
 - UI
 - Shared
 - Localizable.strings
 - Localizable.stringsdict
 - Data
 - Intents.intentdefinition
 - Intents.stringsdict
 - Order+Intents.swift
 - OrderSoupIntentHandler.swift
 - SoupMenuManager+Intents.swift
 - Support
 - SoupChefIntentsUI
 - Supporting Targets
 - Frameworks
 - Products

- CUSTOM INTENTS
- OrderSoup
 - Response

- ENUMS
- Soup

Custom Intent

Category: Order

Title: Order Soup

Description: Order a soup

Default Image: chicken_noodle_soup

Confirmation: User confirmation required

Parameters

Parameter
soup
quantity
toppings

Display Name:

Type: Soup

Array: Supports multiple values

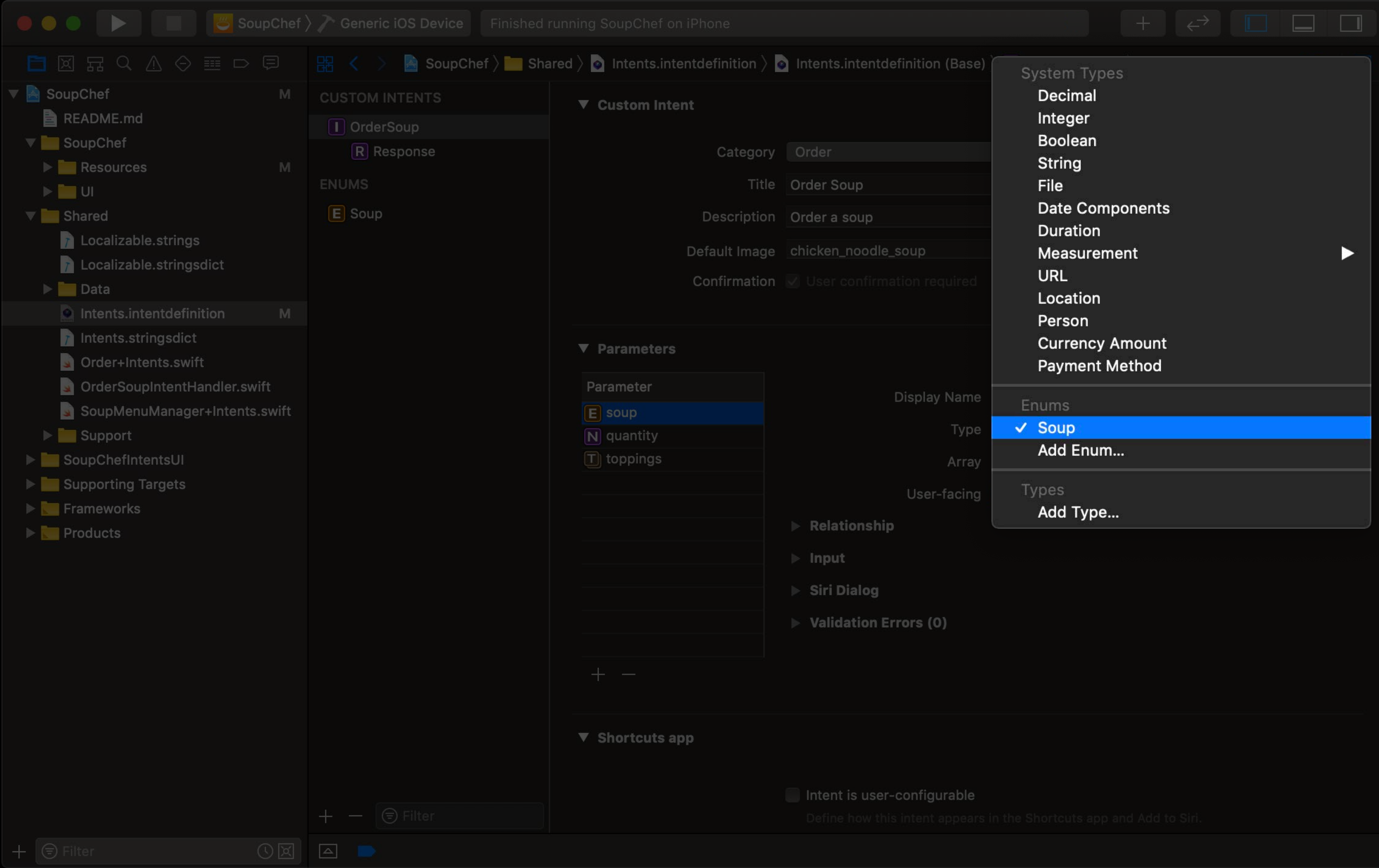
User-facing: User can supply value in Siri and Shortcuts app

Shortcuts app

Intent is user-configurable

Define how this intent appears in the Shortcuts app and Add to Siri.

Suggestions



SoupChef > Generic iOS Device > Finished running SoupChef on iPhone

SoupChef > Shared > Intents.intentdefinition > Intents.intentdefinition (Base) > Custom Intents > OrderSoup

SoupChef (M)

- README.md
- SoupChef (M)
 - Resources (M)
 - UI
- Shared
 - Localizable.strings
 - Localizable.stringsdict
 - Data
 - Intents.intentdefinition (M)
 - Intents.stringsdict
 - Order+Intents.swift
 - OrderSoupIntentHandler.swift
 - SoupMenuManager+Intents.swift
 - Support
 - SoupChefIntentsUI
 - Supporting Targets
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 - Products

CUSTOM INTENTS

- OrderSoup
 - Response (R)
- ENUMS
 - Soup (E)

Parameters

Parameter
S soup
N quantity
T toppings

Display Name

Type String

Array Supports multiple values

User-facing User can supply value in Siri and Shortcuts app

Dynamic Options Valid values are provided dynamically

Relationship

Input

Default Value

Multiline Displays multiple lines of editable text

Keyboard

Capitalization None

Autocorrect Disable autocorrect

Smart Quotes Disable smart quotes

Smart Dashes Disable smart dashes

Siri Dialog

Validation Errors (0)

Shortcuts app

+ - Filter

Project Explorer showing file structure for SoupChef:

- SoupChef (M)
 - README.md
 - SoupChef
 - Resources (M)
 - UI
 - Shared
 - Localizable.strings
 - Localizable.stringsdict
 - Data
 - Intents.intentdefinition (M)
 - Intents.stringsdict
 - Order+Intents.swift
 - OrderSoupIntentHandler.swift
 - SoupMenuManager+Intents.swift
 - Support
 - SoupChefIntentsUI
 - Supporting Targets
 - Frameworks
 - Products

CUSTOM INTENTS

- OrderSoup
 - Response (R)

ENUMS

- Soup (E)

Filter

Parameters

Parameter	Display Name	Type	Array	User-facing	Dynamic Options
soup (S)					
quantity (N)					
toppings (T)					

Relationship

Input

Keyboard

Siri Dialog

Validation Errors (0)

Shortcuts app

System Types

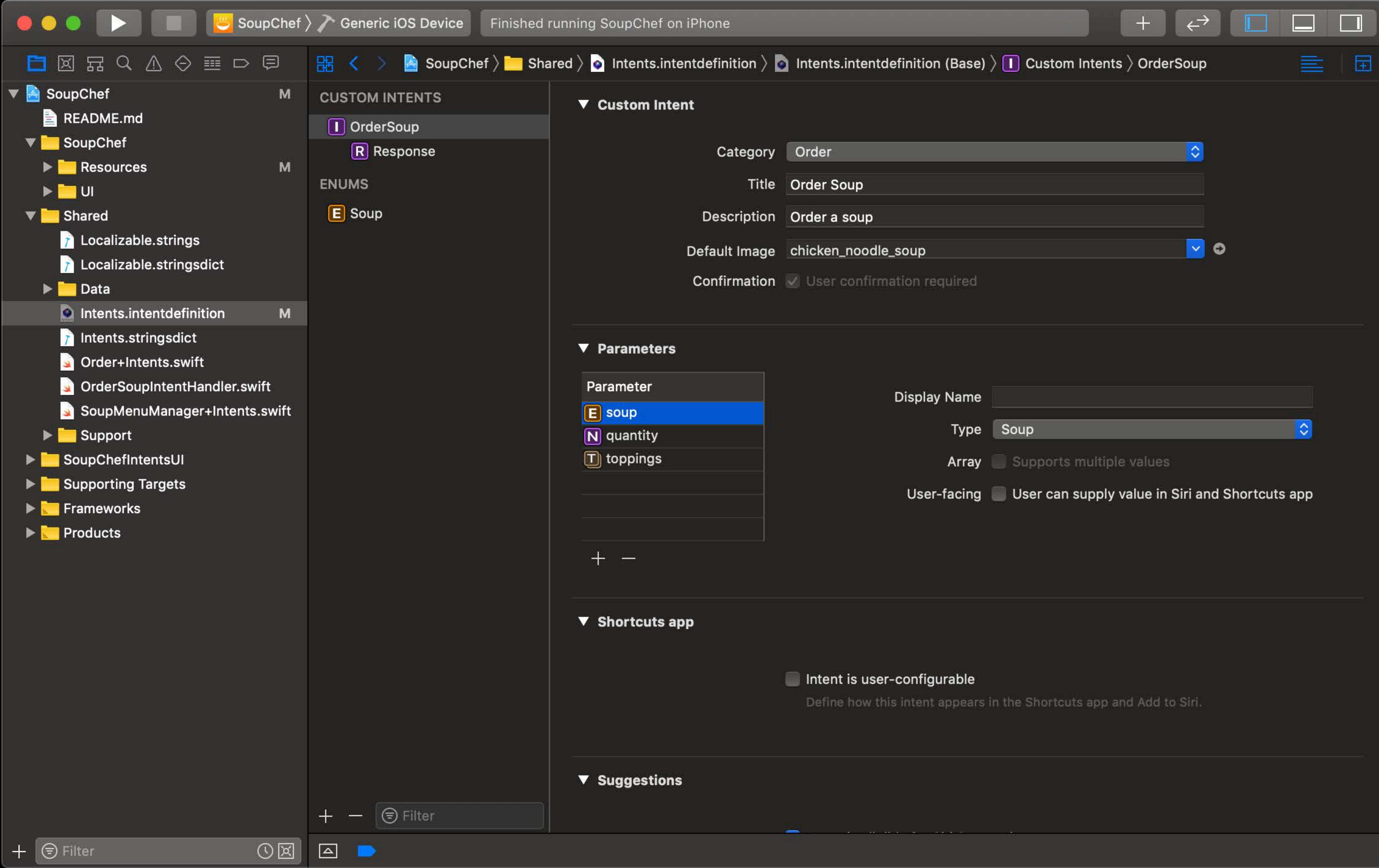
- Decimal
- Integer
- Boolean
- String
- File
- Date Components
- Duration
- Measurement
- URL
- Location
- Person
- Currency Amount
- Payment Method

Enums

- Soup (checked)
- Add Enum...

Types

- Add Type...



- SoupChef
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- CUSTOM INTENTS
- OrderSoup
 - Response

- ENUMS
- Soup

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Parameters

Parameter	Display Name
soup	
quantity	
toppings	

Display Name:

Type: Soup

Array: Supports multiple values

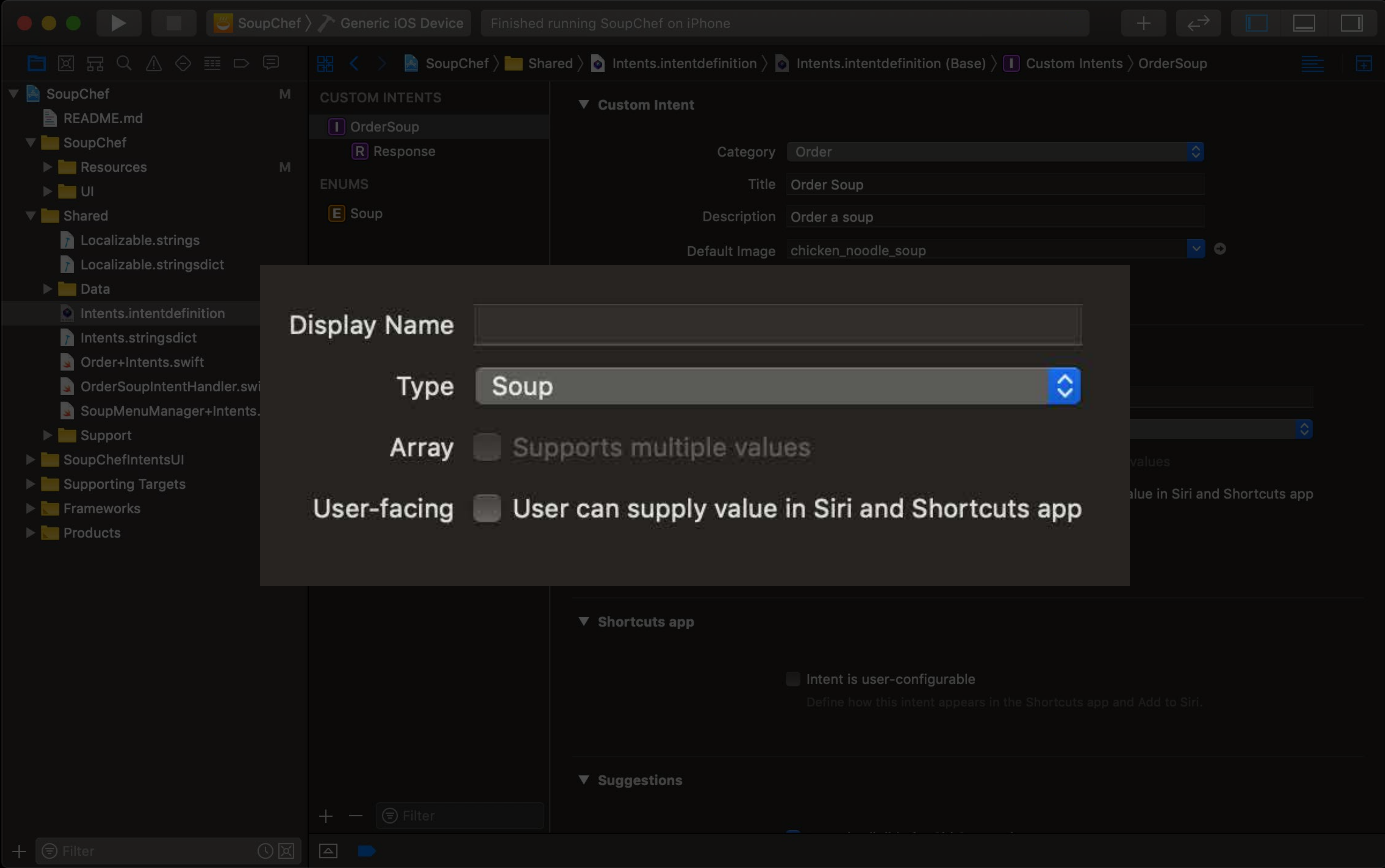
User-facing: User can supply value in Siri and Shortcuts app

Shortcuts app

Intent is user-configurable

Define how this intent appears in the Shortcuts app and Add to Siri.

Suggestions



Display Name

Type

Soup

Array

Supports multiple values

User-facing

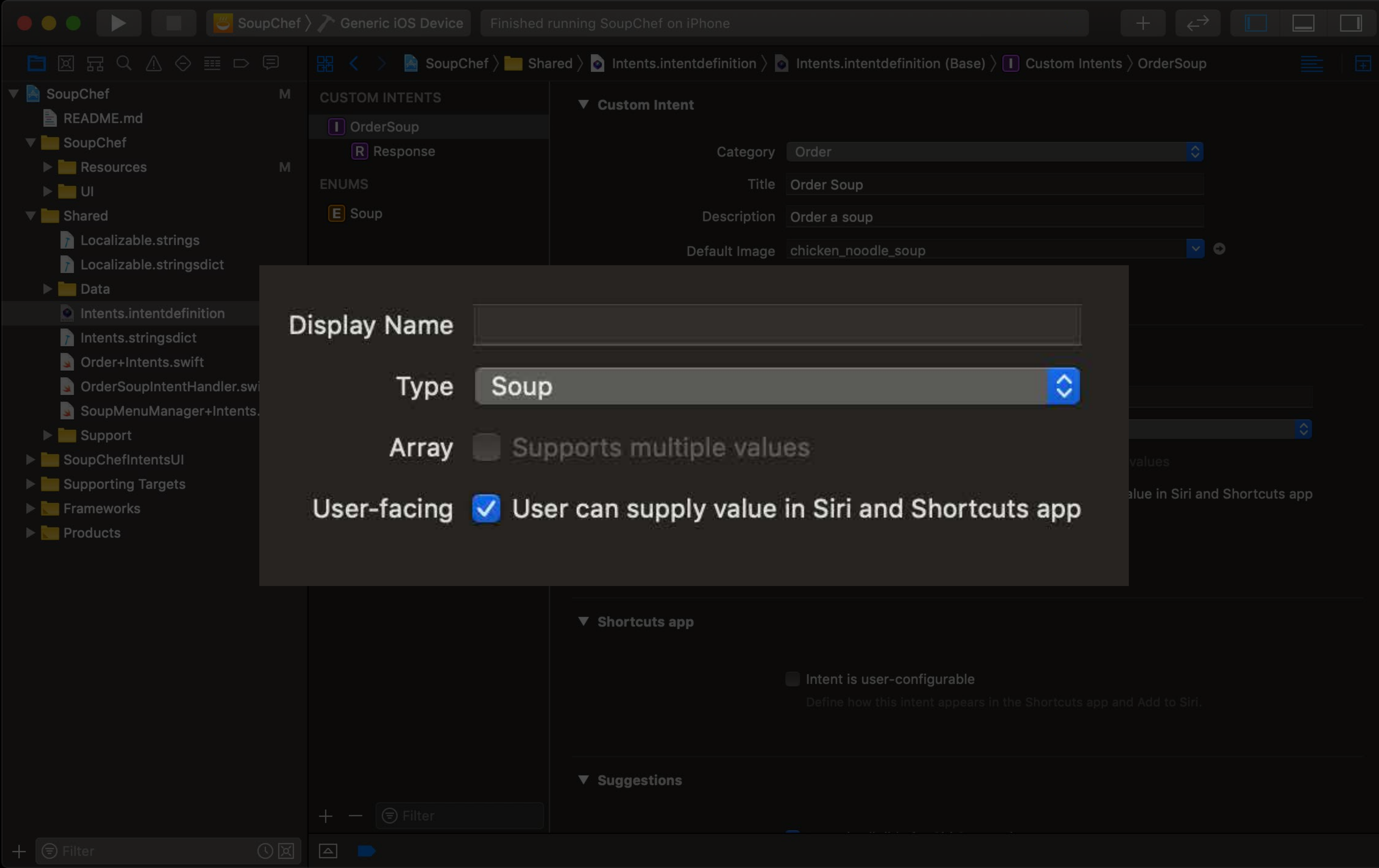
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Suggestions



Display Name

Type

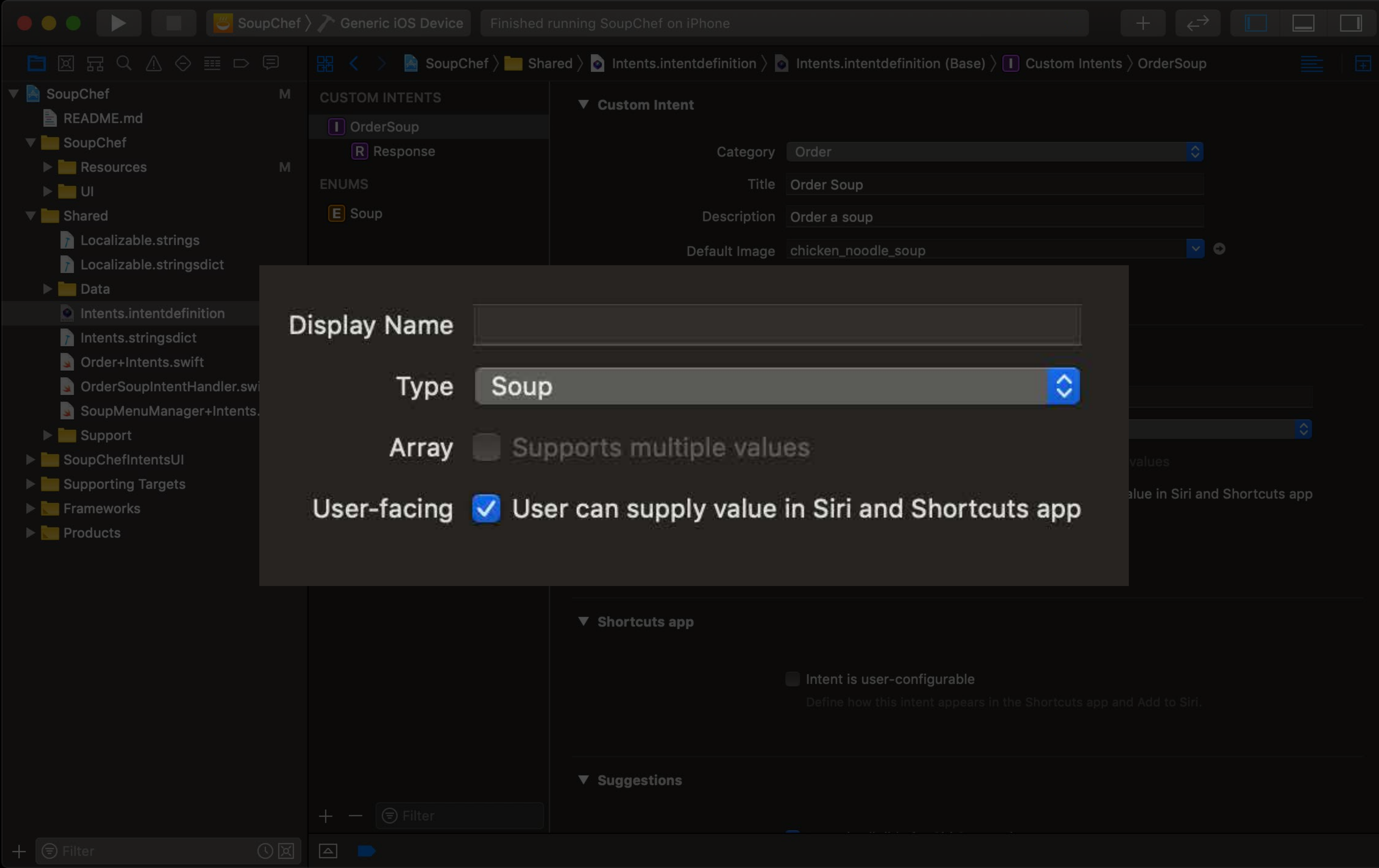
Soup

Array

Supports multiple values

User-facing

User can supply value in Siri and Shortcuts app



Display Name

Type

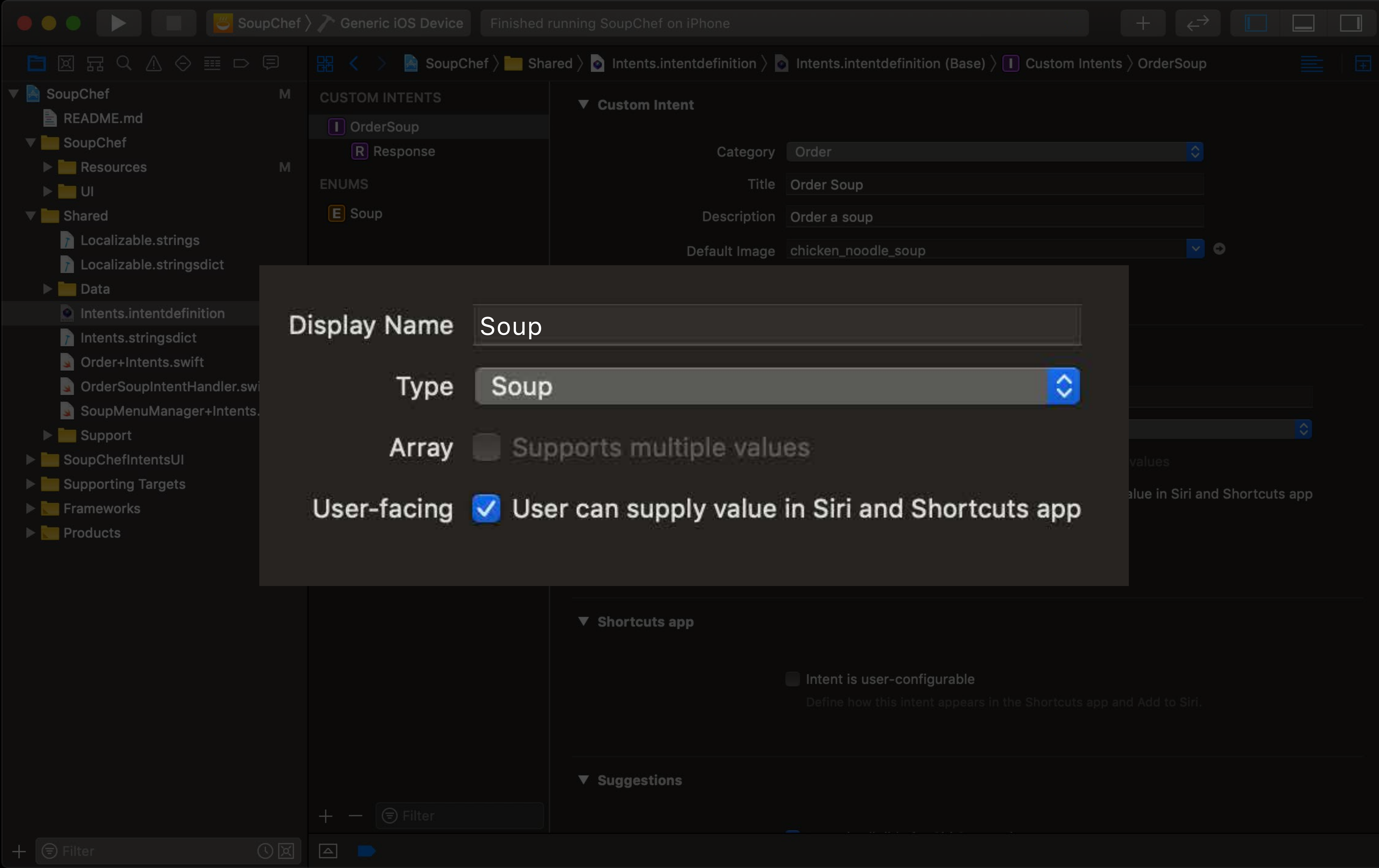
Soup

Array

Supports multiple values

User-facing

User can supply value in Siri and Shortcuts app



Display Name

Type

Array Supports multiple values

User-facing User can supply value in Siri and Shortcuts app

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SoupChef (M)

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 - Localizable.strings
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- Order+Intents.swift
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- SoupChefIntentsUI
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- Products

