### **Chapter 1: Sprites and Animations**



DOWNLOAD GET STARTED

## **Downloads**

If you are starting a new project, it's highly recommended that you use the official installer for Cocos2D.

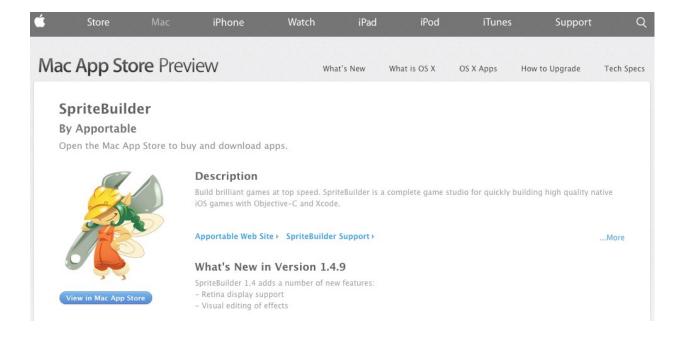
#### Official Installer

Cocos2D-SpriteBuilder installer (Mac App Store) – **SpriteBuilder** is the official installer for the latest version of Cocos2D. Once your project is created, you can continue using SpriteBuilder, or do everything programmatically in Xcode if you prefer. Follow the instructions on our **Getting Started page** and you'll be up and running in minutes.

#### **Archived Releases**

Releases of Cocos2D are archived here. You can also find them on our GitHub page.

Cocos2D 3.4

















## SpriteBuilder 44

Build brilliant games at top speed. SpriteBuilder is a complete game studio for quickly building high quality native iOS games with Objective-C and Xcode.

SpriteBuilder packages the best-in-class tools for iOS game development, Cocos2d and...

...More

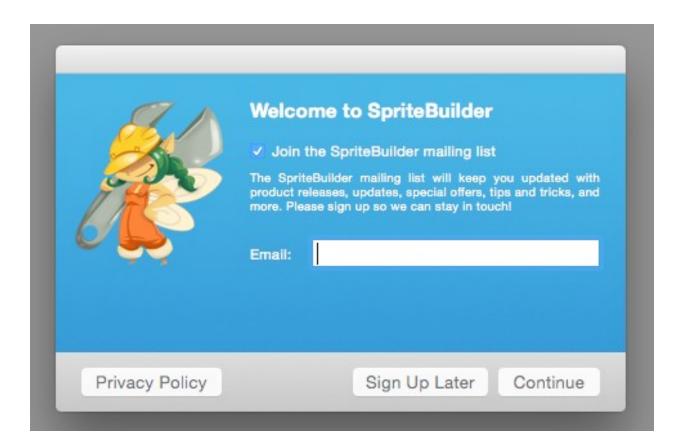
#### What's New in Version 1.4.9

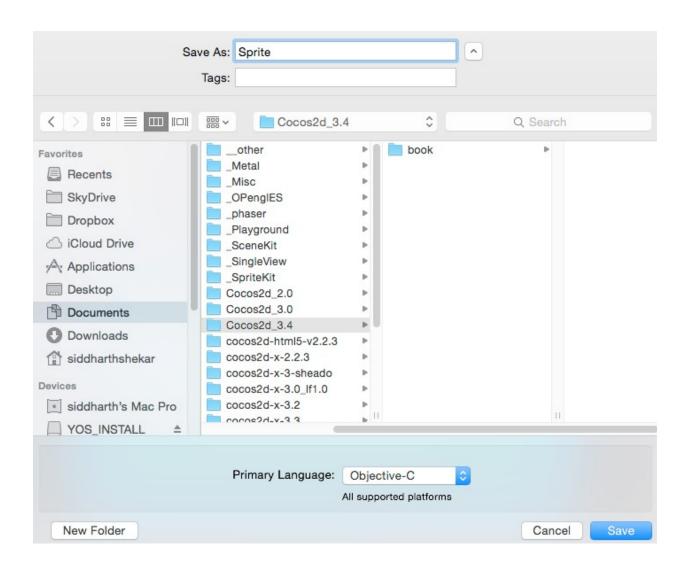
SpriteBuilder 1.4 adds a number of new features:

- Retina display support...

...More

























(Essentials)

Xcode provides everything developers need to create great applications for Mac, iPhone, and iPad. Xcode brings user interface design, coding, testing, and debugging all into a unified workflow. The Xcode IDE combined with the Cocoa and Cocoa Touch frameworks, and the Swift programming language make developing apps easier and more fun than ever before.

