#WWDC18

Quick Look

Previews from the ground up

Session 237

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Introduction to Quick Look

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Adopting Quick Look Preview Controller

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Providing custom Quick Look previews

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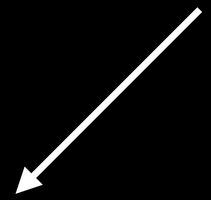
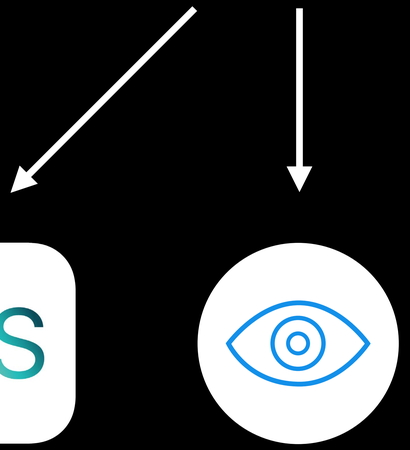
Quick Look

Quick Look



Previewing
Documents

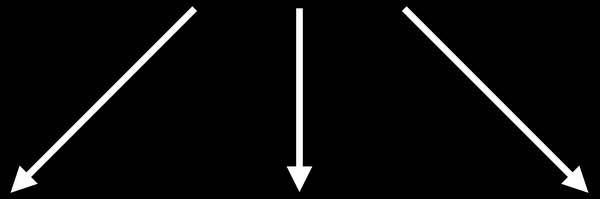
Quick Look



Previewing Documents

Providing Custom Previews

Quick Look



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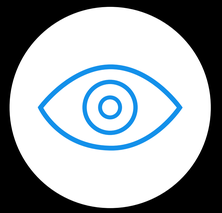
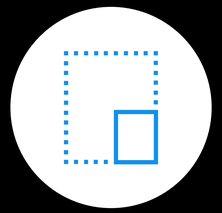


Providing Custom Previews



Providing Custom Thumbnails

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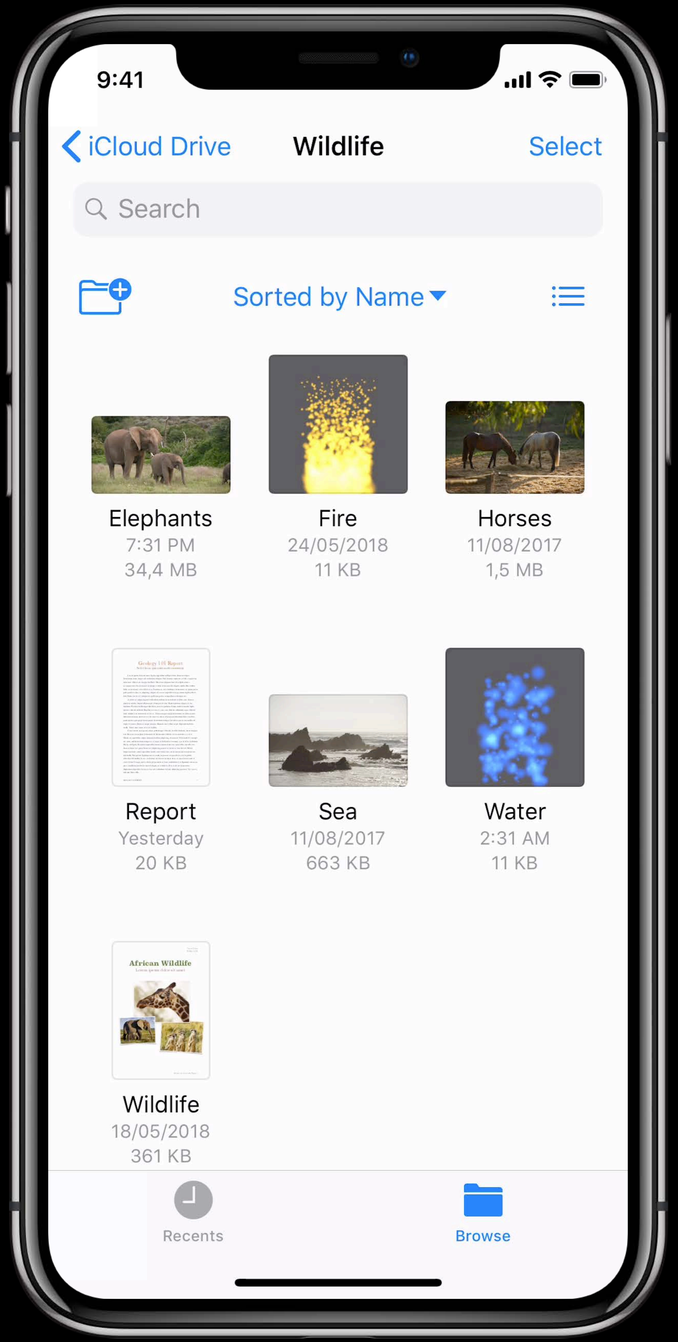

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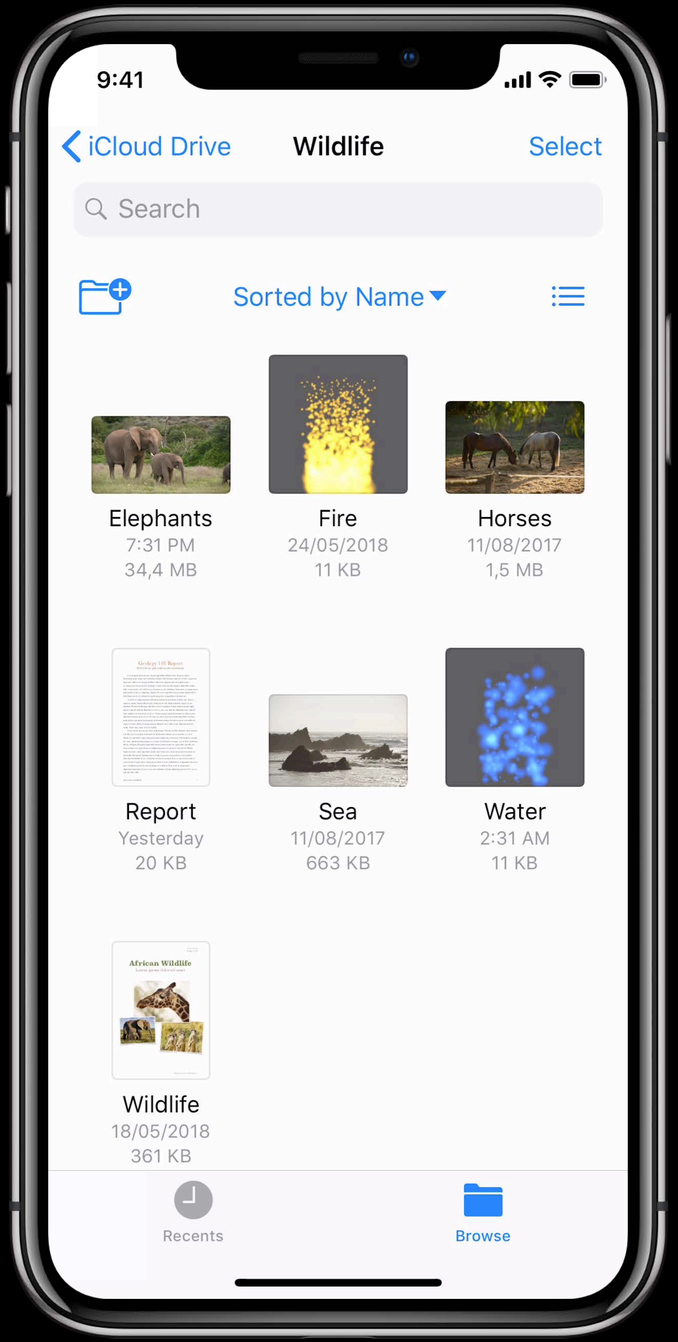

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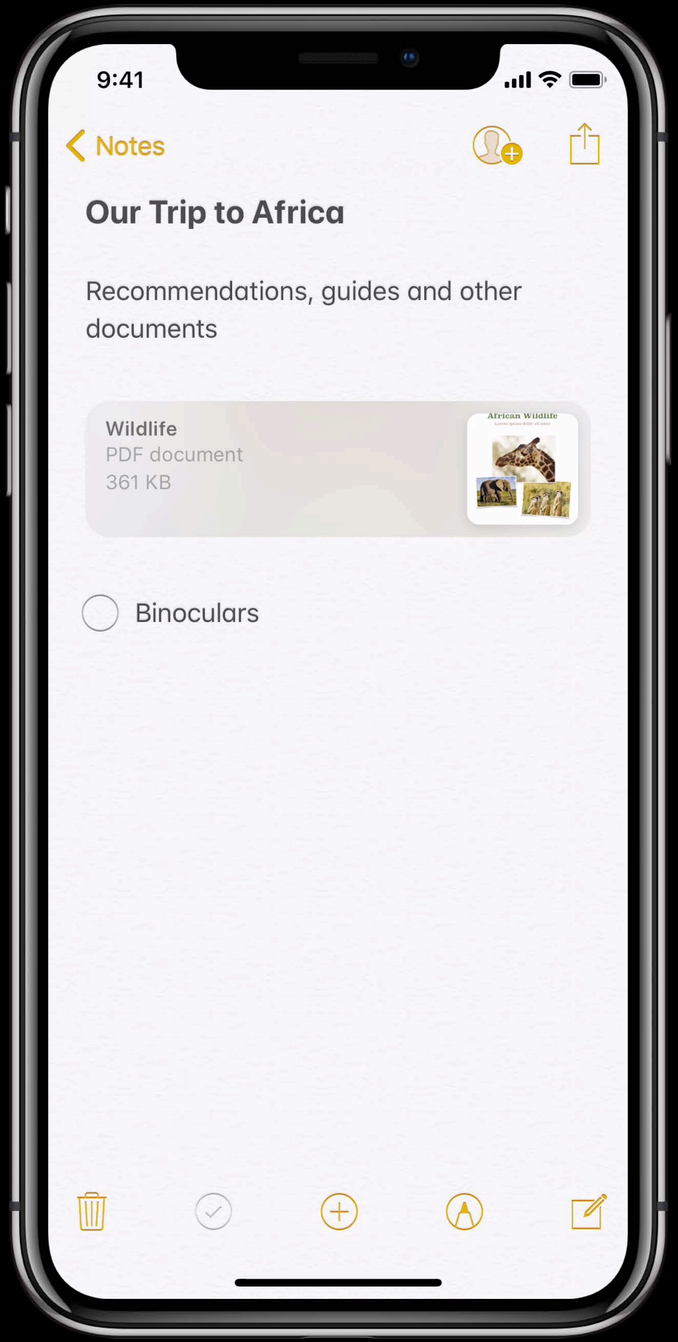

