



Computing & Information Sciences
FLORIDA INTERNATIONAL UNIVERSITY

Mobile Application Development

lecture18

Spring 2012 - COP 4655 U1

M/W 6:25pm– ECS 138

Steve Luis

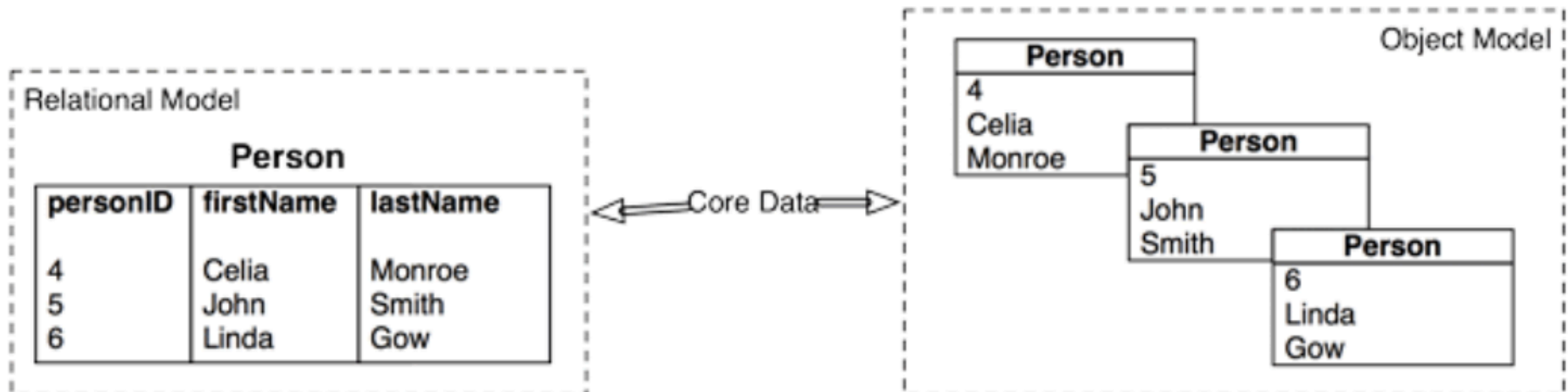
Agenda

- Core Data Overview
- Demo



Core Data

- Framework for storing and retrieving Objects. No SQL needed. Uses SQLite
- Translates Object Model to Relational Data Management
- Consider the Mapping:
 - Table → Class
 - Column → Instance Variable
 - Row → Object