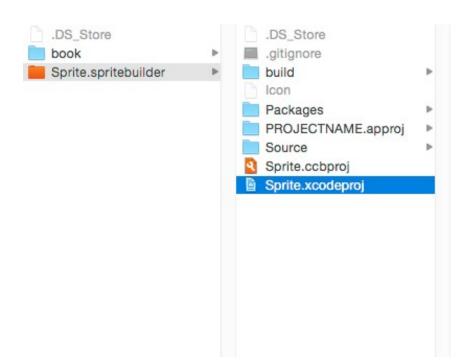
...More

#### What's New in Version 6.3.2

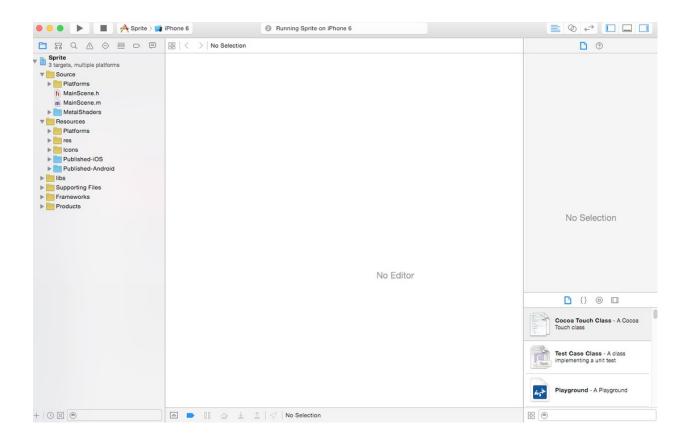
Install \*

Xcode 6.3.2 improves stability and fixes an issue that could result in slow compile times for complex Swift projects.

...More

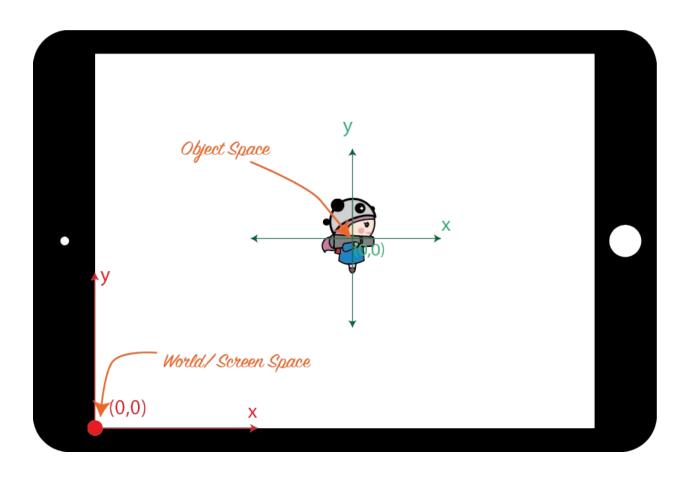


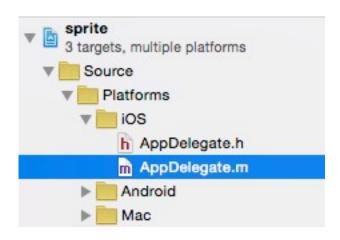


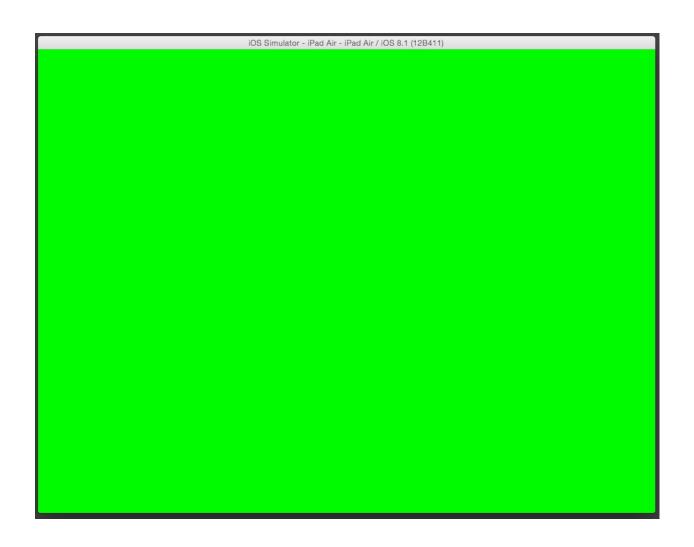


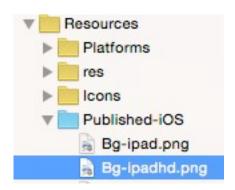
iOS Simulator - iPhone 6 - iPhone 6 / iOS 8.1 (12B411)

