

# «Popover» in a view controller

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# As an introduction...

## **Difference between small and large devices**

- Exploit the surface...  
... with appropriate mechanisms

## **Typical situations**

- UIActionControllers in «actionSheet» mode
- «Pickers»
  - ▶ **To be studied later**
- or any view...

# Extensions of UIViewController

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## Since iOS9

- Attribute popoverPresentationController
  - ▶ Of type UIPopoverPresentationController
  - ▶ May be nil

## UIPopoverPresentationController

- Describes the behavior of a popover
  - ▶ sourceView + sourceRect
  - ▶ barButtonItem
  - ▶ arrowDirection and permittedArrowDirection
  - ▶ delegate

## UIPopoverPresentationControllerDelegate

- prepareForPopoverPresentation(\_:)
- popoverPresentationControllerShouldDismissPopover(\_:)
- popoverPresentationControllerDidDismissPopover(\_:)

# Extensions of UIViewController

## Since iOS9

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**What can I put in a popover?**

Any view  
(with its controller)

## UIPopoverPresentationController

- Describes the
  - ▶ sourceView + sourceRect
  - ▶ barButtonItem
  - ▶ arrowDirection and permittedArrowDirection
  - ▶ delegate

## UIPopoverPresentationControllerDelegate

- prepareForPopoverPresentation(\_:)
- popoverPresentationControllerShouldDismissPopover(\_:)
- popoverPresentationControllerDidDismissPopover(\_:)

# An example (small device)



# An example (large device)



# ViewController



**Sake of simplicity...**

Code located in a  
ViewController

# ViewController

```
import UIKit

class ViewController: UIViewController, UIPopoverPresentationControllerDelegate {

    private let a = UIAlertController(title: "My Action",
                                     message: "Here is my action",
                                     preferredStyle: .actionSheet)

    private let b1 = UIButton(type: .system)
    private let b2 = UIButton(type: .system)
    private let l = UILabel()
    private let i = UIImageView(image: UIImage(named: "john-harris"))

    private let isIPad = UIDevice.current.userInterfaceIdiom == .pad
    private let size = UIScreen.main.bounds.size
    private var count = 1
}
```



# ViewController

```
override func viewDidLoad() {
    super.viewDidLoad()
    // Do any additional setup after loading the view
    self.view = UIView(frame : UIScreen.main.bounds)
    self.view.backgroundColor = UIColor.lightGray
    self.view.addSubview(b1)
    self.view.addSubview(b2)
    self.view.addSubview(l)
    b1.addTarget(self, action: #selector(action1),
                for: .touchDown)
    b1.setTitle("ActionSheet", for: .normal)
    b1.frame = CGRect(x: size.width / 2.0 - 60,
                     y: 60, width: 120, height: 40)
    b2.addTarget(self, action: #selector(action2),
                for: .touchDown)
    b2.setTitle("Image", for: .normal)
    b2.frame = CGRect(x: size.width / 2.0 - 40,
                     y: 120, width: 80, height: 40)
    l.frame = CGRect(x: 20, y: 200,
                    width: size.width - 40, height: 40)
    l.textAlignment = .center
    a.addAction(UIAlertAction(title: "Yes",
                              style:.default,
                              handler: {(a) -> Void in
                                  self.l.text = "" })))
    a.addAction(UIAlertAction(title: "No",
                              style: .cancel,
                              handler: nil))
}
```

# ViewController

```
@objc func action1 () {
    if isIPad {
        a.modalPresentationStyle = .popover // dedicated parameter
        // a.popoverPresentationController != nil on an iPad
        a.popoverPresentationController?.sourceView = self.view
        a.popoverPresentationController?.sourceRect = b1.frame
        a.popoverPresentationController?.delegate = self
        self.present(a, animated: true, completion: nil)
    } else {
        self.present(a, animated: true, completion: nil)
    }
}

@objc func action2 () {
    if isIPad {
        let vc = UIViewController() // Let's embed in a view controller
        vc.view = i
        // vc.modalPresentationStyle != nil on an iPad
        vc.modalPresentationStyle = .popover
        vc.popoverPresentationController?.sourceView = self.view
        vc.popoverPresentationController?.sourceRect = b2.frame
        vc.popoverPresentationController?.delegate = self
        self.present(vc, animated: true, completion: nil)
    } else {
        i.frame = CGRect(x: size.width / 2.0 - 125.0,
                        y: 200, width: 250, height: 350)
        self.view.addSubview(i)
    }
}
```

# ViewController

```
// UIPopoverPresentationControllerDelegate Protocol

func popoverPresentationControllerShouldDismissPopover(_
    popoverPresentationController: UIPopoverPresentationController) -> Bool{
    return true
}

func popoverPresentationControllerDidDismissPopover(_
    popoverPresentationController :UIPopoverPresentationController) {
    if l.text == nil {
        l.text = "dismiss \(\count)"
    } else {
        l.text = l.text!+" - dismiss \(\count)"
    }
    count += 1
    popoverPresentationController.delegate = nil
}
}
```

# No popover on a large device?

**КАВООМ**

# No popover on a large device?

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adPro9 SAR Running Alerte! on iPadPro9 SAR

19:17 Dim. 7 oct.

```
Alerte! > Alerte! > AppDelegate.swift > AppDelegate
1 //
2 // AppDelegate.swift
3 // Alerte!
4 //
5 // Created by Dakar Tech on 07/10/2018.
6 // Copyright © 2018 Sorbonne Université. All rights reserved.
7 //
8
9 import UIKit
10
11 @UIApplicationMain
12 class AppDelegate: UIResponder, UIApplicationDelegate {
13
14     var window: UIWindow?
15
16
17     func application(_ application: UIApplication, didFinishLaunchingWithOptions launchOptions: [UIApplication.LaunchOptionsKey:
18         Any]?) -> Bool {
19         // Override point for customization after application launch.
20         return true
21     }
22 }
```

Thread 1: signal SIGABRT

Alerte! > Thread 1 > 12 main

2018-10-07 19:17:42.796389+0200 Alerte![1800:709398] \*\*\* Terminating app due to uncaught exception 'NSGenericException', reason: 'Your application has presented a UIAlertController (<UIAlertController: 0x102051400>) of style UIAlertControllerStyleActionSheet from Alerte\_.ViewController (<Alerte\_.ViewController: 0x101e17fc0>). The modalPresentationStyle of a UIAlertController with this style is UIModalPresentationPopover. You must provide location information for this popover through the alert controller's popoverPresentationController. You must provide either a sourceView and sourceRect or a barButtonItem. If this information is not known when you present the alert controller, you may provide it in the UIPopoverPresentationControllerDelegate method - prepareForPopoverPresentation.'

\*\*\* First throw call stack:  
(0x1ba9ceef8 0x1b9b9ca40 0x1e70c4cb8 0x1e70cde0c 0x1e70cb790 0x1e6da3190 0x1e6d911d0 0x1e6dc0508 0x1ba95cb94 0x1ba957828 0x1ba957dc8 0x1ba9575b8 0x1bcbcb584 0x1e6d97558 0x100e0d6c0 0x1ba417b94)  
libc++abi.dylib: terminating with uncaught exception of type NSRangeException  
(lldb)

All Output


Filter

# As a conclusion...

 **Nothing complicated is'n't it?**



 **Part of the iOS «look and feel»**

-  You must use it when your Applications run on large devices!