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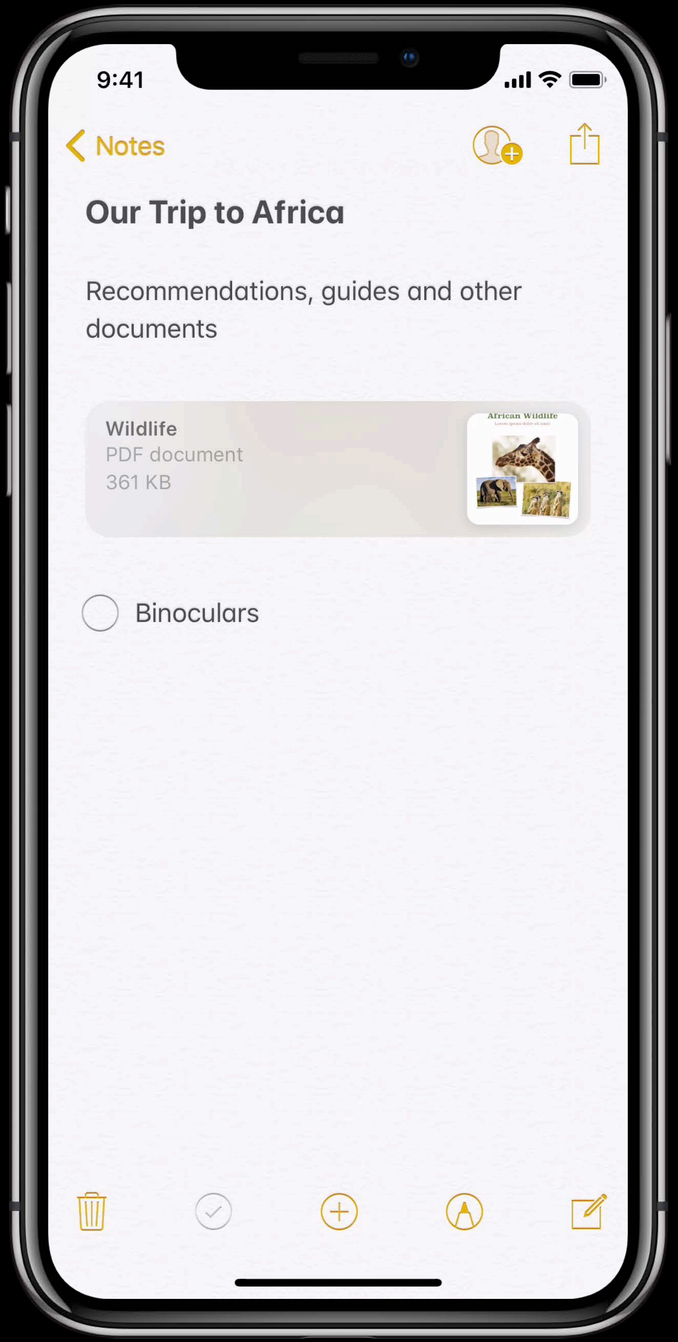

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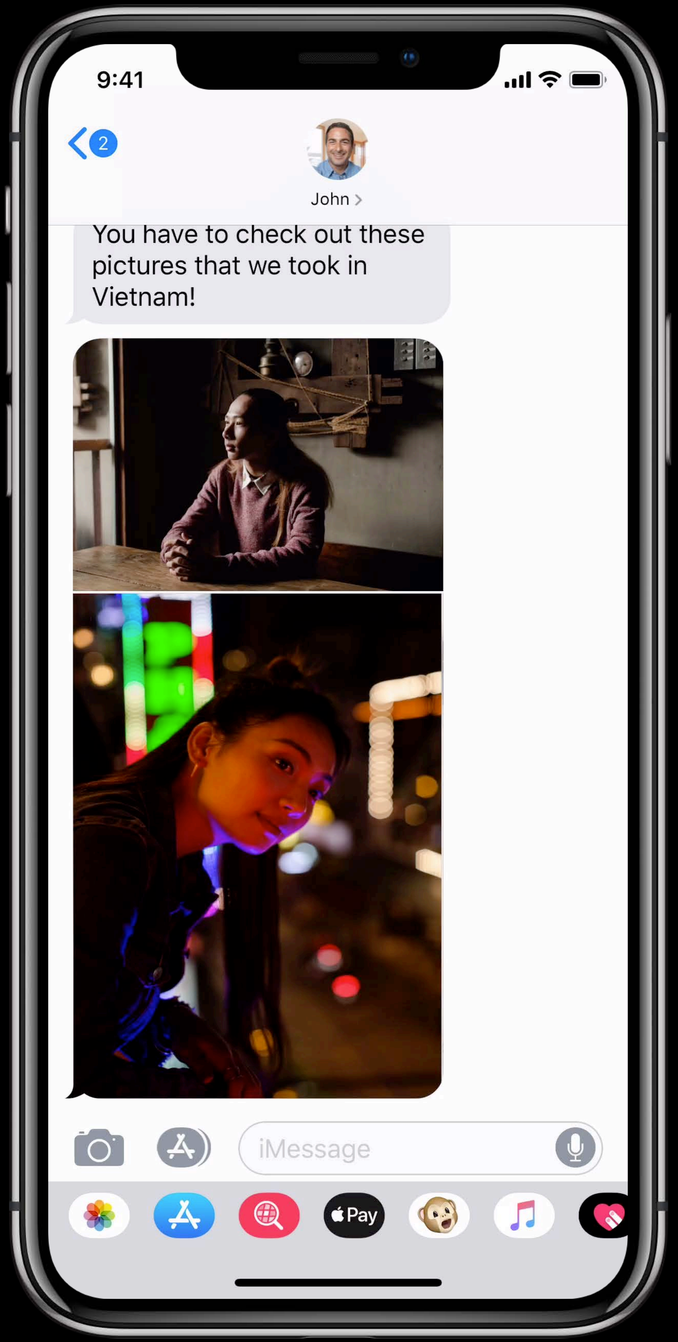

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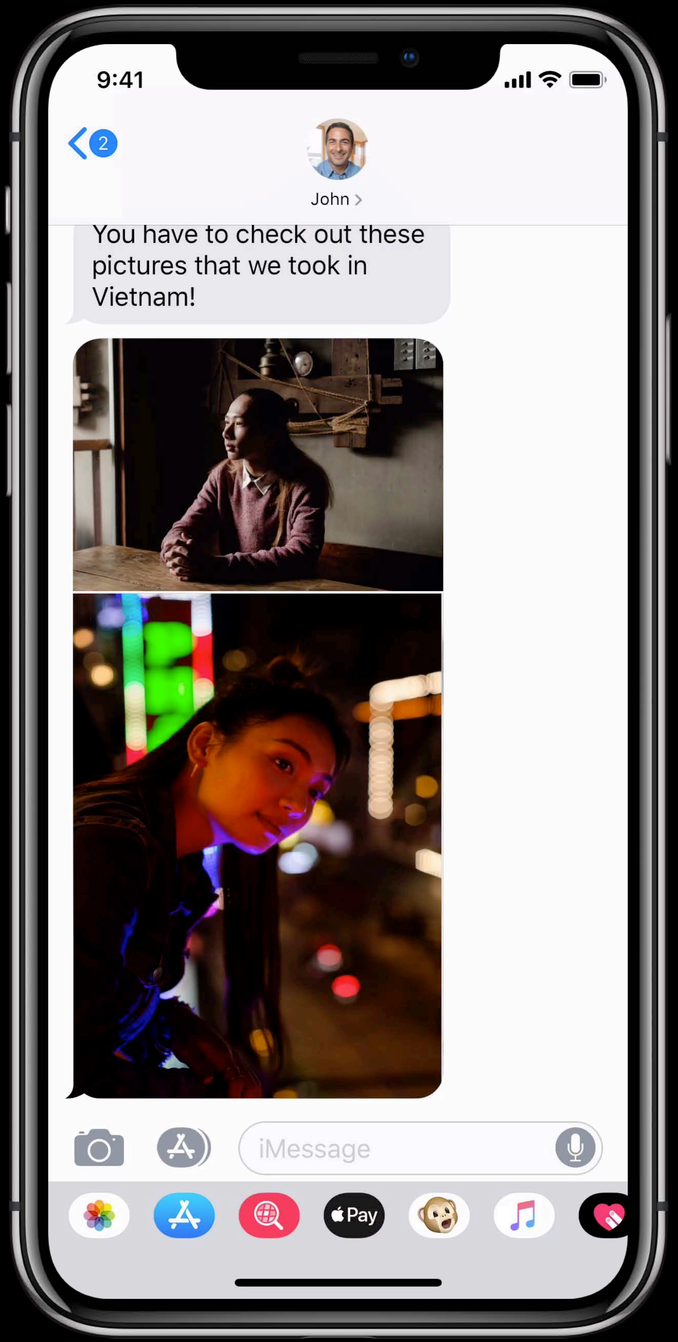

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Who is this session for?

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Building Great Document-based Apps in iOS 11	Session 229	WWDC 2017
Managing Documents in your iOS Apps	Session 216	WWDC 2018

Introduction

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Introduction

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API introduced with iOS 4

Introduction

Quick Look

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View controller to preview documents

Introduction

Quick Look

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Data source pattern

Introduction

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Delegate pattern

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Easy view controller transitions

Introduction

Why using Quick Look?

Introduction

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Works with most common file types

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Native user experience

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Security is handled for you

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Supported file types

Images

Videos

Audio files

PDF documents

HTML documents

Rich Text Format (RTF) documents

Text files that conform to public.text

iWork and Office documents

ZIP archives

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File formats covered by 3rd Party Quick Look preview extensions

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- File formats covered by 3rd Party Quick Look preview extensions
- USDZ

Introduction

User experience

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Pinch-to-zoom

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Pinch-to-zoom

Swipe-to-dismiss

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Thumbnails for PDFs

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Thumbnails for PDFs

Tabs in spreadsheets

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Scrubber for audio and video files

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When to use Quick Look

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You want to let the user zoom into photos

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Easily flick through a collection of photos

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When not to use Quick Look

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Editing content	

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Adding views on top of the preview	

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✗	✓
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Adding views on top of the preview	Not supported

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Getting Started

Setting up a QLPreviewController

This looks ok to us. Adjusted centered positioning. Let us know if there was something specific you wanted us to fix.

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let previewController = QLPreviewController()
previewController.dataSource = dataSource
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Providing Items