# **SpriteBuilder**









```
Find \ Text \ Containing

Q-CCFileUtilsSearchMode

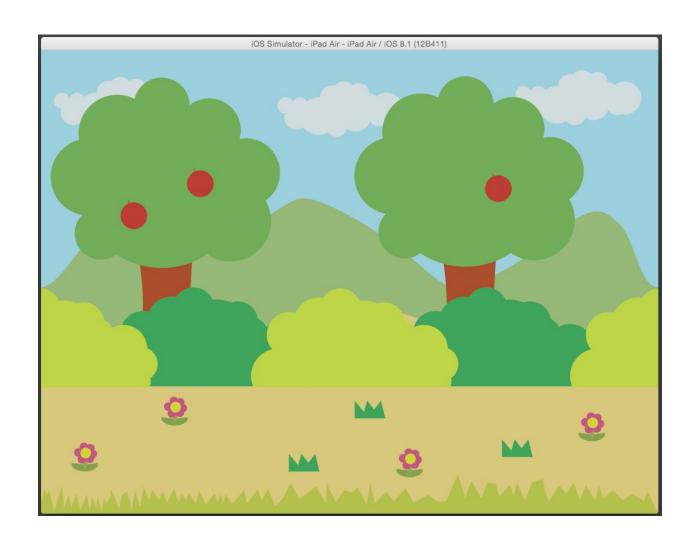
Il results in 3 files

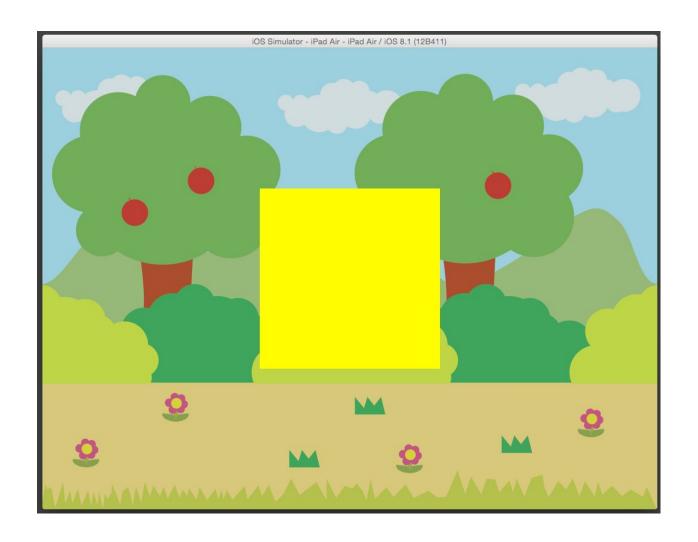
Tile sharedFileUtils.searchMode = CCFile UtilsSearchMode Directory CCFileUtils

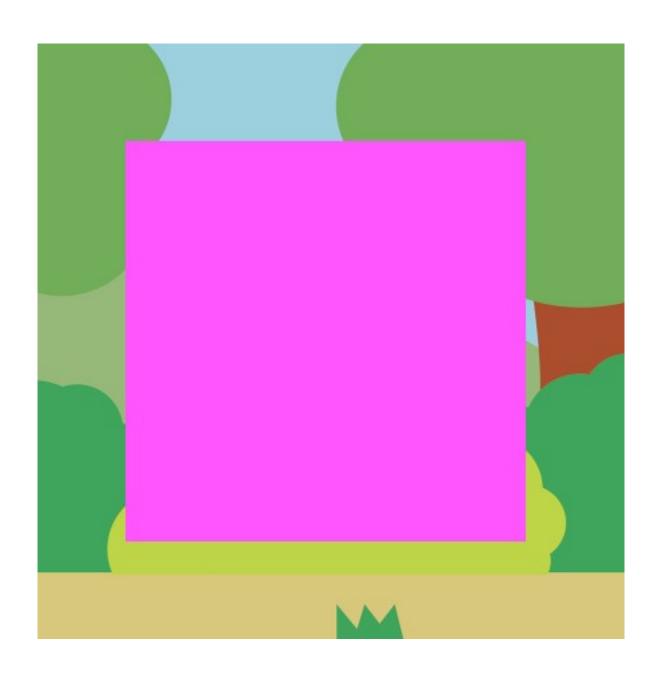
SearchModeDirectory CCFileUtils

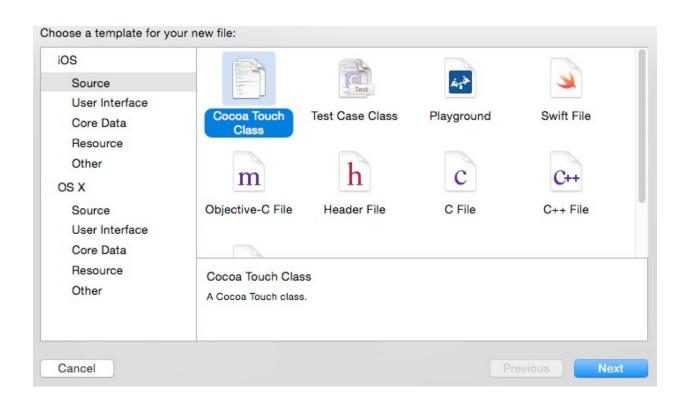
SharedFileUtils.searchMode = CCFileUtils

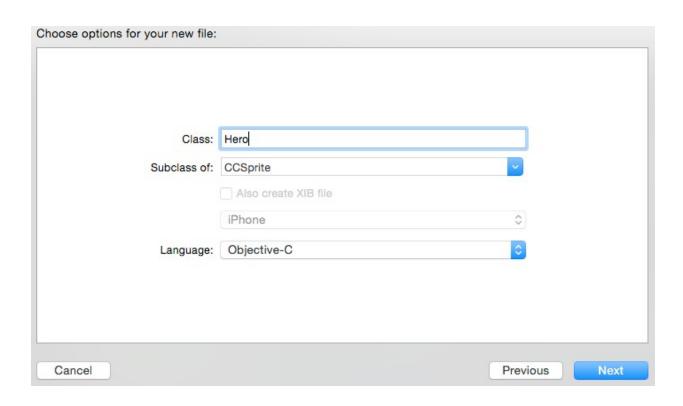
SharedFi
```