CUSTOM INTENTS

- OrderSoup (I)
- Response (R)

ENUMS

- Soup (E)

Custom Intent

Category: Order

Title: Order Soup

Description: Order a soup

Default Image: chicken_noodle_soup

Confirmation: User confirmation required

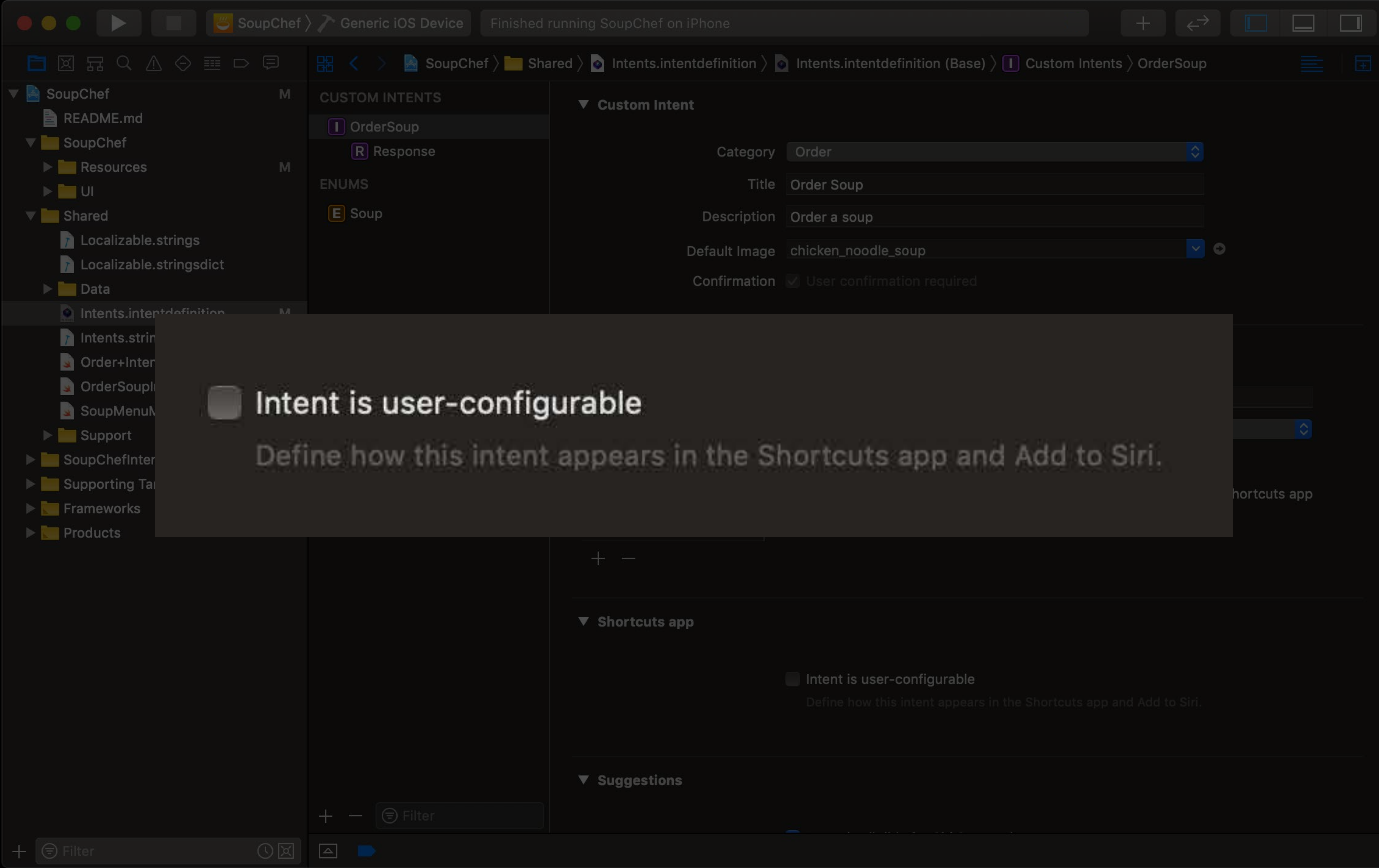
Parameters

Parameter	Display Name	Type	Array	User-facing
soup (E)	Soup	Soup	<input type="checkbox"/> Supports multiple values	<input type="checkbox"/> User can supply value in Siri and Shortcuts app
quantity (N)				
toppings (T)				

Shortcuts app

Intent is user-configurable
Define how this intent appears in the Shortcuts app and Add to Siri.

Suggestions



Intent is user-configurable

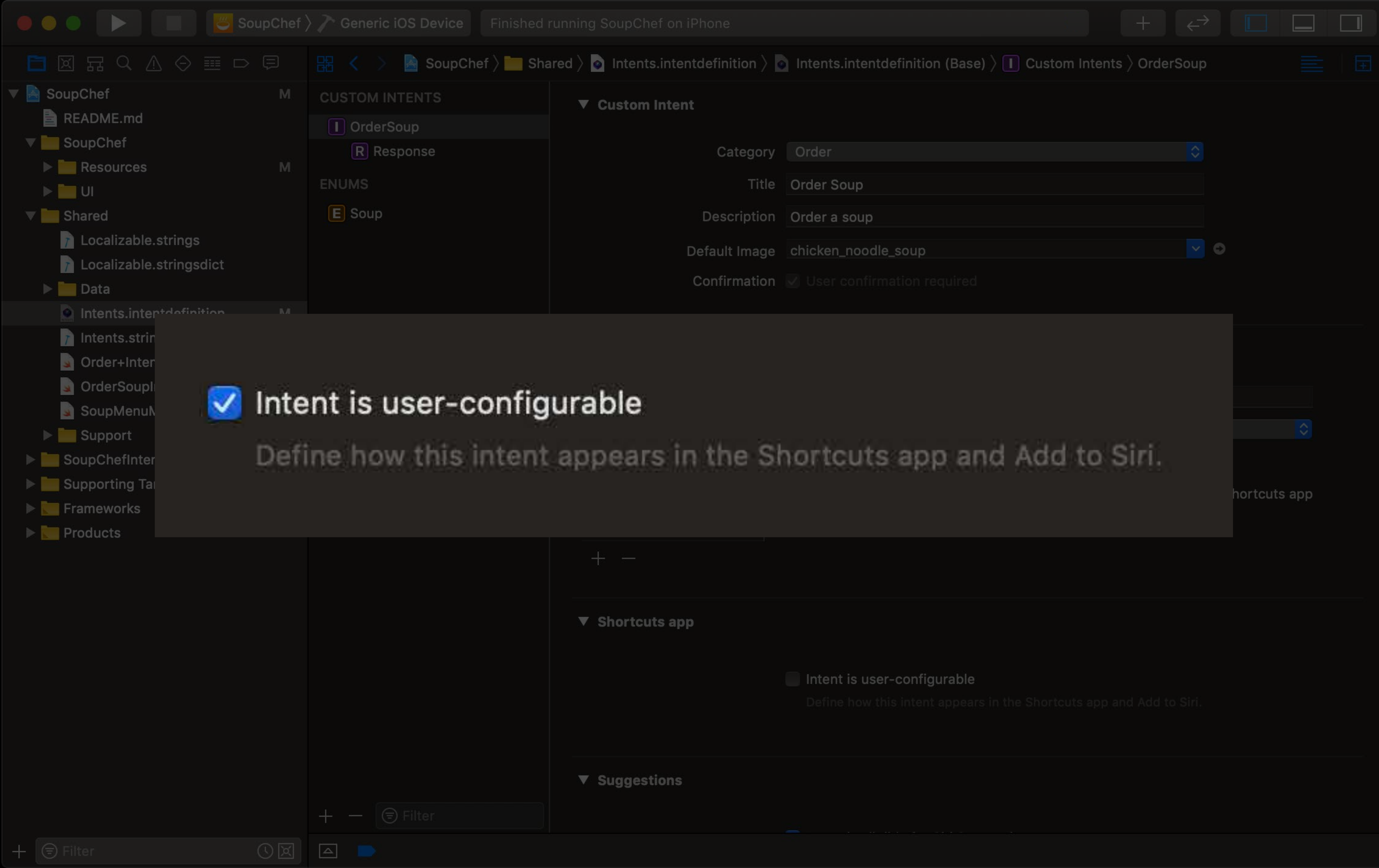
Define how this intent appears in the Shortcuts app and Add to Siri.

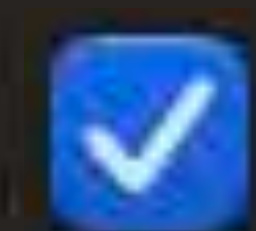
▼ **Shortcuts app**

Intent is user-configurable

Define how this intent appears in the Shortcuts app and Add to Siri.

▼ **Suggestions**



 **Intent is user-configurable**

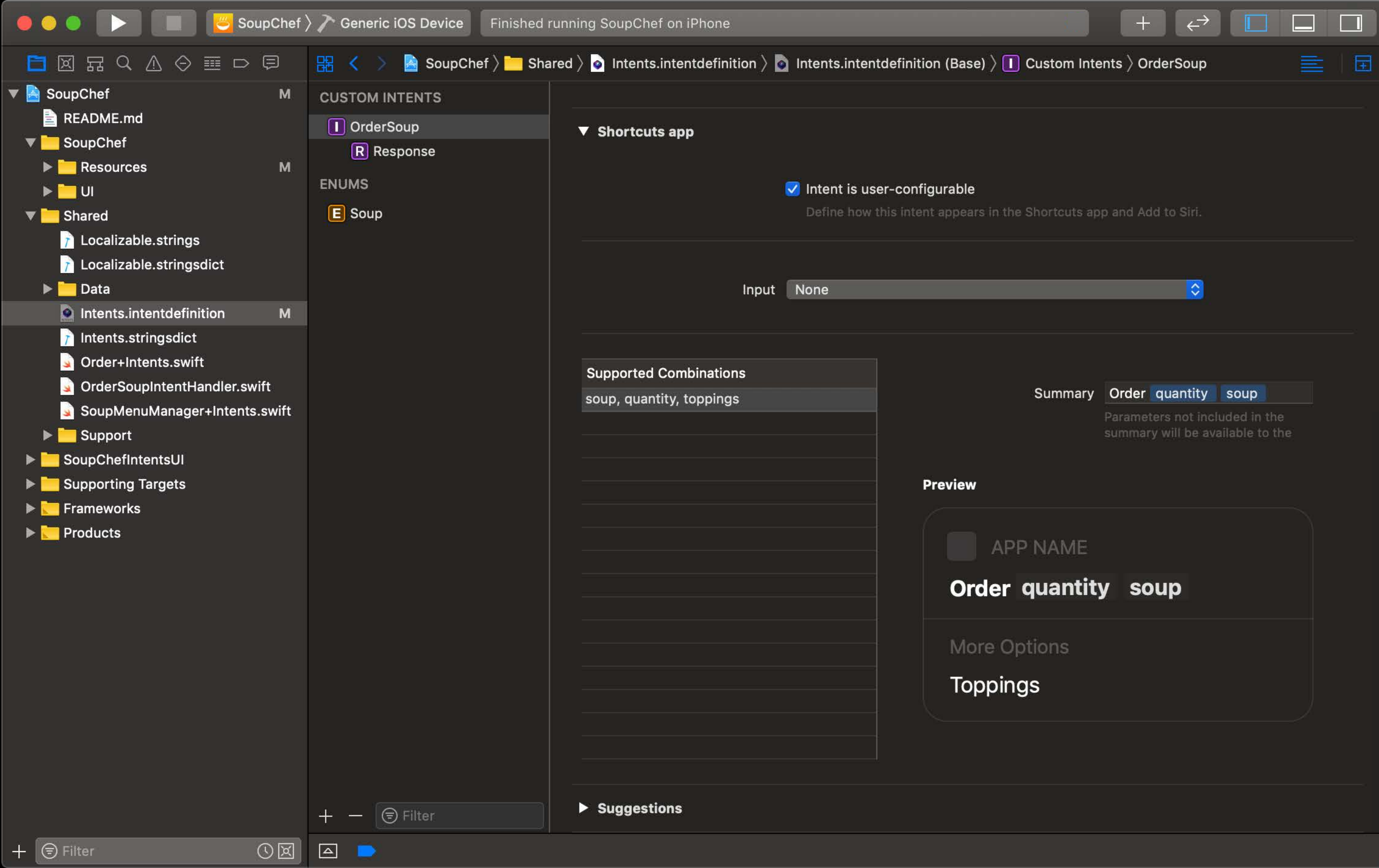
Define how this intent appears in the Shortcuts app and Add to Siri.

▼ Shortcuts app

Intent is user-configurable

Define how this intent appears in the Shortcuts app and Add to Siri.

