

# Flashcards

## Lesson 6

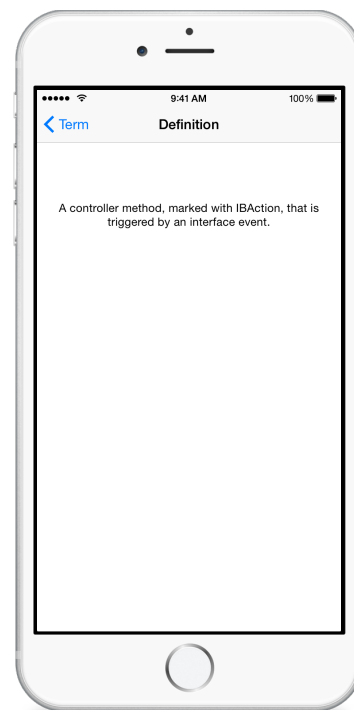


### Description

Override the term controller `viewWillAppear:animated:` method to draw a random card each time the controller is presented.

### Learning Outcomes

- Analyze app behavior and relate behavior to controller life cycle methods.
- Discover the `UIViewController` `viewWillAppear:animated:` method and distinguish it from other controller life cycle methods.
- Practice overriding a controller method to customize app behavior.



### Vocabulary

controller life cycle events	<code>UIViewController</code>	method override
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### Materials

- **Flashcards Lesson 6** Xcode project

### Opening

How can we display a different flashcard `term` when returning from the definition controller?

## Agenda

- Discuss the desire for a new random term to be displayed every time the `TermController` is presented.
- Discuss possible solutions, such as customizing the behavior of the Term (back) button to cause the `TermController` to pick a new `Flashcard`.
- Using the Xcode Documentation and API Reference (⇧⌘0), explore the `UIViewController` class reference. Explore methods such as `willMoveToParentViewController:` and properties such as `parentViewController` and `presentingViewController`.
- Discuss a simple approach of having the `TermController` choose a random `Flashcard` term to display every time the view controller will appear, rather than during `viewDidLoad`.
- Using the Xcode Documentation and API Reference (⇧⌘0), explore the `UIViewController` `viewWillAppear:animated:` method.
- Update the `TermController`, moving the `Flashcard` selection to a new implementation of `viewWillAppear:animated:`.

```
override func viewDidLoad() {  
    super.viewDidLoad()  
}  
  
override func viewWillAppear(animated: Bool) {  
    super.viewWillAppear(animated)  
    if let flashcard = deck.randomCard {  
        self.flashcard = flashcard  
        termLabel.text = flashcard.term  
    }  
}
```

- Discuss how `viewWillAppear:animated:` will be called when the view first appears, and each time it reappears when transitioning back from the definition controller.
- Run the app (⌘R), tap the Definition button, observe the corresponding definition, tap the Term (back) button, and observe a new (likely, due to the random `Flashcard` selection) `term` appear. Move back and forth between term and definition to observe the changes.

## Closing

What if you use some of the other controller life cycle methods to display the term of different flashcards? How much code might be involved? What are the benefits and drawbacks to the different approaches?

## Modifications and Extensions

- Use modal transitions and gestures to move between the view controllers.
- Add a **.plist** file to the project to store a dictionary of flashcard data, and populate the `Deck` using this data instead of a hard-coded array.

## Resources

View Controller Programming Guide for iOS: Responding to Display-Related Notifications <http://developer.apple.com/library/ios/featuredarticles/ViewControllerPGforiPhoneOS/RespondingtoDisplay-Notifications/RespondingtoDisplay-Notifications.html>

UIViewController Class Reference [https://developer.apple.com/library/ios/documentation/UIKit/Reference/UIViewController\\_Class/index.html](https://developer.apple.com/library/ios/documentation/UIKit/Reference/UIViewController_Class/index.html)