QLPreviewControllerDataSource and QLPreviewItem protocol

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protocol QLPreviewControllerDataSource {
    func numberOfPreviewItems(in controller: QLPreviewController) -> Int
    func previewController(_ controller: QLPreviewController,
                           previewItemAt index: Int) -> QLPreviewItem
}
```

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protocol QLPreviewItem {
    var previewItemURL: URL? { get }
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extension NSURL: QLPreviewItem { }
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extension MyViewController: QLPreviewControllerDataSource {
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Presenting Quick Look

Presenting a QLPreviewViewController modally

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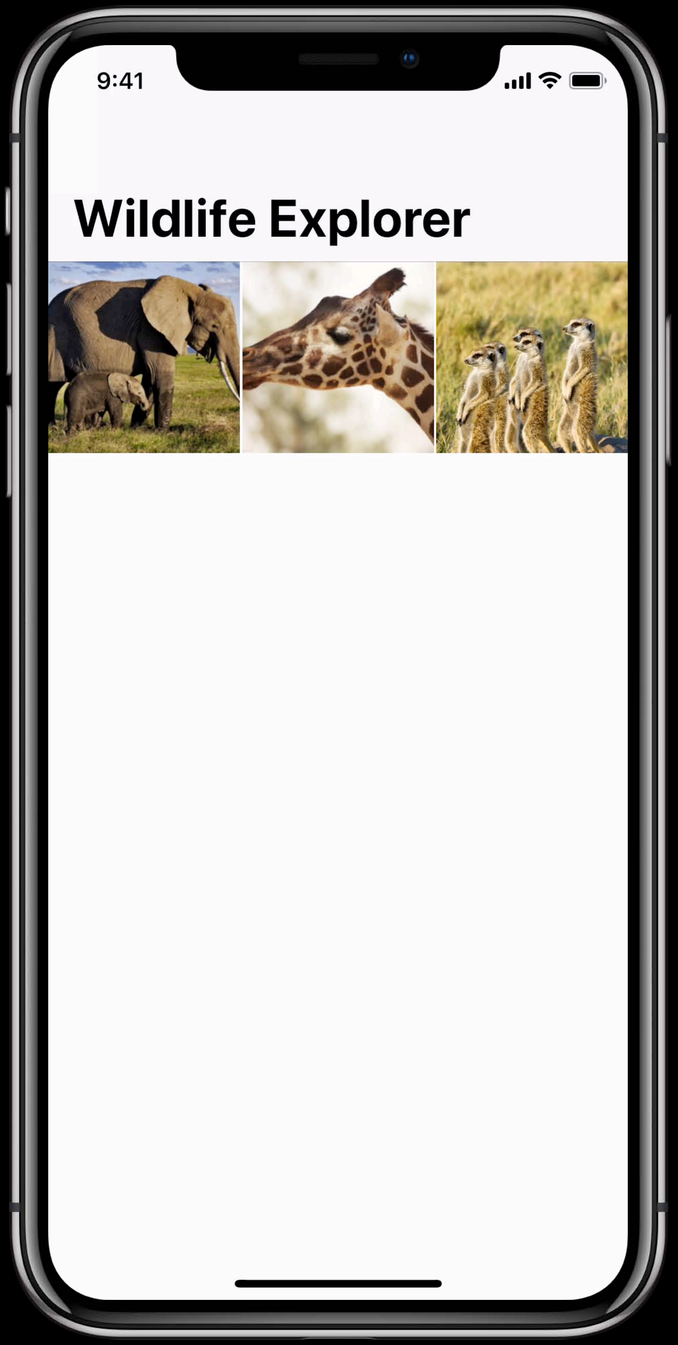
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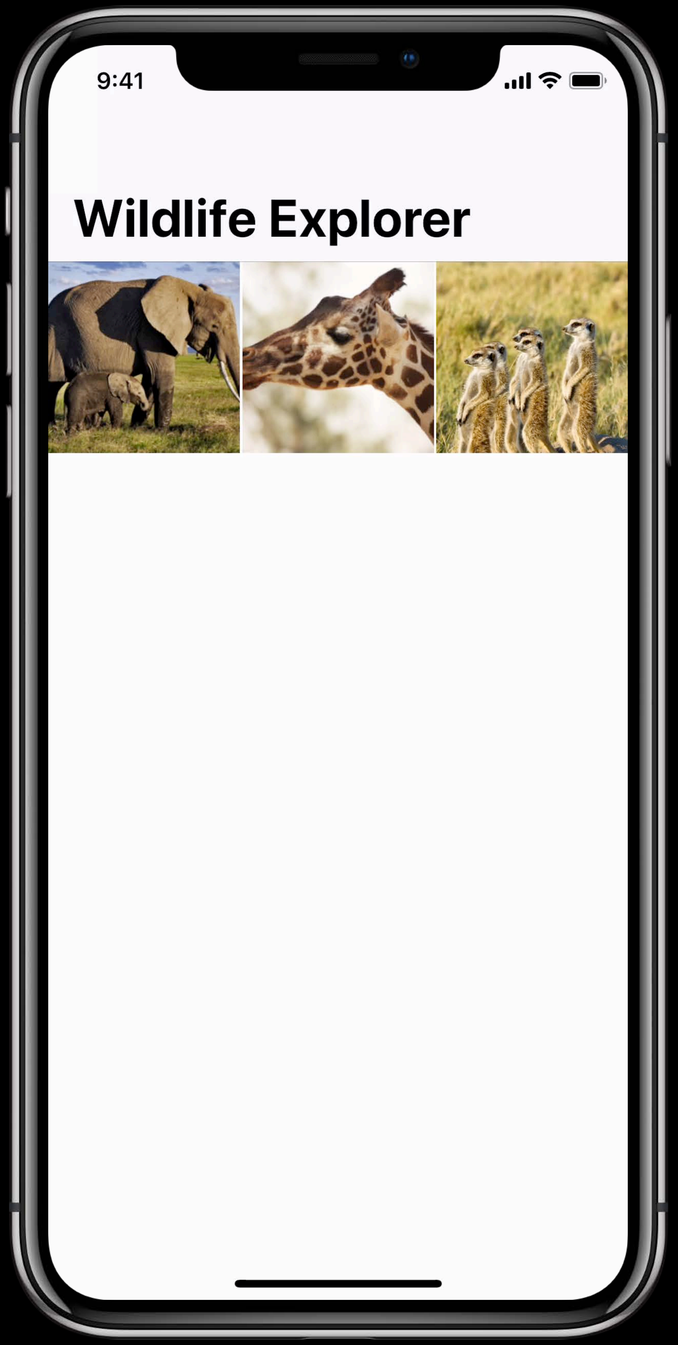
Wildlife Explorer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Presenting Quick Look

Pushing a QLPreviewViewController into UINavigationController

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navigationController.pushViewController(previewController, animated: true)
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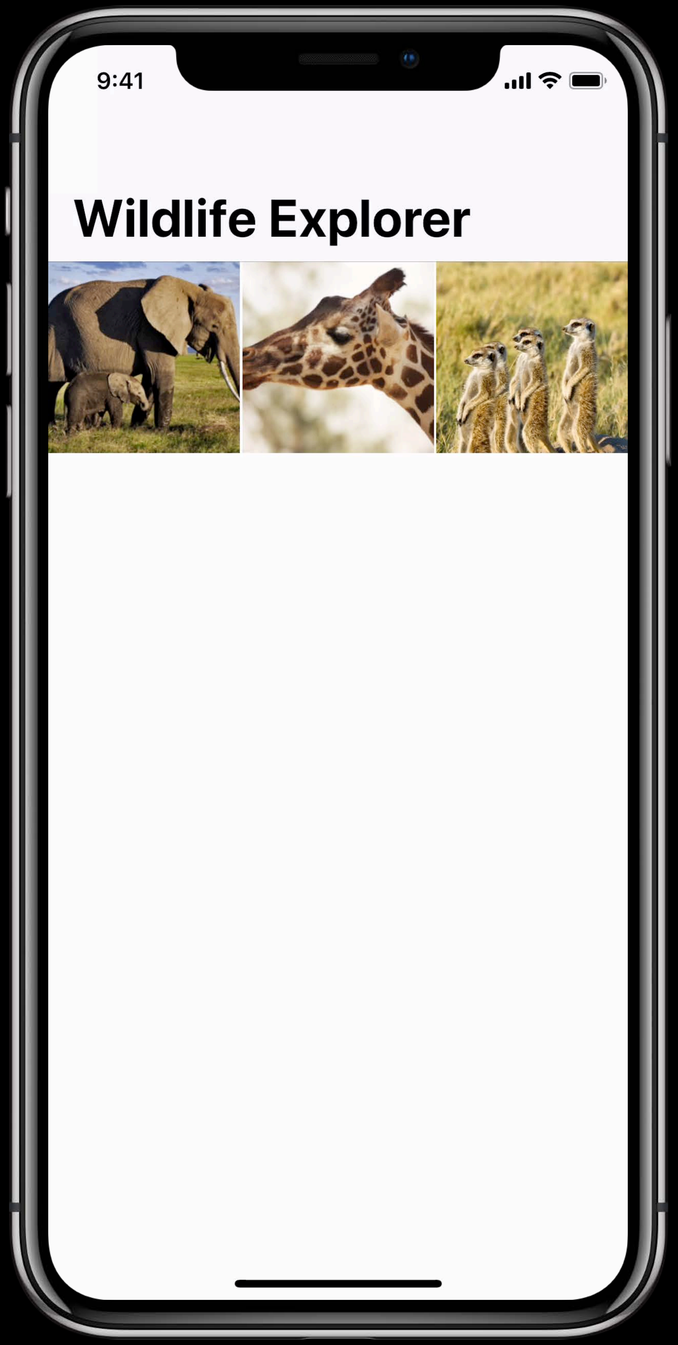
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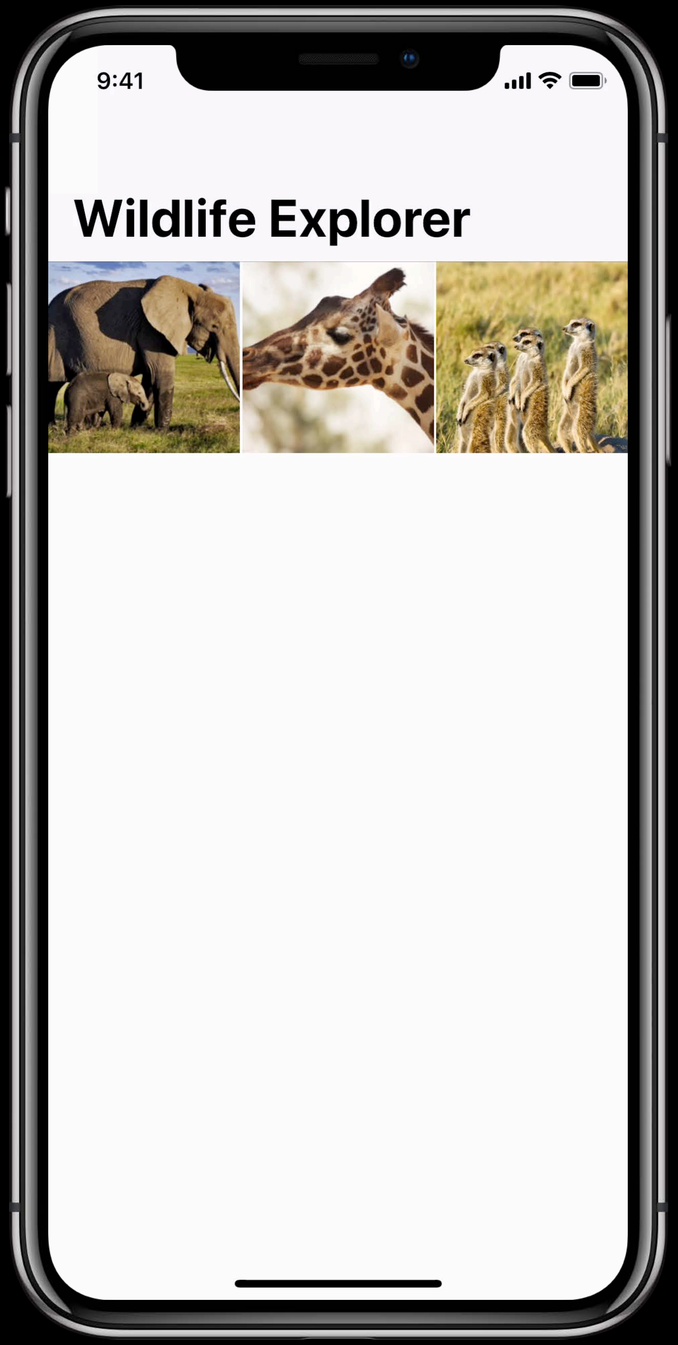
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Controlling Quick Look

```
class QLPreviewController : UIViewController {

    class func canPreview(_ item: QLPreviewItem) -> Bool

    weak var dataSource: QLPreviewControllerDataSource?

    func reloadData()

    var currentPreviewItemIndex: Int

    weak var delegate: QLPreviewControllerDelegate?
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                                inSourceView view: AutoreleasingUnsafeMutablePointer<UIView?>)
                                -> CGRect

optional func previewController(_ controller: QLPreviewController,
                                transitionImageFor item: QLPreviewItem,
                                contentRect: UnsafeMutablePointer<CGRect>) -> UIImage?