▼ Suggestions



- ▼ SoupChef
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 - Products

Summary Order quantity soup

Parameters not included in the summary will be available to the

Preview

APP NAME

Order quantity soup

More Options

Toppings

Order quantity soup

Parameters not included in the summary will be available to the

Order quantity soup

9:41



Done

Order Soup



SOUP CHEF



Order 1 Clam Chowder

Show More

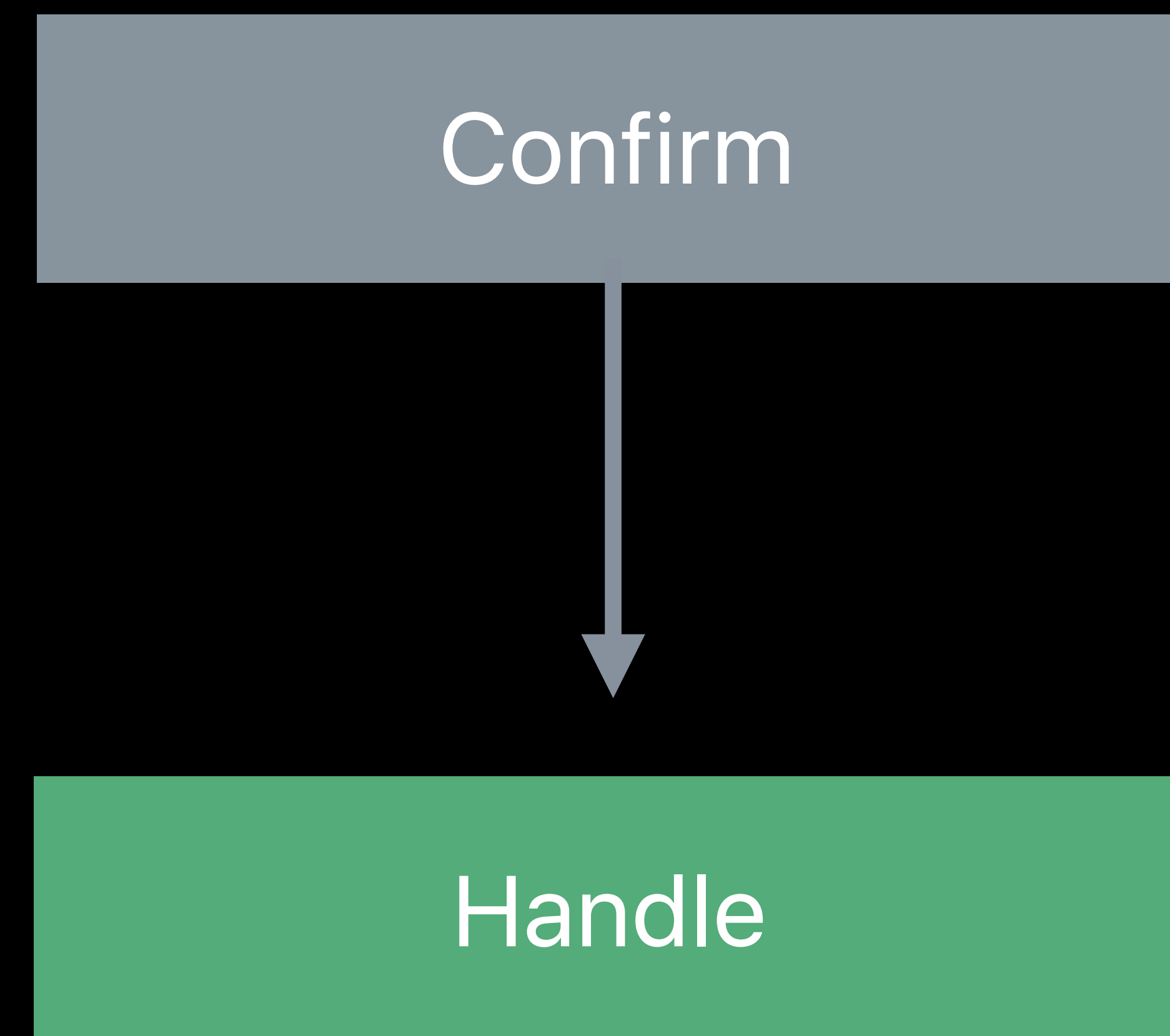


Search for apps and actions



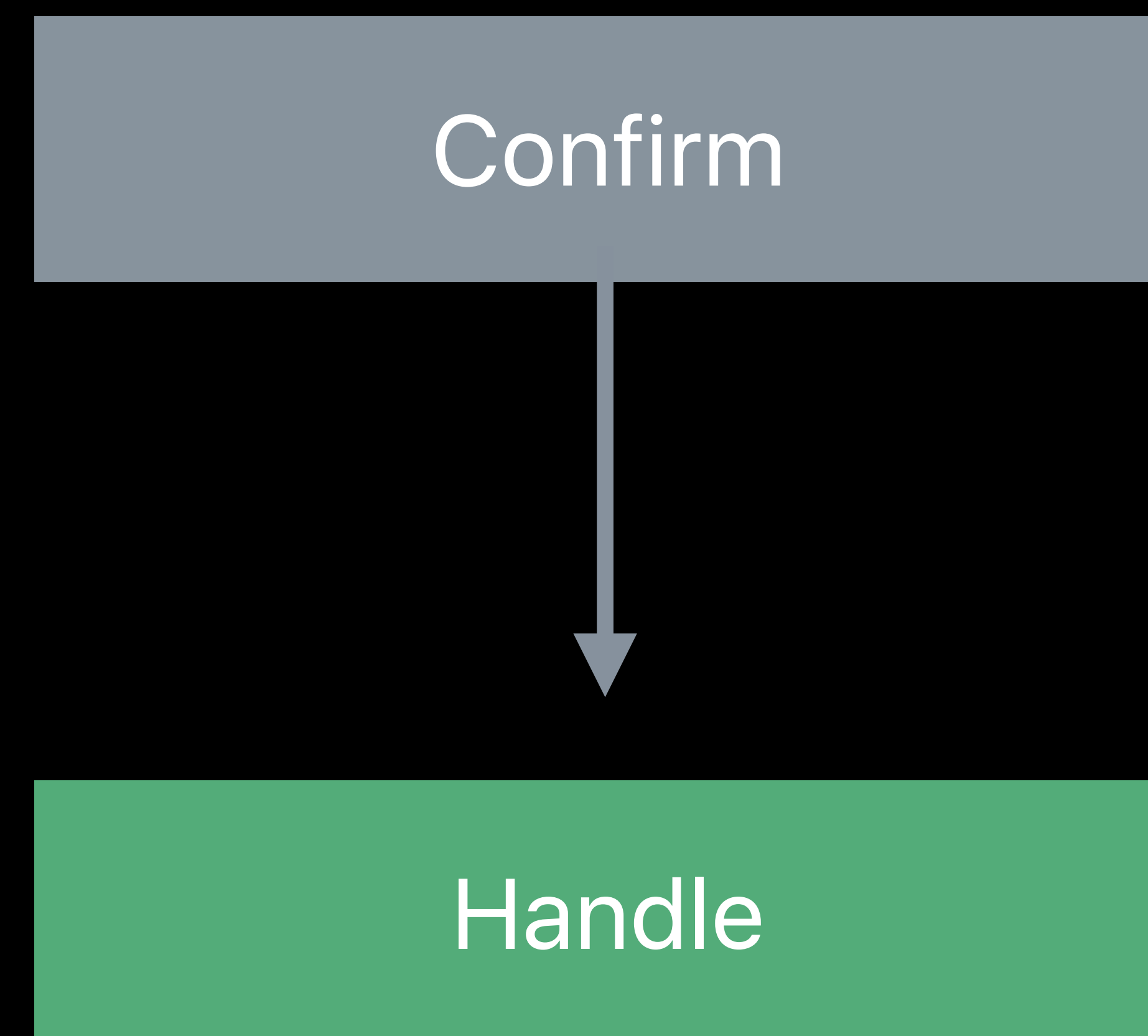
Parameter Resolution

Lifecycle of an Intent



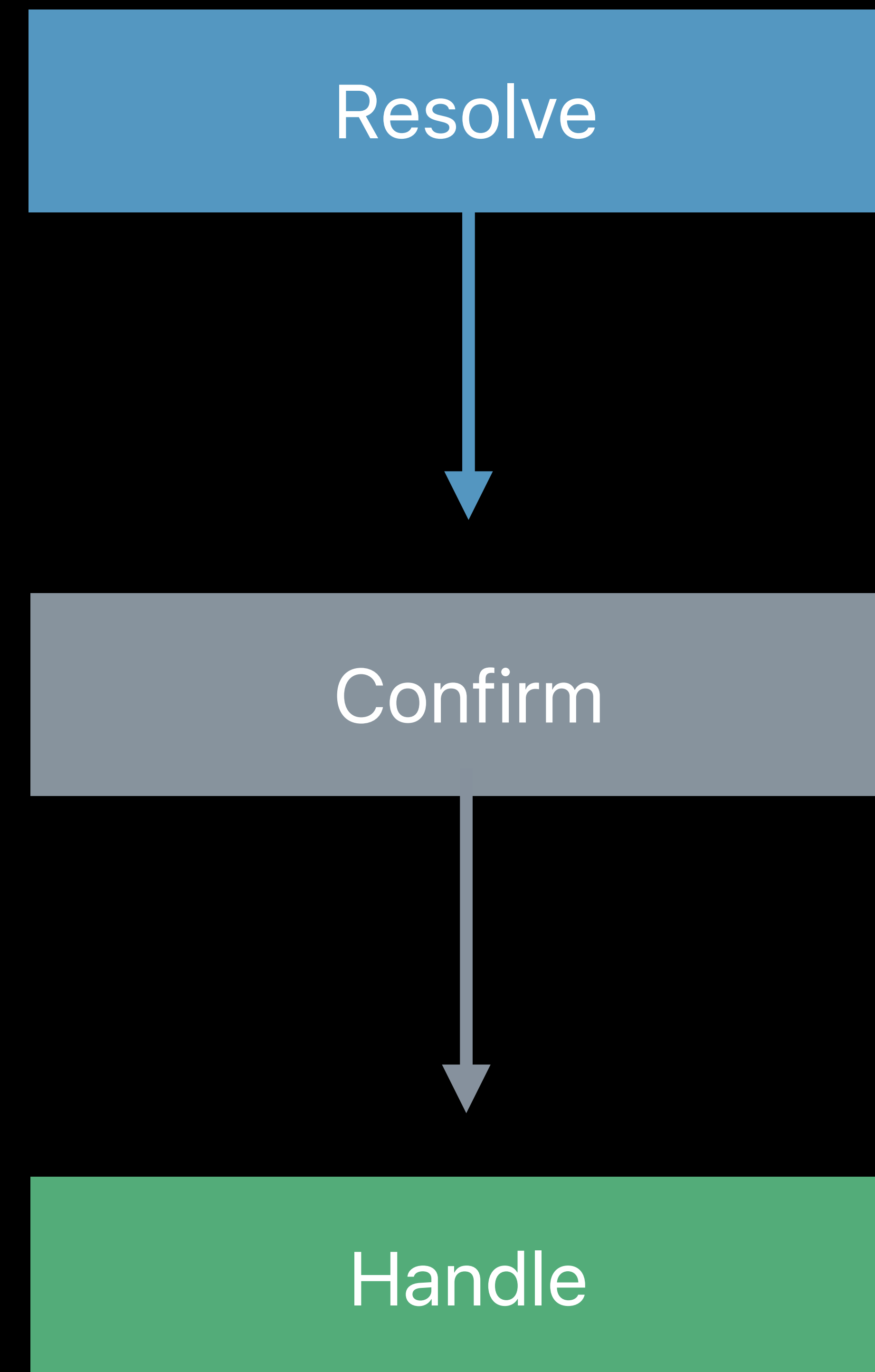
Lifecycle of an Intent

NEW



Lifecycle of an Intent

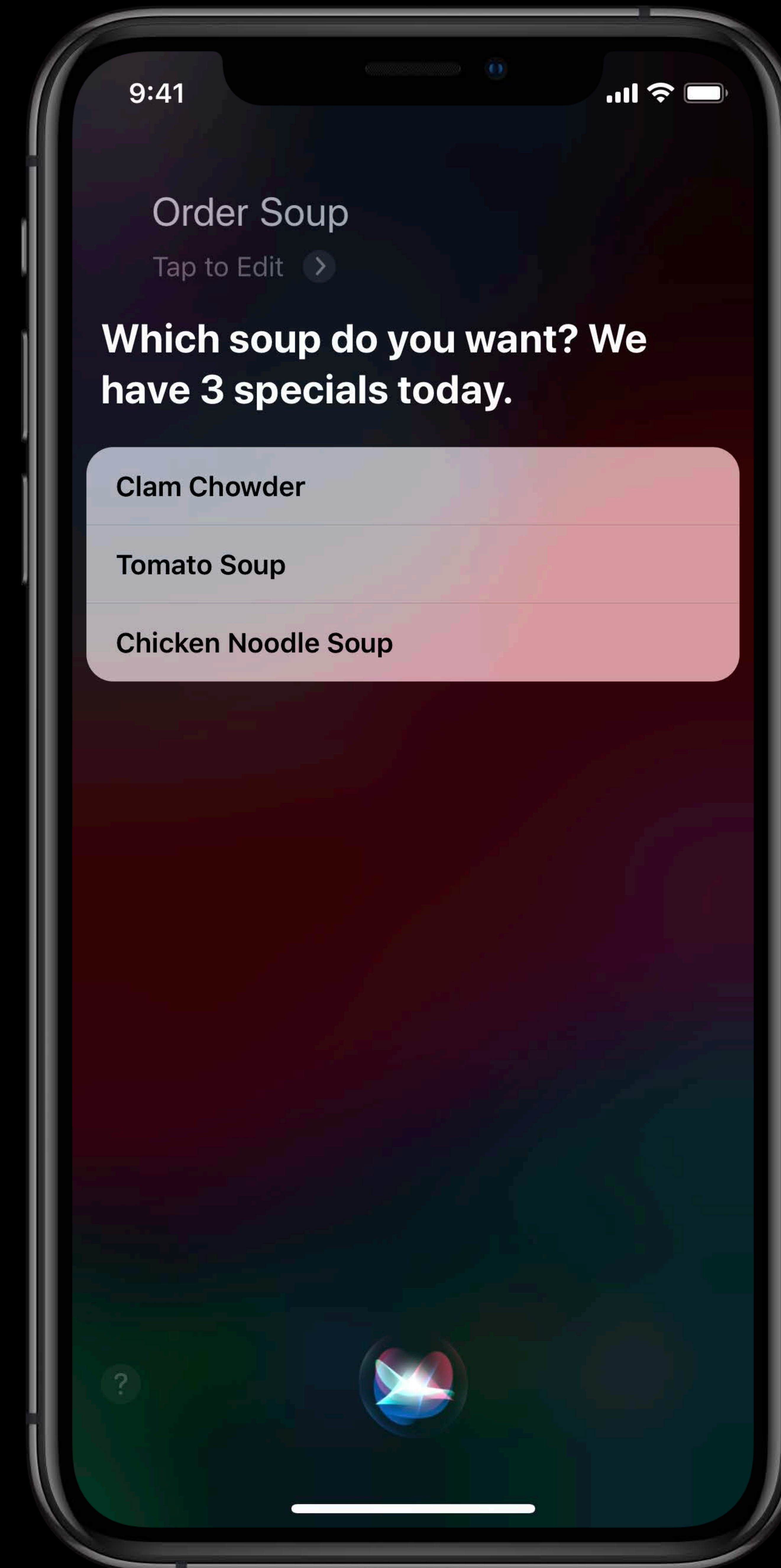
NEW



Lifecycle of an Intent

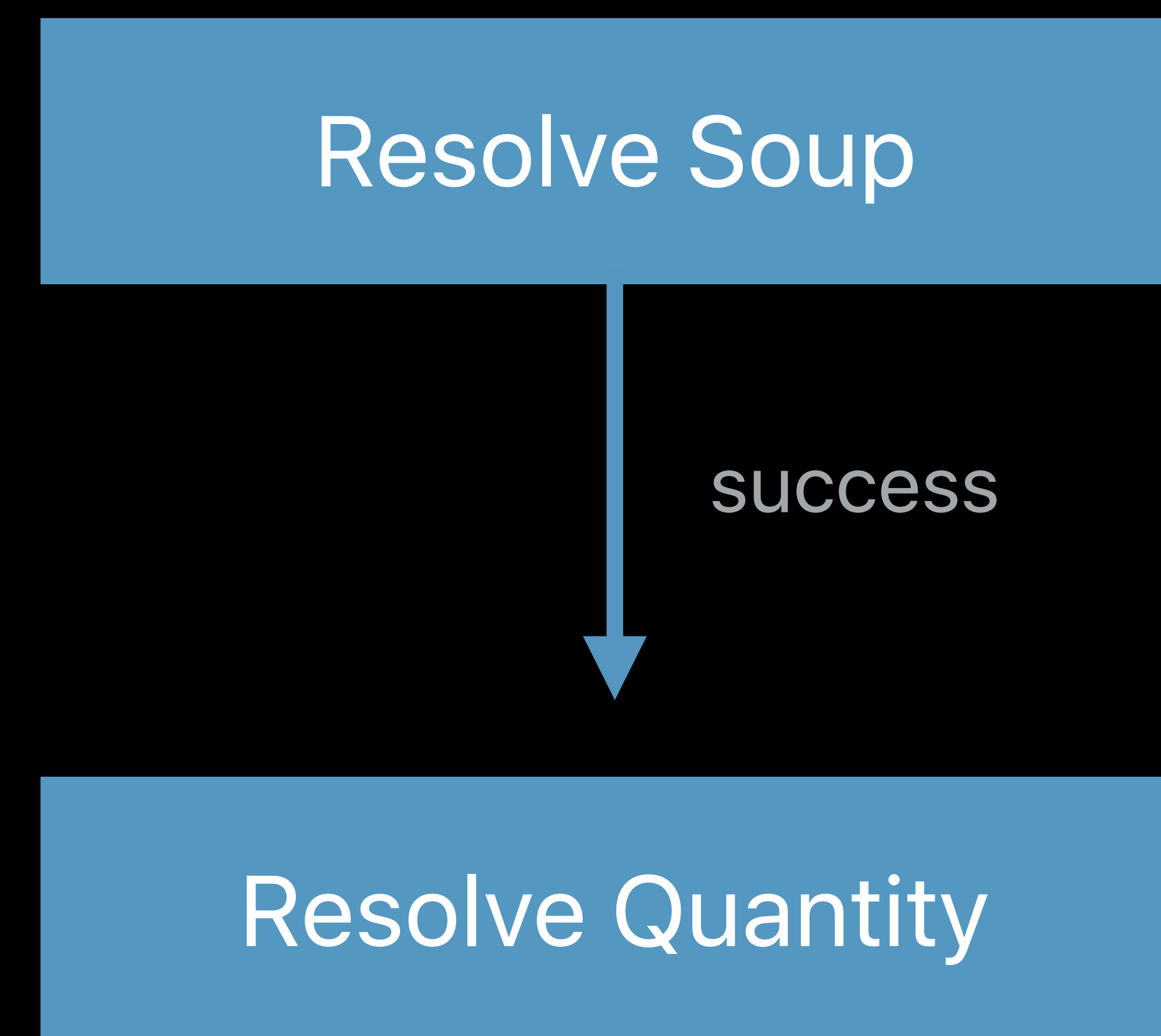
Resolve

Resolve Soup



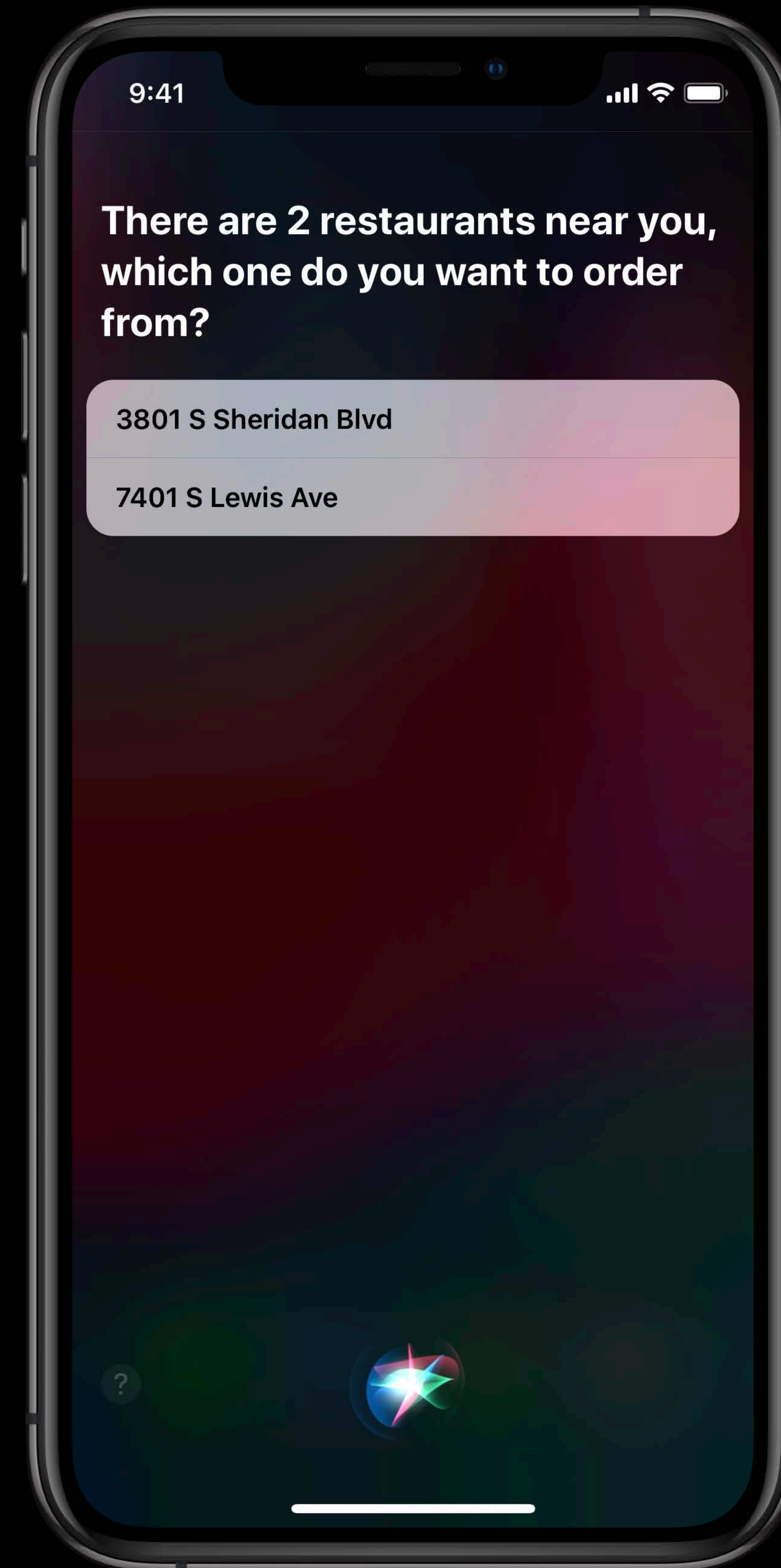
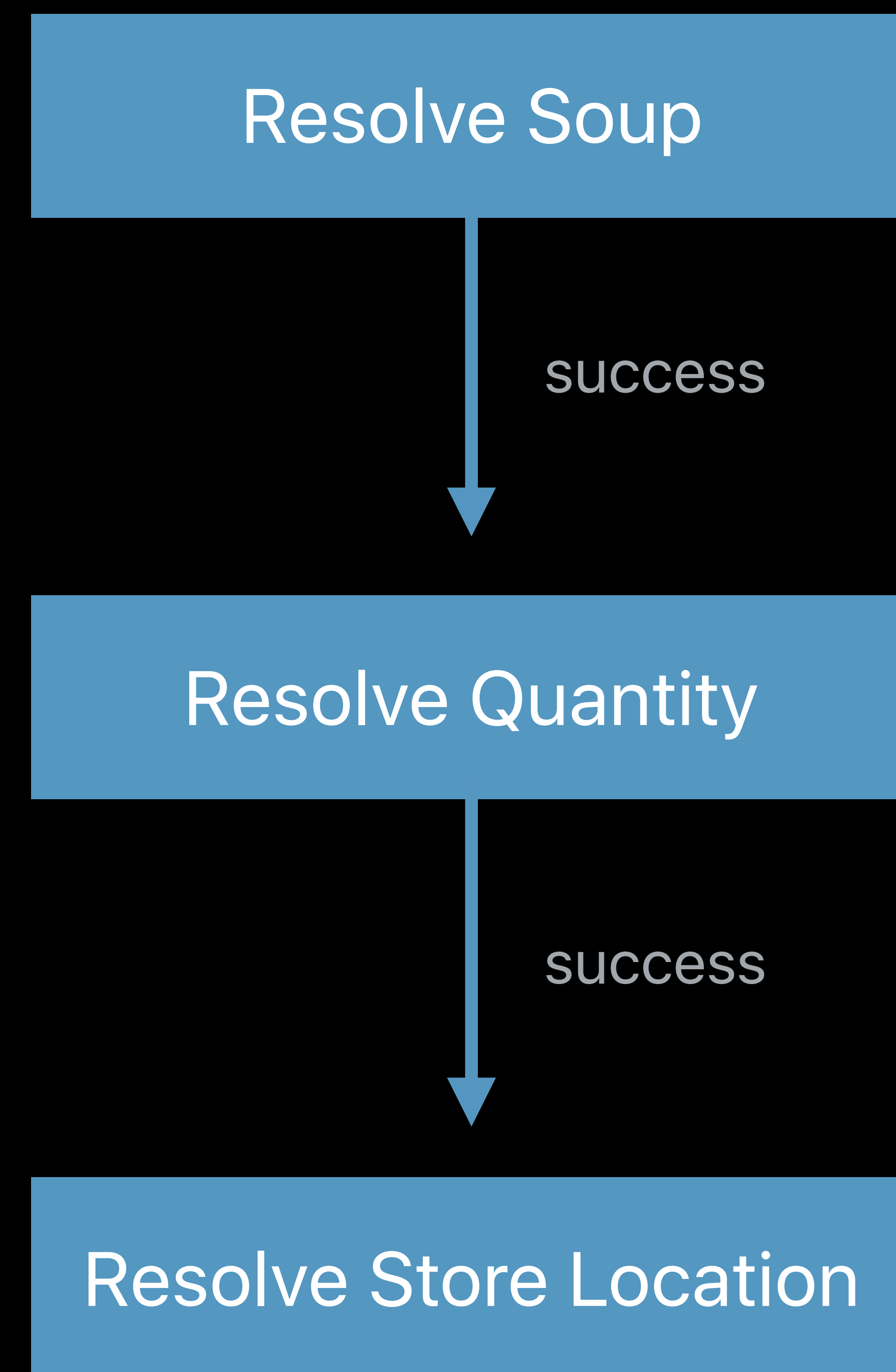
Lifecycle of an Intent

Resolve



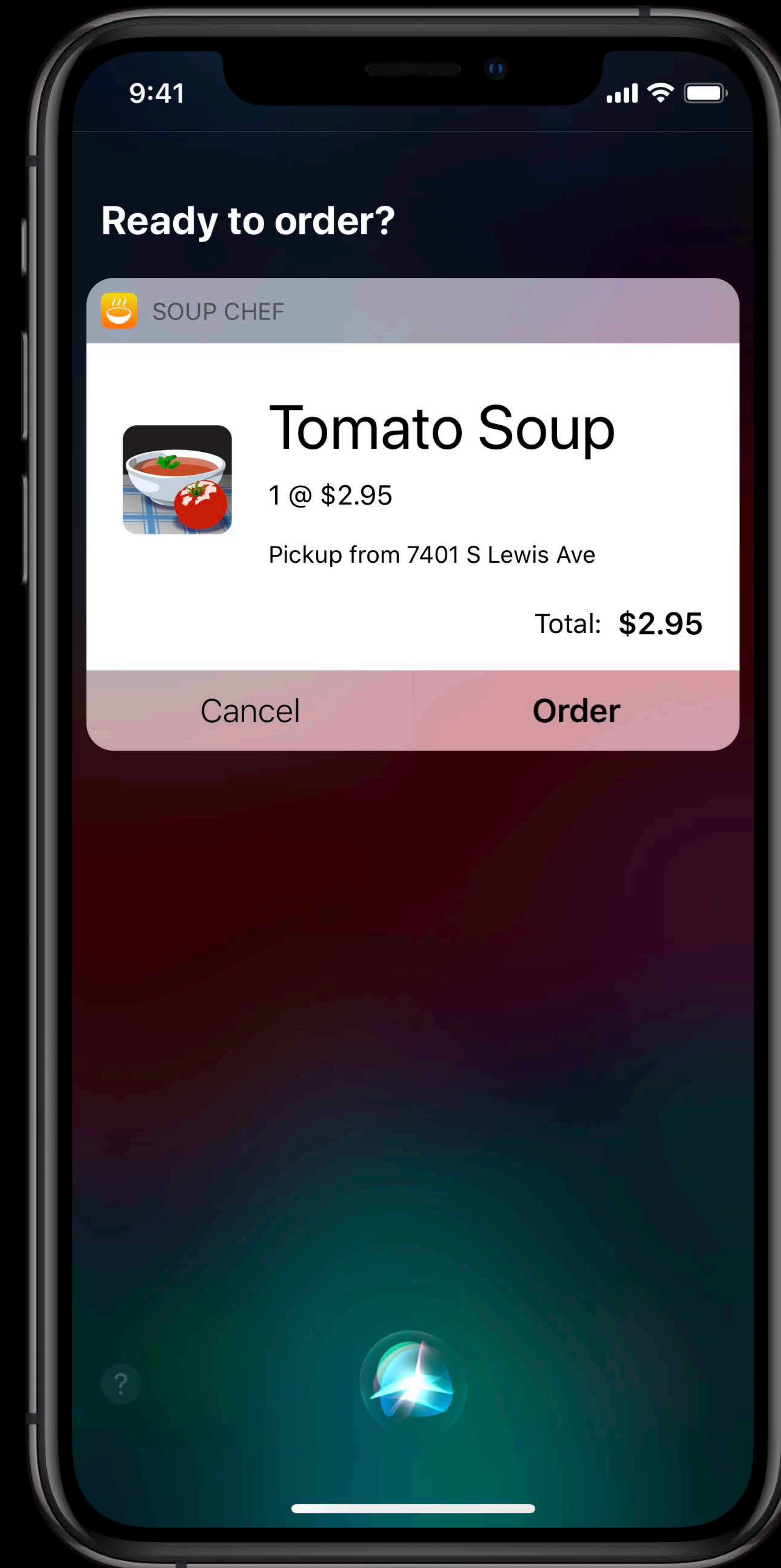
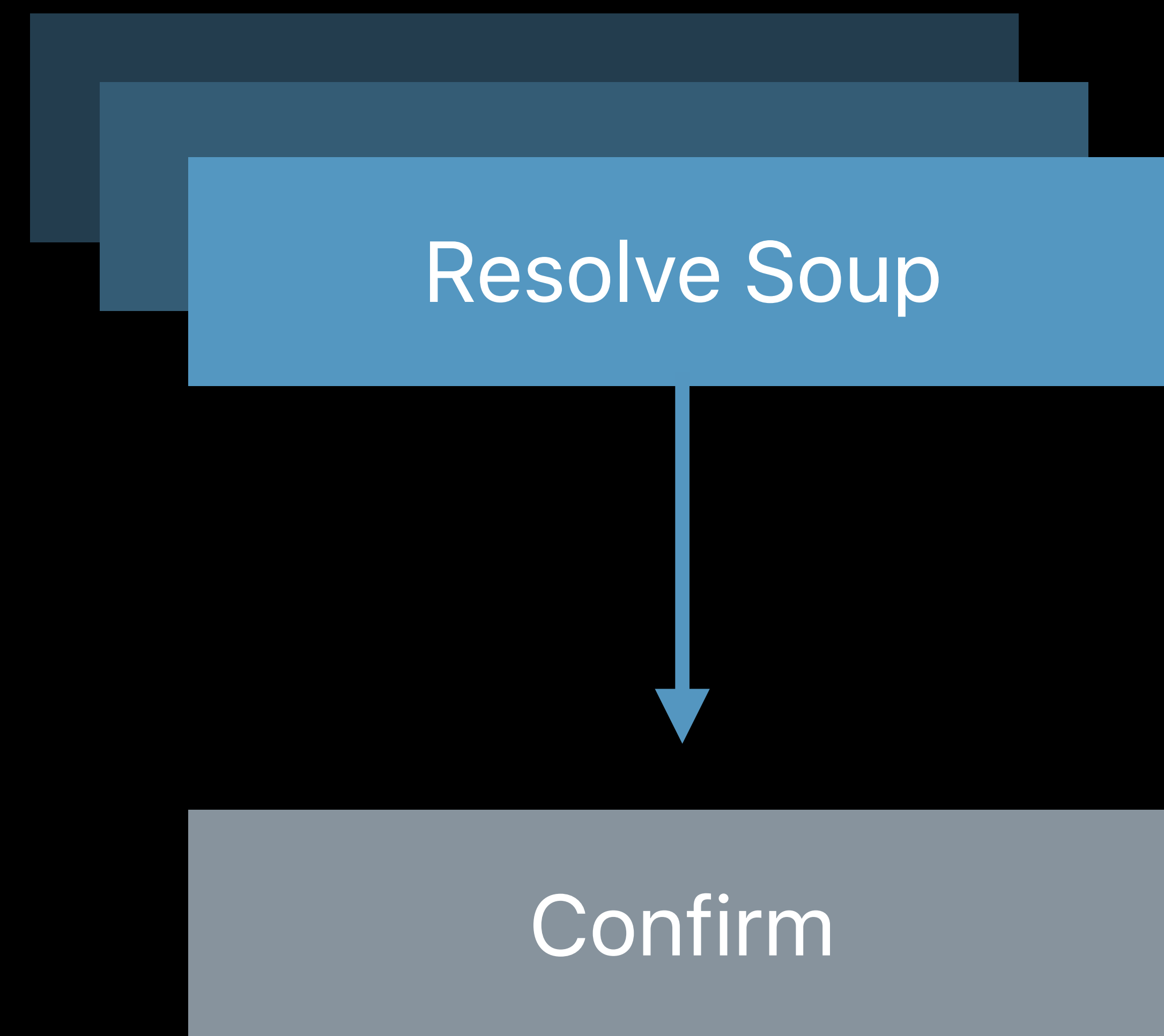
Lifecycle of an Intent

Resolve



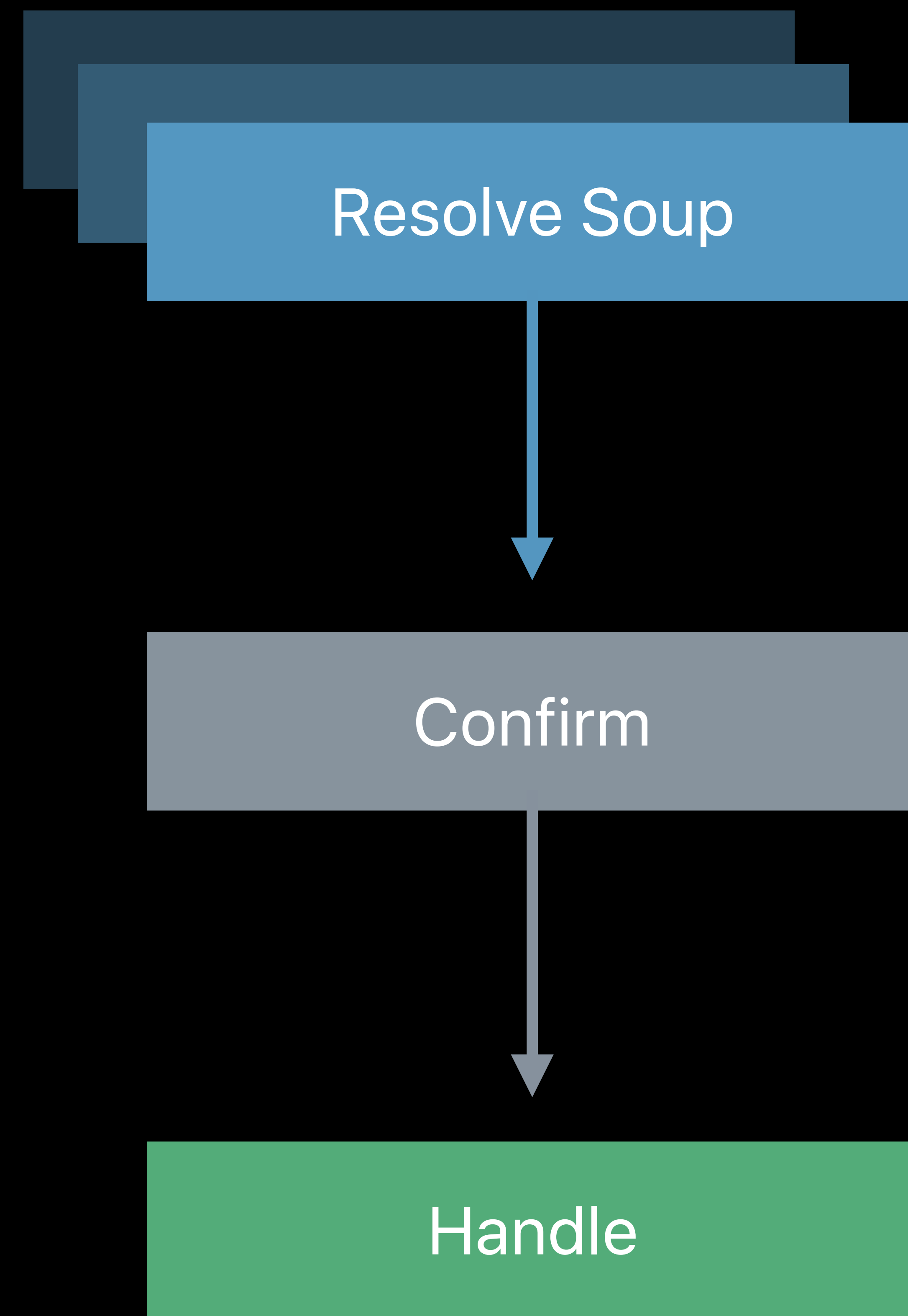
Lifecycle of an Intent

Confirm



Lifecycle of an Intent

Handle



```
public class OrderSoupIntent: INIntent {
    public var items: [INObject]?
    public var deliveryLocation: CLPlacemark?
}
```

```
public protocol OrderSoupIntentHandling: NSObjectProtocol {
    optional func confirm(intent: OrderSoupIntent, completion: @escaping
(OrderSoupIntentResponse) -> Void)
    func handle(intent: OrderSoupIntent, completion: @escaping (OrderSoupIntentResponse) ->
Void)
}
```



```
public class OrderSoupIntent: INIntent {  
    public var items: [INObject]?  
    public var deliveryLocation: CLPlacemark?  
}
```

```
public protocol OrderSoupIntentHandling: NSObjectProtocol {  
    optional func confirm(intent: OrderSoupIntent, completion: @escaping  
(OrderSoupIntentResponse) -> Void)  
    func handle(intent: OrderSoupIntent, completion: @escaping (OrderSoupIntentResponse) ->  
Void)  
}
```

```
public class OrderSoupIntent: INIntent {
    public var items: [INObject]?
    public var deliveryLocation: CLPlacemark?
}
```

```
public protocol OrderSoupIntentHandling: NSObjectProtocol {
    optional func confirm(intent: OrderSoupIntent, completion: @escaping
(OrderSoupIntentResponse) -> Void)
    func handle(intent: OrderSoupIntent, completion: @escaping (OrderSoupIntentResponse) ->
Void)
    func resolveSoup(for intent: OrderSoupIntent, with completion: @escaping
(SoupResolutionResult) -> Void)
    func resolveQuantity(for intent: OrderSoupIntent, with completion: @escaping
(OrderSoupQuantityResolutionResult) -> Void) {
    func resolveStoreLocation(for intent: OrderSoupIntent, with completion: @escaping
(INPlacemarkResolutionResult) -> Void)
}
```



```
public class OrderSoupIntent: INIntent {
    public var items: [INObject]?
    public var deliveryLocation: CLPlacemark?
}
```

```
public protocol OrderSoupIntentHandling: NSObjectProtocol {
    optional func confirm(intent: OrderSoupIntent, completion: @escaping
(OrderSoupIntentResponse) -> Void)
    func handle(intent: OrderSoupIntent, completion: @escaping (OrderSoupIntentResponse) ->
Void)
    func resolveSoup(for intent: OrderSoupIntent, with completion: @escaping
(SoupResolutionResult) -> Void)
    func resolveQuantity(for intent: OrderSoupIntent, with completion: @escaping
(OrderSoupQuantityResolutionResult) -> Void) {
        func resolveStoreLocation(for intent: OrderSoupIntent, with completion: @escaping
(INPlacemarkResolutionResult) -> Void)
    }
}
```


Intents.intentdefinition — Edited

SoupChef > Shared > Intents.intentdefinition > Intents.intentdefinition (Base) > Custom Intents > OrderSoup

CUSTOM INTENTS

- OrderSoup
- Response

ENUMS

- Soup
- OrderType

TYPES

- OrderInfo

Custom Intent

Category: Order

Title: Order Soup

Description: Order a soup

Default Image: chicken_noodle_soup

Confirmation: User confirmation required

Parameters

Parameter	Display Name	Type	Array	User-facing	Dynamic Options
soup					
quantity					
toppings	Toppings	Custom	<input checked="" type="checkbox"/> Supports multiple values	<input checked="" type="checkbox"/> User can supply value in Siri and Shortcuts app	<input checked="" type="checkbox"/> Valid values are provided dynamically
storeLocation					

Shortcuts app

Intent is user-configurable
Define how this intent appears in the Shortcuts app and Add to Siri.

