Objective-C Overview

Super-set of the C language

Objective C

C

Good

- Objective-C the language is open-source through GCC and Clang.

Bad

- The libraries it depends upon are not open-source.
- There is no specification or standards body

Apple basically controls Objective-C

C

* Functions

* if / for / while / switch

* Manual memory management

* Preprocessor

* Uses pointers *

* structs and enums

Objective-C

* Classes and objects

* Messages

* Properties

* Protocols

* Categories

Objective-C	Java	C#
Message	Method	Method
Protocol	Interface	Interface
Category	-	Extension Method
Property	Property	Property
Selector	-	delegate?

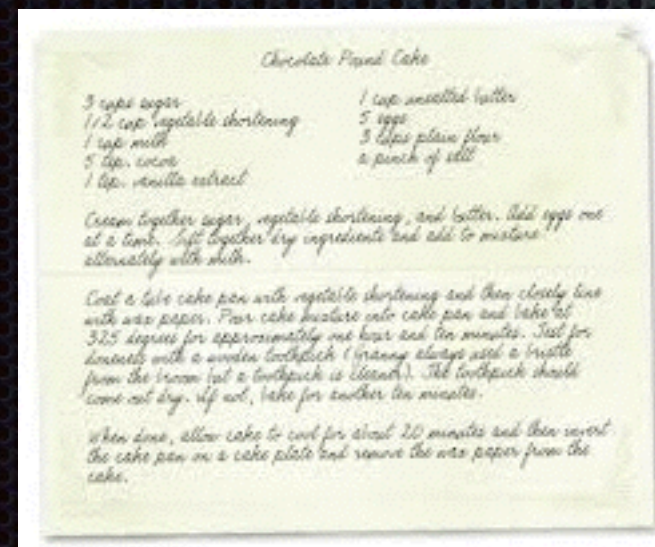| Objective-C	Ruby	Python	Javascript
Message	Method		
Protocol	Mixin	-	-
Category	-		
Property			
Selector	-		

OO Primer

Class

Recipe for an object

Object

Instance of a class

Method Definition

```
- (void)doSomethingAmazing;
```

Send message

```
[object doSomethingAmazing];
```

Message

- Tells object to do something

```
[object doSomethingAmazing]
```

Message

Are worded like sentences

```
[object showOnScreenAnimated:YES]
```

Message

Sometimes really long sentences

```
[object animateWithDuration:3.0f
             options:CoolOption1
             distance:500];
```

Method Definition
```
- (void)animateWithDuration:(CGFloat)duration
        options:(AnimationOptions)options
       distance:(NSInteger)distance;
```

Message

Can be public or private

Public
```
[object doSometing];
```


Private
```
[self doSometing];
```

Property

- Exposes object data. (aka. provides public attributes of the object)
- Should **not** perform any actions.

```
object.isAnimating

object.superview
```

Property Definition

```
@property BOOL isAnimation;

@property UIView *superview;
```

Property Definition

```
@property (nonatomic, assign) BOOL isAnimating;

@property (nonatomic, strong) UIView *superview;
```

Instance variable   (aka. ivar)

- provides internal object state

```
someSecretKey

shouldNotifyOnNextCall
```

Protocol

Contract or promise that an object will implement a specific methods

Category

Added method to existing classes