optional func previewController(_ controller: QLPreviewController,
                                transitionViewFor item: QLPreviewItem) -> UIView?
```

Controlling Quick Look

Animated transitions

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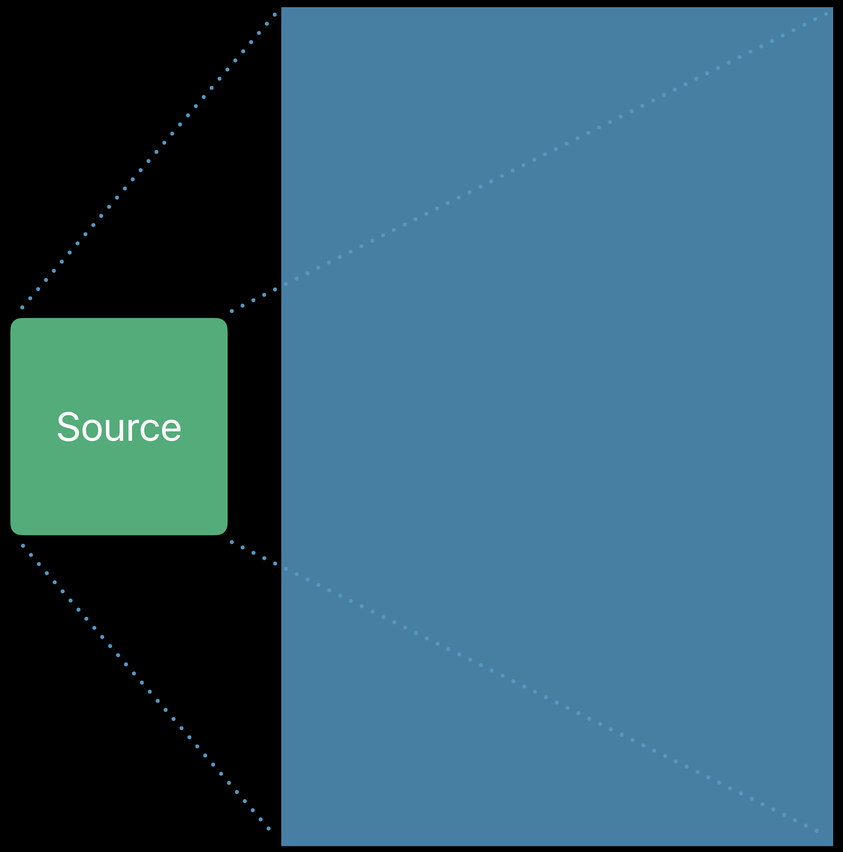

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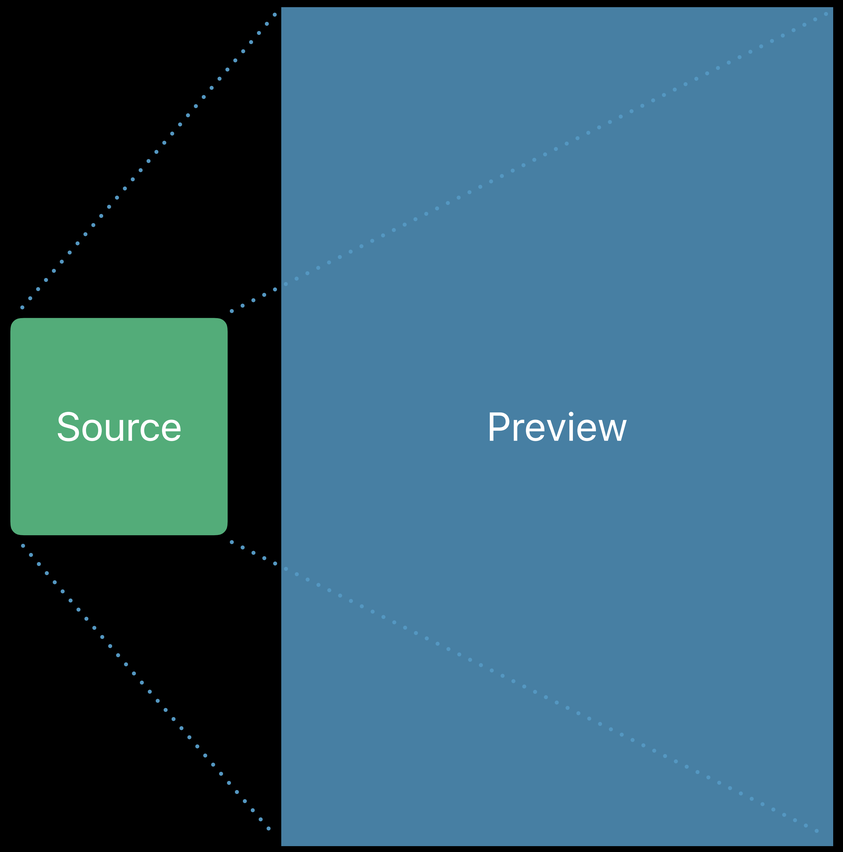

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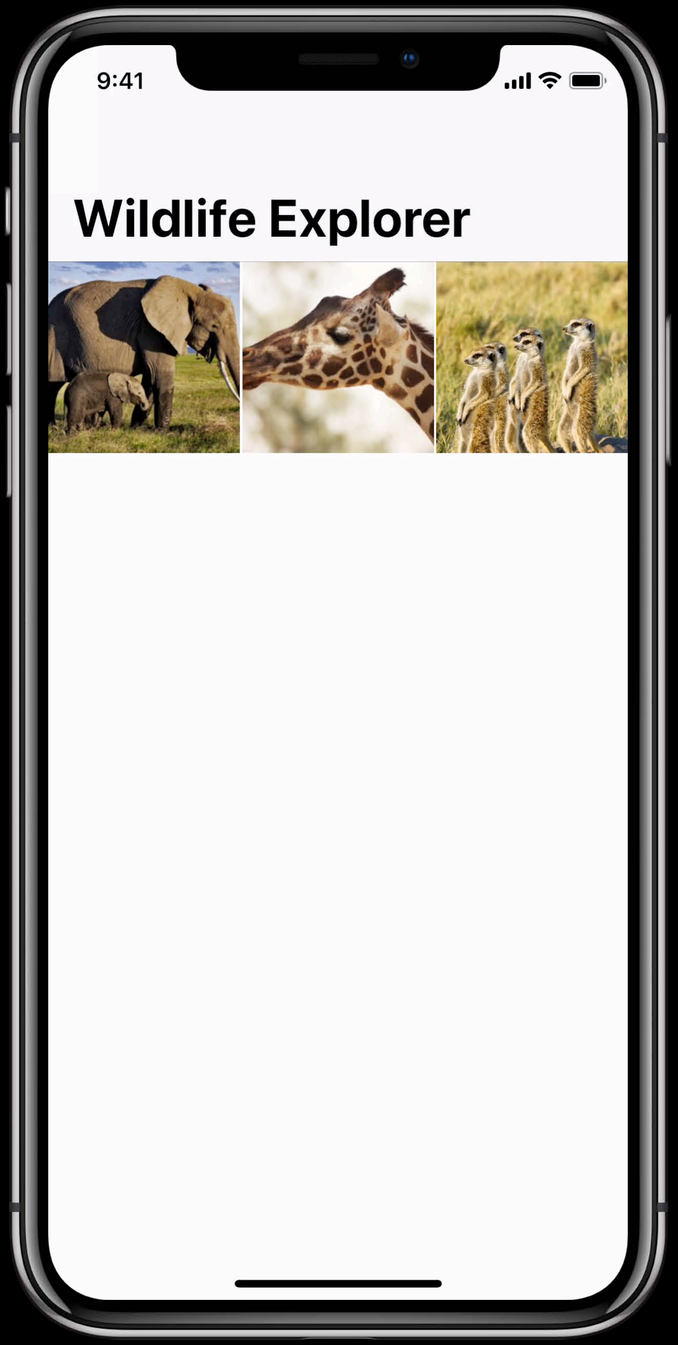
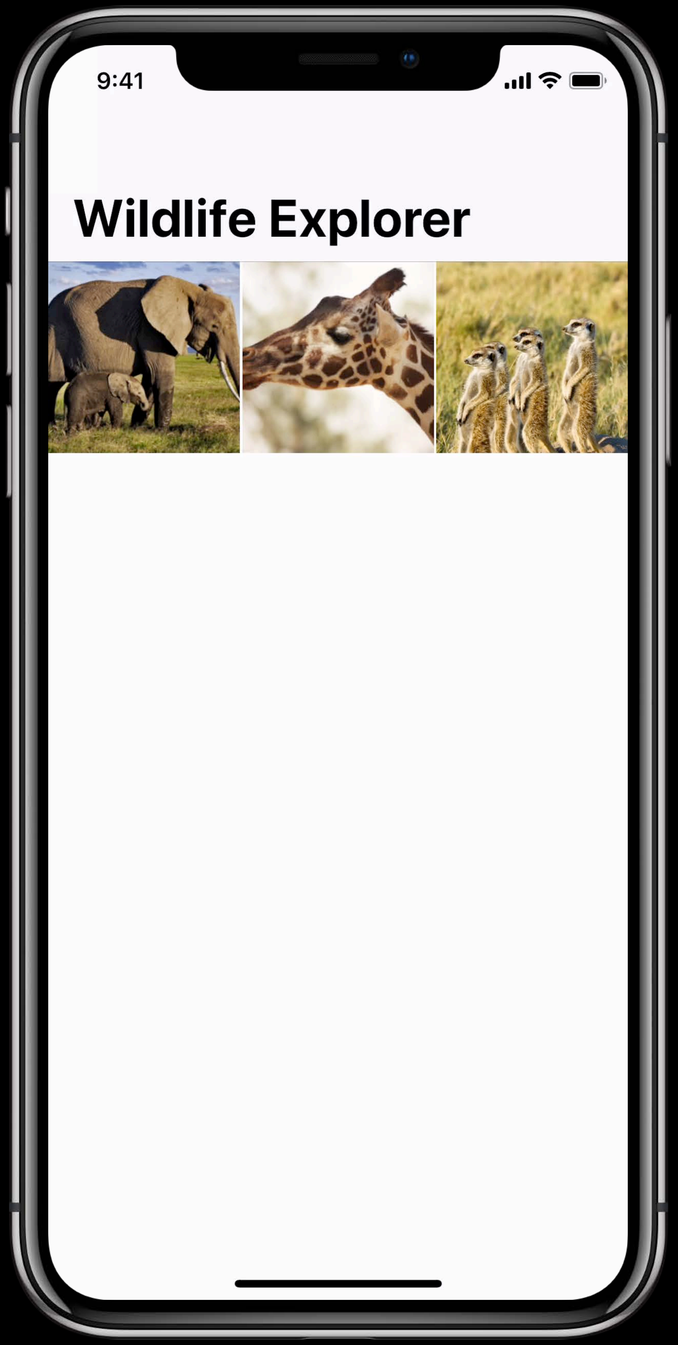
                                transitionViewFor item: QLPreviewItem) -> UIView?
```


