GENERAL ASSEMBLY

MOBILE DEVELOPMENT

LESSON 15
PROPERTY LISTS

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UPCOMING SUBJECT MATTERS

15. User Defaults and Property Lists
16. Core Data
17. Networking & CocoaPods
18. Parse.com + Review of Networking and Data Persistence
19. Maps and Location
20. Scroll Views + Lab Time (or Scroll Views + Stack Views)
21. Animations + Lab Time
22. CloudKit
23. App Store Submission Process + Lab Time

FINAL

- Start thinking and working on your Final project.

- Review PDF in class

LEARNING OBJECTIVES

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- Info: Introduction to Persistence
- New: Property Lists
- In-Class Assignment

GETTING STARTED

INTRODUCTION TO PERSISTENCE

WHAT IS PERSISTENCE AND WHY DO IT?

- We persist data so that we can access it quickly between sessions.
- Examples
  - App high scores
  - App settings
  - User credentials
  - Etc.

HOW DO YOU PERSIST? (PT. 1)

- There are many ways to persist data
- Choosing how to persist depends on several things
  - What kind of data am I writing?
  - What kind of data am I reading?
  - Am I storing relations between things?
  - For how long do I need store the data?

HOW DO YOU PERSIST? (PT. 2)

- There are several built-in options for persisting data in iOS
  - This session:
    - User defaults
    - Property lists
    - Flat files
  - Next session:
    - Core Data
    - SQLite

USER DEFAULTS

USER DEFAULTS

- A key/value store for storing small, independent bits of data

- What else have we used that utilizes the the key/value paradigm?

USER DEFAULTS

- What kind of data am I writing?
  - Small bits of data and an associated key, stored one at a time
  - e.g. A string, a number, a boolean, a dictionary, an array, a date, etc.
- What kind of data am I reading?
  - Same as above, retrieved one at a time
- Am I storing relations between things?
  - No
- How persistent does my data need to be?
  - Persistent across app sessions, but is deleted when the app is deleted

USER DEFAULTS

- Good for:
  - App settings
  - App state
- Not good for:
  - Large data sets
  - Complex relations
  - Sensitive data
  - Caches

NSUSERDEFAULTS

- To Playgrounds!

NSUSERDEFAULTS (ADVANCED)

- If you want to store a custom class, you'll need to use the NSKeyedArchiver and NSKeyedUnarchiver class.
- The NSKeyedArchiver class allows you to convert your class (and its properties) into NSData. You then save NSData into your project.
- The NSKeyedUnarchiver class allows you to build your custom class with values saved as NSData inside of NSUserDefaults.

- More info in NSUserDefaults section of http://nshipster.com/nscoding/

PROPERTY LISTS

PROPERTY LISTS

- Property Lists (files that end in .plist) are just text files that are formatted according to a specific standard.
  - That standard: XML (extensible Markup Language)
- All non-Swift, non-C, non-C++, non-Objective-C, and non-Objective-C++ files are accessed through the NSBundle class.

PROPERTY LISTS

- What kind of data am I writing?
  - Small-ish sets of data (a few hundred Kb) retrieved one file-at-a-time
  - e.g. A string, a number, a boolean, a dictionary, an array
- What kind of data am I reading?
  - Same as above
- Am I storing relations between things?
  - Not complicated ones
- How persistent does my data need to be?
  - Persistent across app sessions, but is deleted when the app is deleted

PROPERTY LISTS

- Good for:
  - Persisting lists,
  - Persisting collections of properties
- Not good for:
  - Large data sets
  - Complex relations
  - Sensitive data

PROPERTY LISTS

- NSUserDefaults is a fancy wrapper around an app-specific plist file
- plists can store:
  - Strings
  - Numbers
  - Date
  - Data
  - Dictionary
  - Array
- Stored in MyAppName.plist

IN CLASS ASSIGNMENT

IN-CLASS ASSIGNMENT

- Two screens
- On first screen, ask user to input names of movies they like in text field.
- After each movie, save the information to an array.
- After saving it into the array, store the array in a plist
- Have a button that goes to second screen
- On second screen (UITableViewController), make table.
- Display the favorite movies stored in the plist.
- Bonus: Store inför