by Sally Ransom

Cocos2d = gaming

- Sprites

- Sound & graphics effects

- Animations

- Physics

- But... not ARC compatible (use -fno-obj-arc)

- UIKit is separate

Get it

www.cocos2d-iphone.org/download

1) Download latest version
2) Use Terminal to cd to folder
3) Drag and drop `install-templates.sh` onto terminal window
4) Press enter
5) Voila!

You Get NODES!

Nodes are... everything

Layers are subviews

Scenes are screens

Sprites are objects

SCORE: 0

59.9

Scenes

- CC = cocos2d as UI = UIKit

- Subclassed from CCLayer or CCLayerColor

- Can use Touch Events Protocol

- Can use Accelerometer

- Built in scene transitions with CCTransition

Scenes

Scene : CCLayer

interface

```objc
#import "cocos2d.h"

@interface BaseScene : CCLayer

@property (nonatomic, assign) CGSize screensize;

+ (CCScene *)scene;
```

or with background color...

```objc
@interface BaseScene : CCLayerColor
...
@implementation BaseScene


- (id)init {
    self = [super initWithColor:ccc4(45,45,45,255)];
...
```

implementation

```objc
#import "BaseScene.h"

@implementation BaseScene

+ (CCScene *)scene {
    CCScene *scene = [CCScene node];
    BaseScene *layer = [BaseScene node];
    [scene addChild: layer];

    return scene;
}

- (id)init {
    if( (self = [super init])) {
        isTouchEnabled_ = YES;
        // do setup
    }
    return self;
}

- (CGSize)screensize {
    return [[CCDirector sharedDirector] winSize];
}
```

scene transitions

```objc
- (void)goToScene:(id)sender {
    [[CCDirector sharedDirector] replaceScene:[BasicScene node]];
}

- (void)flipToScene:(id)sender {
    [[CCDirector sharedDirector] replaceScene:[CCTransitionFlipX transitionWithDuration:1.0
                                              scene:[MenuScene node]]];
}
```

Layers

- Subclassed from CCNode

- Layers are subviews for Scenes

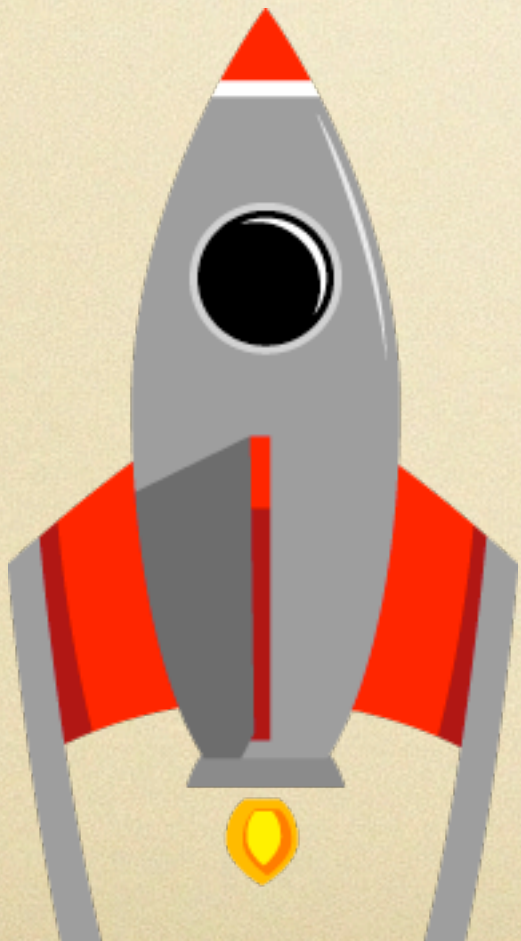- Does not conform to Touch Events Protocols

Sprites

Add a simple sprite to a scene

```objc
- (void)addMySprite {
CCSprite *mySprite = [CCSprite
spriteWithFile:@"myspriteimage.png"];
    mySprite.position = ccp(self.screensize.width/2,
self.screensize.height/2);

    [self addChild:background z:1];
}
```

