

# Gesturizer

## Lesson 5



### Description

Configure the single tap gesture recognizer to fail when a double tap is recognized.

### Learning Outcomes

- Analyze user interaction to reproduce a potential bug.
- Discover how different gesture recognizers may respond to seemingly identical gestures.
- Practice establishing outlet connections between a controller and a view.
- Practice examining documentation for how an API can provide functionality to solve problems.



### Vocabulary

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UIGestureRecognizer	outlet	property
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### Materials

- **Gesturizer Lesson 5** Xcode project

### Opening

How can we prevent the single tap gesture from interfering with the double tap gesture?

## Agenda

- Run the app (⌘R), double tap slowly, and observe both the **Tap** and **Double Tap** text appear.
- Discuss how a double tap satisfies both the single tap and double tap gesture recognizers.
- Discuss the possibility of having the single tap gesture recognizer call `singleTap:` only if there is no double tap.
- Using the Xcode Documentation and API Reference (⇧⌘0), explore the `UIGestureRecognizer` class reference and the `requireGestureRecognizerToFail:` method.
- Using Interface Builder and the Assistant Editor (⇧⌘↵), use Control-dragging to add two outlet properties to the `ViewController` class.

```
@IBOutlet var singleTapRecognizer: UITapGestureRecognizer!  
@IBOutlet var doubleTapRecognizer: UITapGestureRecognizer!
```

- Update the implementation of `viewDidLoad`, to configure the `singleTapRecognizer`.

```
override func viewDidLoad() {  
    super.viewDidLoad()  
  
    singleTapRecognizer.requireGestureRecognizerToFail(doubleTapRecognizer)  
}
```

- Discuss how the call to `requireGestureRecognizerToFail:` informs the `singleTapRecognizer` that it should only call its action if the `doubleTapRecognizer` fails.
- Run the app (⌘R), tap the view once, slowly double tap the view, and observe that the label text appears independently with each gesture.

## Closing

What would we have to do if we added a triple-tap gesture recognizer?

## Modifications and Extensions

- Investigate the `UIGestureRecognizer` methods `locationInView:` and `locationOfTouch:inView:`. Explain the difference between these two methods, and explain the meaning of the word **centroid** found in the documentation. Add a new label that displays the coordinates of the touches.

## Resources

Event Handling Guide for iOS <http://developer.apple.com/library/ios/documentation/EventHandling/Conceptual/EventHandlingiPhoneOS/Introduction/Introduction.html>

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

Creating an Outlet Connection [https://developer.apple.com/library/ios/recipes/xcode\\_help-IB\\_connections/chapters/CreatingOutlet.html](https://developer.apple.com/library/ios/recipes/xcode_help-IB_connections/chapters/CreatingOutlet.html)