9:41
Wildlife Explorer


9:41
Wildlife Explorer

Demo

Presenting Quick Look Preview Controller

Introduction to Quick Look

Adopting Quick Look Preview Controller

Providing custom Quick Look previews

Providing custom thumbnails

Preview Extension

Introduction

Preview Extension

Introduction

Extends Quick Look's previewing capabilities

Preview Extension

Introduction

Extends Quick Look's previewing capabilities

Quick Look support for your custom file formats

Preview Extension

Introduction

Extends Quick Look's previewing capabilities

Quick Look support for your custom file formats

Great for shareable files

Preview Extension

Introduction

Extends Quick Look's previewing capabilities

Quick Look support for your custom file formats

Great for shareable files

QLPreviewController uses your extension


9:41
Done
1 of 3
Fire
Particles document


9:41
Done
1 of 3

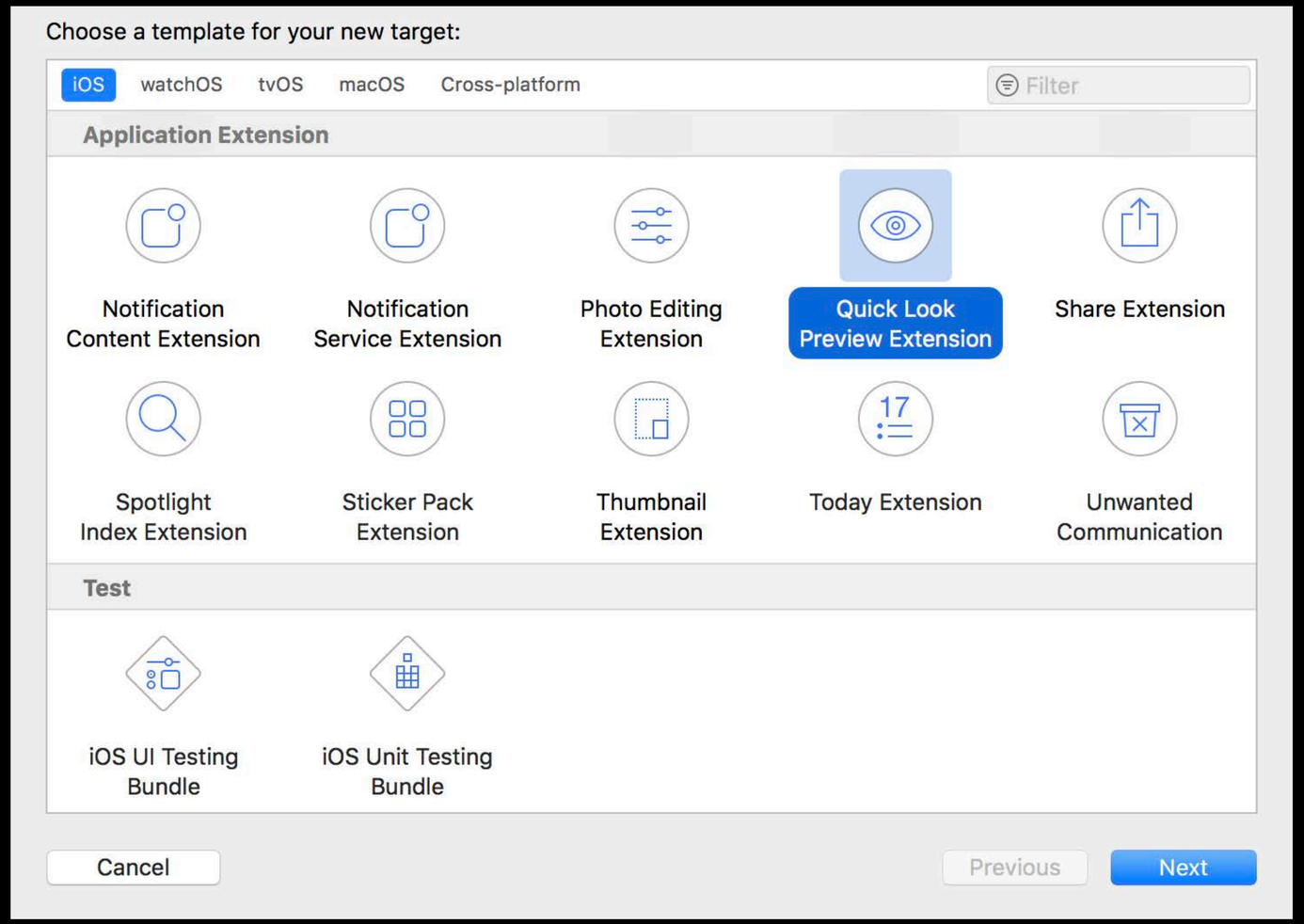

9:41
Done
1 of 3

Creating a Preview Extension

Step 1—Creation using Xcode template

Creating a Preview Extension

Step 1—Creation using Xcode template



Creating a Preview Extension

Template generated files

Creating a Preview Extension

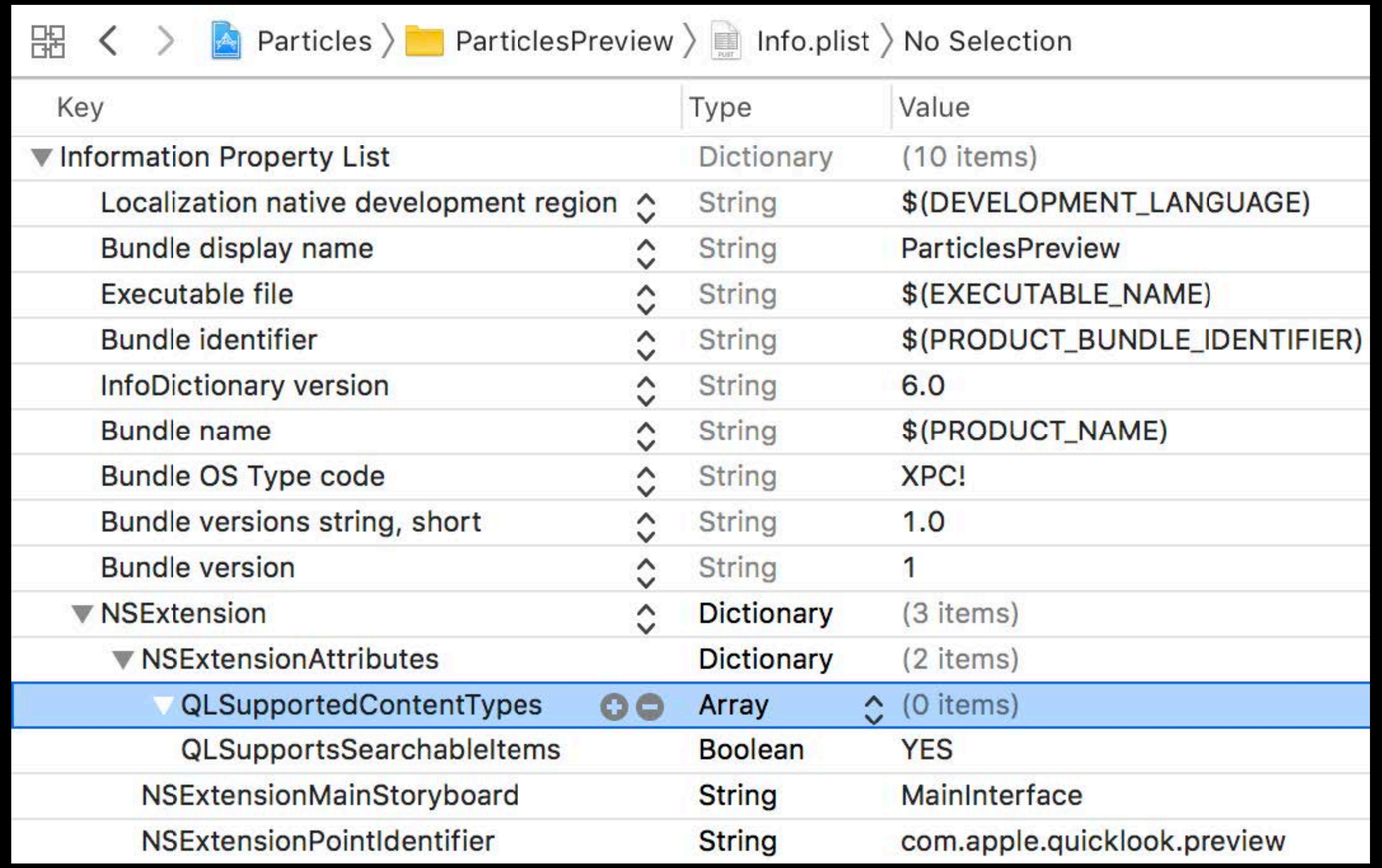
Template generated files

Creating a Preview Extension

Step 2—Editing the Info.plist

Creating a Preview Extension