Filter

- CUSTOM INTENTS
 - OrderSoup
 - Response
- ENUMS
 - Soup
 - OrderType
- TYPES
 - OrderInfo

Custom Intent

Category: Order

Title: Order Soup

Description: Order a soup

Default Image: chicken_noodle_soup

Confirmation: User confirmation required

Parameter

- Parameter
 - soup
 - quantity
 - toppings
 - storeLocation
- Shortcut

Display Name: Toppings

Type: Custom

Array: Supports multiple values

User-facing: User can supply value in Siri and Shortcuts app

Dynamic Options: Valid values are provided dynamically

Intent is user-configurable
Define how this intent appears in the Shortcuts app and Add to Siri.

+ - Filter



- CUSTOM INTENTS
 - OrderSoup
 - Response
- ENUMS
 - Soup
 - OrderType
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 - OrderInfo

Custom Intent

Category: Order

Title: Order Soup

Description: Order a soup

Default Image: chicken_noodle_soup

Confirmation: User confirmation required

Parameter

- Parameter
 - soup toppings
 - quantity
 - toppings
 - storeLocation

Display Name: Toppings

Type: Custom

Array: Supports multiple values

User-facing: User can supply value in Siri and Shortcuts app

Dynamic Options: Valid values are provided dynamically

Intent is user-configurable
Define how this intent appears in the Shortcuts app and Add to Siri.

+ - Filter

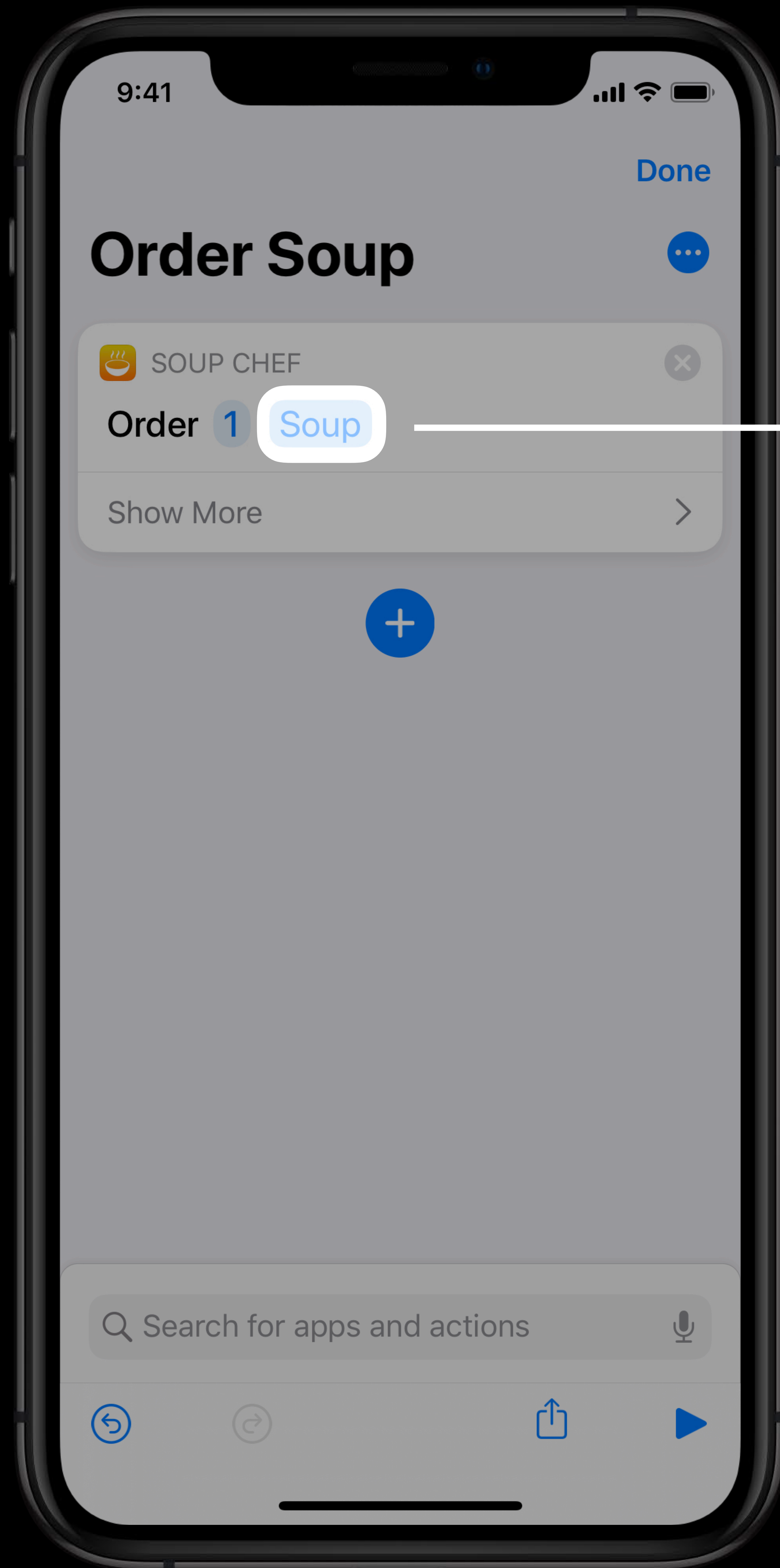
Lifecycle of an Intent

Resolve

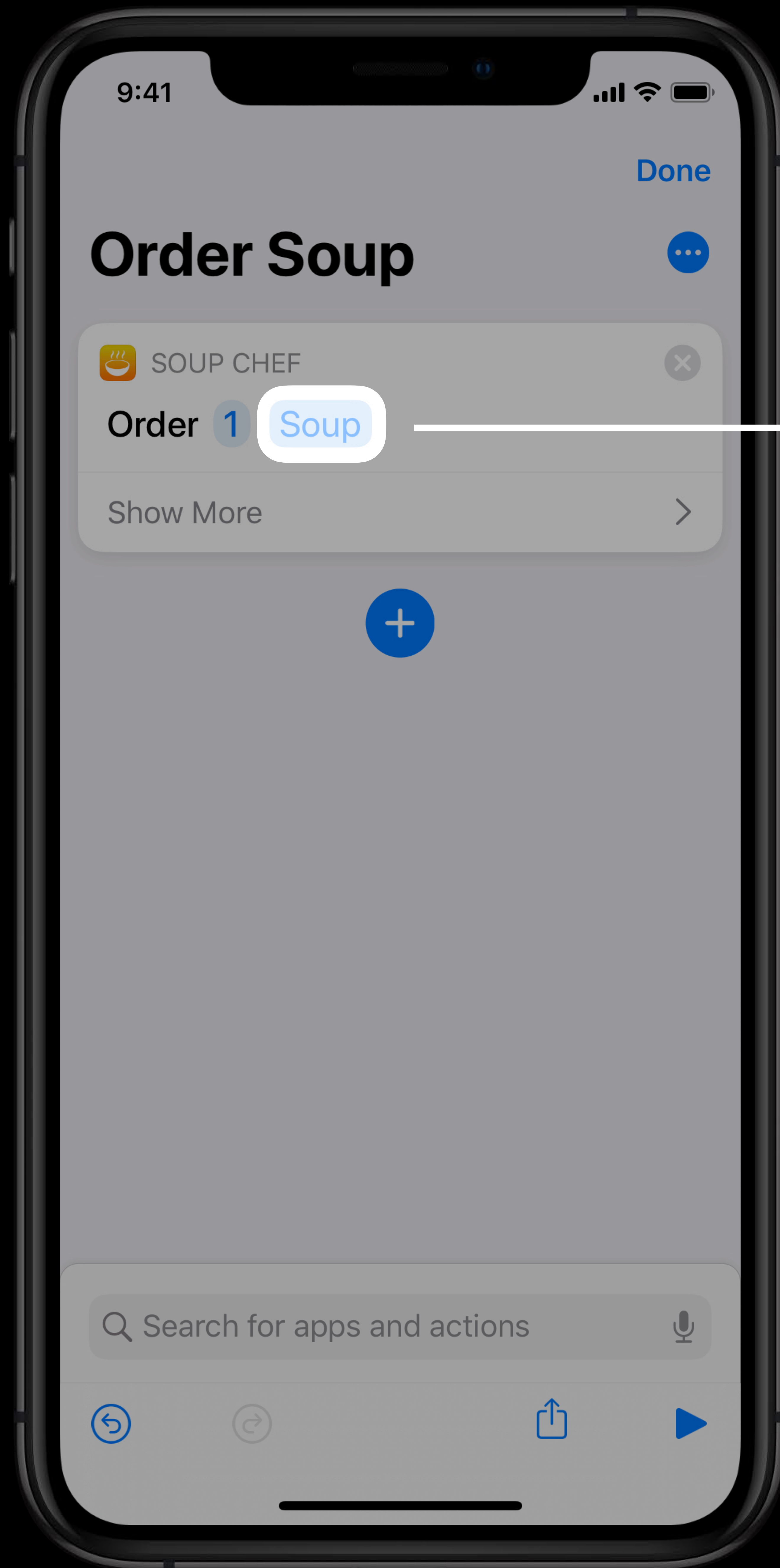
```
func resolveSoup(for intent: OrderSoupIntent, with completion: @escaping  
(SoupResolutionResult) -> Void)
```