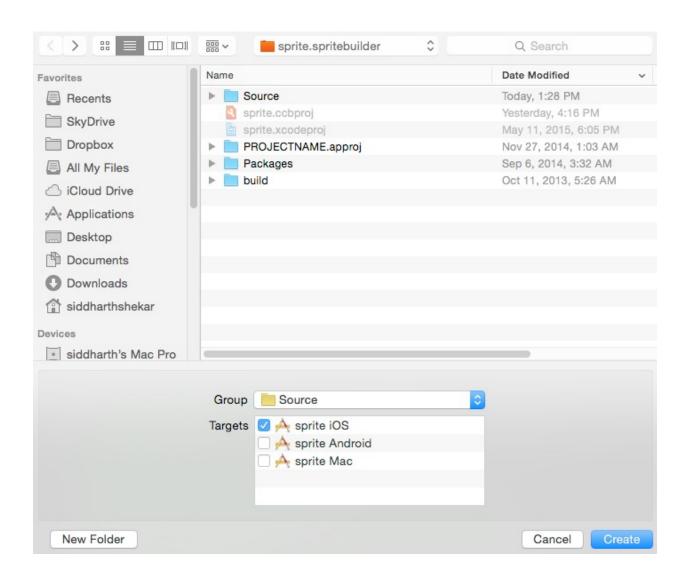


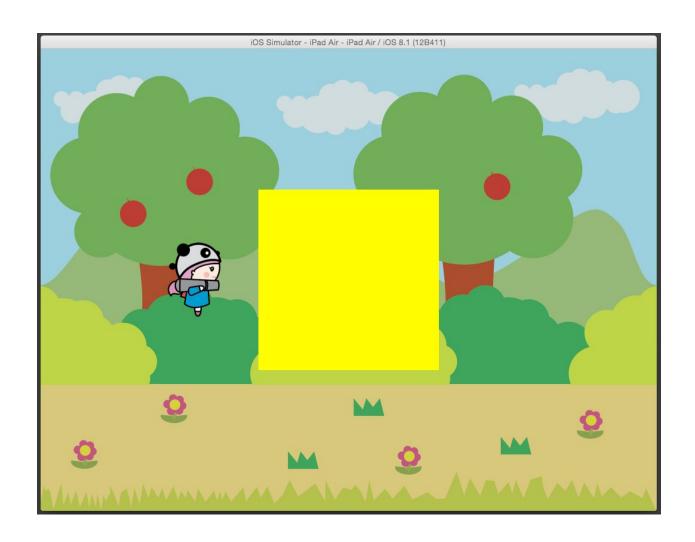


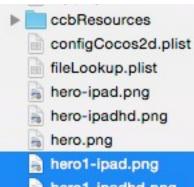




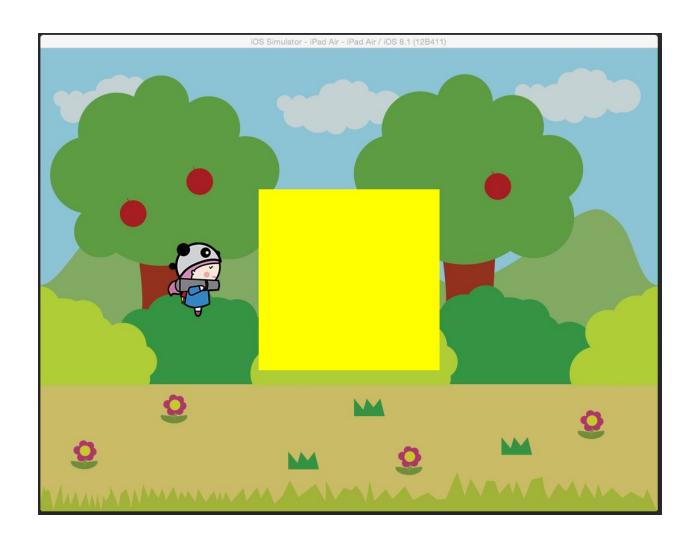


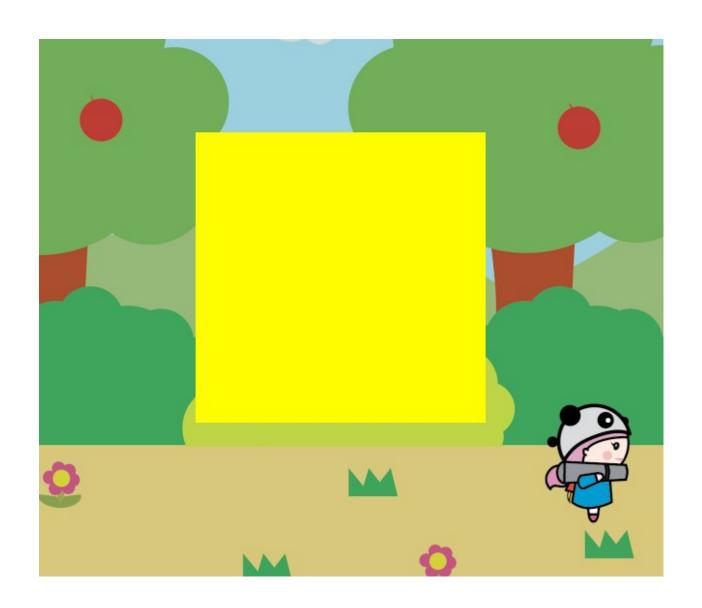


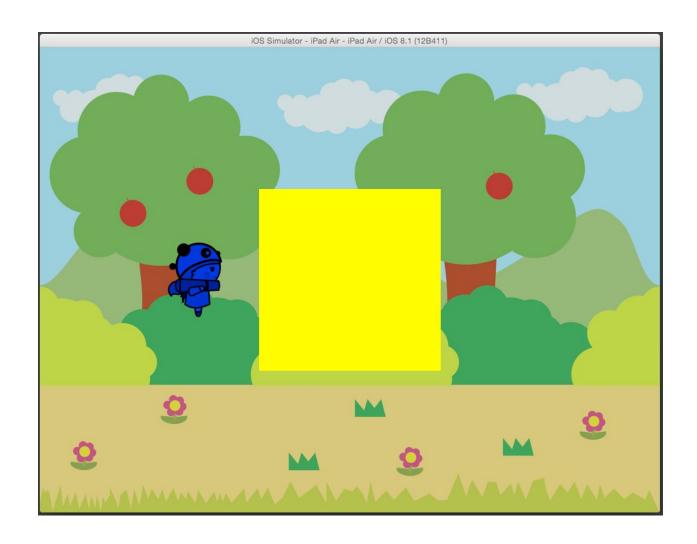