Step 2—Editing the Info.plist

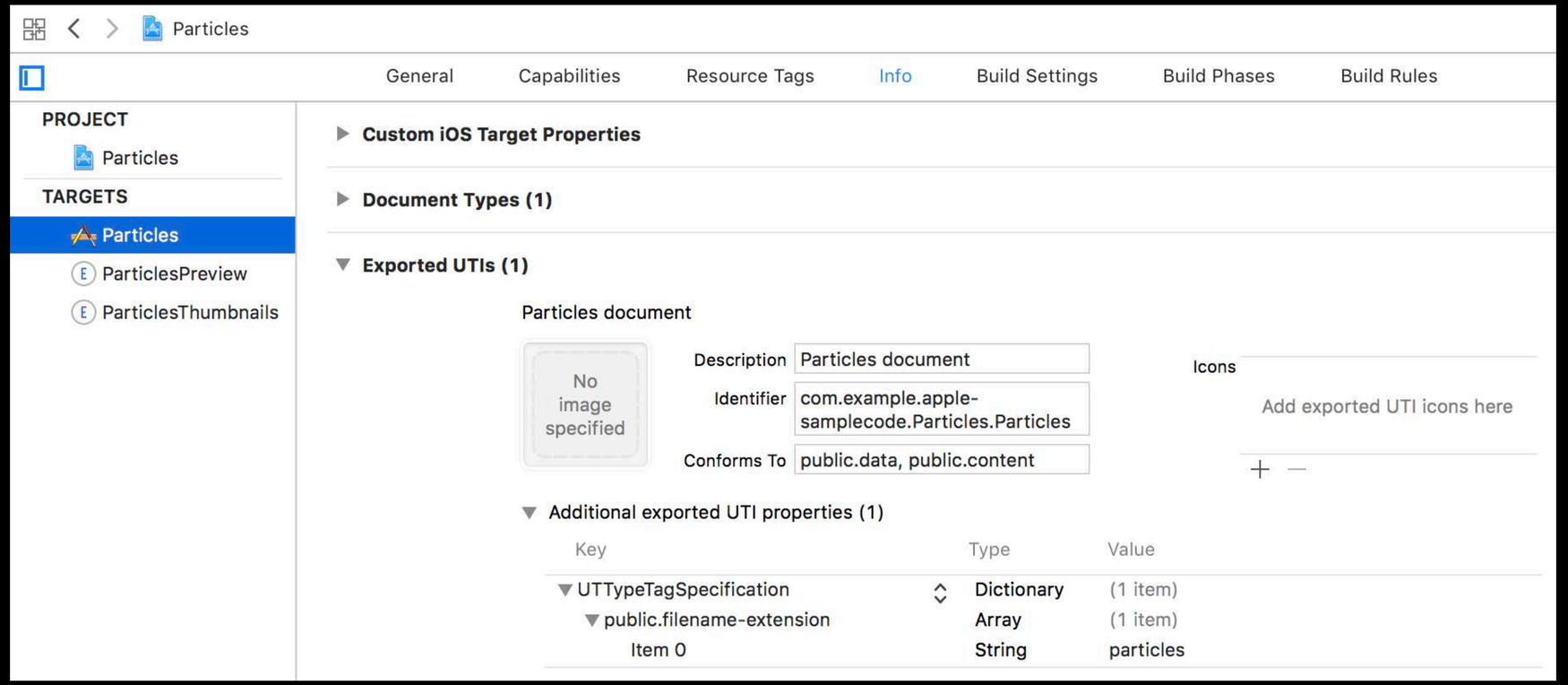


Creating a Preview Extension

Step 2—Editing the Info.plist

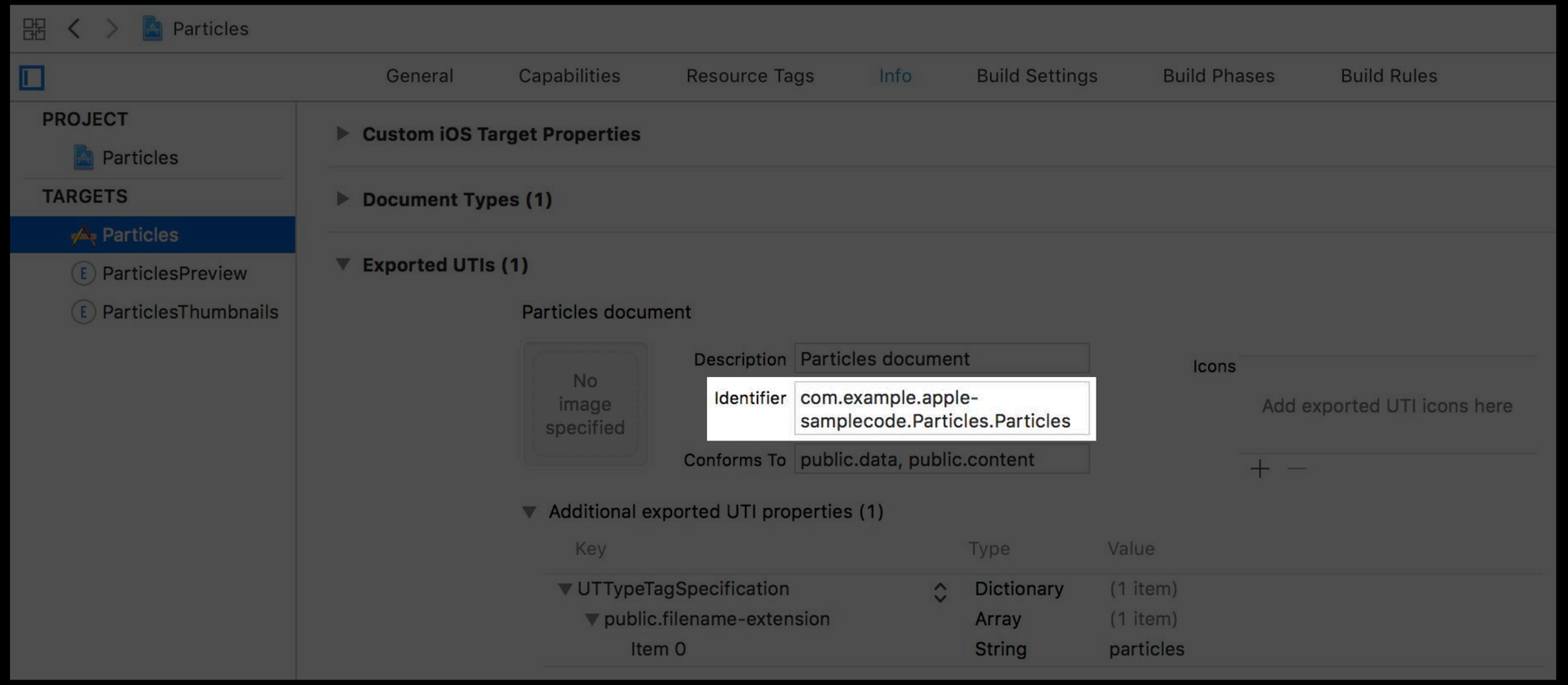
Creating a Preview Extension

Step 2—Editing the Info.plist



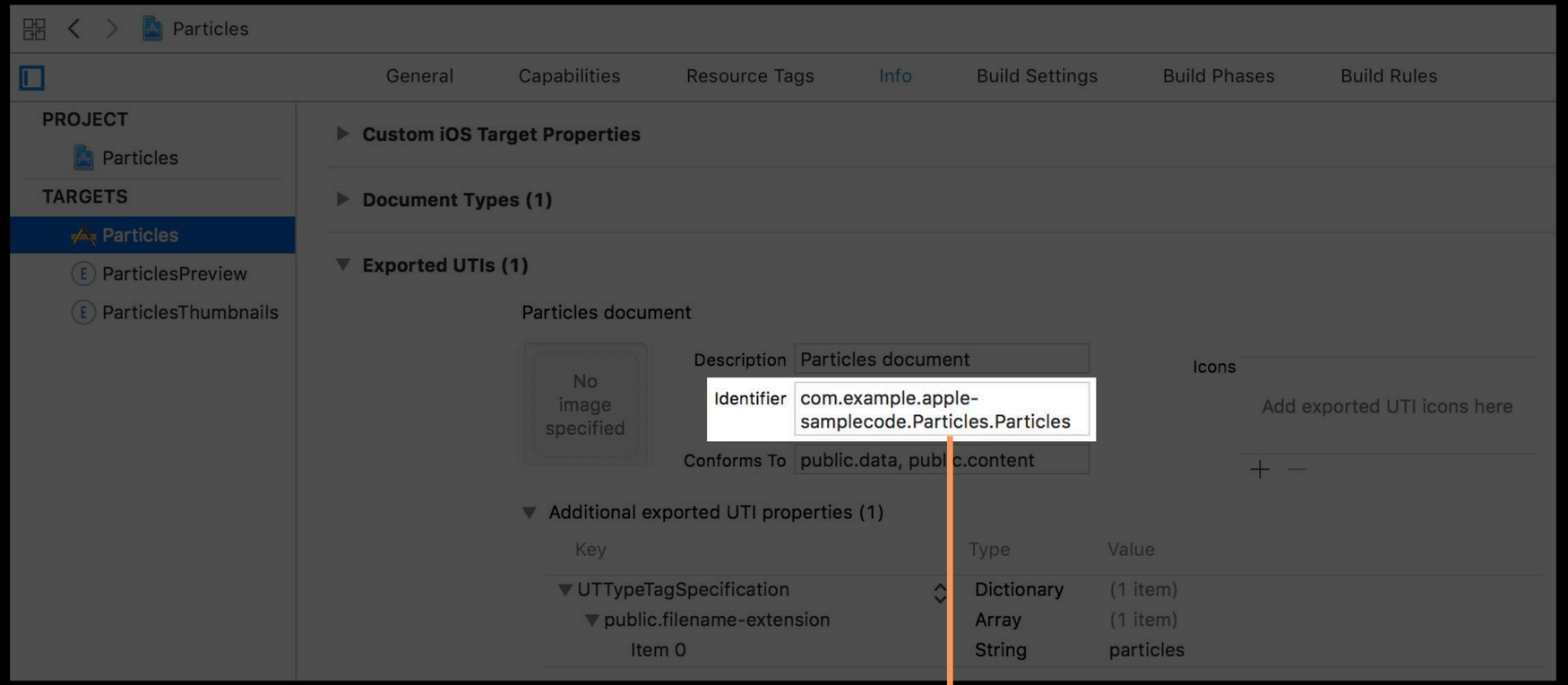
Creating a Preview Extension

Step 2—Editing the Info.plist



Creating a Preview Extension

Step 2—Editing the Info.plist



NSExtension	Dictionary	(3 items)
NSExtensionAttributes	Dictionary	(2 items)
QLSupportedContentTypes	Array	(1 item)
Item 0	String	com.example.apple-samplecode.Particles.Particles

Creating a Preview Extension

Step 3—QLPreviewingController protocol

```
class PreviewViewController: UIViewController, QLPreviewingController {

    func preparePreviewOfFile(at url: URL,
                              completionHandler handler: @escaping (Error?) -> Void) {

        // Load the preview and call the completion handler asynchronously when ready.
        loadPreviewOfFile(at: url, completionHandler: handler)
    }
}
```

Creating a Preview Extension

Step 3—QLPreviewingController protocol

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Introduction to Quick Look

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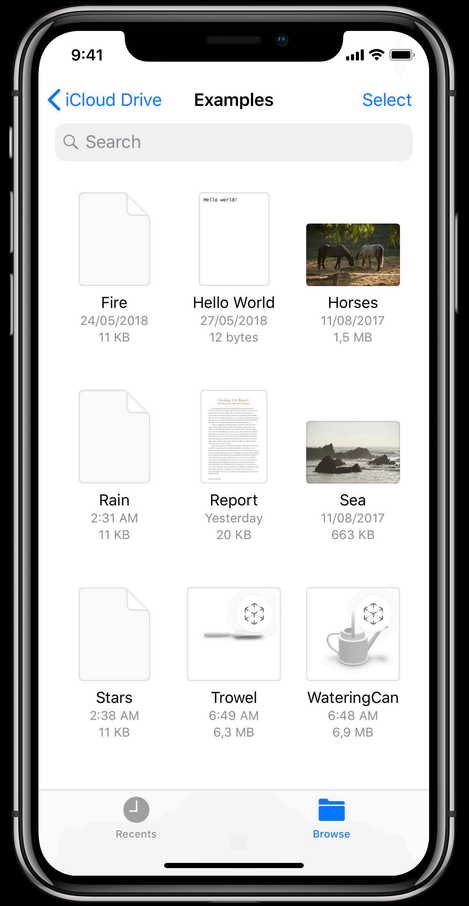
Providing custom Quick Look previews