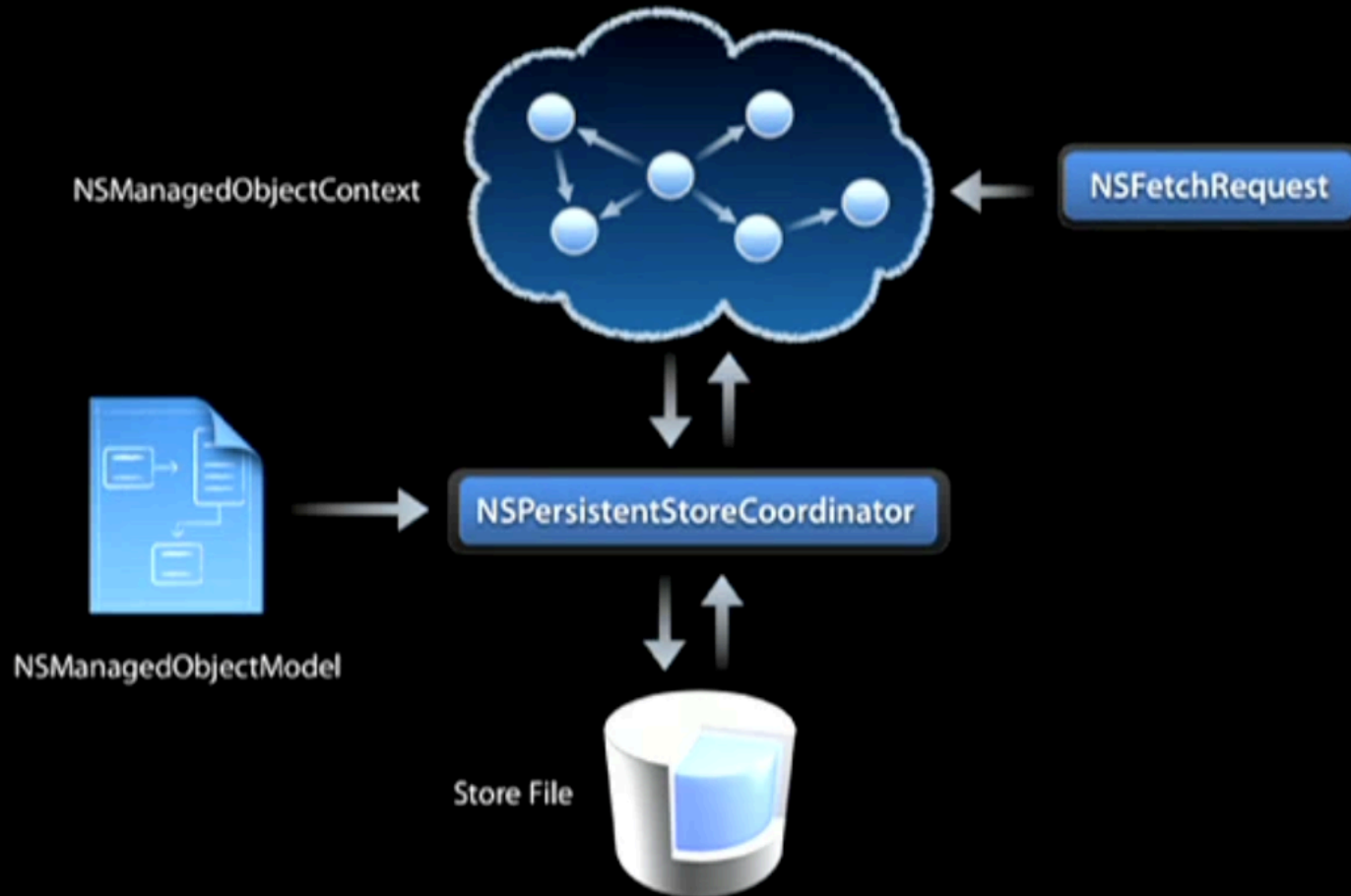
Entity Relationship Model

- Entity = Description of Object.
 - Managed Object is the instance of the entity created at runtime. Think: Class/Instance.
- Attribute = Instance variable of class. Store data.
- Relationship = Relationship between entities.
 - To-one: Person to home address
 - To-many: Home address to person
- Properties = Attributes + Relationships
- Xcode Data Model Editor: used to create the Entity Data Model

Core Data Framework

- NSManagedObjectContext
 - Called the “context”
 - Manages access to the Persistent Store
 - Stores and maintains information about properties changed since the last time they were saved.
- NSManagedObjectModel
 - Loads and represents at runtime the data model you create in Xcode

Bringing It All Together



Creating New Managed Objects

- `NSEntityDescription`
 - Keep track of all entities defined in the apps data model.

```
[NSEntityDescription insertNewObjectForEntityForName:@"EntityName"  
inManagedObjectContext: context]
```

- Returns an instance of `NSManagedObject` with properties set
- Inserts object into context.
- Will be copied to persistent store with object receives “save:”

Retrieving Managed Objects

- To retrieve managed objects from the persistent store:

```
NSFetchRequest * request = [[NSFetchRequest alloc] init];
NSEntityDescription * entityDescr = [NSEntityDescription entityForName:
    @"EntityName: inManagedObjectContext: context];
[request setEntity: entityDescr];
NSPredicate *pred = [NSPredicate predicateWithFormat: @"(name = %@)",
    nameString]; // consider nameString = @"john"
[request setPredicate: pred];
NSError *error;
NSArray * objects = [context executeFetchRequest: request error: &error];
If (objects == nil ) { // no results or error result }
```


Readings, Exam 3, & Deadlines

- Apple Developers Library:
 - Core Data Tutorial for iOS:
 - http://developer.apple.com/library/ios/#DOCUMENTATION/DataManagement/Conceptual/iPhoneCoreData01/Introduction/Introduction.html#//apple_ref/doc/uid/TP40008305-CH1-SW1
 - Video: Working with Core Data
 - <https://developer.apple.com/videos/ios/?id=21>
 - UI Class references for Core Data
- Conway Chapter 17
- Exam #3: Weds. April 25th 5-7pm
- Team Project Due: April 26th demo by appointment