Resolve Soup

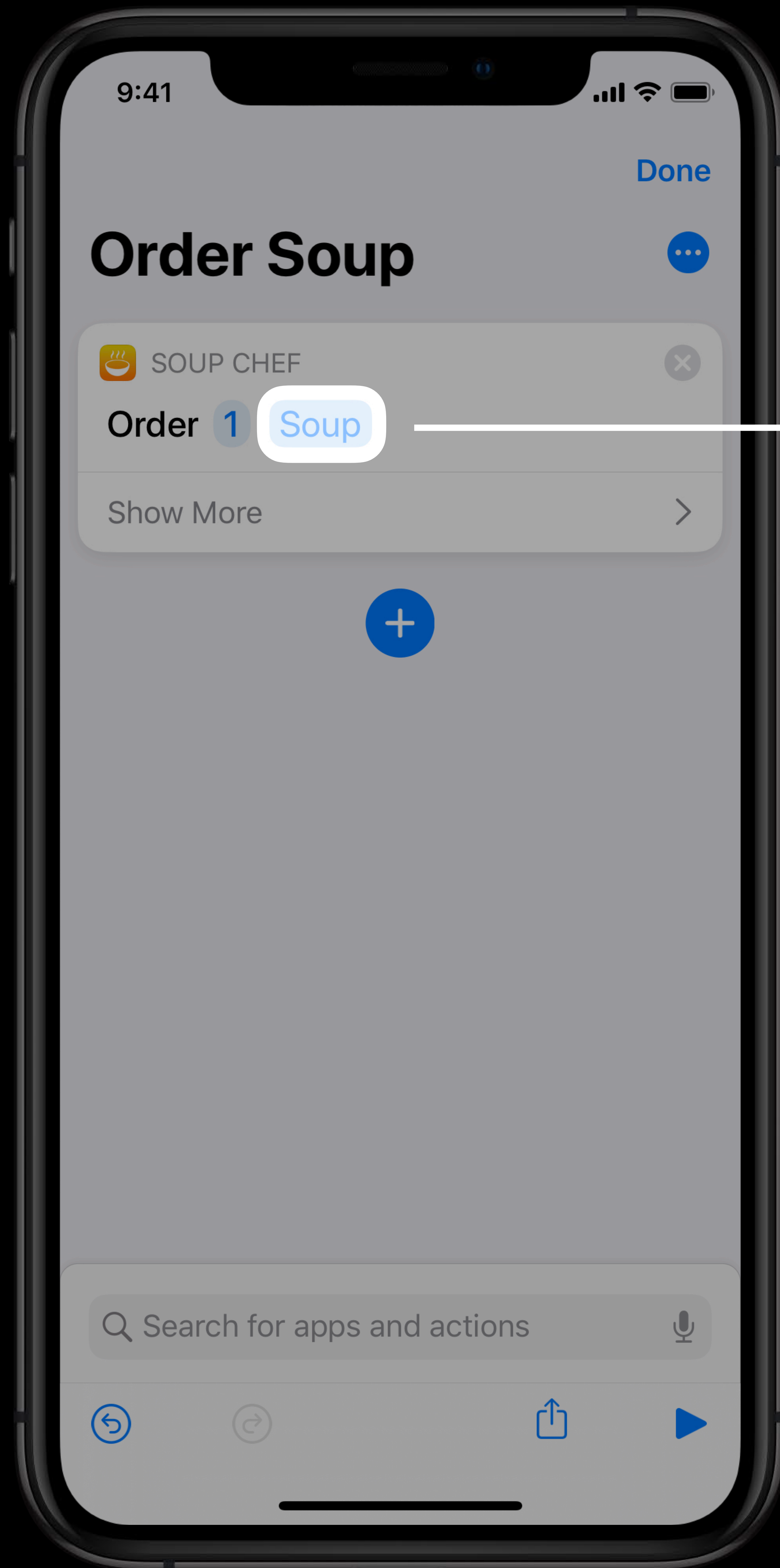
Resolve Soup



Resolve Soup

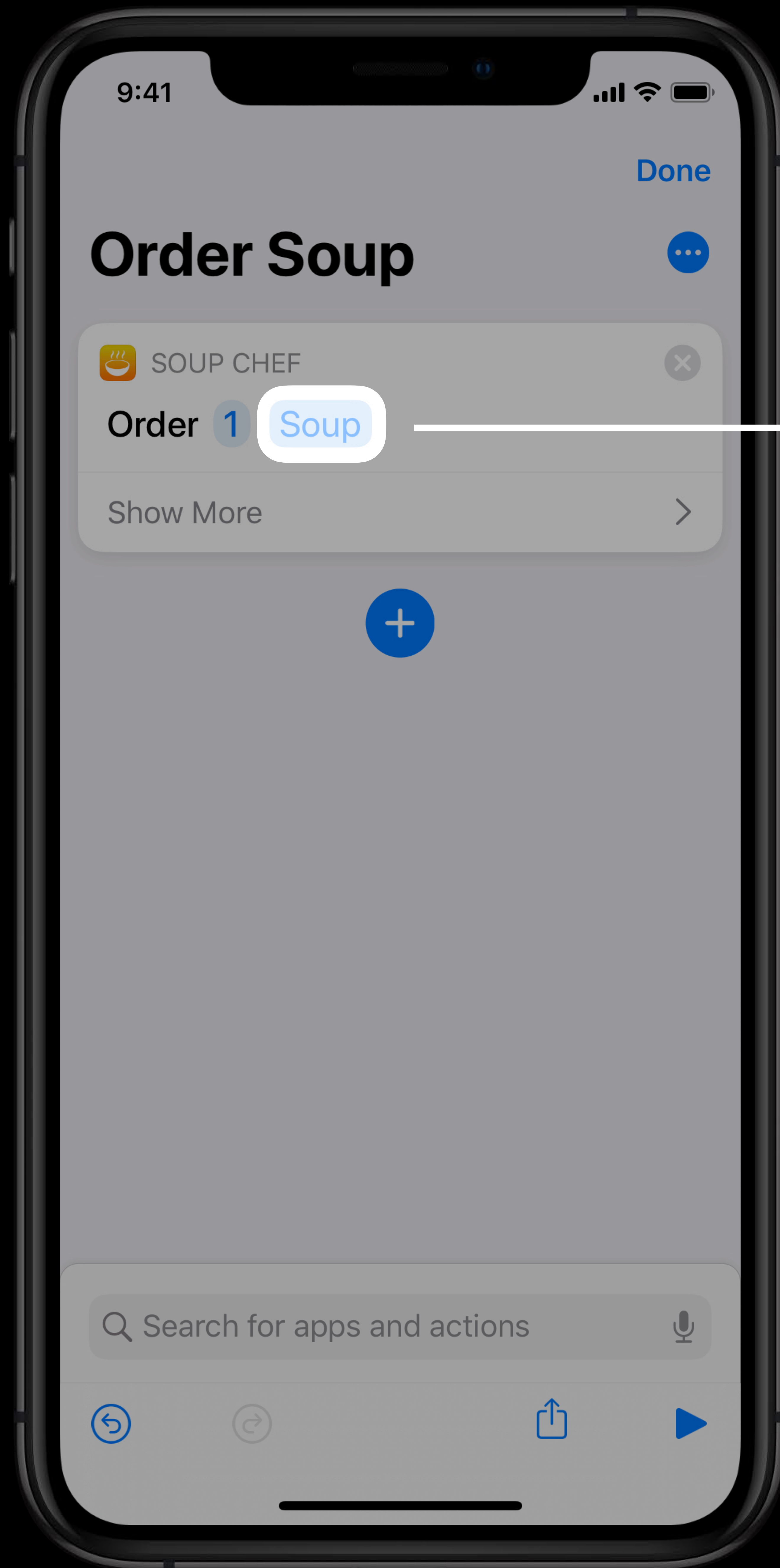


Resolve Soup



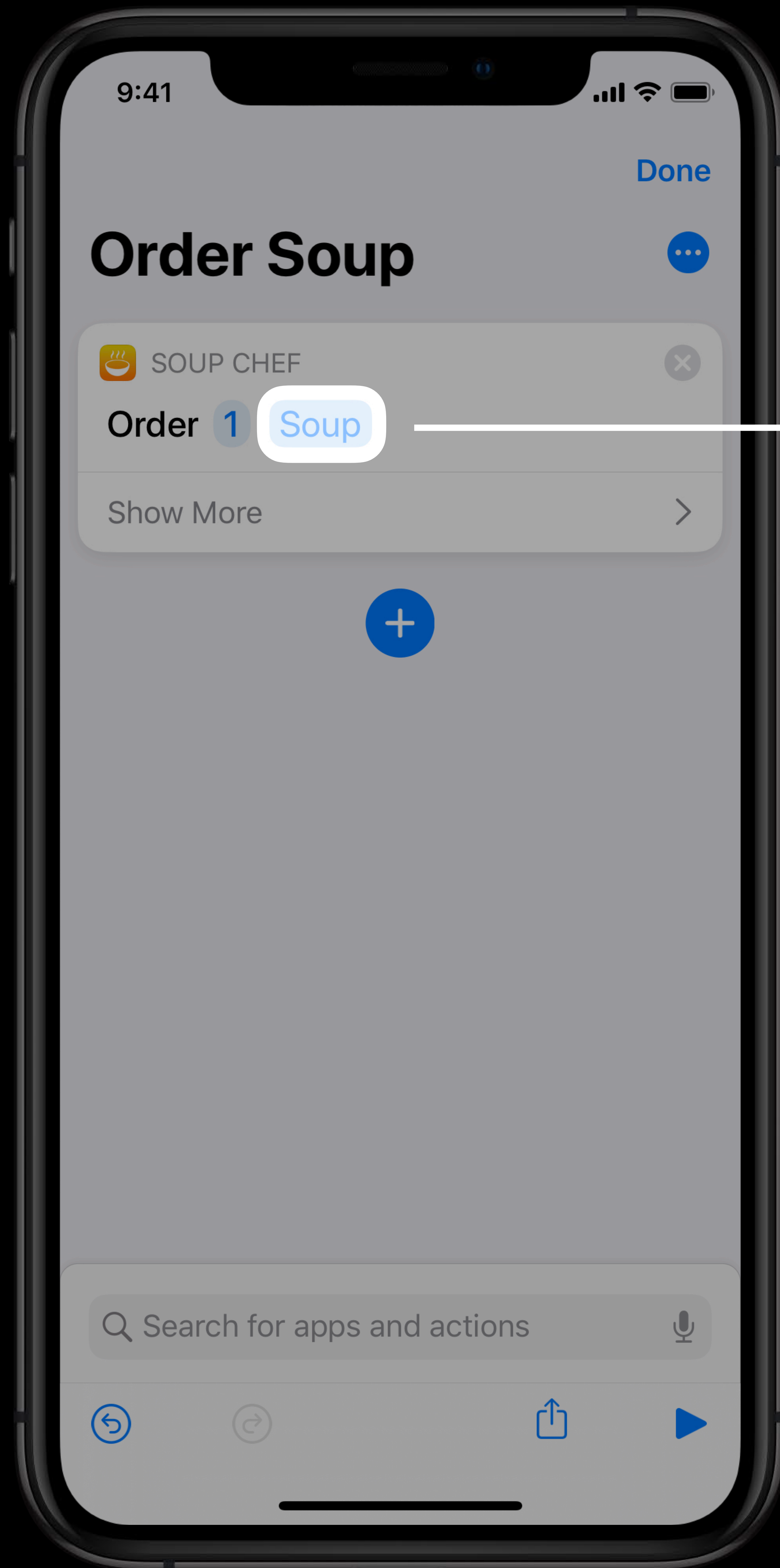
Resolve Soup

Resolution Result



Resolve Soup

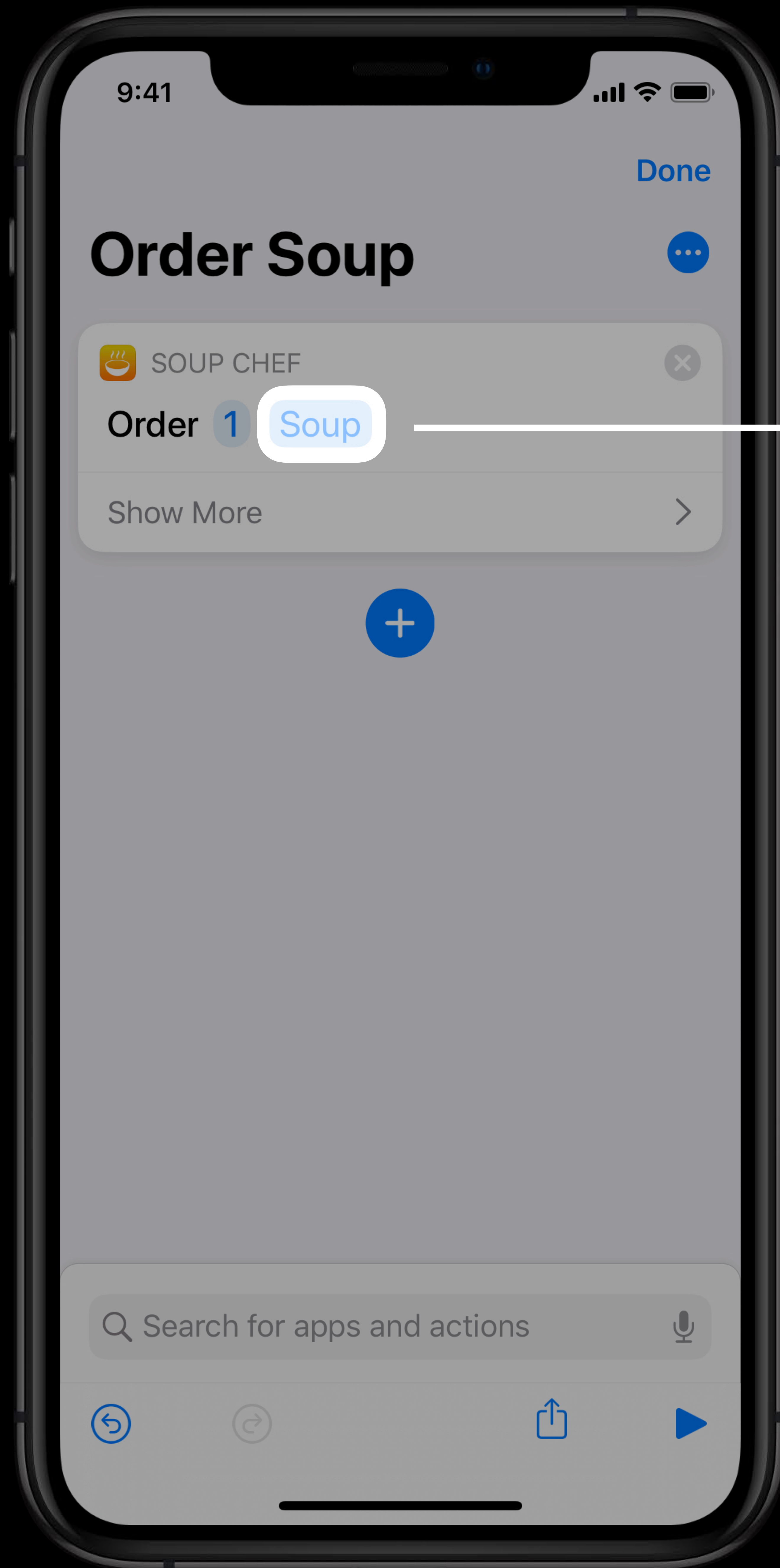
Resolution Result



Resolve Soup

Resolution Result

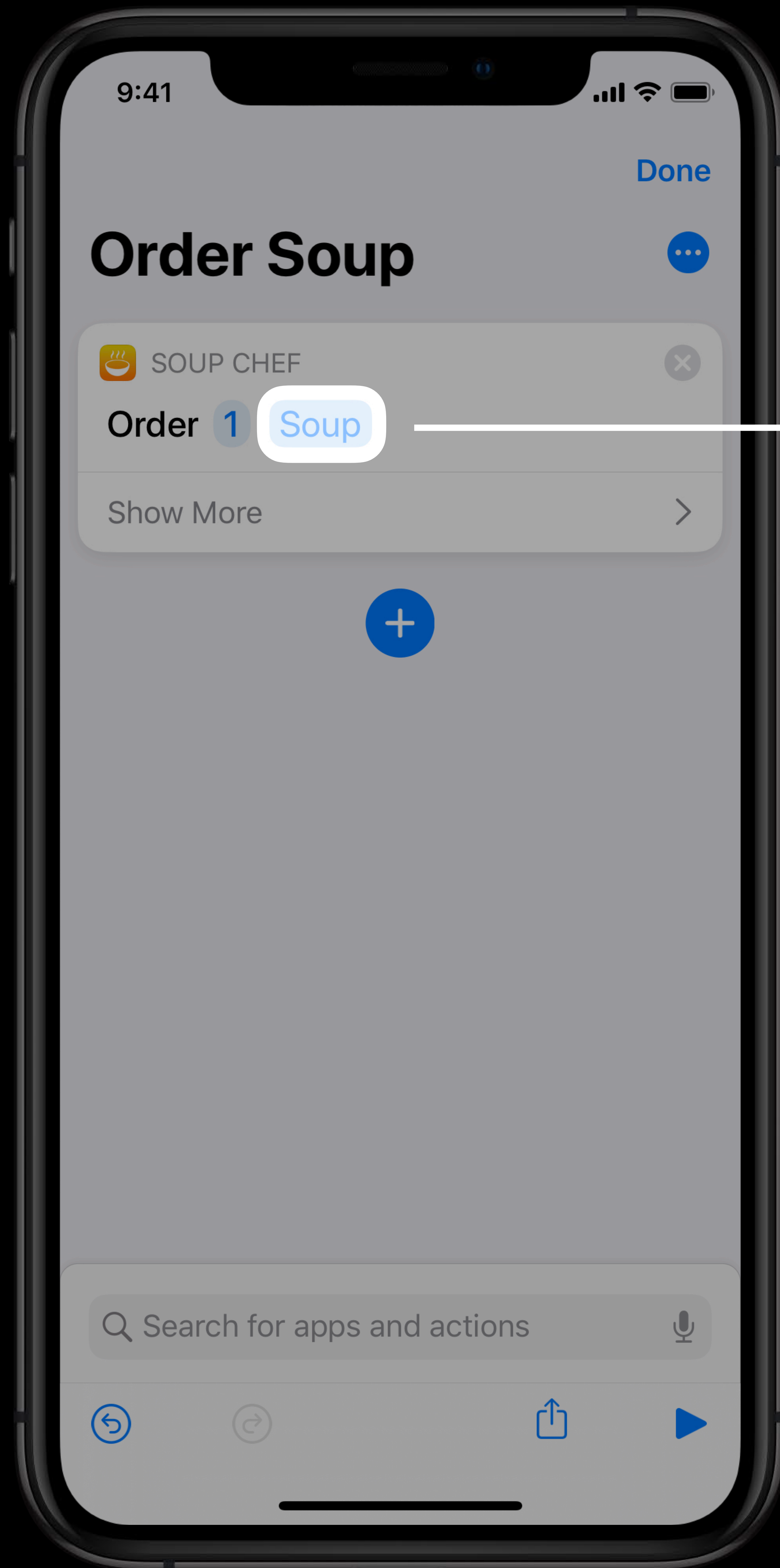
Needs Value



Resolve Soup

Resolution Result

Needs Value

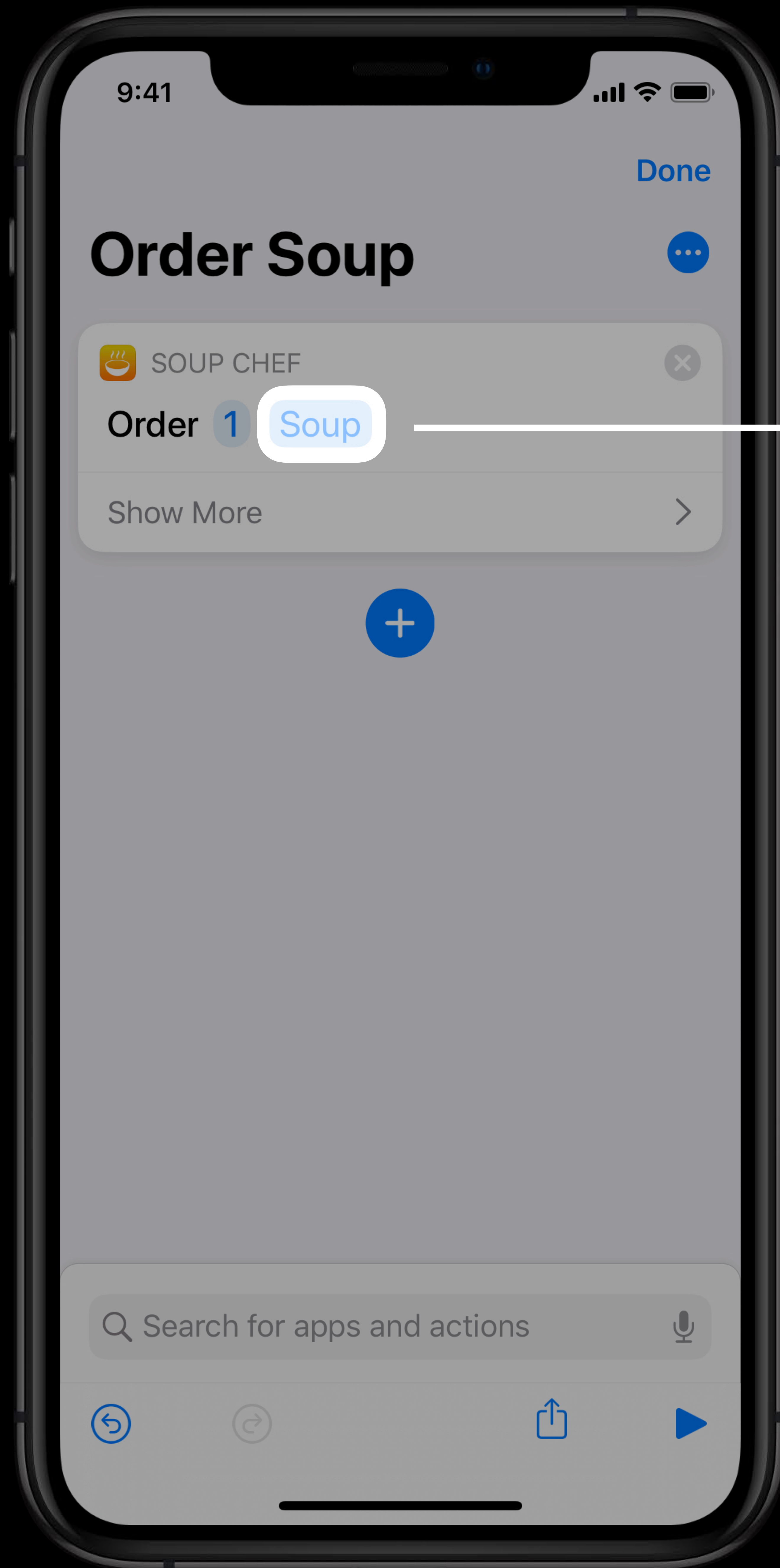


Resolve Soup

Resolution Result

Needs Value

SoupChef says:
"What type of soup
do you want?"

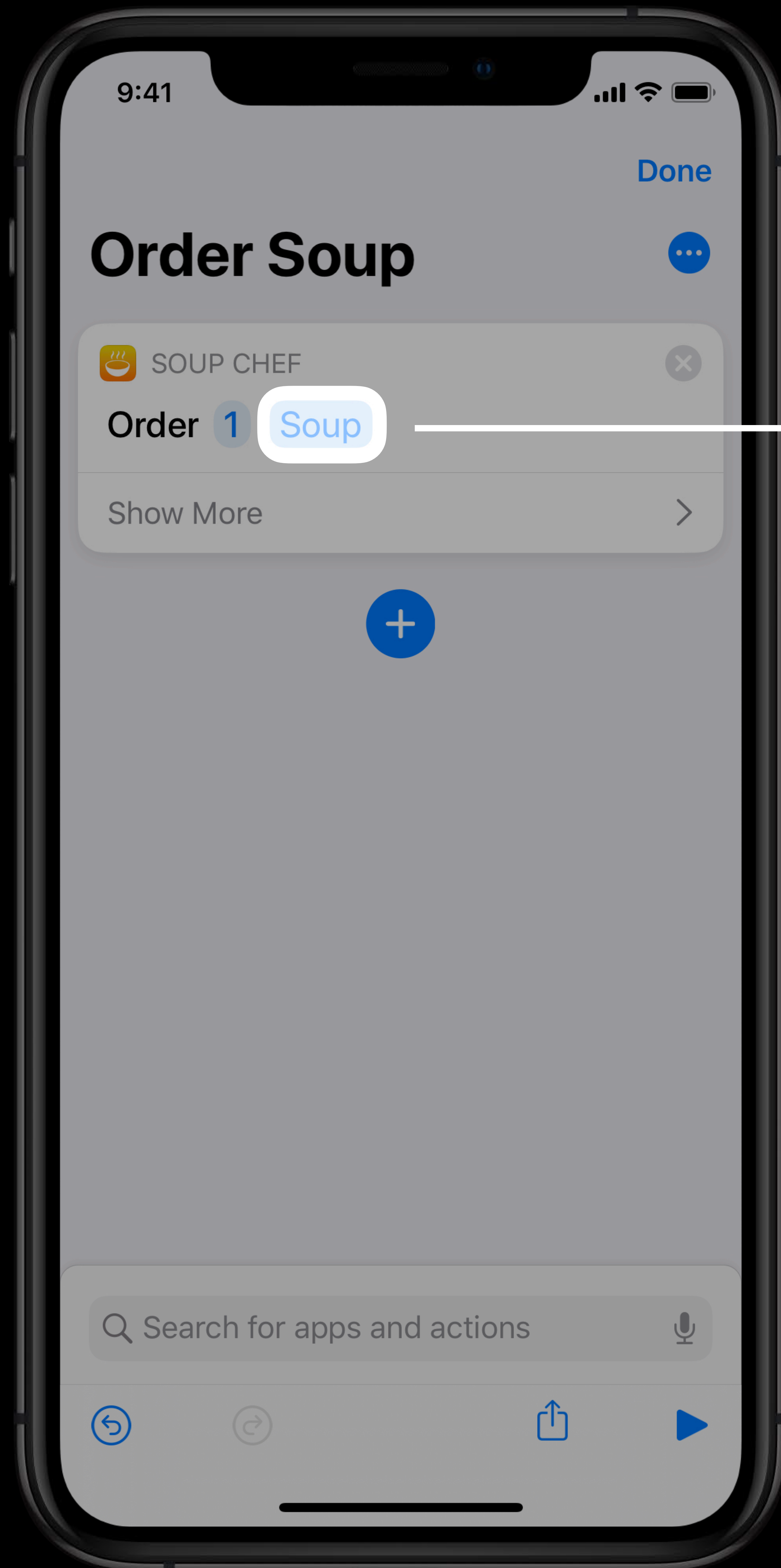


Resolve Soup

Resolution Result

Needs Value

SoupChef says:
"What type of soup
do you want?"



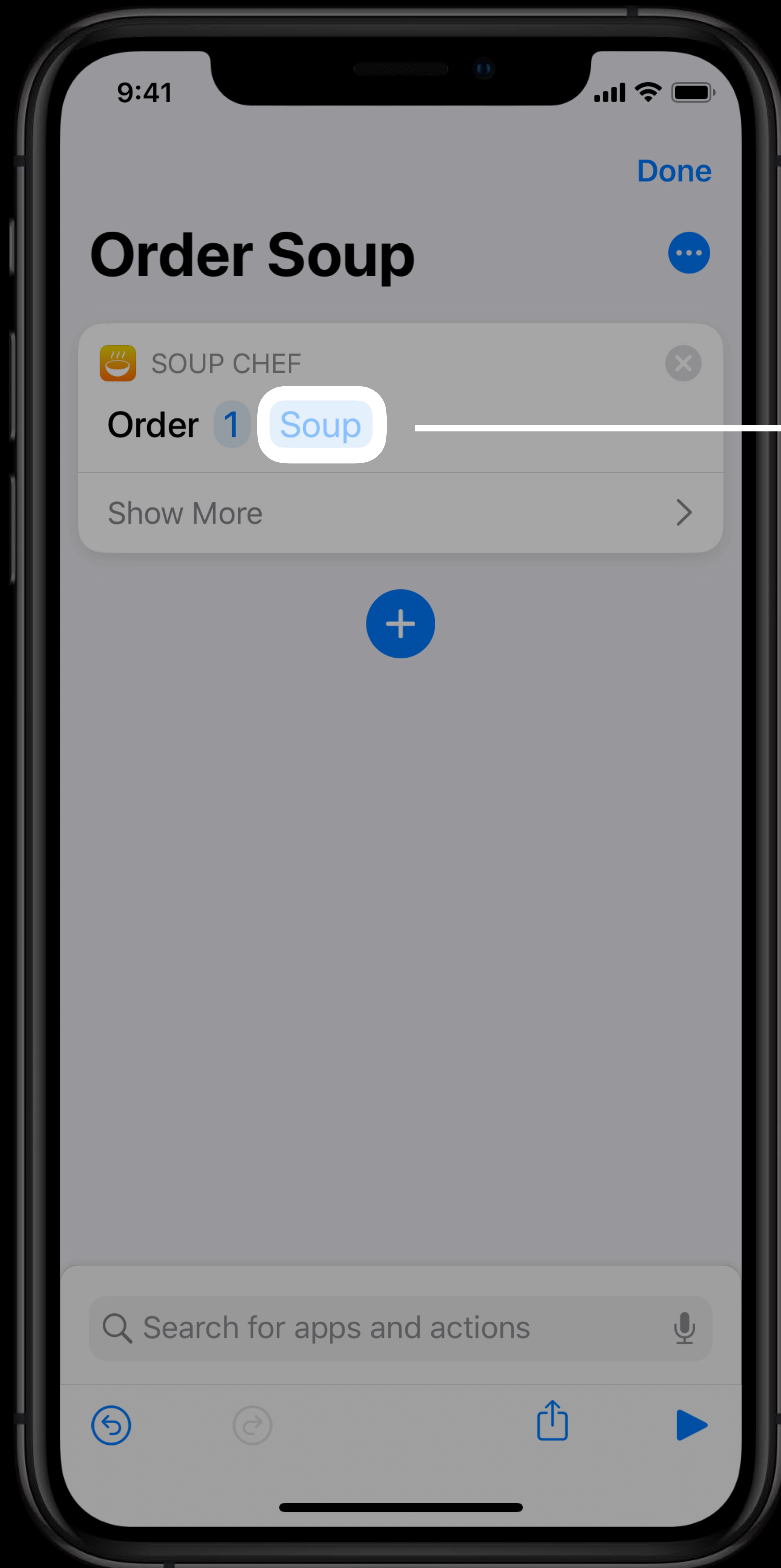
Resolve Soup

Resolution Result

Needs Value

SoupChef says:
"What type of soup
do you want?"

Clam Chowder



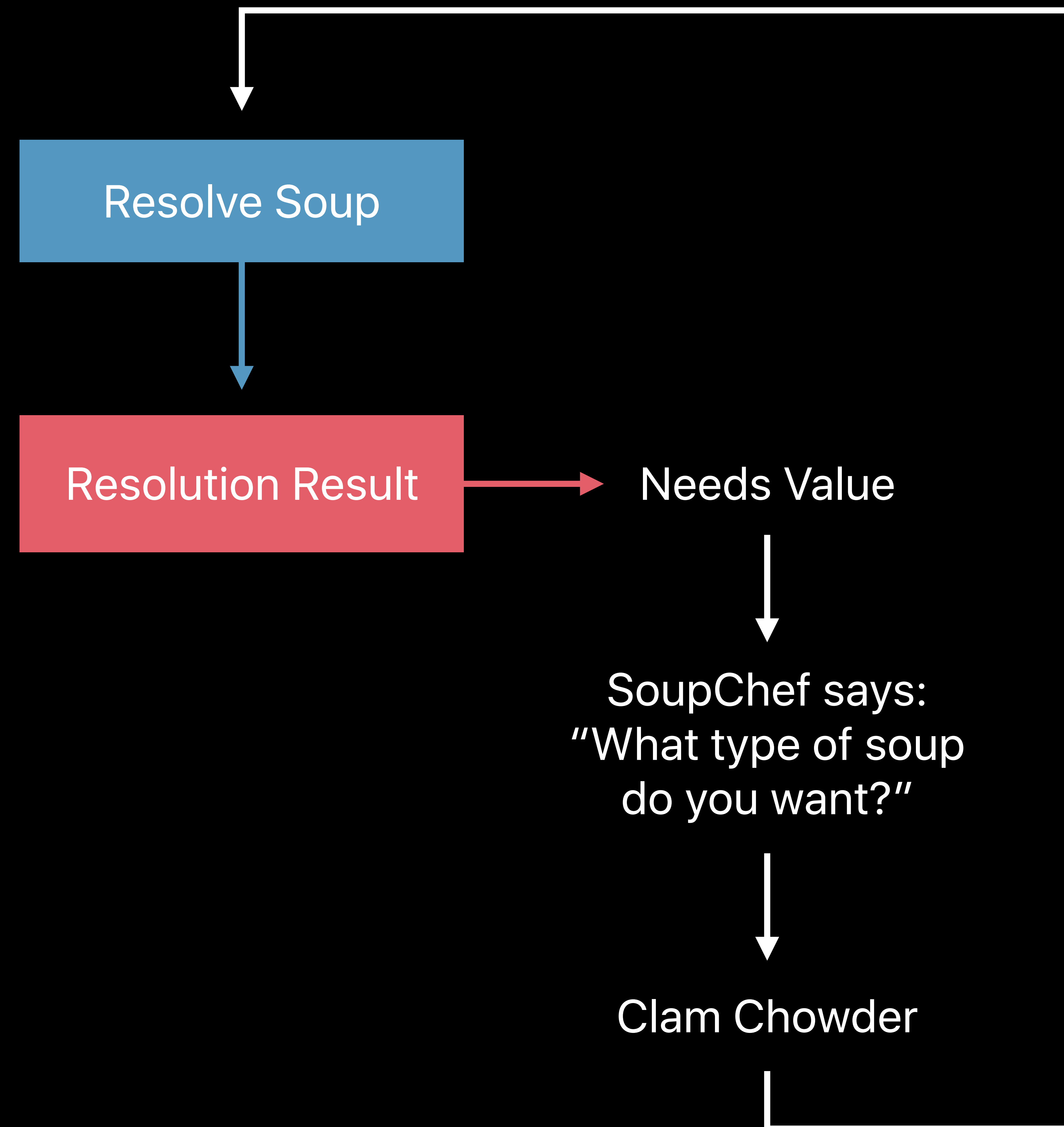
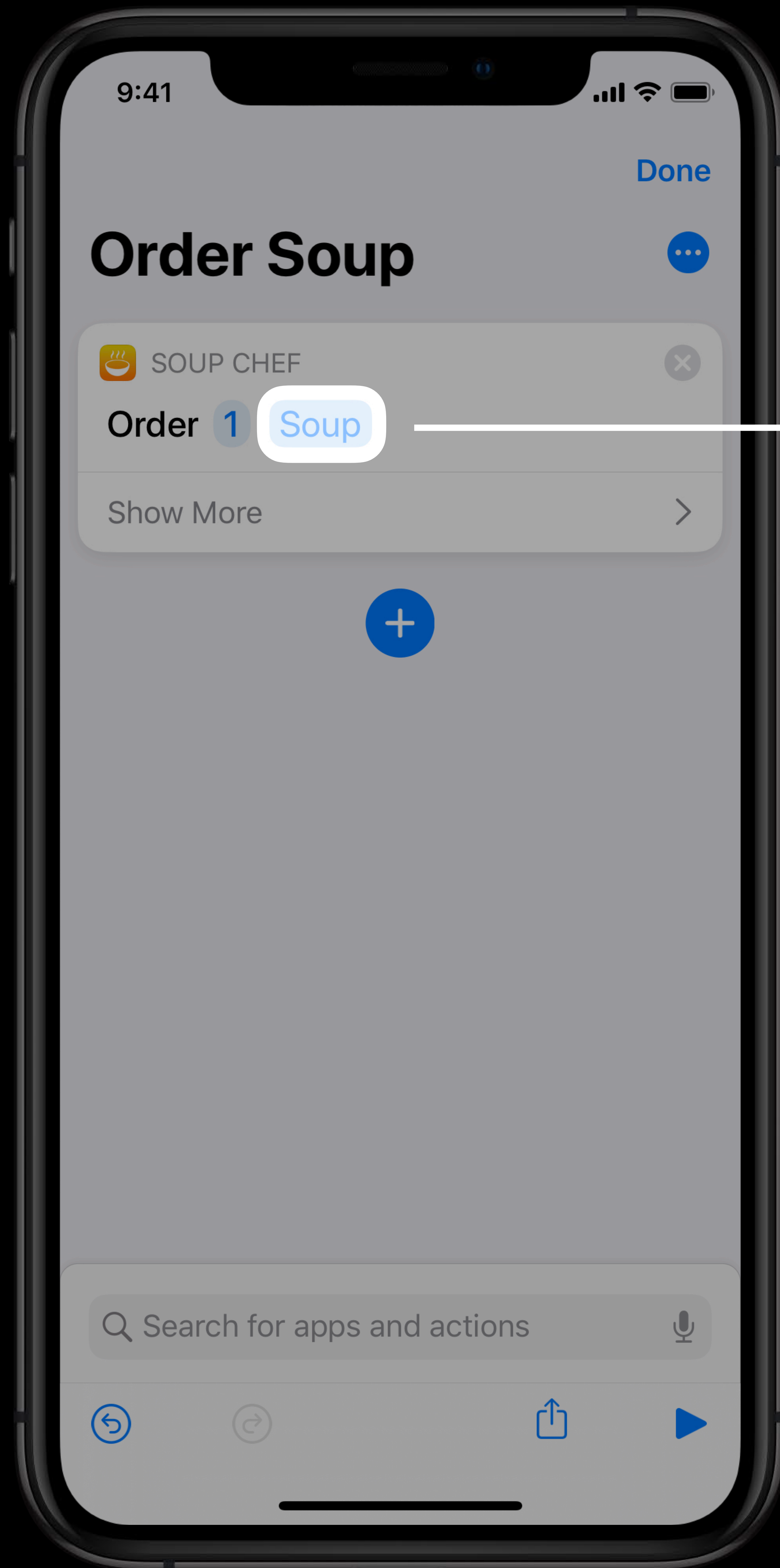
Resolve Soup

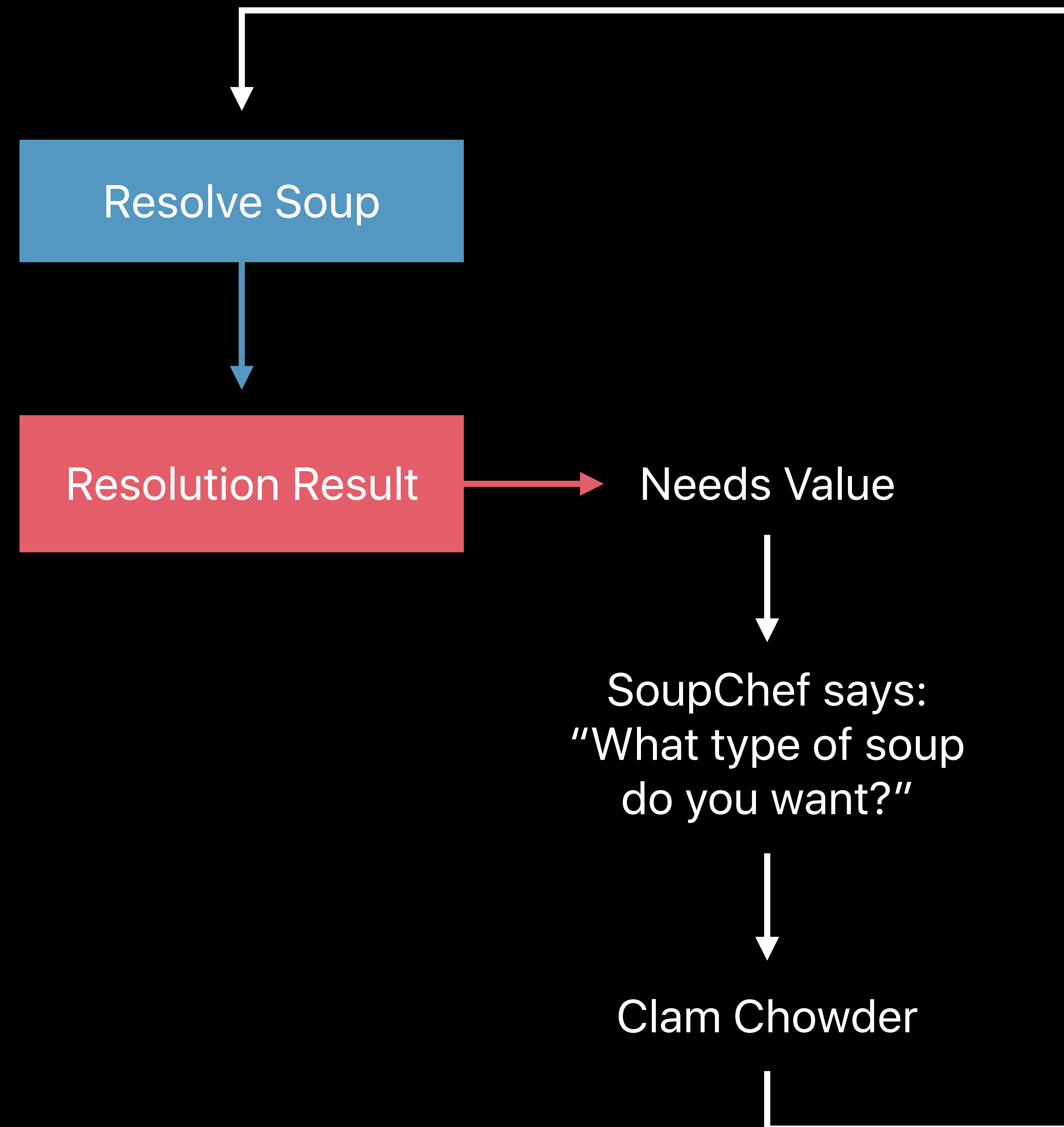
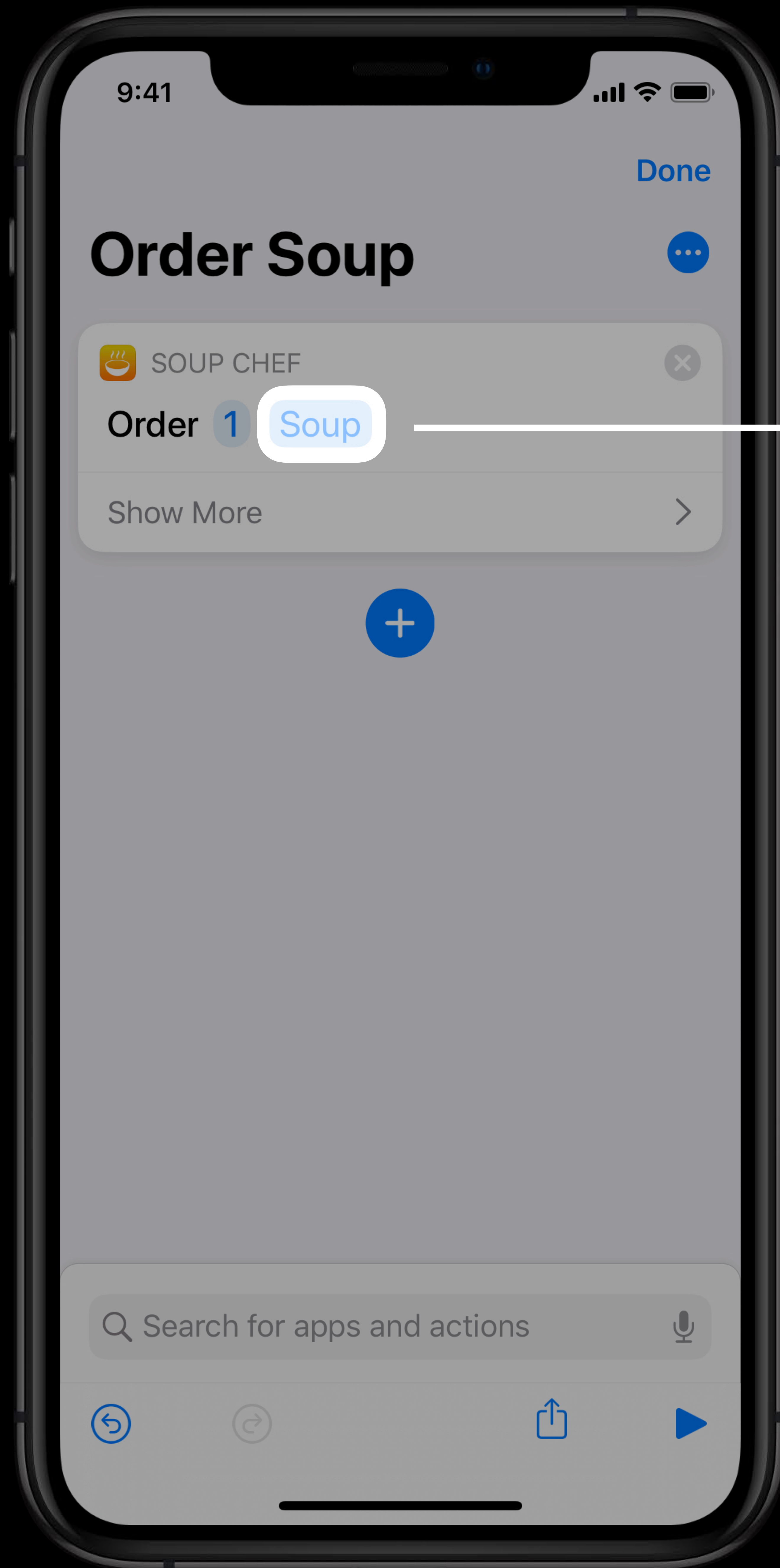
Resolution Result