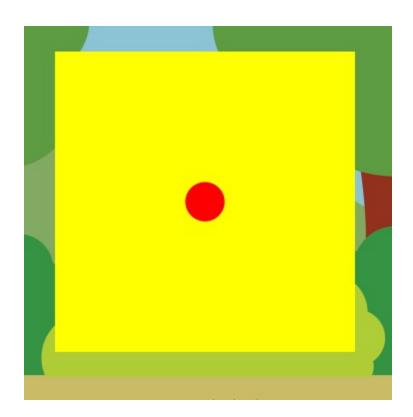


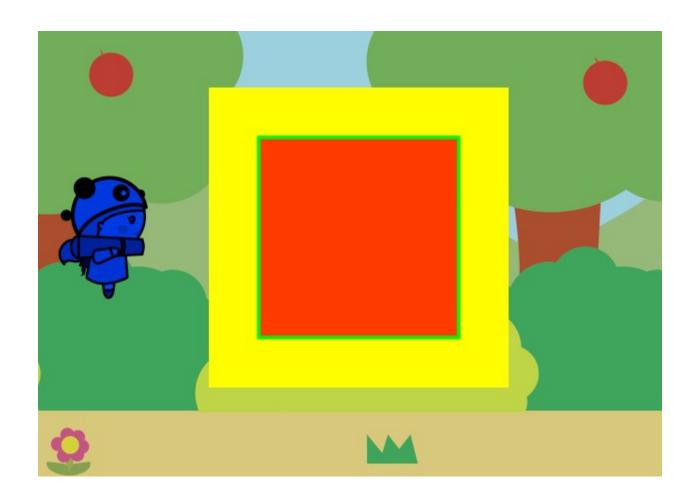
- hero1-ipadhd.png
- hero1.png
- hero2-ipad.png
- hero2-ipadhd.png
- hero2.png
- hero3-ipad.png
- hero3-ipadhd.png
- hero3.png
- hero4-ipad.png
- hero4-ipadhd.png
- hero4.png

