3.0 Lesson - Saving and Loading

Paul Solt - Paul@SuperEasyApps.com
SuperEasyApps.com

3.1 Lecture - Saving and Loading

Learn about how to load and save data in your application using the app bundle and the documents directory.

3.2 Tutorial - Loading Text and Data Files From the App Bundle

1. Create a new text file "data.txt" with sample text:

```
sample text can be any kind of text data you want to load into your app
```

2. Run your app and then open the App Bundle from the Products
3. In Finder, right-click and Show Package Contents
4. Load the text using code:

```swift
override func viewDidLoad() {
    super.viewDidLoad()
    // load data from bundle (read only)
    loadTextFromBundle()
}

func loadTextFromBundle() {
    // load text file from NSBundle (app bundle is read only)
    if let path = NSBundle.mainBundle().pathForResource("data", ofType: "txt") {
        do {
```

```
        let text = try String(contentsOfFile:path)
        print("Text:", text)
    } catch let error as NSError {
        print("Error loading file", error.localizedDescription)
    }
  }
}
```

Links

- iOS Application Bundle Programming Guide

3.3 Tutorial - Saving Text Files to the Document Directory

1. Create a FileHelper.swift code file to get the document directory

```
import Foundation

func documentDirectory() -> NSURL {
    return NSFileManager().URLsForDirectory(.DocumentDirectory, inDomains:
.UserDomainMask).first!
}

func urlInDocumentDirectory(fileName: String) -> NSURL {
    return documentDirectory().URLByAppendingPathComponent(fileName)
}
```

2. Print the document directory path in viewDidLoad()

```
print("document directory", documentDirectory().path!)
```

3. Use Finder to go to the folder path use Finder to go to the path (Finder > Go > Go To Folder)

Copy and paste the portion that looks like:

```
/Users/paulsolt/Library/Developer/CoreSimulator/Devices/4DA7A252-C7A7-4EA0-
95D8-1A7C179CB27A/data/Containers/Data/Application/A3C35DDF-9C07-47A3-BA6B-
78344F2FC232/Documents
```

4. Save your text to the document directory

```swift
override func viewDidLoad() {
    // ...
    print("document directory", documentDirectory().path!)
    saveTextToDocumentDirectory("Data that I want to save for later")
}
func saveTextToDocumentDirectory(text: String) {
    let url = urlInDocumentDirectory("mytext.txt")
    do {
        try text.writeToURL(url, atomically: true, encoding: NSUTF8StringEncoding)
    } catch let error as NSError {
        print("Error saving text", error.localizedDescription)
    }
}
```

Links

- iOS File System Basics

3.4 Tutorial - Loading Text Files From the Document Directory

```swift
override func viewDidLoad() {
    // ...
    if let text = loadTextFromDocumentDirectory() {
        print("loaded text:", text)
    }
}
func loadTextFromDocumentDirectory() -> String? {
    var text: String?
    let url = urlInDocumentDirectory("mytext.txt")
    do {
        text = try String(contentsOfURL: url)
    } catch let error as NSError {
        print("Error loading text from documents directory:", error.localizedDescription)
    }
    return text
}
```

3.5 Tutorial - Saving and Loading Images From the Document Directory

```swift
override func viewDidLoad() {
    // ...
    let downloadedImage = UIImage(named: "Row.jpg")!
    let imageURL = urlInDocumentDirectory("Row.jpg")

    saveImage(downloadedImage, url: imageURL)
    let image = loadImage(imageURL)
    print(image)
}

func saveImage(image: UIImage, url: NSURL) {
    let data = UIImageJPEGRepresentation(image, 1.0) // NSData
    do {
        try data?.writeToURL(url, options: .AtomicWrite)
    } catch let error as NSError {
        print("Error saving image", error.localizedDescription)
    }
}

func loadImage(url: NSURL) -> UIImage? {
    let image = UIImage(contentsOfFile: url.path!)
    return image
}
```