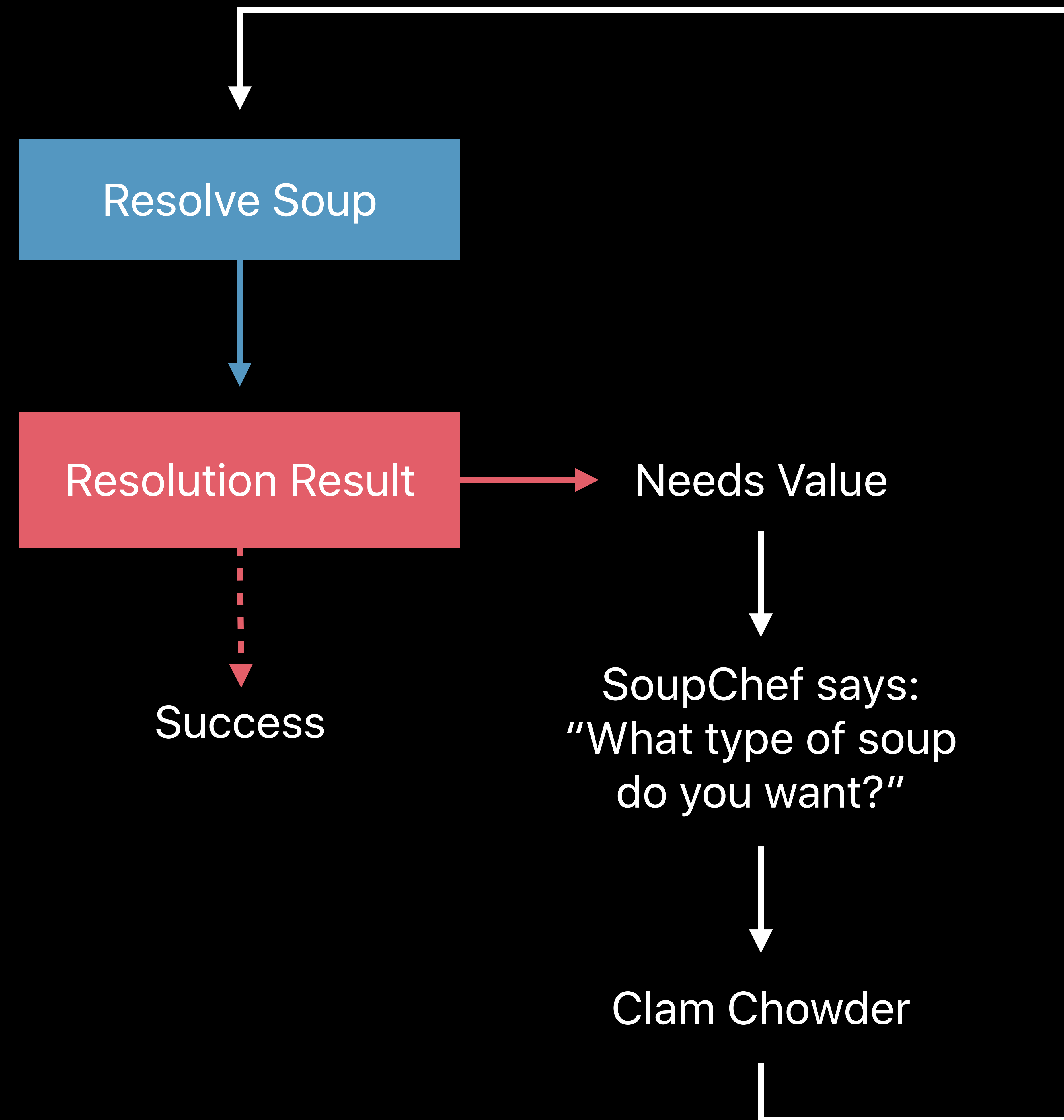
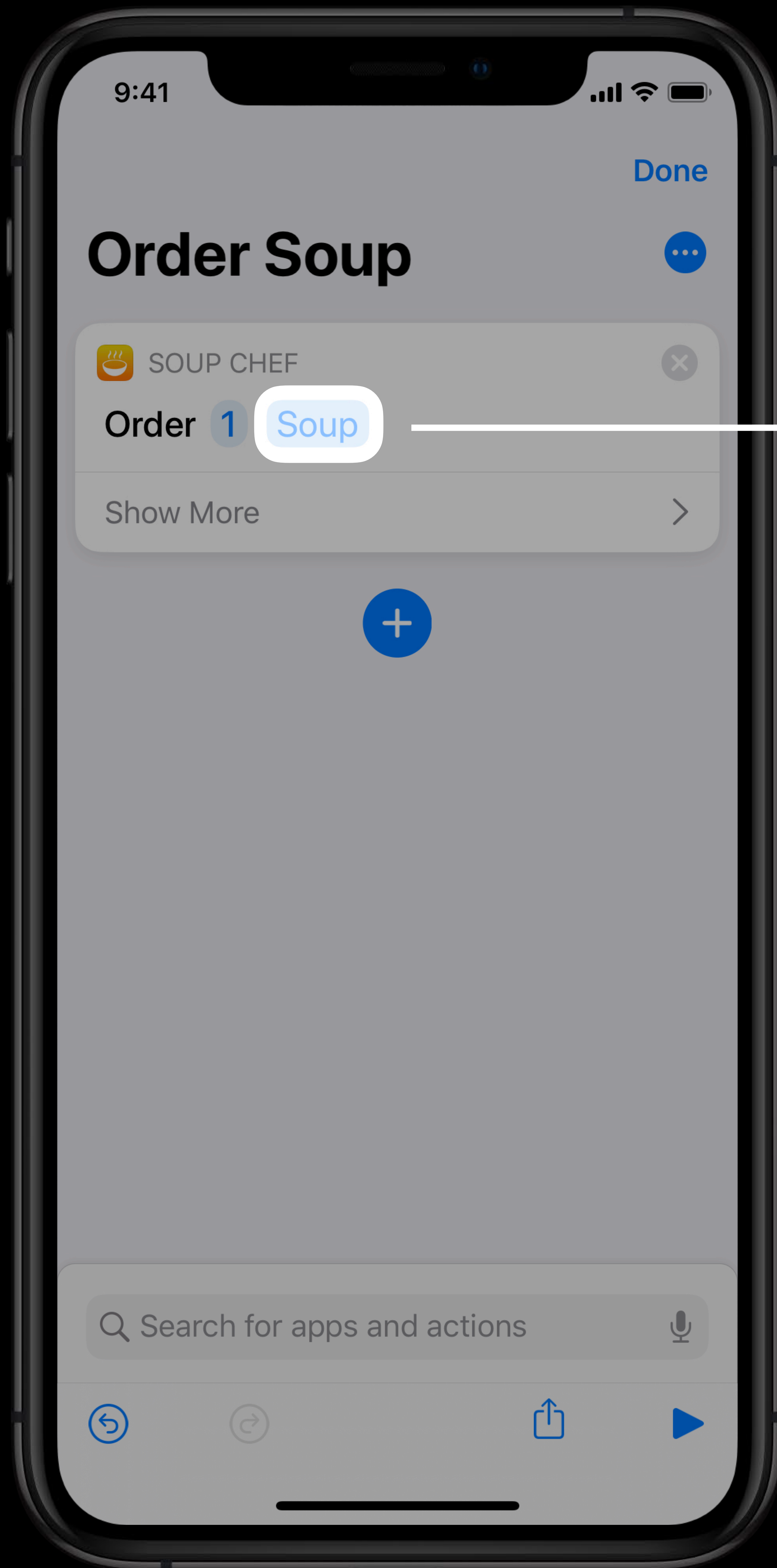
Needs Value

SoupChef says:
"What type of soup
do you want?"

Clam Chowder









9:41




Done

Order Soup



 SOUP CHEF 

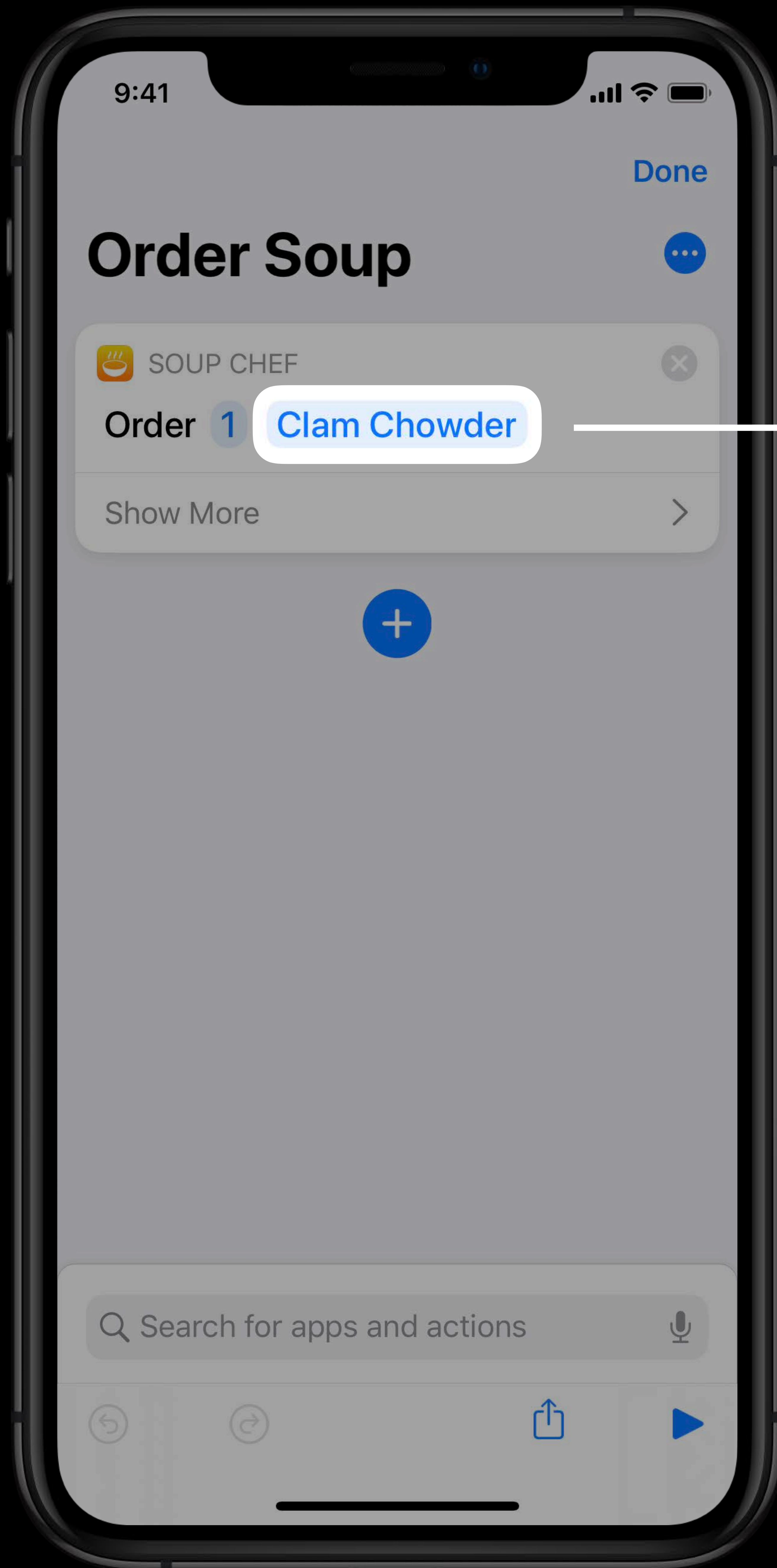
Order **1** **Clam Chowder**

Show More 

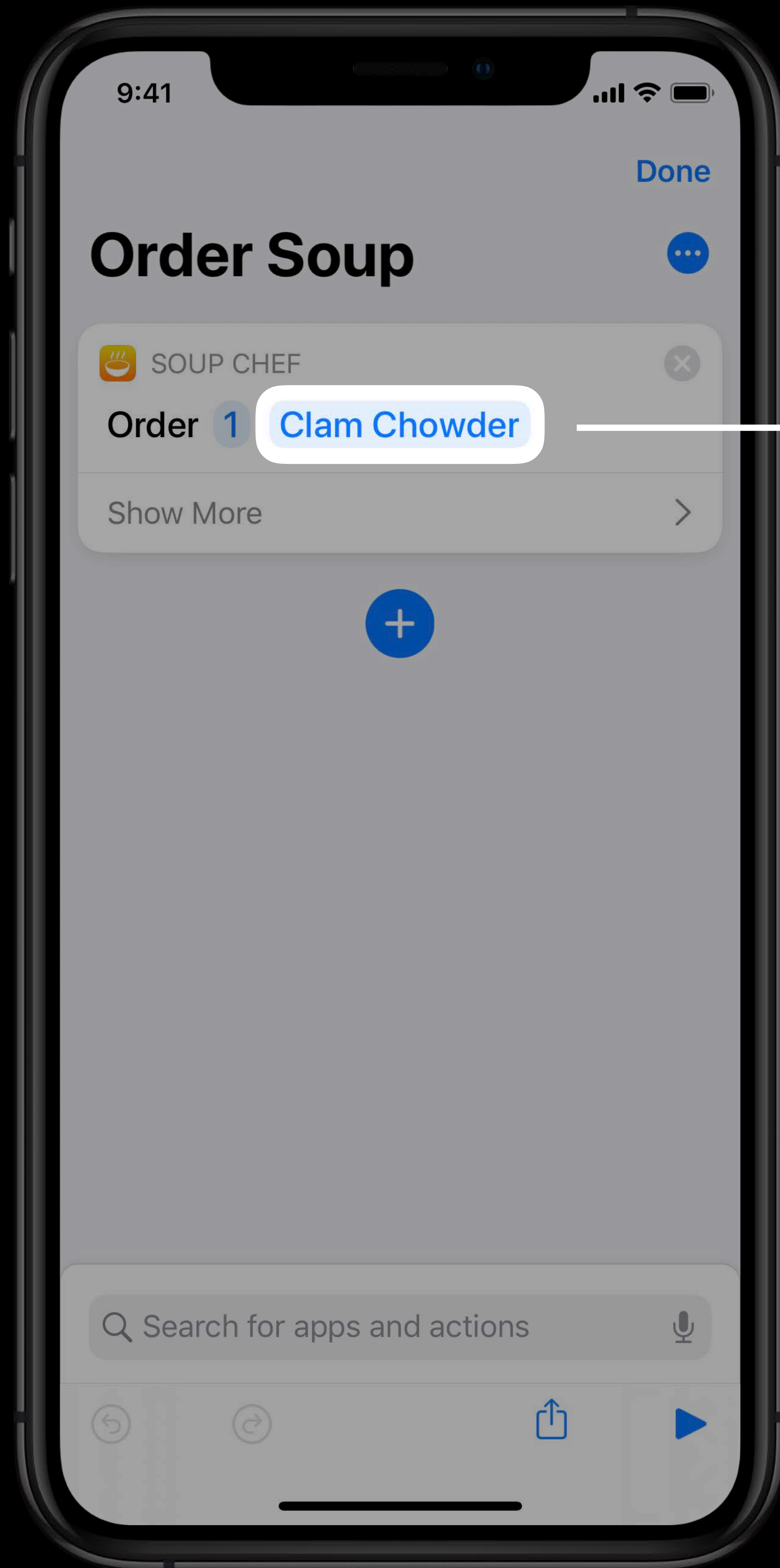


🔍 Search for apps and actions 

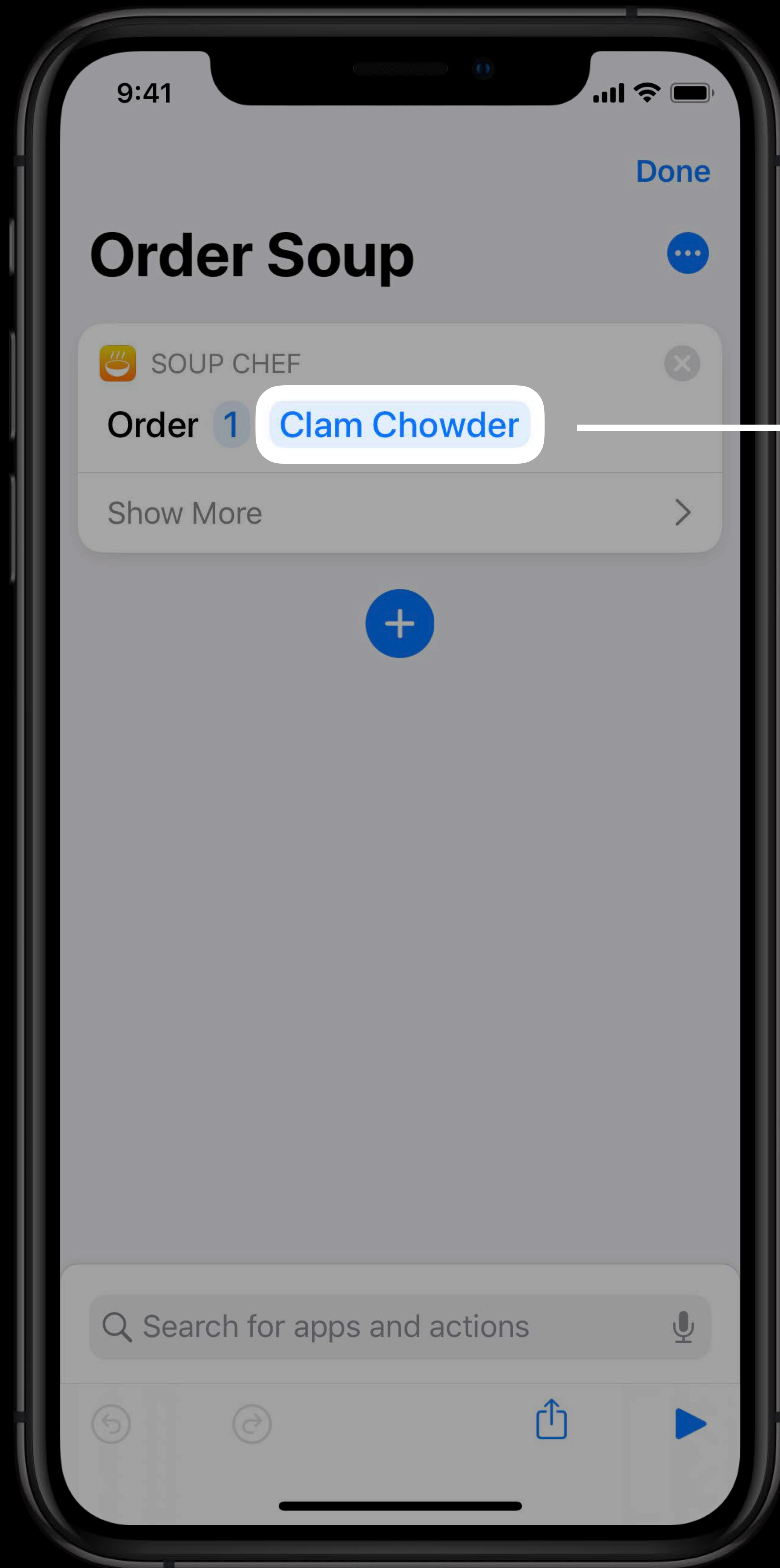




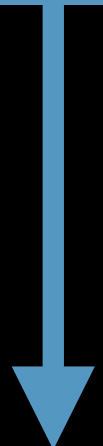
Resolve Soup



Resolve Soup



Resolve Soup



Success

```
public func resolveSoup(for intent: OrderSoupIntent,  
                        with completion: @escaping (SoupResolutionResult) -> Void) {  
    if intent.soup == .unknown {  
        completion(.needsValue())  
    } else {  
        completion(.success(with: intent.soup))  
    }  
}
```



```
public func resolveSoup(for intent: OrderSoupIntent,  
                        with completion: @escaping (SoupResolutionResult) -> Void) {  
    if intent.soup == .unknown {  
        completion(.needsValue())  
    } else {  
        completion(.success(with: intent.soup))  
    }  
}
```

```
public func resolveSoup(for intent: OrderSoupIntent,  
                        with completion: @escaping (SoupResolutionResult) -> Void) {  
    if intent.soup == .unknown {  
        completion(.needsValue())  
    } else {  
        completion(.success(with: intent.soup))  
    }  
}
```


Handling Voice Input

Roman Efimov, Shortcuts Engineering

9:41



**You asked for 10 Clam
Chowders, but we don't have
that many in stock.**

**How many soups do you want
to order?**



9:41



Looks like you're not near the store. There are 2 restaurants near you, which one do you want to order from?