Providing custom thumbnails

Thumbnail Extension

iOS native thumbnail generation support



Thumbnail Extension

iOS native thumbnail generation support

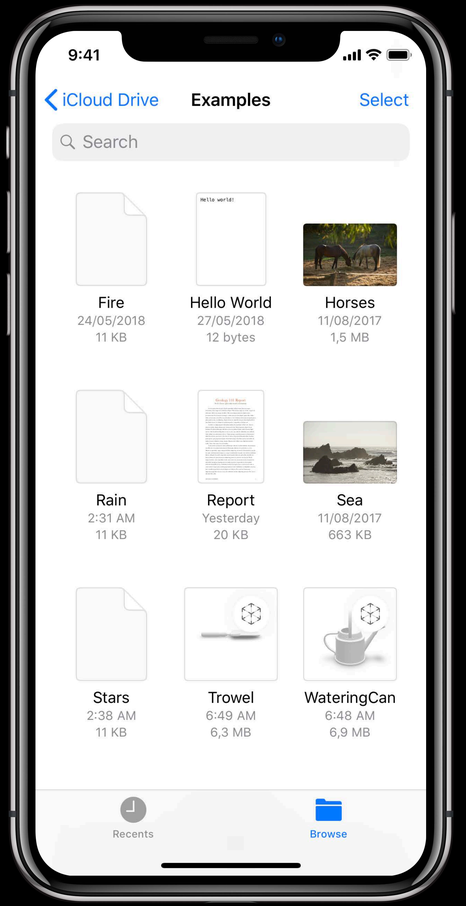
Images

Videos

PDF documents

Text files

USDZ



Thumbnail Extension

iOS native thumbnail generation support

Images

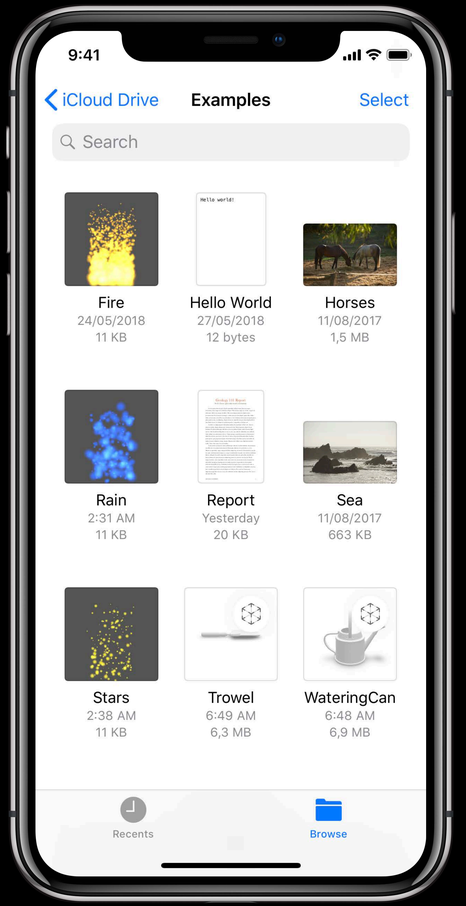
Videos

PDF documents

Text files

USDZ

Any file covered by 3rd Party
Quick Look thumbnail extensions



Thumbnail Extension

Visibility

Thumbnail Extension

Visibility

In the Files app and any UIDocumentBrowserViewController-based app

Thumbnail Extension

Visibility

In the Files app and any UIDocumentBrowserViewController-based app

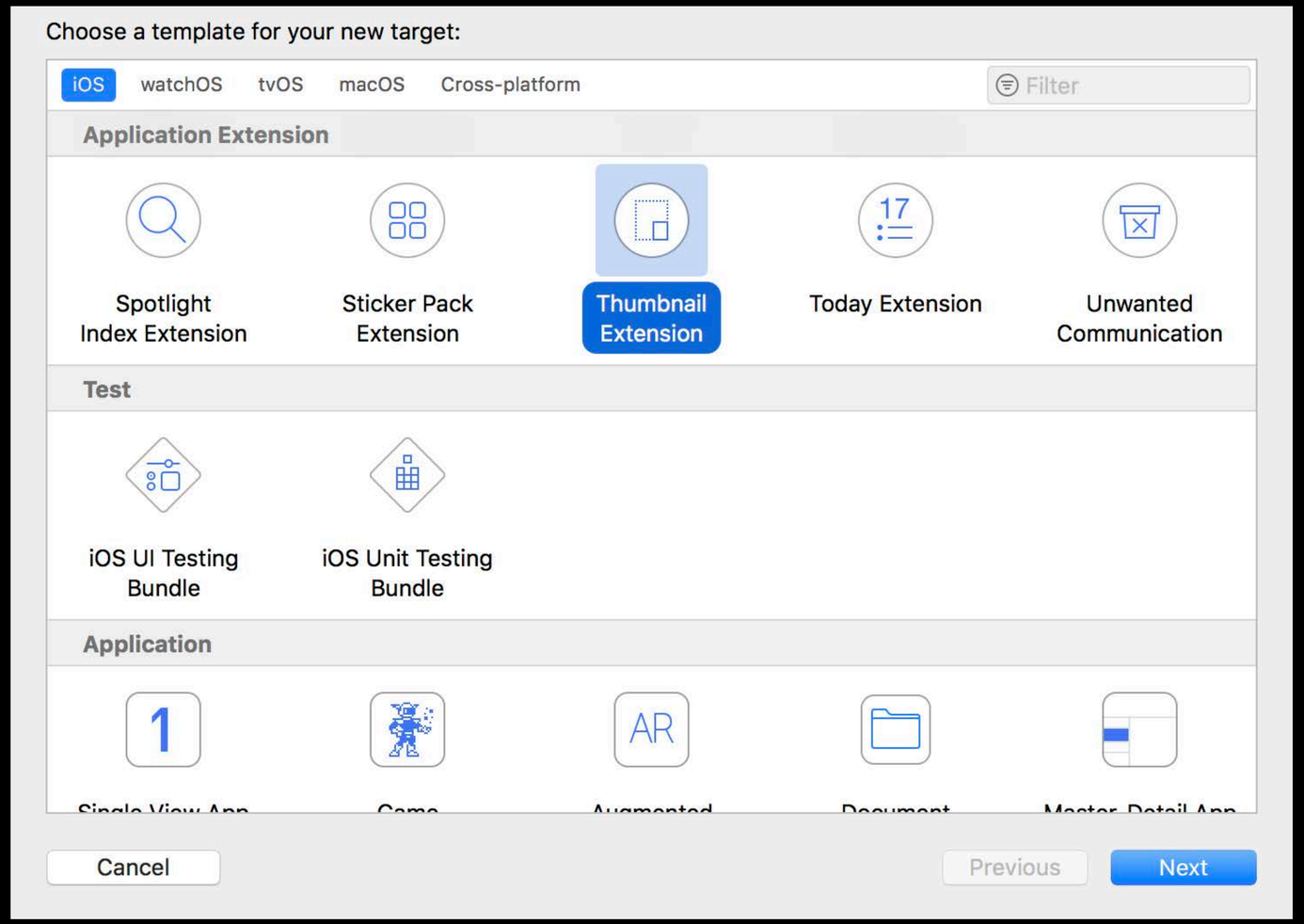
In Quick Look's list view

Creating a Thumbnail Extension

Step 1—Creation using Xcode template

Creating a Thumbnail Extension

Step 1—Creation using Xcode template

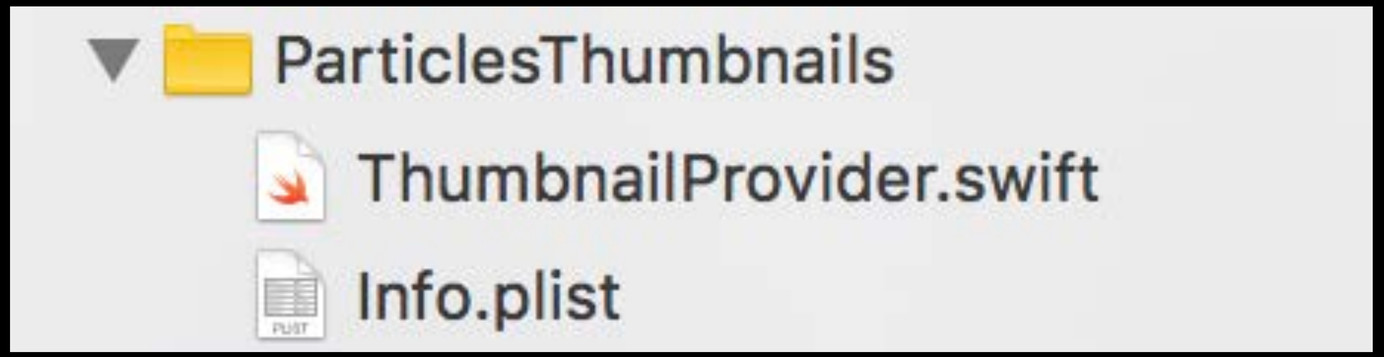


Creating a Thumbnail Extension

Template generated files

Creating a Thumbnail Extension

Template generated files

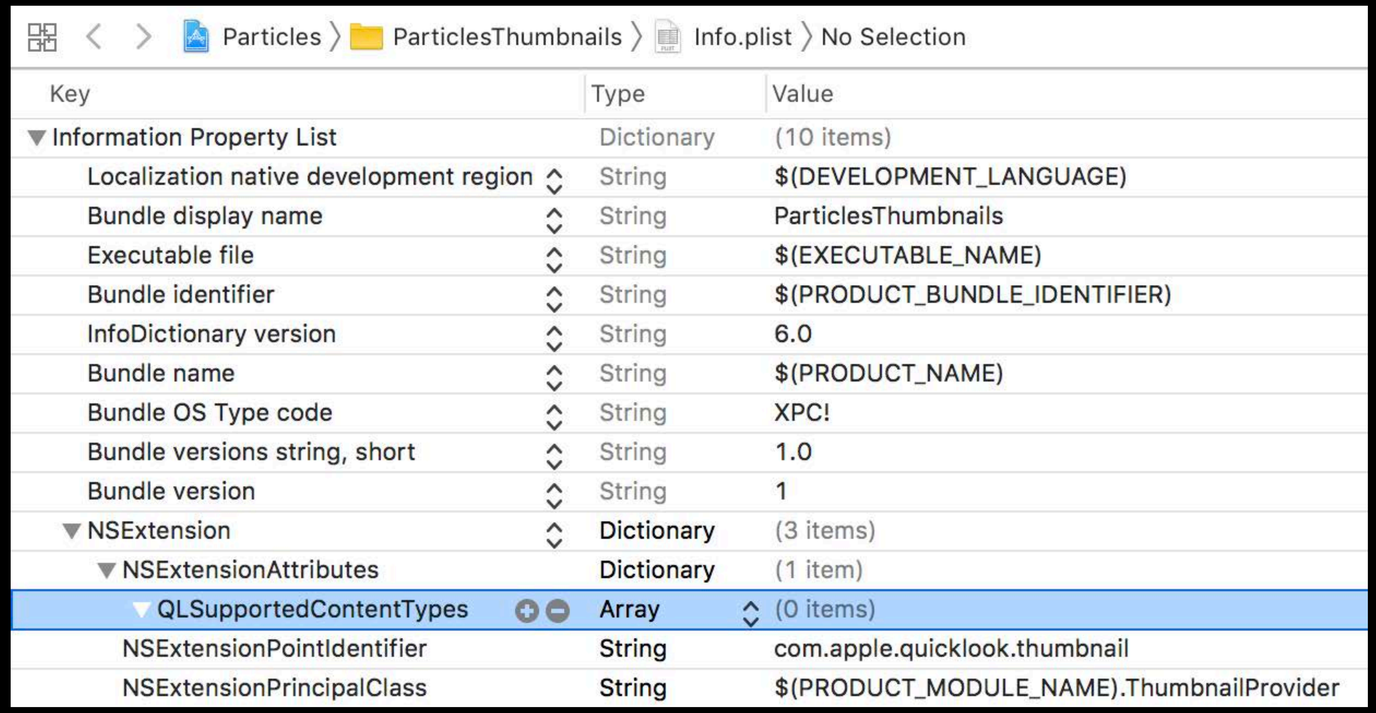


Creating a Thumbnail Extension

Step 2—Editing the Info.plist

Creating a Thumbnail Extension

Step 2—Editing the Info.plist



Creating a Thumbnail Extension

Step 2—Editing the Info.plist

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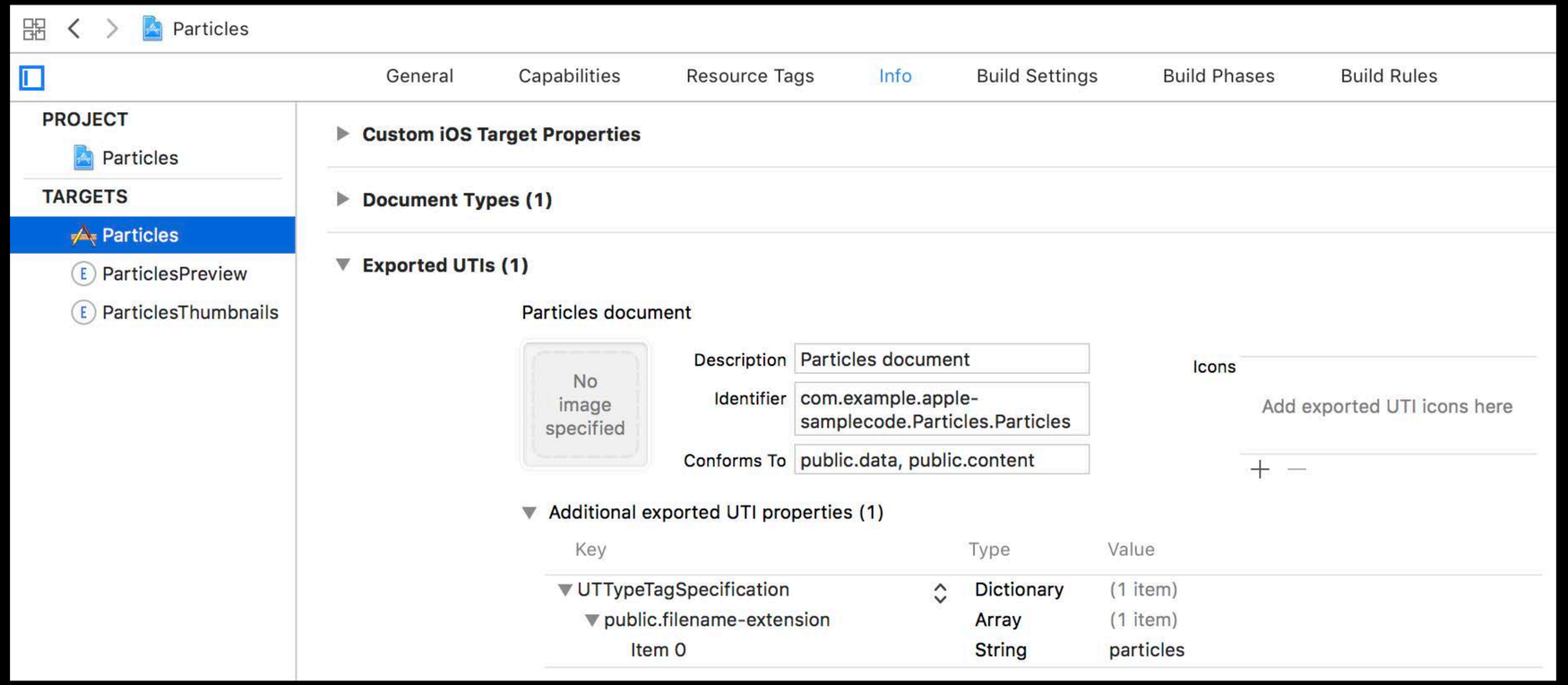
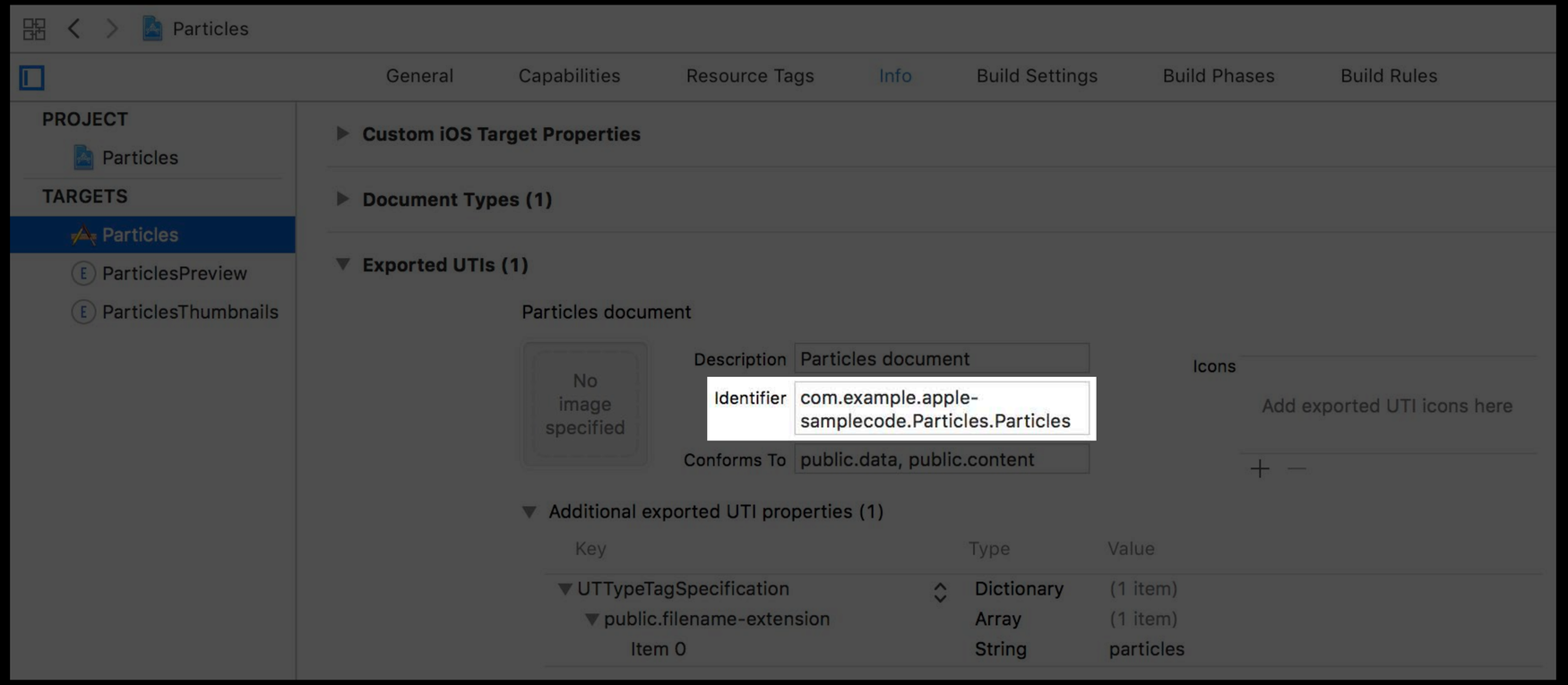


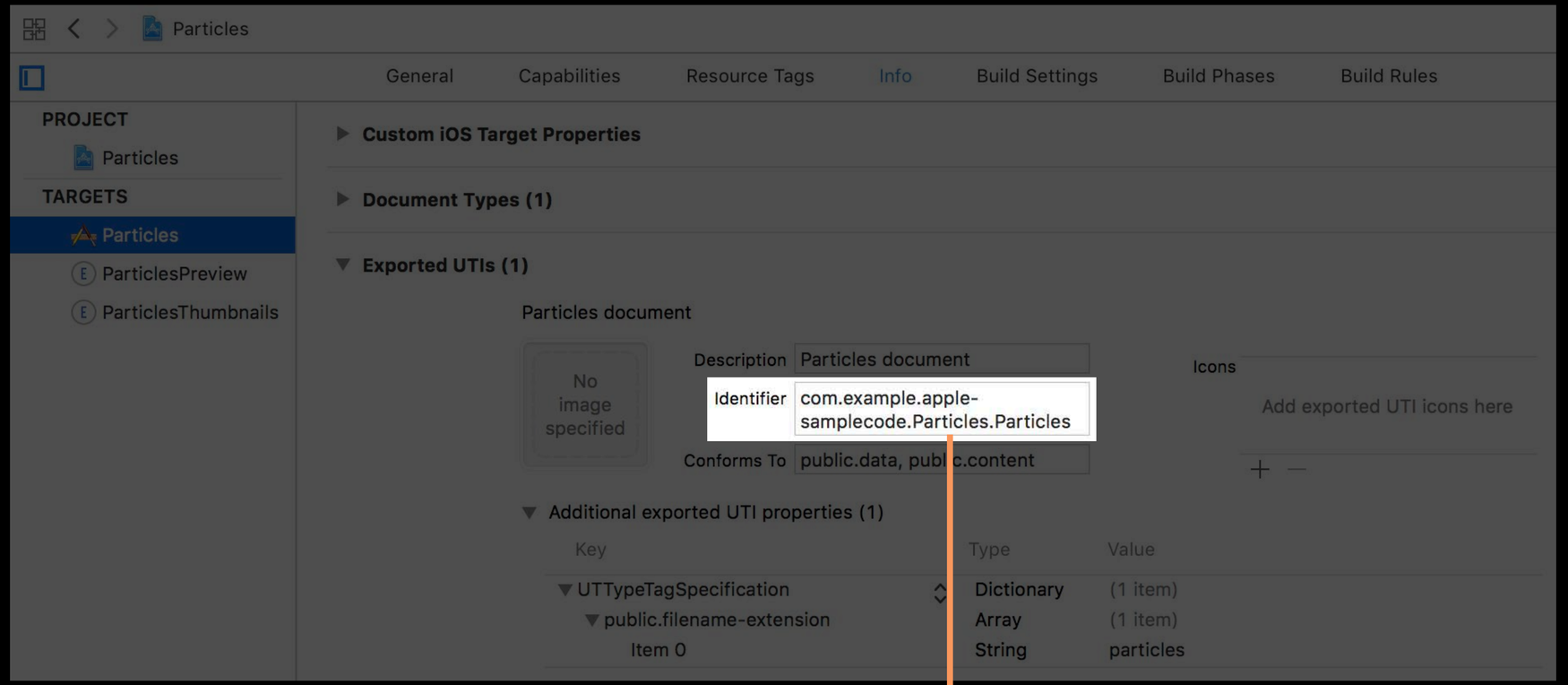
Creating a Thumbnail Extension

Step 2—Editing the Info.plist



Creating a Thumbnail Extension

Step 2—Editing the Info.plist



▼ NSExtension	Dictionary	(3 items)
▼ NSExtensionAttributes	Dictionary	(1 item)
▼ QLSupportedContentTypes	Array	(1 item)
Item 0	String	com.example.apple-samplecode.Particles.Particles

