Consuming Web Services and Using Local Storage on iOS

Archiving and the File System

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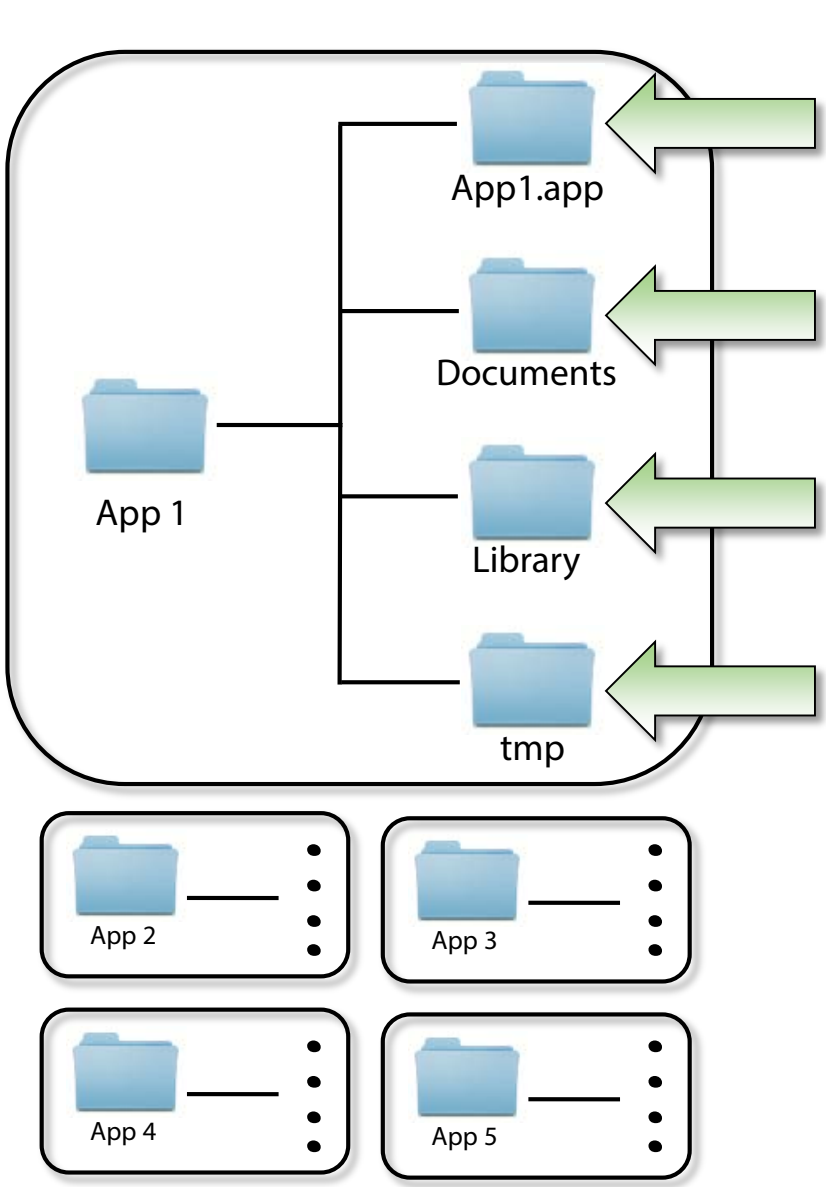
Archiving and the File System

- App sandbox and the default directory structure
- Specifying File Paths with NSString and NSURL
- File management with NSFileManager
- Using the NSCoder class to read and write archives
- Adopting the NSCoding protocol
- Using NSKeyedArchiver to save objects to the device

App Sandbox



- Application Bundle
- Store documents and app data files
- Primary location for user-
- Files that are not user data files
- Files not needed between app launches
- Delete files when no longer needed
- System may purge files when app is not running

Specifying the Path to Files

String-Based Path

- Easy to construct
- File system only
- Uses NSStrings

Path-Based URL

- Apple-recommended
- Also works with network resources
- Uses NSURL
- Preferred by NSFileManager

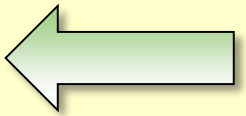
```
-(void)logHomeDirectory {

    NSString *homeDir = NSHomeDirectory();

    NSURL *fileURL = [NSURL fileURLWithPath:homeDir];

    NSLog(@"File Path:  %@", [fileURL path]);

}
```