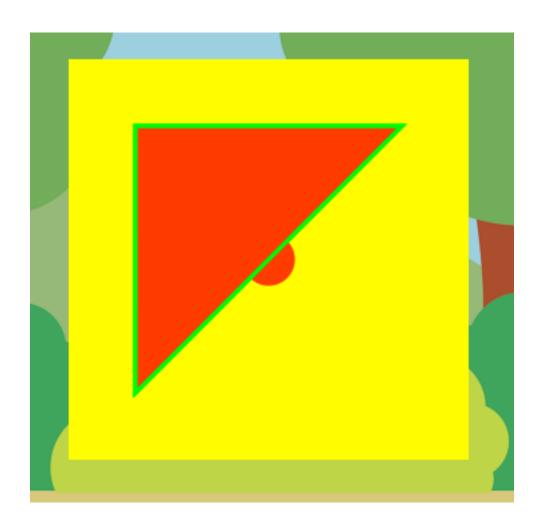


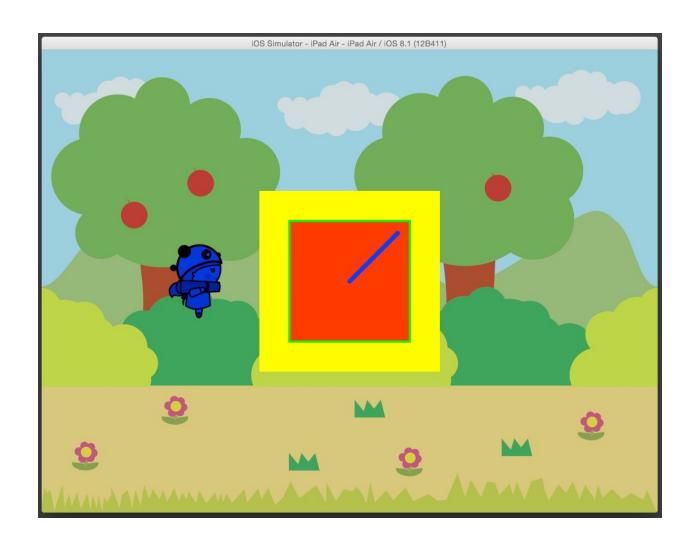


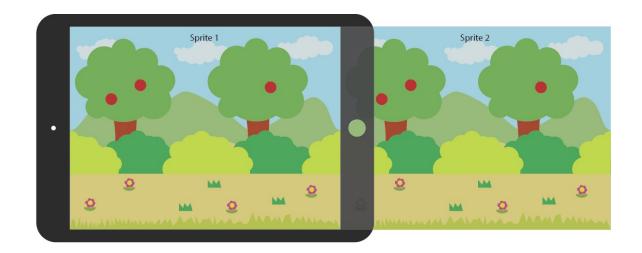


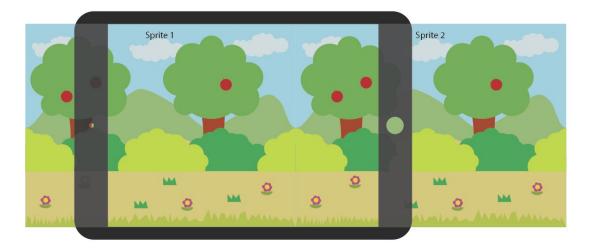


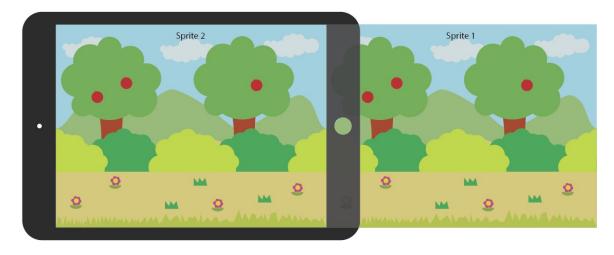


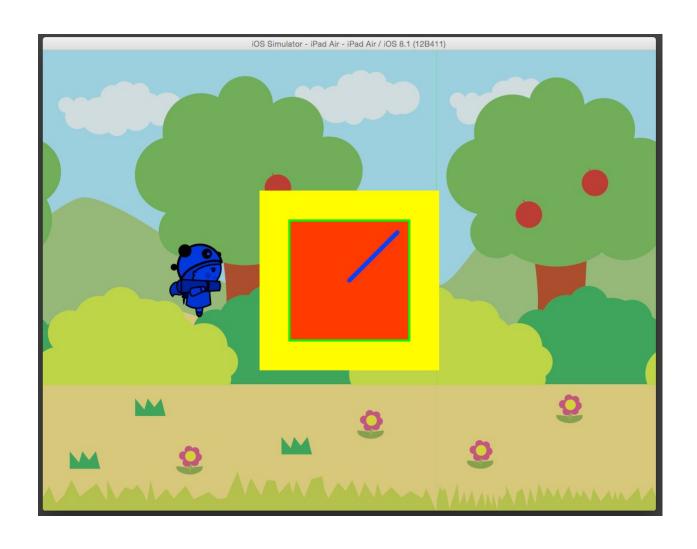




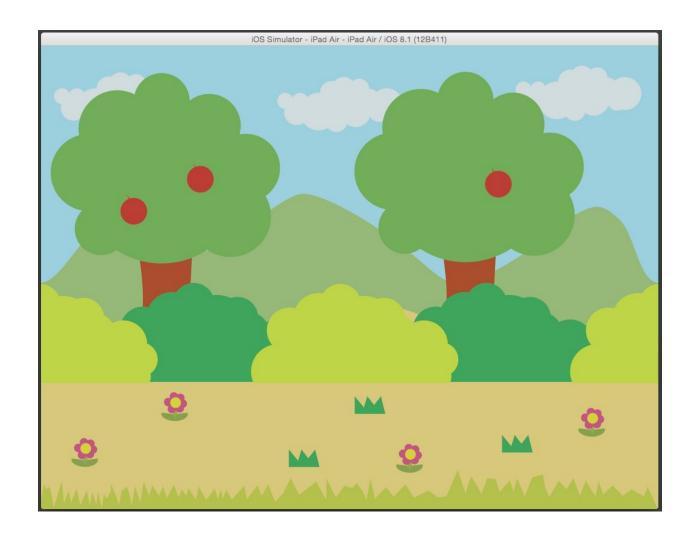


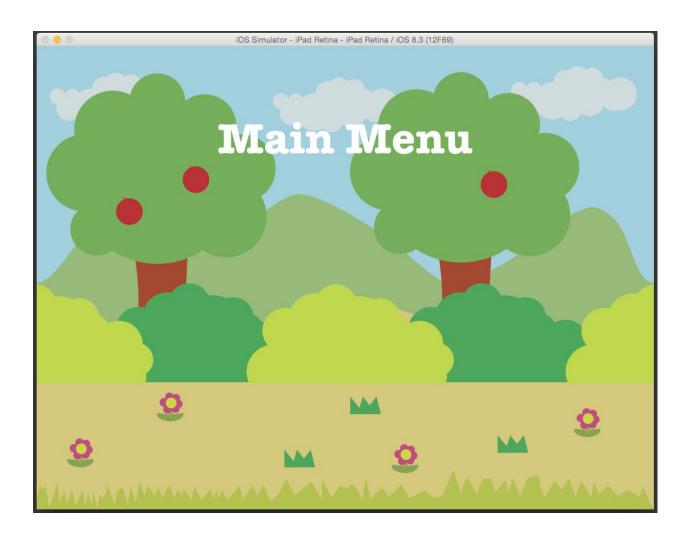


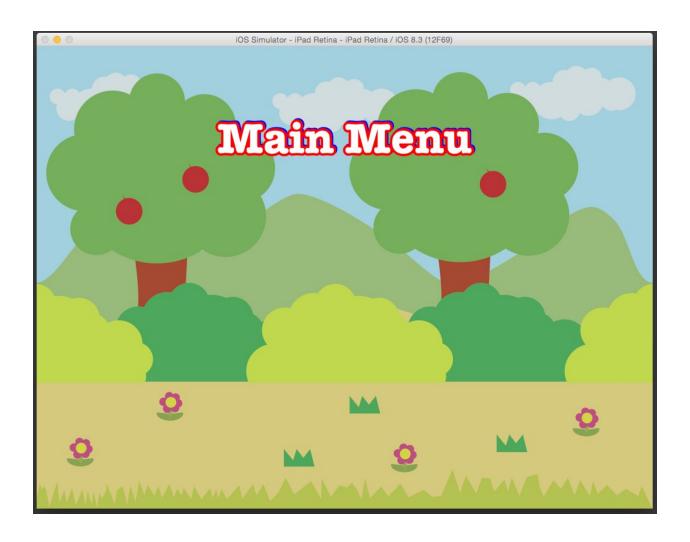


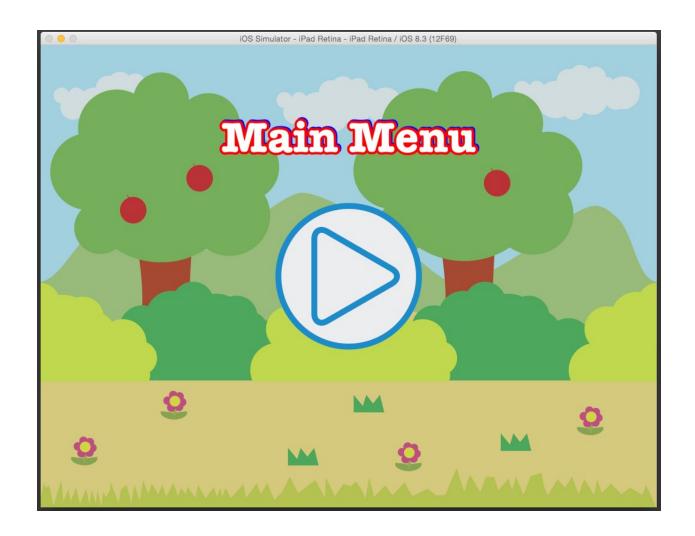


**Chapter 2: Scenes and Menus** 





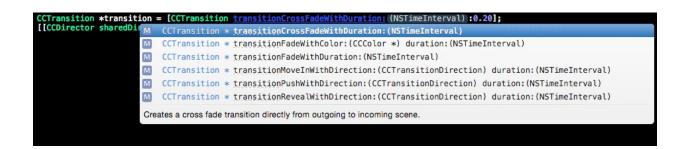