3801 S Sheridan Blvd

7401 S Lewis Ave



Handling Voice Input

Resolve



Handling Voice Input

Resolve

needsValue

disambiguation

unsupported

confirmationRequired

success

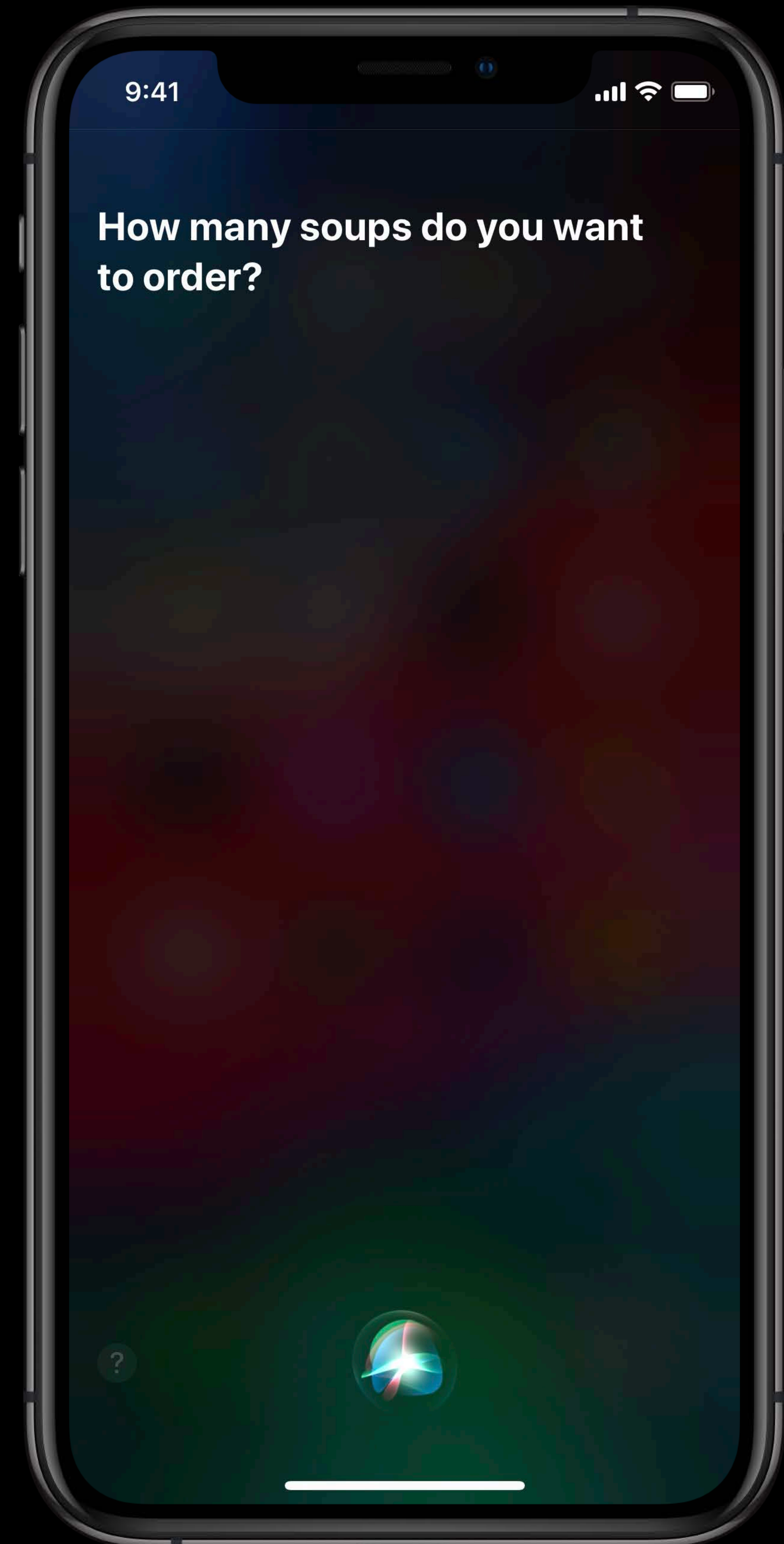
notRequired

Handling Voice Input

Resolve

needsValue

```
guard let quantity = intent.quantity else {  
    completion(.needsValue())  
    return  
}
```



- CUSTOM INTENTS
 - OrderSoup
 - Response
- ENUMS
 - Soup

▼ Custom Intent

Category: Order

Title: Order Soup

Description: Order a soup

Default Image: chicken_noodle_soup

Confirmation: User confirmation required

▼ Parameters

Parameter
<input type="checkbox"/> soup
<input checked="" type="checkbox"/> quantity
<input type="checkbox"/> toppings
<input type="checkbox"/> storeLocation

Display Name: Quantity

Type: Integer

Array: Supports multiple values

User-facing: User can supply value in Siri and Shortcuts app

Dynamic Options: Valid values are provided dynamically

▶ Relationship

▶ Input

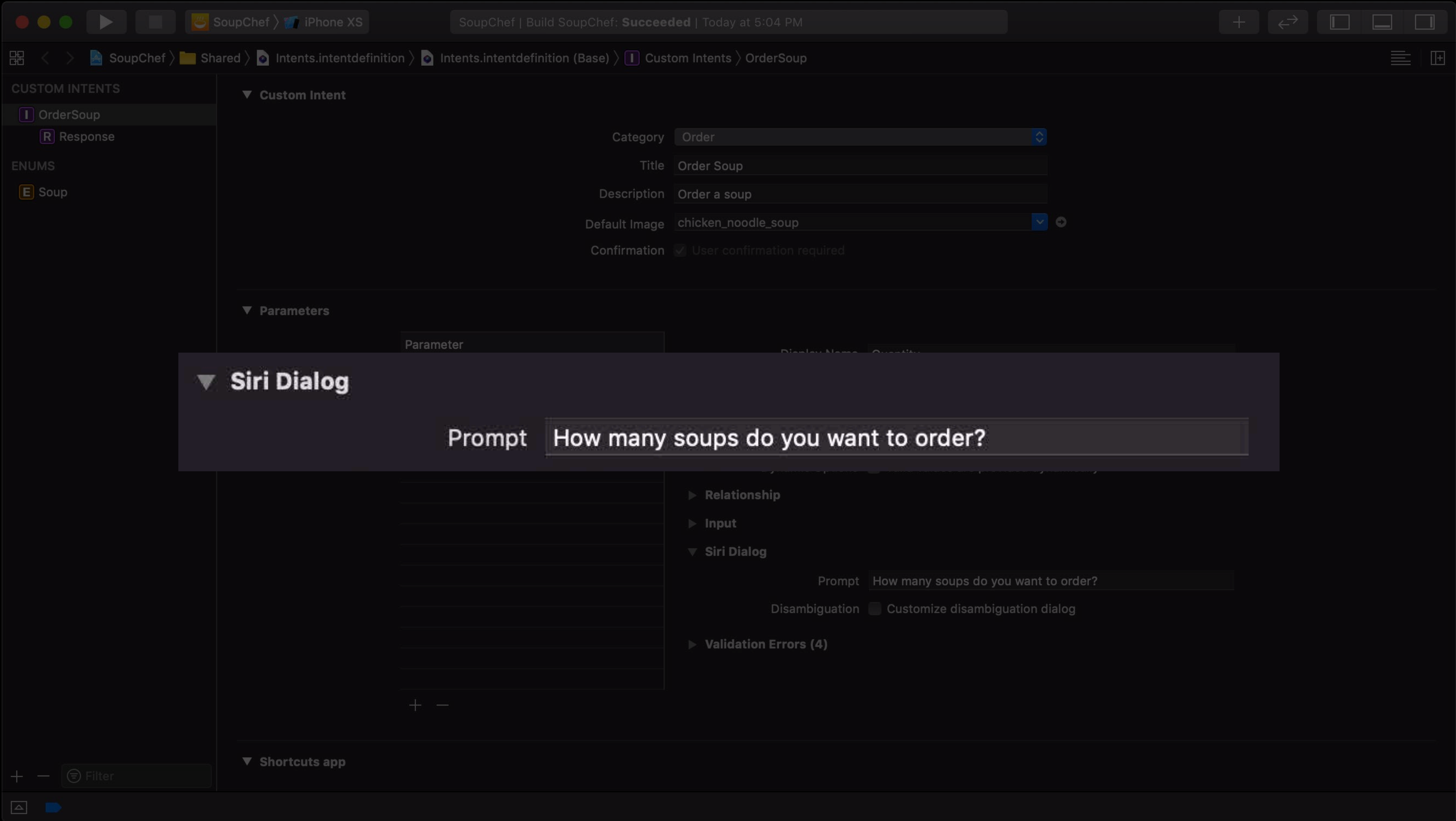
▼ Siri Dialog

Prompt: How many soups do you want to order?

Disambiguation: Customize disambiguation dialog

▶ Validation Errors (4)

▼ Shortcuts app



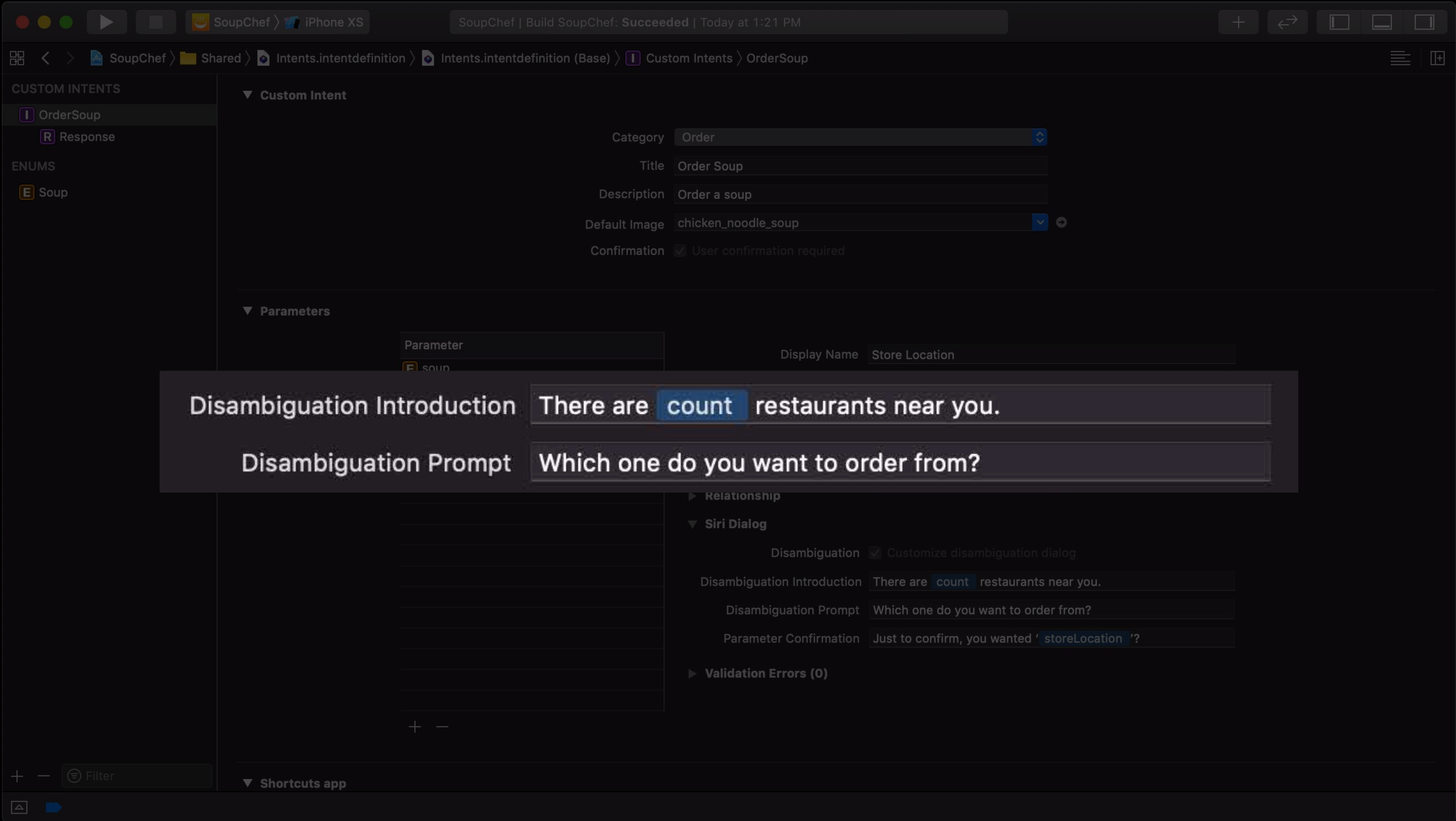
Handling Voice Input

Resolve

disambiguation

```
.disambiguation(with: storeLocations)
```



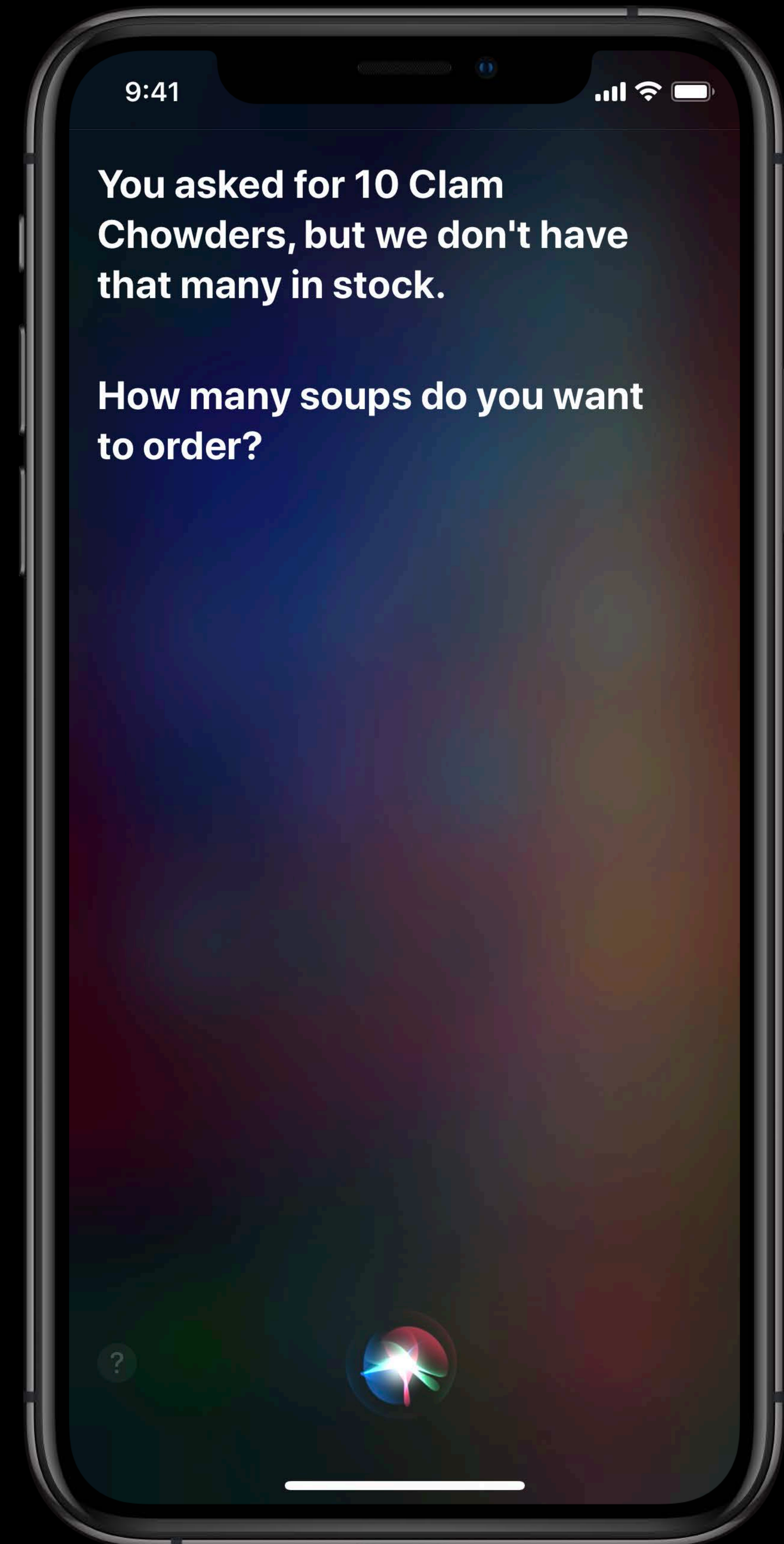


Handling Voice Input

Resolve

unsupported

```
if quantity > menuItem.itemsInStock {  
    completion(  
        .unsupported(forReason: .notEnoughInStock)  
    )  
}
```



SoupChef | Build SoupChef: **Succeeded** | Today at 5:04 PM

SoupChef > Shared > Intents.intentdefinition > Intents.intentdefinition (Base) > Custom Intents > OrderSoup

CUSTOM INTENTS

- OrderSoup
- Response

ENUMS

- Soup

Custom Intent

Category: Order

Title: Order Soup

Description: Order a soup

Default Image: chicken_noodle_soup

Confirmation: User confirmation required

Parameters

Parameter
<input type="checkbox"/> soup
<input checked="" type="checkbox"/> quantity
<input type="checkbox"/> toppings
<input type="checkbox"/> storeLocation

Display Name: Quantity

Type: Integer

Array: Supports multiple values

User-facing: User can supply value in Siri and Shortcuts app

Dynamic Options: Valid values are provided dynamically

Relationship

Input

Siri Dialog

Validation Errors (4)

Code	Template
negativeNumbersN...	<code>displayName</code> can't be negative.
greaterThanMaxim...	<code>displayName</code> can't be higher than <code>maximumValue</code> .
lessThanMinimumV...	<code>displayName</code> can't be lower than <code>minimumValue</code> .
notEnoughInStock	You asked for <code>quantity</code> soup, but we don't have that many in stock.

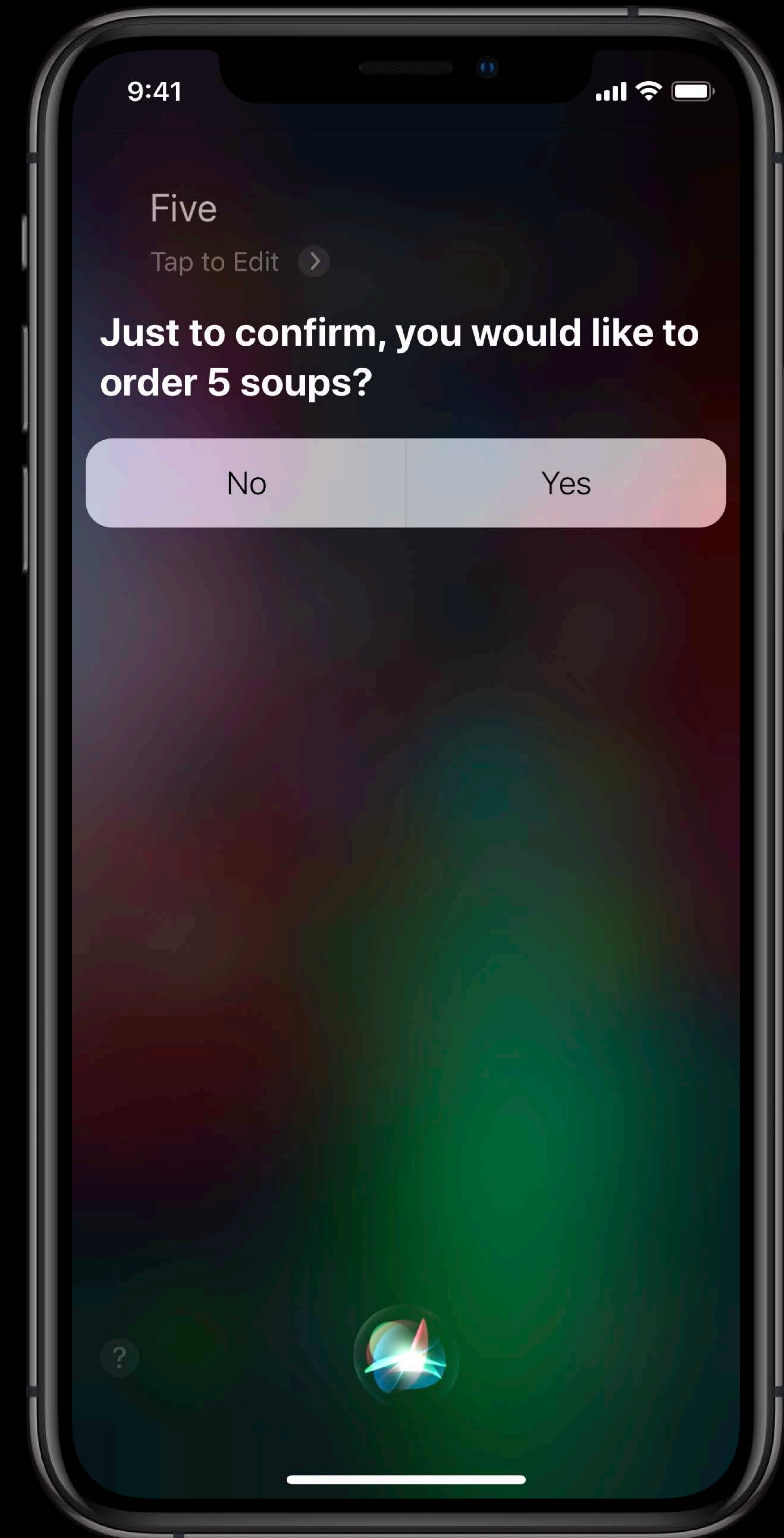
+ -

Handling Voice Input

Resolve

confirmationRequired

```
.confirmationRequired(with: quantity)
```



- CUSTOM INTENTS
 - OrderSoup
 - Response
- ENUMS
 - Soup

▼ Custom Intent

Category: Order

Title: Order Soup

Description: Order a soup

Default Image: chicken_noodle_soup

Confirmation: User confirmation required

▼ Parameters

Parameter
soup
quantity
toppings
storeLocation

Display Name: Quantity

Type: Integer

Array: Supports multiple values

User-facing: User can supply value in Siri and Shortcuts app

Dynamic Options: Valid values are provided dynamically

▶ Relationship

▶ Input

▼ Siri Dialog

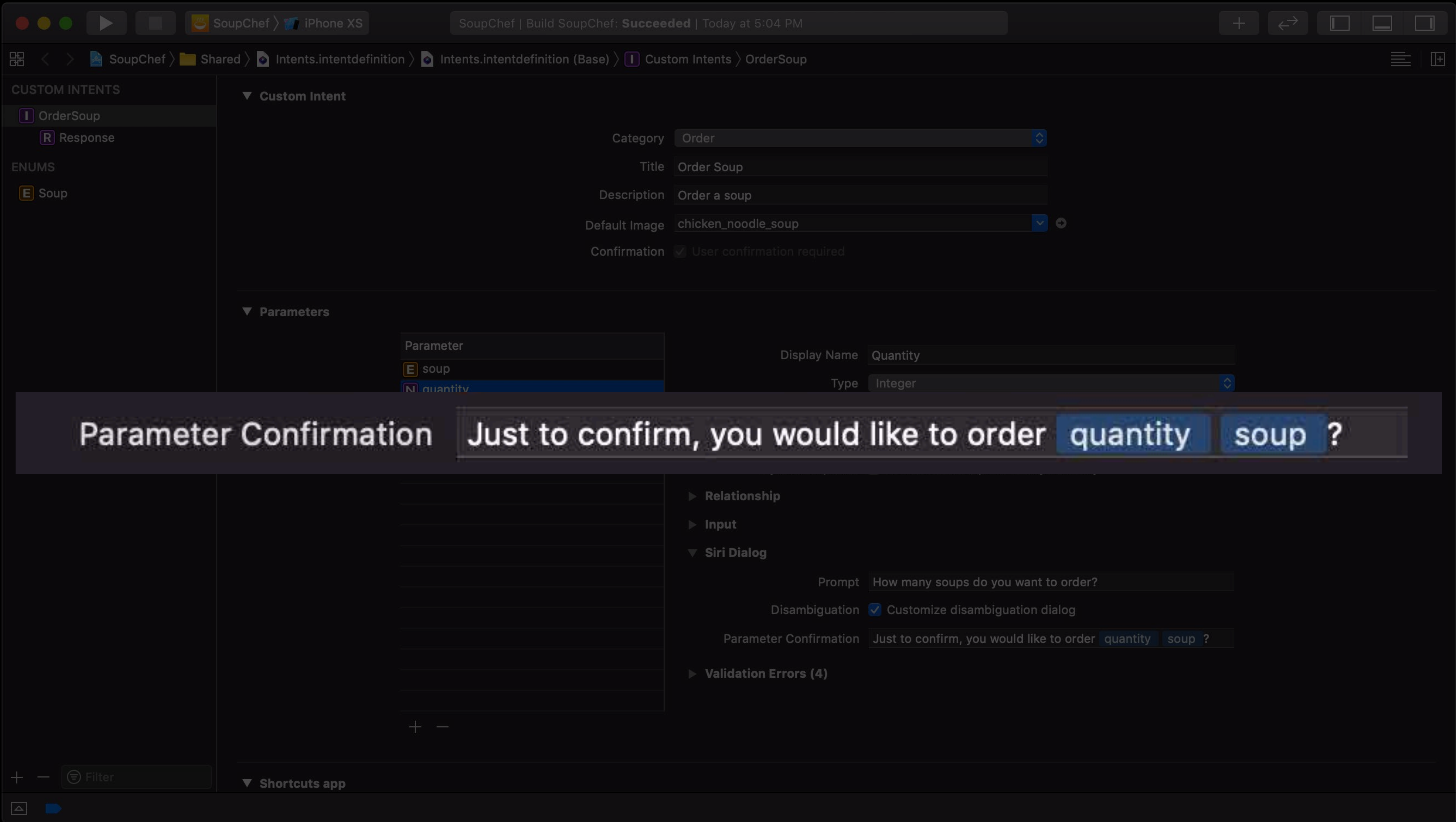
Prompt: How many soups do you want to order?

Disambiguation: Customize disambiguation dialog

Parameter Confirmation: Just to confirm, you would like to order quantity soup ?

▶ Validation Errors (4)

▼ Shortcuts app



Parameter Confirmation

Just to confirm, you would like to order **quantity** **soup** ?

Relationship

Input

Siri Dialog

Prompt

Disambiguation Customize disambiguation dialog

Parameter Confirmation

Validation Errors (4)

Handling Voice Input

Resolve

success

```
.success(with: storeLocation)
```


Handling Voice Input

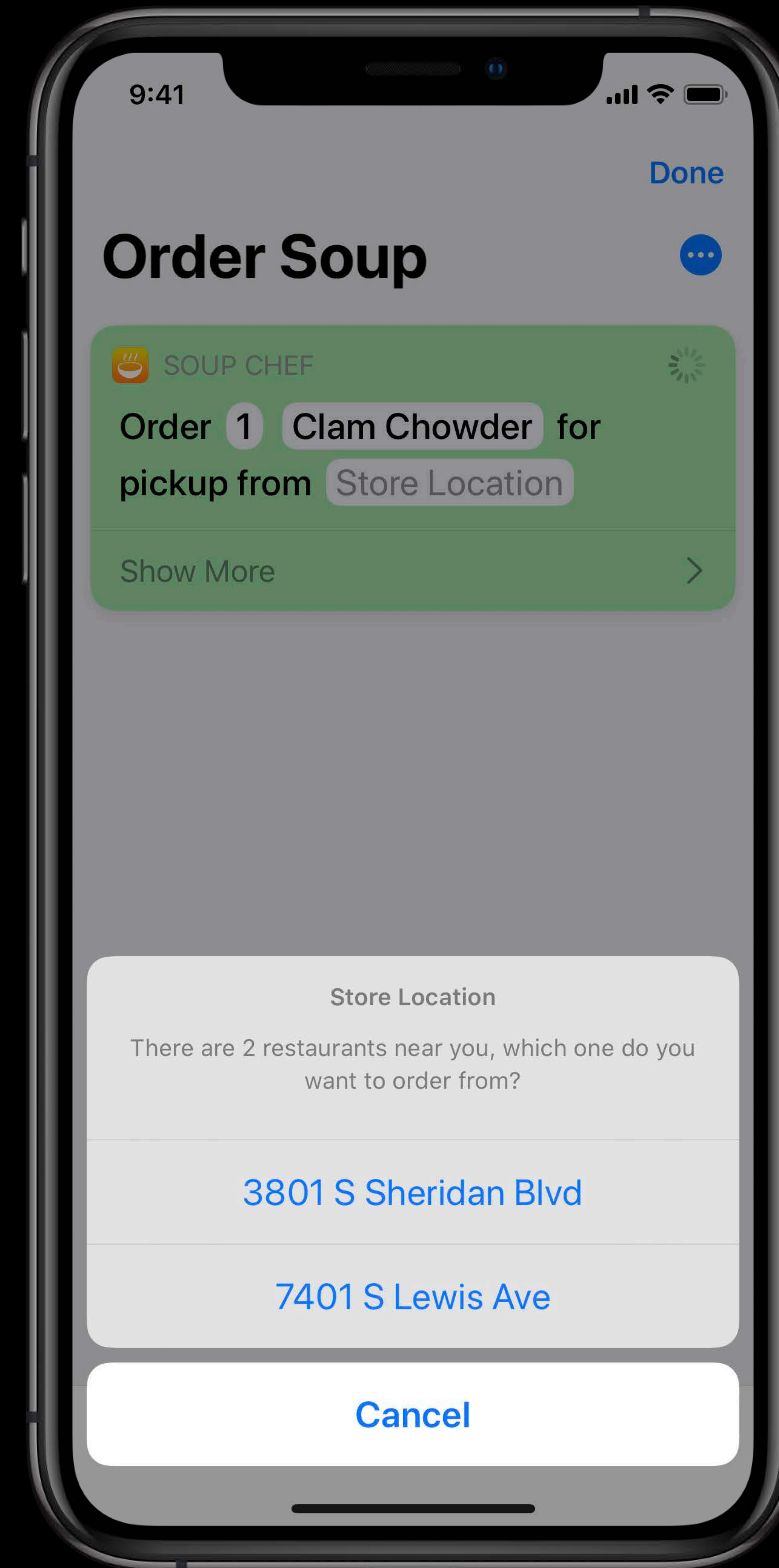
Resolve

success

```
.success(with: storeLocation)
```

notRequired

```
.notRequired()
```



Demo

9:41




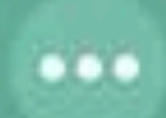
Edit



My Shortcuts

Q Search




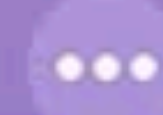
Home ETA
2 actions

Directions to Event
3 actions

Upload Last Photo
4 actions



Play Playlist
1 action


Walk to Coffee
3 actions

Log My Weight
2 actions

Make PDF
2 actions



Create Shortcut


My Shortcuts


Automation


Gallery

9:41

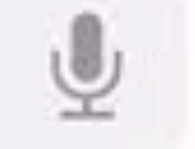



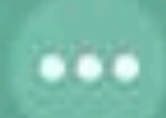
Edit



My Shortcuts

Q Search




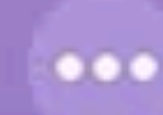
Home ETA
2 actions

Directions to Event
3 actions

Upload Last Photo
4 actions



Play Playlist
1 action


Walk to Coffee
3 actions

Log My Weight
2 actions

Make PDF
2 actions



Create Shortcut


My Shortcuts


Automation


Gallery

9:41



Cancel

Next

New Shortcut



Create a shortcut to actions you do in your apps every day.