Add a subclassed sprite to a scene

```objc
#import "cocos2d.h"

@interface MySprite : CCSprite

@end
```

```objc
#import "MySprite.h"

@implementation MySprite

- (id)init {
    self = [super init];

    if (self) {
        CCTexture2D *texture = [[CCTextureCache
sharedTextureCache] addImage: @"myspriteimage.png"];
        CGRect rect = CGRectZero;
        rect.size = texture.contentSize;
        [self setTexture:texture];
        [self setTextureRect:rect];
    }

    return self;
}
```

```objc
- (void)addMySprite {
MySprite *mySprite = [MySprite alloc] init];
    mySprite.position = ccp(self.screensize.width/2,
self.screensize.height/2);

    [self addChild:background z:1];
}
```
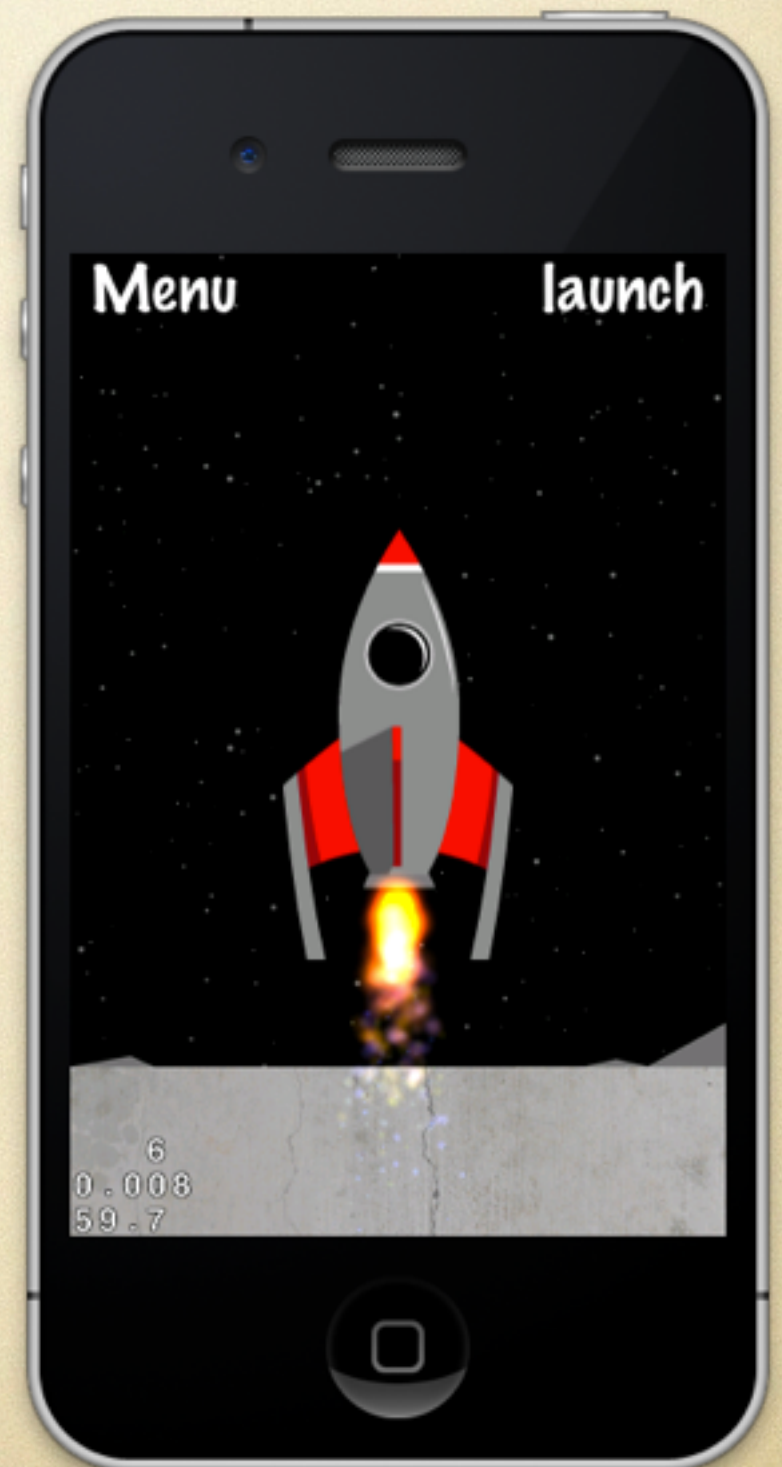
Animations

- CCAction is a single action

- `[aSprite runAction:myAction];`

- CCSequence is a sequence of actions

- `[aSprite runAction:mySequence];`

- Works on any node!

Particle Emitters

- Organized animation using particles

- Cocos2d has default particle emitters

- You can make your own!

- Particle Designer by 71Squared

Physics

- Use Box2d framework

- Worlds

- Gravity

- Bodies with shape, friction, and density

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