EINTERMEDIATE 3

# COREDATA



PART 4: UNIT TESTING

### APP PREVIEW

```
A Camp...anager ) iPad Pro (12.9 inch) CampgroundManager | Build CampgroundManager: Succeeded | 0.070s 🛕 1
                            🔡 🔇 > 🙇 CampgroundManager > 🦲 CampgroundManagerTests > 🦲 Services > 🕍 CamperServiceTests.swift > No Selection
                                                                                                                                       < ( )
                             46

▼ CampgroundManager

                                   func testContextIsSavedAfterAddingCamper() {
 ▼ CampgroundManager
                            Q47
                                     let derivedContext = persistentContainer.newBackgroundContext()
  ▶ Model
                                     camperService = CamperService(managedObjectContext: derivedContext)
  Services
                              49
    AppDelegate.swift
                              50
     MasterViewController.swift
                              51
                                     expectation(
     DetailViewController.swift
                                        forNotification: NSNotification.Name.NSManagedObjectContextDidSave.rawValue,
                              52
    LaunchScreen.storyboard
                                        object: derivedContext) { notification in
                              53
     Main.storyboard
                              54
                                          return true
    Images.xcassets
                              55
    CampgroundMa...ger.xcdatamodeld
                              56
  ▼ Supporting Files
                                     let camper = camperService.addCamper("Bacon Lover", phoneNumber:
                             57
      h CampgroundM...idging-Header.h
                                          "910-543-9000")
      Info.plist
                                     XCTAssertNotNil(camper)
                              58
 ▼ CampgroundManagerTests
                              59
    TestPersistentContainer.swift
                              60
                                     waitForExpectations(timeout: 2.0) { error in
  ▼ Services
                                        XCTAssertNil(error, "Save did not occur")
                              61
       CamperServiceTests.swift
                              62
      CampSiteServiceTests.swift
                              63
                                   }
      ReservationServiceTests.swift
                             64
  ▶ Supporting Files
                                   func testAddCamper() {
                            ♦65
 Products
                                     let camper = camperService.addCamper("Bacon Lover", phoneNumber:
                              66
                                          "910-543-9000")
                             67
                              68
                                     XCTAssertNotNil(camper, "Camper should not be nil")
                                     XCTAssertTrue(camper?.fullName == "Bacon Lover")
                              69
                                     XCTAssertTrue(camper?.phoneNumber == "910-543-9000")
                              70
                             71
                             72 }
```

### UNIT TESTING

- Put thought into app architecture
- Add features and refactor with confidence
- Automated
- Acts as implicit documentation

### FIRST PRINCIPLES

Fast

Isolated

Repeatable

Self-Verifying

Timely



### PERSISTENT STORE TYPES



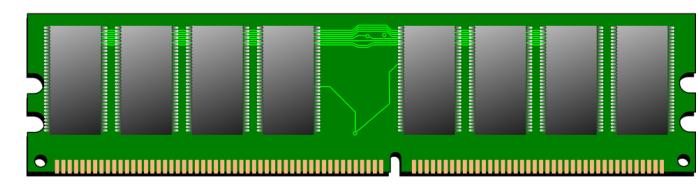




XML Store Type



Binary Store Type



In-Memory Store Type



# DEMO TIME!



## CHALLENGE TIME!

```
$\rightarrow$ 28 class CampSiteServiceTests: XCTestCase {
 29
      // MARK: Properties
      var campSiteService: CampSiteService!
      var persistentContainer: NSPersistentContainer!
      override func setUp() {
        super.setUp()
        persistentContainer = NSPersistentContainer.testContainer()
        campSiteService = CampSiteService(managedObjectContext: persistentContainer.
            viewContext)
 38
 39
      override func tearDown() {
        super.tearDown()
 41
  42
        persistentContainer = nil
  43
        campSiteService = nil
 45
 46
      func testRootContextIsSavedAfterAddingCampsite() {
        let derivedContext = persistentContainer.newBackgroundContext()
 48
 49
        campSiteService = CampSiteService(managedObjectContext: derivedContext )
 50
 51
 52
        expectation(
          forNotification: NSNotification.Name.NSManagedObjectContextDidSave.rawValue,
          object: derivedContext) { notification in
            return true
```