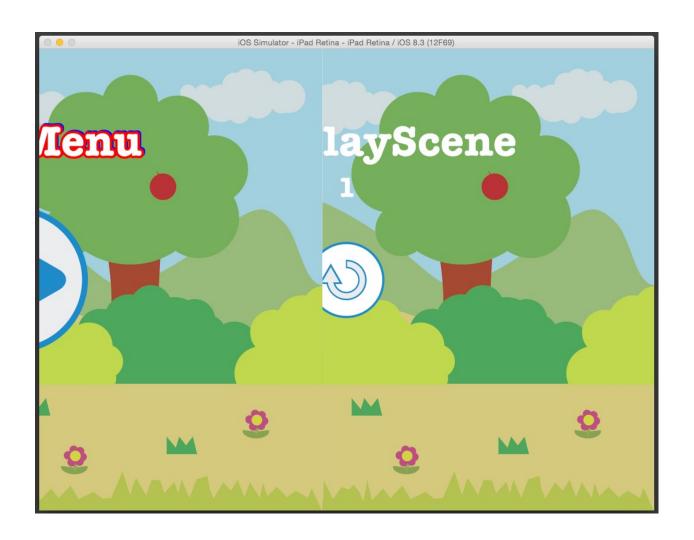


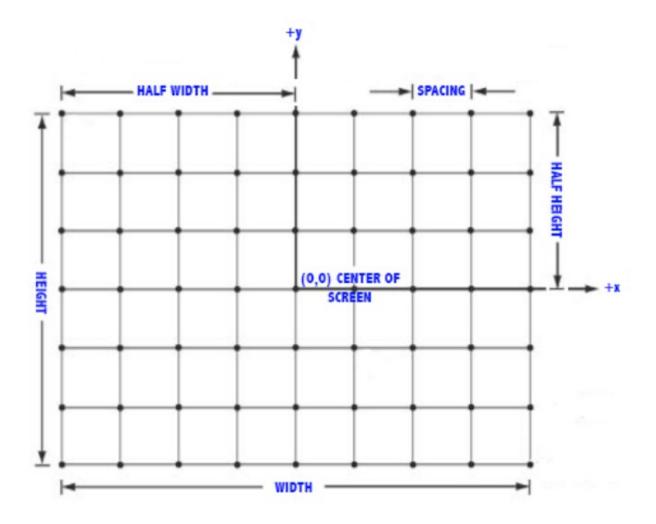
```
cocos2d: GL supports BGRA8888 textures: YES
cocos2d: GL supports NPOT textures: YES
cocos2d: GL supports discard_framebuffer: YES
cocos2d: GL supports shareable VAO: NO
cocos2d: CCGraphicsBufferClass: CCGraphicsBufferGLUnsynchronized
cocos2d: CCGraphicsBufferBindingsClass: CCGraphicsBufferBindingsGL
cocos2d: CCRenderCommandDrawClass: CCRenderCommandDrawGL
2015-06-14 12:41:30.224 scenes[5133:106291] cocos2d: animation started with frame interval: 60.00
