



Computing & Information Sciences
FLORIDA INTERNATIONAL UNIVERSITY

Mobile Application Development

lecture8

Spring 2012 - COP 4655 U1

M/W 6:25pm – ECS 134

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Agenda

- NSNumber, NSString, NSArray
- Programming Assignment #3: Address Book
- Exam 1 Study Guide



NSNumber

- For each basic data type, a class method exists that allocates an NSNumber object and sets it to a specified value.
- signed or unsigned char, short int, int, long int, long long int, float, or double or as a BOOL
- Used in combination with Collections.
- See table 15.1 for Creation and Retrieval Methods

```
NSNumber *intNumber;  
NSInteger myInt; // 64/32 bit
```

```
intNumber = [NSNumber numberWithInt: 100];  
myInt = [intNumber integerValue];  
NSLog(@"%li", (long) myInt);
```

numberWith vs. initWith

- numberWith is a class method that creates the object ... no alloc needed, no release needed.
- initWith is an instance method that initializes the NSNumber object with the value. You must alloc and release the object when you are done.
- Note: you cannot change the value to an NSNumber object once assigned.

NSString

@"Hello World"

- Constant or literal string object
- The string is immutable, cannot be change.

```
NSString *str = @"Hello World";
```

```
NSLog(@"%@@", str);
```

Description method

- Use %@ to display arrays, sets and dictionaries.
- Override description instance method to display your object values, eg.

- (NSString *) description

{

return [NSString stringWithFormat: @"%i/%i", num, den];

}

[...]

NSLog(@"The value of the fraction is %@", f1);

[...]

The value of the fraction is 1/2

NSMutableString

- NSString type is immutable vs. NSMutableString which is mutable (change value of object)
- Subclass of NSString, all methods inherited: compare, length, stringByAppendingString, isEqualToString, uppercaseString, substringToIndex, substringFromIndex, ...
- NSMutableString *str = [NSMutableString stringWithString: @"HelloWord"];
- [str insertString: @"mutable" atIndex: [str length]];

Array Objects

- Ordered collection of objects
- NSArray is immutable vs. NSMutableArray is mutable

```
NSArray *numbers= [NSArray arrayWithObjects:  
@"one", @"two", @"three", nil];
```

```
NSLog(@" %@", [numbers objectAtIndex: 0]);
```

“one”

NSMutableArray

```
NSMutableArray *numbers= [NSMutableArray  
 arrayWithObjects: @"one", @"two", @"three",  
 nil];
```

```
[numbers addObject: @"four"];
```

```
NSLog(@" %@ ", [numbers objectAtIndex: 3]);  
"four"
```

```
NSLog(@"%@ ", numbers);
```

Programming Assignment #3

- Implement the Address Book, Kochan, Chap. 15 on page 332-349—
See Appendix B
- Implement synthesized address card methods
- Use NSMutableArray to store multiple cards
- Start with three cards defined programmatically.
- Display name and email address in UITextFields.
- Include buttons for Next/Previous which control the card to display.
- Include buttons for New/Update which allow you to add a new card or update an existing one.
- Display cards in alphabetically sorted order by name, resorting after a new card is added or a card is updated.
- Due: Wednesday, Feb 15th @ 11pm

Exam 1 Feb 8th: Study Guide

- Kochan Chapters: 1-11, 15, 21
- Conway Chapters: 1
- Apple Developer Library:
 - UILabel and UIButton/ Outlet/Action
 - Design Patterns: Singleton, Delegate, MVC
 - Xcode
- Programs Completed
- Lecture notes
- For example: Coding loops/conditionals, class principles, data management Data Types/NSObjects