Providing Thumbnails

Step 3—Implementing your QLThumbnailProvider subclass

Providing Thumbnails

Step 3—Implementing your QLThumbnailProvider subclass

Draw thumbnails

Providing Thumbnails

Step 3—Implementing your QLThumbnailProvider subclass

Draw thumbnails

- Using CoreGraphics

Providing Thumbnails

Step 3—Implementing your QLThumbnailProvider subclass

Draw thumbnails

- Using CoreGraphics
- Using UIKit

Providing Thumbnails

Step 3—Implementing your QLThumbnailProvider subclass

Draw thumbnails

- Using CoreGraphics
- Using UIKit

Return an image file URL

Providing Thumbnails

Step 3—Implementing your QLThumbnailProvider subclass

```
class ThumbnailProvider: QLThumbnailProvider {

    override func provideThumbnail(for request: QLFileThumbnailRequest,
                                   _ handler: @escaping (QLThumbnailReply?, Error?) -> Void) {

        // Create a QLThumbnailReply for the request that will generate a thumbnail
        // and pass it through the handler.
        let reply = thumbnailReply(for: request)
        handler(reply, nil)
    }
}
```

Providing Thumbnails

Step 3—Implementing your QLThumbnailProvider subclass

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class ThumbnailProvider: QLThumbnailProvider {

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Providing Thumbnails

Step 3—Implementing your QLThumbnailProvider subclass

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        let reply = thumbnailReply(for: request)
        handler(reply, nil)
    }
}
```

Demo

Providing custom previews and thumbnails

Summary

Preview documents in your app with Quick Look easily

Extend Quick Look's capabilities system-wide with preview and thumbnail extensions

More Information

https://developer.apple.com/session237


WWDC18