Mobile Application Development

lecture11

Fall 2011 - COP 4655 U1

T/R 5:00 - 6:15pm – ECS 134

Steve Luis

Agenda

- NSDictionary

- NSSet

- Categories

- #define #pragma

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Categories

- Categories allow you to group methods and/or extend a class definition.
- Extending a existing class definition without subclassing
- Partition methods into groups
- You can reference existing ivars – cannot add additional ivars
- You can override method – you cannot access the original declared method.
- Don't forget to #import class header file before you declare a category.

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Extend a class

```
#import <Foundation/Foundation.h>
@interface NSObject (SpecialPrint)
-  (void) printXYZ ;
@end


@implementation NSObject (SpecialPrint)
-  (void) printXYZ {
   // some work here
}
```

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Dictionary

- A dictionary is a collection of data consisting of key-object pairs.

- Obtain the object by its key.

- Key must be unique, usually a string.

- Value can be any object type, but never <u>nil</u>.

- Immutable and mutable types

- Can be searched and enumerated (retrieve all key-object pairs).

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Dictionary: Enumeration Demo

```
NSDictionary *glossary =
    [NSDictionary dictionaryWithObjectsAndKeys:
        @"value1", @"key1",
        @"value2",@"key2",
        @"value3",@"key3", nil];
[...]
for (NSString *key in glossary)
   NSLog (@"%@ %@", key, [glossary objectForKey: key]);
```

Note: may **not** retrieve in the order it was added!

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Sets

- A set is a collection of unique objects, can be immutable/mutable.

- Operations:
  - Search
  - Add
  - Remove members (mutable)
  - Comparing
  - Intersection/union

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Example

NSMutableSet *mySet = [NSMutableSet setWithObjects: @"test1", @"test2",nil];

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#define

- #define allows you to define simple macros identified by precompiler

#define TRUE 1 // symbol constant

- Mostly used for constants and expressions

#define XSQUARE(x) x * x

- Store in Constants.h file and use #import "Constants.h"

- Functions like find and replace.

- Define symbol using capital letters

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#pragma

- #pragma defines a special action such as defining a location in code

- Insert in code to create section between methods.

#pragma -

#pragma mark YourSectionName

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Set Demo

- Program 15.16
- Categories
- #define
- Enumaration

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Readings

- Review Kochan Chapter 15: Dictionary and Sets

- Chapter 11: Categories

- Read Chapter 12: Preprocessor

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Dates to Remember

- Programming and Participation Due tonight 11pm

- Next exam: 10/25
  - Cumulative
  - Open Book

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