NSFileManager

Locate System Directories

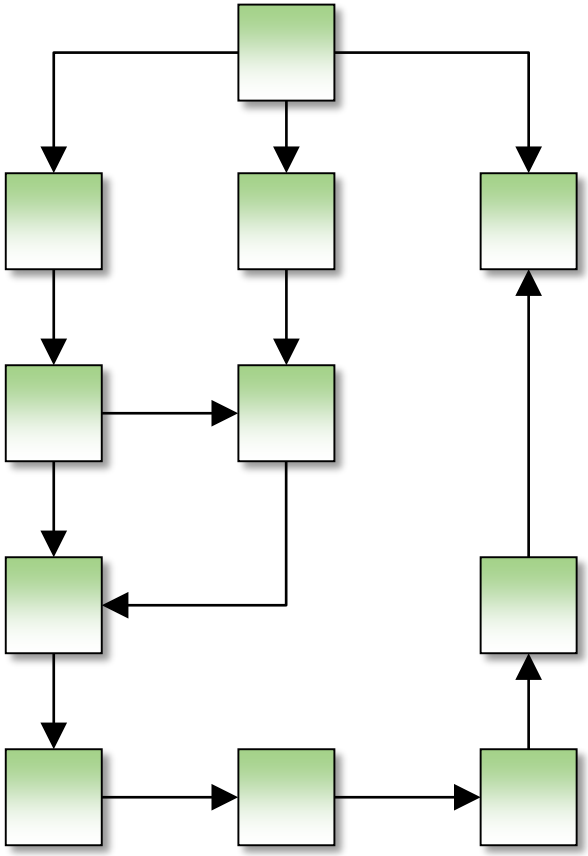
Retrieve Directory Contents

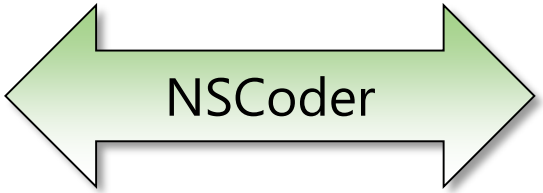
Create and Delete
Files and Directories

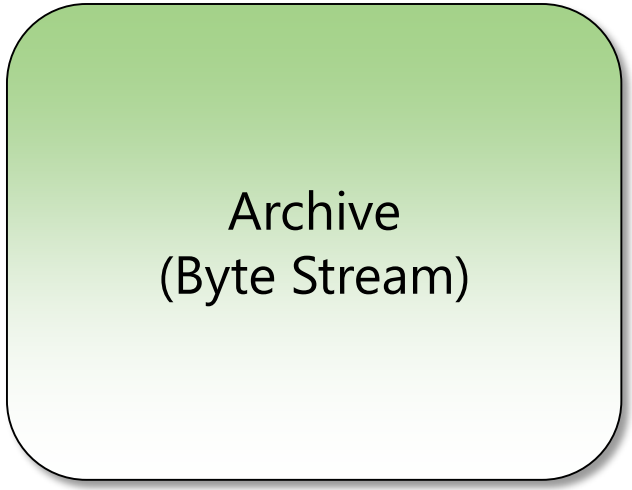
Moving and Copying Items

NSCoder Class

Object Graph







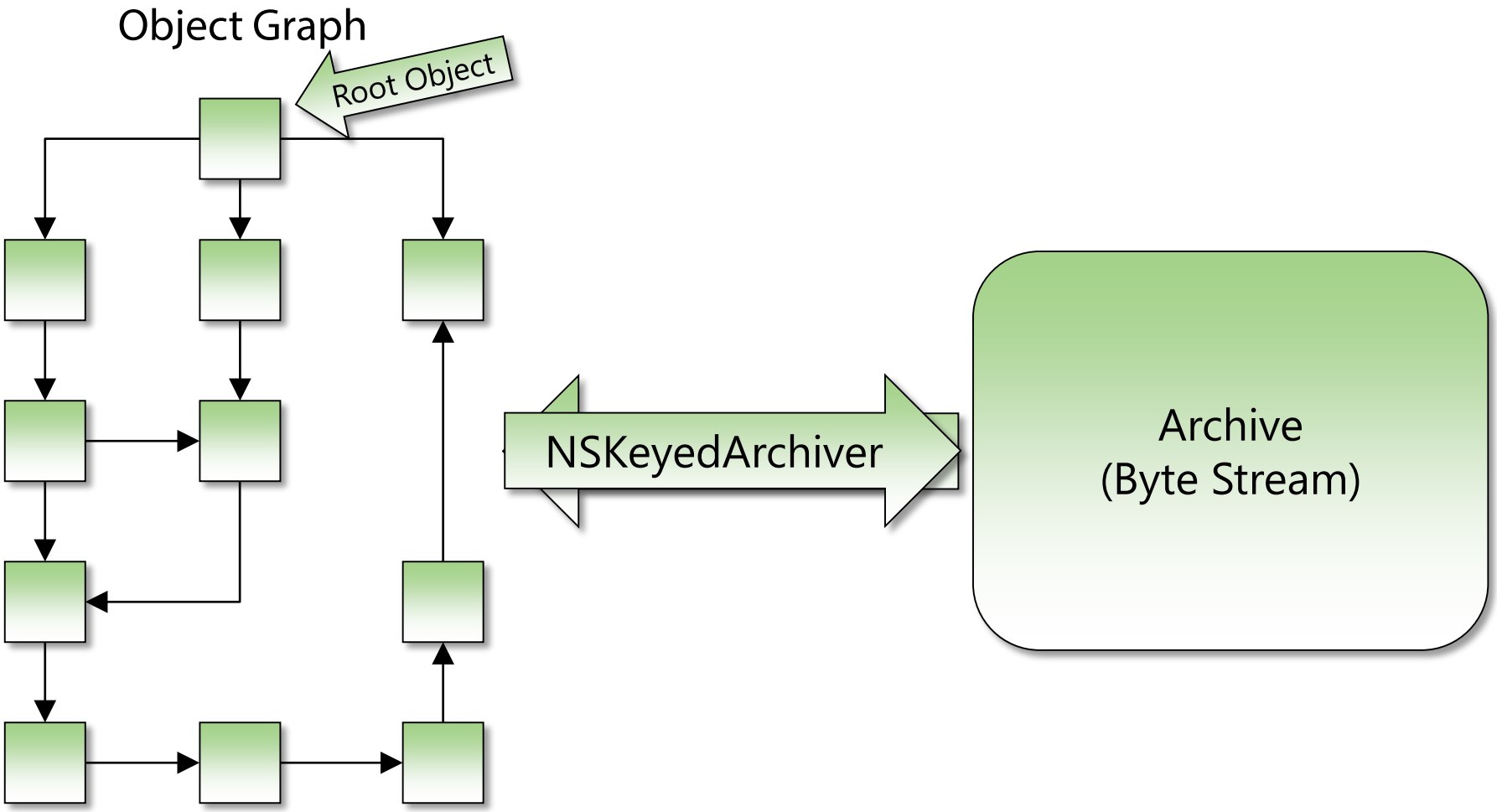
NSCoding Protocol

```
@interface Person : NSObject <NSCoding>
@property (nonatomic, strong) NSString *firstName;
@property (nonatomic, strong) NSString *lastName;
@property (nonatomic) int age;
@end
```

```
- (void) encodeWithCoder:(NSCoder *)aCoder {
    [aCoder encodeObject:_firstName forKey:@"firstName"];
    [aCoder encodeObject:_lastName forKey:@"lastName"];
    [aCoder encodeInt:_age forKey:@"age"];
}

- (id) initWithCoder:(NSCoder *)aDecoder {
    self = [super init];
    if (self) {
        [self setFirstName:[aDecoder decodeObjectForKey:@"firstName"]];
        [self setLastName:[aDecoder decodeObjectForKey:@"lastName"]];
        [self setAge:[aDecoder decodeIntForKey:@"age"]];
    }
    return self;
}
```

Using NSKeyedArchiver and NSKeyedUnarchiver




```
[NSKeyedUnarchiver unarchiveObjectWithFile: someFile];
```

Summary

- App sandbox and directory structure
- Different ways of specifying paths in iOS
- Many uses for NSFileManager
- Role of NSCoder objects
- Implementing the NSCoding protocol
- Using NSKeyedArchiver and NSKeyedUnarchiver