 Add Action

Help

 Search for apps and actions



9:41



Cancel

Next

New Shortcut



Create a shortcut to actions you do in your apps every day.

+ Add Action

Help

Q Search for apps and actions



9:41



Q Search for apps and actions



Apps



Favorites



Scripting



Media



Location



Documents



Sharing



Web

Suggestions

Based on how you use your iPhone.



Order Soup



Clam
Chowder



Tomato
Soup



Soup

9:41



Q Search for apps and actions



Apps



Favorites



Scripting



Media



Location



Documents



Sharing



Web

Suggestions

Based on how you use your iPhone.



Order Soup



Clam
Chowder



Tomato
Soup



Soup

9:41



Cancel

Next

New Shortcut



SOUP CHEF



Order **1** **Soup** for pickup from
Store Location

Show More



Q Search for apps and actions



9:41



Cancel

Next

New Shortcut



SOUP CHEF



Order **1** **Soup** for pickup from
Store Location

Show More



Q Search for apps and actions



9:41





Edit



My Shortcuts

Q Search





Home ETA
2 actions



Directions to Event
3 actions

Upload Last Photo
4 actions



Play Playlist
1 action

Walk to Coffee
3 actions

Log My Weight
2 actions

Make PDF
2 actions

Order Soup
Order Soup



My Shortcuts



Automation



Gallery

9:41





Edit



My Shortcuts

Q Search





Home ETA
2 actions



Directions to Event
3 actions

Upload Last Photo
4 actions



Play Playlist
1 action

Walk to Coffee
3 actions

Log My Weight
2 actions

Make PDF
2 actions

Order Soup
Order Soup



My Shortcuts



Automation



Gallery

9:41




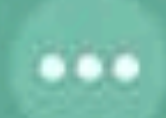
Edit



My Shortcuts

Q Search




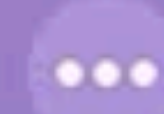
Home ETA
2 actions



Directions to Event
3 actions

Upload Last Photo
4 actions



Play Playlist
1 action

Walk to Coffee
3 actions

Log My Weight
2 actions

Make PDF
2 actions

Order Soup
Order Soup



My Shortcuts



Automation



Gallery

9:41




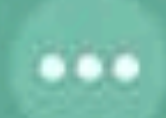
Edit



My Shortcuts

Q Search




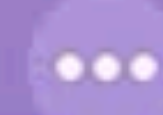
Home ETA
2 actions


Directions to Event
3 actions

Upload Last Photo
4 actions



Play Playlist
1 action

Walk to Coffee
3 actions

Log My Weight
2 actions

Make PDF
2 actions

Order Soup
Order Soup




My Shortcuts


Automation


Gallery

9:41



Done

Order Soup



SOUP CHEF



Order **1** **Soup** for pickup from
Store Location

Show More



Q Search for apps and actions



9:41



Done

Order Soup



SOUP CHEF



Order **1** **Soup** for pickup from
Store Location

Show More



Q Search for apps and actions



9:41



Done

Order Soup



SOUP CHEF



Order 1 **Soup** for pickup from

Store Location

Show More



Soup

Clam Chowder

Tomato Soup

Chicken Noodle Soup

Ask Each Time

Cancel

9:41



Done

Order Soup



SOUP CHEF



Order 1 **Soup** for pickup from

Store Location

Show More



Soup

Clam Chowder

Tomato Soup

Chicken Noodle Soup

Ask Each Time

Cancel

9:41



Done

Order Soup



SOUP CHEF



Order 1 Clam Chowder for
pickup from Store Location

Show More



Q Search for apps and actions



9:41



Done

Order Soup



SOUP CHEF



Order **1** **Clam Chowder** for
pickup from **Store Location**

Show More



Q Search for apps and actions



9:41




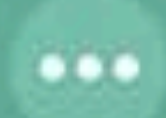
Edit



My Shortcuts

Q Search




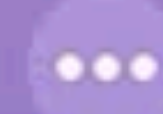
Home ETA
2 actions

Directions to Event
3 actions

Upload Last Photo
4 actions


Play Playlist
1 action

Walk to Coffee
3 actions

Log My Weight
2 actions

Make PDF
2 actions

Order Soup
Order Soup



My Shortcuts



Automation



Gallery

9:41




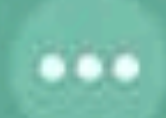
Edit



My Shortcuts

Q Search




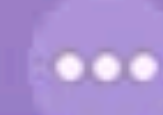
Home ETA
2 actions



Directions to Event
3 actions

Upload Last Photo
4 actions



Play Playlist
1 action

Walk to Coffee
3 actions

Log My Weight
2 actions

Make PDF
2 actions

Order Soup
Order Soup



My Shortcuts



Automation



Gallery

9:41

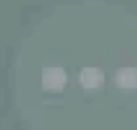


Edit



My Shortcuts

Search



Home ETA

2 actions



Directions to Event

3 actions



Upload Last Photo

4 actions



Play Playlist

1 action



Store Location

There are 2 restaurants near you, which one do you want to order from?

3801 S Sheridan Blvd

7401 S Lewis Ave

Cancel

9:41

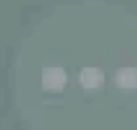


Edit



My Shortcuts

Search



Home ETA

2 actions



Directions to Event

3 actions



Upload Last Photo

4 actions



Play Playlist

1 action



Store Location

There are 2 restaurants near you, which one do you want to order from?

3801 S Sheridan Blvd

7401 S Lewis Ave

Cancel

Building Actions with Parameter Relationships







9:41



Done

Order Soup



SOUP CHEF



Order 1 Clam Chowder for
delivery to Delivery Location

Show More



Order Type

pickup

delivery



Ask Each Time

Cancel

9:41



Done

Order Soup



SOUP CHEF



Order 1 Clam Chowder for
delivery to Delivery Location

Show More



Search for apps and actions



9:41



Done

Order Soup



SOUP CHEF



Order 1 Clam Chowder for
delivery to Delivery Location

Show More



Search for apps and actions



9:41



Done

Order Soup



SOUP CHEF



Order 1 Clam Chowder for pickup from Store Location

Show More



Store Location

3801 S Sheridan Blvd

7401 S Lewis Ave

Ask Each Time

Cancel

- CUSTOM INTENTS**
- OrderSoup
 - Response
- ENUMS**
- Soup
 - OrderType

▼ Custom Intent

Category: Order

Title: Order Soup

Description: Order a soup

Default Image: chicken_noodle_soup

Confirmation: User confirmation required

▼ Parameters

Parameter
soup
quantity
toppings
orderType
deliveryLocation
storeLocation

Display Name: Delivery Location

Type: Location

Array: Supports multiple values

User-facing: User can supply value in Siri and Shortcuts app

Dynamic Options: Valid values are provided dynamically

▼ Relationship

Parent Parameter: orderType

Show If Parent: has exact value

Value: delivery

- ▶ Display
- ▶ Siri Dialog
- ▶ Validation Errors (0)

▼ Shortcuts app

SoupChef | Build SoupChef: **Succeeded** | Today at 5:04 PM

SoupChef > Shared > Intents.intentdefinition > Intents.intentdefinition (Base) > Custom Intents > OrderSoup

CUSTOM INTENTS

- OrderSoup
 - Response

ENUMS

- Soup
- OrderType

Custom Intent

Category: Order

Title: Order Soup

Description: Order a soup

Default Image: chicken_noodle_soup

Confirmation: User confirmation required

Parameters

- orderType
 - deliveryLocation
 - storeLocation

Relationship

Parent Parameter: orderType

Show If Parent: has exact value

Value: delivery

Display

Siri Dialog

Validation Errors (0)

Shortcuts app

- CUSTOM INTENTS**
- OrderSoup
 - Response
- ENUMS**
- Soup
 - OrderType

▼ Custom Intent

Category: Order

Title: Order Soup

Description: Order a soup

Default Image: chicken_noodle_soup

Confirmation: User confirmation required

▼ Parameters

Parameter
soup
quantity
toppings
orderType
deliveryLocation
storeLocation

Display Name: Delivery Location

Type: Location

Array: Supports multiple values

User-facing: User can supply value in Siri and Shortcuts app

Dynamic Options: Valid values are provided dynamically

▼ Relationship

Parent Parameter: orderType

Show If Parent: has exact value

Value: delivery

- ▶ Display
- ▶ Siri Dialog
- ▶ Validation Errors (0)

▼ Shortcuts app

SoupChef | Build SoupChef: **Succeeded** | Today at 5:04 PM

SoupChef > Shared > Intents.intentdefinition > Intents.intentdefinition (Base) > Custom Intents > OrderSoup

CUSTOM INTENTS

- OrderSoup
- Response

ENUMS

- Soup
- OrderType

Custom Intent

Category: Order

Title: Order Soup

Description: Order a soup

Default Image: chicken_noodle_soup

Confirmation: User confirmation required

Relationship

Parent Parameter: orderType

Show If Parent: has exact value

Value: delivery

Show If Parent: has exact value

Value: delivery

▶ Display

▶ Siri Dialog

▶ Validation Errors (0)

Filter

Shortcuts app

9:41



Done

Order Soup



SOUP CHEF



Order 1 Clam Chowder for
pickup from 7401 S Lewis Ave

Show More



Q Search for apps and actions



9:41



Done

Order Soup



SOUP CHEF



Order 1 Clam Chowder for
pickup from 7401 S Lewis Ave

Show More



Q Search for apps and actions



Demo

Parameter Relationships

Identified parent and child parameters

Established parameter relationships

Updated summaries for each parameter combination

Dynamic Options

9:41



Done

Order Soup



SOUP CHEF



Order 1 | Clam Chowder for
delivery to Current Location

Show More



Variables Ask Each Time Clipbo Done

1

2

3

ABC

DEF

4

5

6

GHI

JKL

MNO

7

8

9

PQRS

TUV

WXYZ

0



9:41



How many soups do you want
to order?



9:41



Done

Order Soup



SOUP CHEF



Order 1 Clam Chowder for
pickup from Store Location

Show More



Store Location

3801 S Sheridan Blvd

7401 S Lewis Ave

Ask Each Time

Cancel

SoupChef | Build SoupChef: **Succeeded** | Today at 5:04 PM

SoupChef > Shared > Intents.intentdefinition > Intents.intentdefinition (Base) > Custom Intents > OrderSoup

CUSTOM INTENTS

- OrderSoup
- Response

ENUMS

- Soup
- OrderType

▼ Custom Intent

Category: Order

Title: Order Soup

Description: Order a soup

Default Image: chicken_noodle_soup

Confirmation: User confirmation required

▼ Parameters

Parameter
<input type="checkbox"/> soup
<input type="checkbox"/> quantity
<input type="checkbox"/> toppings
<input type="checkbox"/> orderType
<input type="checkbox"/> deliveryLocation
<input checked="" type="checkbox"/> storeLocation

+ -

Display Name: Store Location

Type: Location

Array: Supports multiple values

User-facing: User can supply value in Siri and Shortcuts app

Dynamic Options: Valid values are provided dynamically

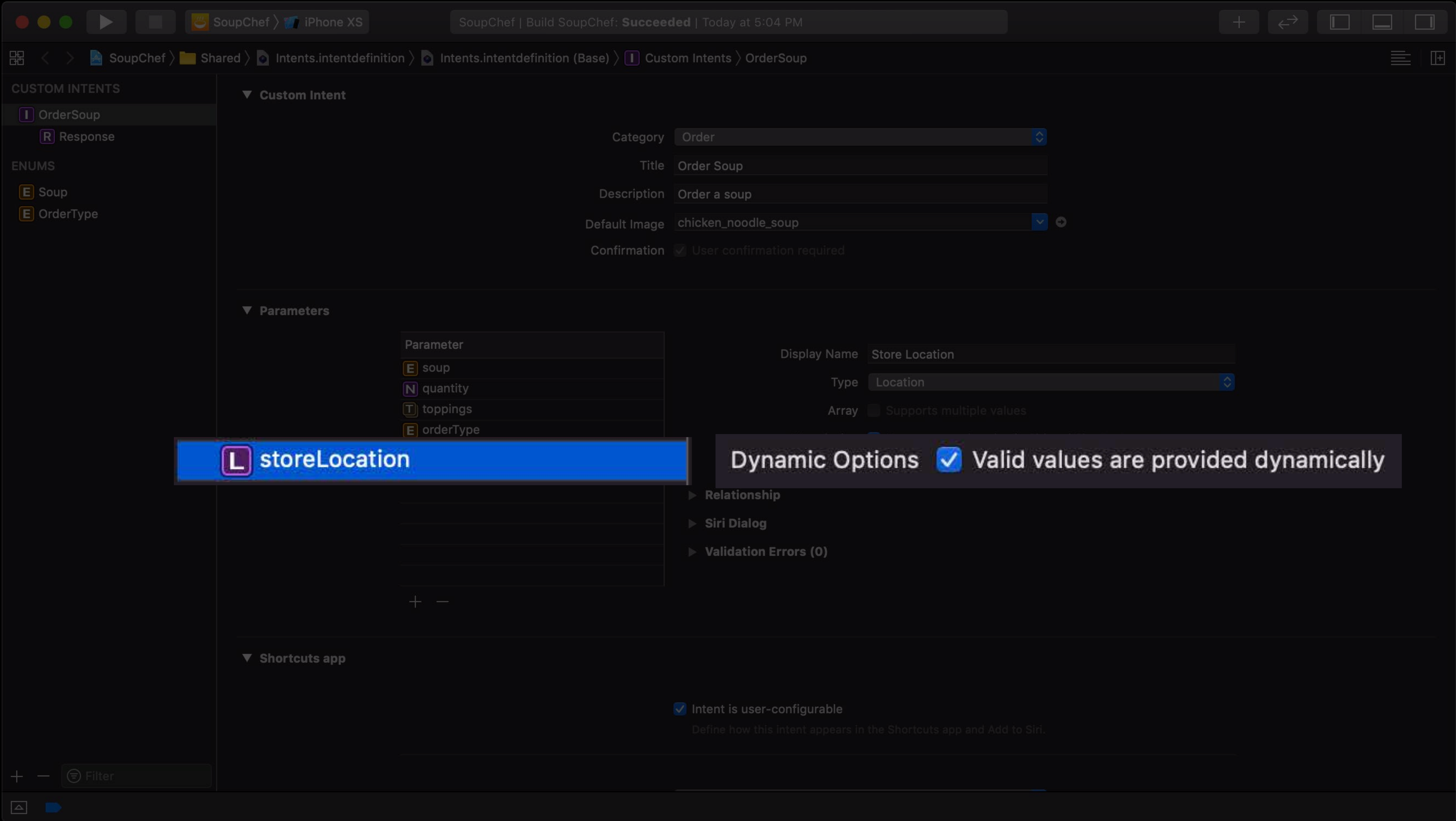
- ▶ Relationship
- ▶ Siri Dialog
- ▶ Validation Errors (0)

▼ Shortcuts app

Intent is user-configurable

Define how this intent appears in the Shortcuts app and Add to Siri.

+ - Filter



L storeLocation

Dynamic Options Valid values are provided dynamically

- ▶ Relationship
- ▶ Siri Dialog
- ▶ Validation Errors (0)

Intent is user-configurable
Define how this intent appears in the Shortcuts app and Add to Siri.


```
public protocol OrderSoupIntentHandling: NSObjectProtocol {
    func handle(intent: OrderSoupIntent, completion: @escaping (OrderSoupIntentResponse) -> Void)
    optional func confirm(intent: OrderSoupIntent, completion: @escaping (OrderSoupIntentResponse) -> Void)
    func resolveStoreLocation(for intent: OrderSoupIntent, with completion: @escaping (INPlacemarkResolutionResult) -> Void)
    func provideStoreLocationOptions(for intent: OrderSoupIntent,
                                     with completion: @escaping ([CLPlacemark]?, Error?))
    optional func defaultStoreLocation(for intent: OrderSoupIntent) -> CLPlacemark?
}
```



```
public protocol OrderSoupIntentHandling: NSObjectProtocol {
    func handle(intent: OrderSoupIntent, completion: @escaping (OrderSoupIntentResponse) -> Void)
    optional func confirm(intent: OrderSoupIntent, completion: @escaping (OrderSoupIntentResponse) -> Void)
    func resolveStoreLocation(for intent: OrderSoupIntent, with completion: @escaping (INPlacemarkResolutionResult) -> Void)
    func provideStoreLocationOptions(for intent: OrderSoupIntent,
                                     with completion: @escaping ([CLPlacemark]?, Error?)
    optional func defaultStoreLocation(for intent: OrderSoupIntent) -> CLPlacemark?
}
```

```
public func provideStoreLocationOptions(for intent: OrderSoupIntent,
                                        with completion: @escaping ([CLPlacemark]?, Error?) {
    completion([
        CLPlacemark(location: CLLocation(latitude: 37.3348, longitude: -122.009),
                    name: "3801 S Sheridan Blvd",
                    postalAddress: nil),
        CLPlacemark(location: CLLocation(latitude: 37.3318, longitude: -122.031),
                    name: "7401 S Lewis Ave",
                    postalAddress: nil)
    ], nil)
}
```



```
public func provideStoreLocationOptions(for intent: OrderSoupIntent,
                                        with completion: @escaping ([CLPlacemark]?, Error?) {
    completion([
        CLPlacemark(location: CLLocation(latitude: 37.3348, longitude: -122.009),
                    name: "3801 S Sheridan Blvd",
                    postalAddress: nil),
        CLPlacemark(location: CLLocation(latitude: 37.3318, longitude: -122.031),
                    name: "7401 S Lewis Ave",
                    postalAddress: nil)
    ], nil)
}
```

```
public func defaultStoreLocation(for intent: OrderSoupIntent) -> CLPlacemark? {  
    return CLPlacemark(location: CLLocation(latitude: 37.3348, longitude: -122.009),  
        name: "3801 S Sheridan Blvd",  
        postalAddress: nil)  
}
```



```
public func defaultStoreLocation(for intent: OrderSoupIntent) -> CLPlacemark? {  
    return CLPlacemark(location: CLLocation(latitude: 37.3348, longitude: -122.009),  
                        name: "3801 S Sheridan Blvd",  
                        postalAddress: nil)  
}
```

Dynamic Options

Resolve

```
guard let storeLocation = intent.storeLocation else {  
    completion(.needsValue())  
    return  
}
```



Building Actions with Outputs

9:41



Done

Order Soup



SOUP CHEF



Order **2** **Clam Chowder** for
pickup from **7401 S Lewis Ave**

Show More



Q Search for apps and actions



9:41



Done

Order Soup



SOUP CHEF



Order **2** **Clam Chowder** for
pickup from **7401 S Lewis Ave**

Show More



MESSAGES



Send " **Hey, I just ordered**
🍲 Order Details . Please pick it up! "
to **John Appleseed** **+**

Show More



Q Search for apps and actions  Cancel



- CUSTOM INTENTS**
- OrderSoup
 - Response
- ENUMS**
- Soup
 - OrderType
- TYPES**
- OrderDetails**

▼ **Type**

Display Name

▼ **Properties**

Property
<input type="checkbox"/> identifier
<input type="checkbox"/> displayString
<input type="checkbox"/> estimatedTime
<input checked="" type="checkbox"/> total

Display Name

Type

Array Supports multiple values

- CUSTOM INTENTS**
- OrderSoup
 - Response**
- ENUMS**
- Soup
 - OrderType
- TYPES**
- OrderDetails

▼ **Properties**

Property
soup
waitTime
 orderDetails

Display Name:

Type:

Array: Supports multiple values

Output:

▼ **Response Templates**

Code
success
failure
failureOutOfStock
successReadySoon

Error: Is error response

Voice-Only Dialog:

Printed Dialog:

SoupChef | Build SoupChef: **Succeeded** | Today at 5:04 PM

SoupChef > Shared > Intents.intentdefinition > Intents.intentdefinition (Base) > Custom Intents > OrderSoup > Response

CUSTOM INTENTS

- OrderSoup
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ENUMS

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Properties

Property
soup
waitTime
orderDetails

Display Name: Order Details

Type: Order Details

Array: Supports multiple values

Property

soup
waitTime
orderDetails

Display Name: Order Details

Type: Order Details

Array: Supports multiple values

+ -

+ - Filter

- CUSTOM INTENTS**
- OrderSoup
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▼ **Properties**

Property
soup
waitTime
 orderDetails

Display Name:

Type:

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Output:

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Code
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CUSTOM INTENTS

- OrderSoup
- Response**

ENUMS

- Soup
- OrderType

TYPES

- OrderDetails

Properties

Property
soup
waitTime
 orderDetails

Display Name: Order Details

Type: Order Details

Array: Supports multiple values

Output: orderDetails

Output orderDetails

failureOutOfStock

successReadySoon

Printed Dialog: Your total is `orderDetails.total` . Your `soup` order will be read

Filter

9:41



Order Soup

Done

pickup from 7401 S Lewis Ave

Show More



MESSAGES



Send " Hey, I just ordered

🍲 Order Details. Please pick it up! "

to John Appleseed +

Show More



Rename

Reveal Action

Done

🍲 Order Details
as Order Details >

Order Details

Default



Estimated Time

Total

Name

- CUSTOM INTENTS**
- OrderSoup
 - Response**
- ENUMS**
- Soup
 - OrderType
- TYPES**
- OrderDetails

▼ **Properties**

Property
soup
waitTime
orderDetails

Display Name

Type

Array Supports multiple values

Output

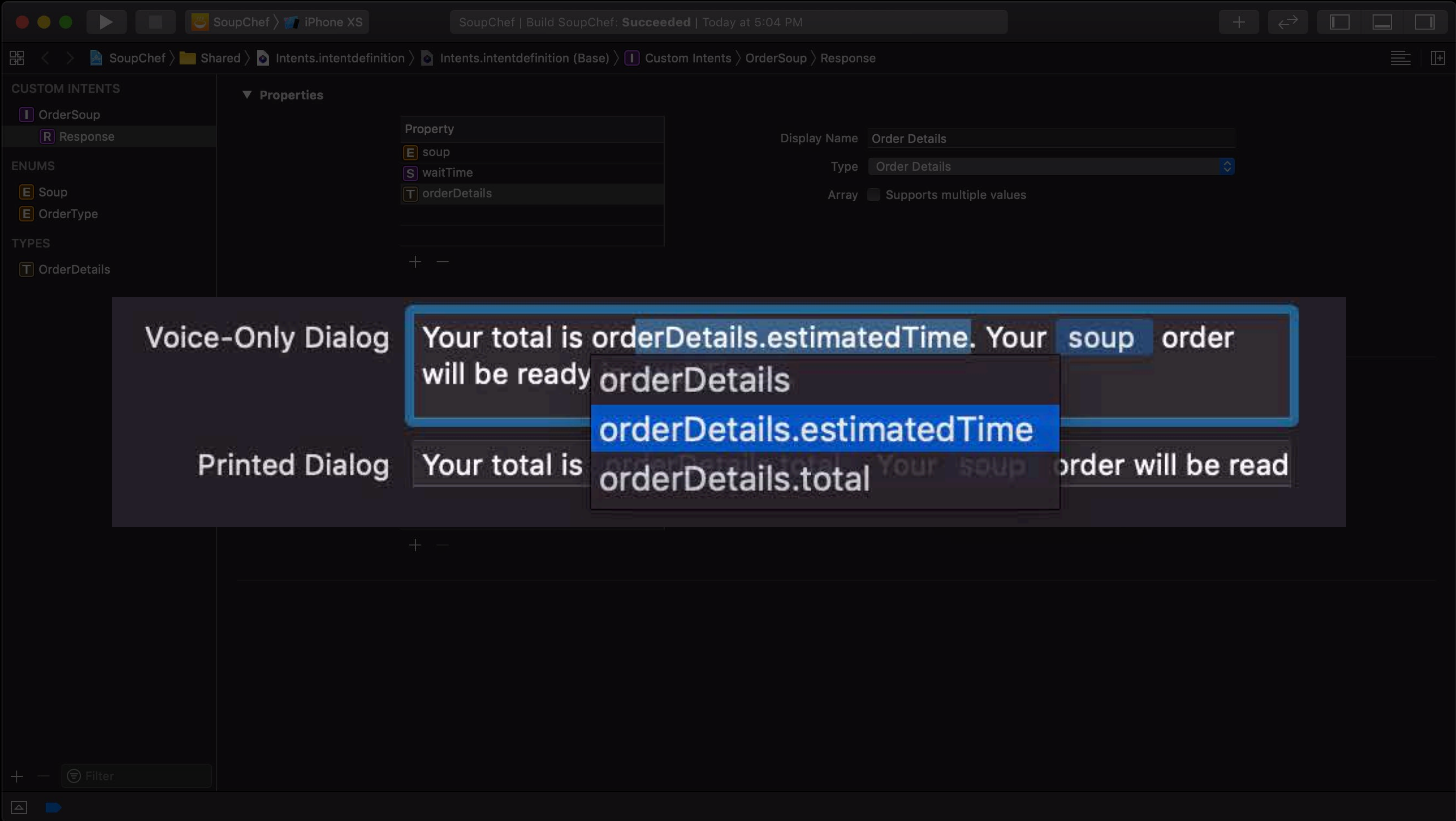
▼ **Response Templates**

Code
success
failure
failureOutOfStock
successReadySoon

Error Is error response

Voice-Only Dialog

Printed Dialog



Summary

Enable customizable shortcuts

Parameters

Outputs

More Information

developer.apple.com/wwdc19/213

Siri Shortcuts Lab

Wednesday, 10:00

SiriKit, Shortcuts, and Siri Event Suggestions Lab

Thursday, 12:00

Designing and Building Great Shortcuts

Friday, 5:20

 WWDC19