2015-06-14 12:41:30.232 scenes[5133:106291] cocos2d: surface size: 2048x1536
2015-06-14 12:41:31.371 scenes[5133:106291] play button pressed
2015-06-14 12:41:31.899 scenes[5133:106291] play button pressed
2015-06-14 12:41:32.102 scenes[5133:106291] play button pressed
2015-06-14 12:41:32.234 scenes[5133:106291] play button pressed
2015-06-14 12:41:32.234 scenes[5133:106291] play button pressed
2015-06-14 12:41:32.33 scenes[5133:106291] play button pressed
```

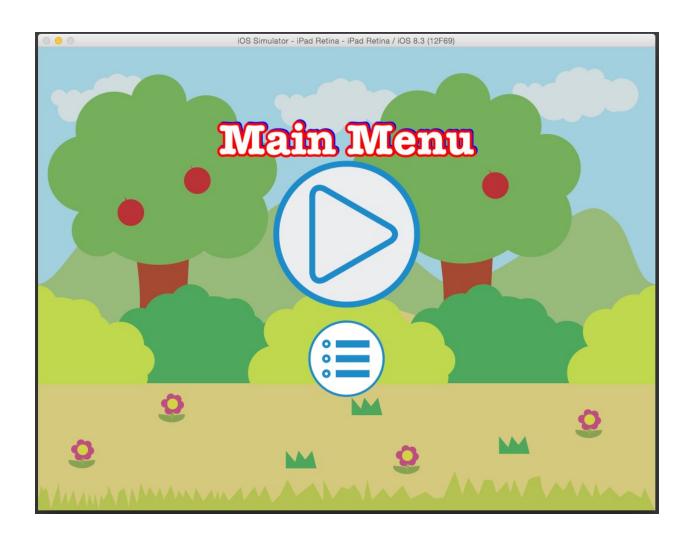


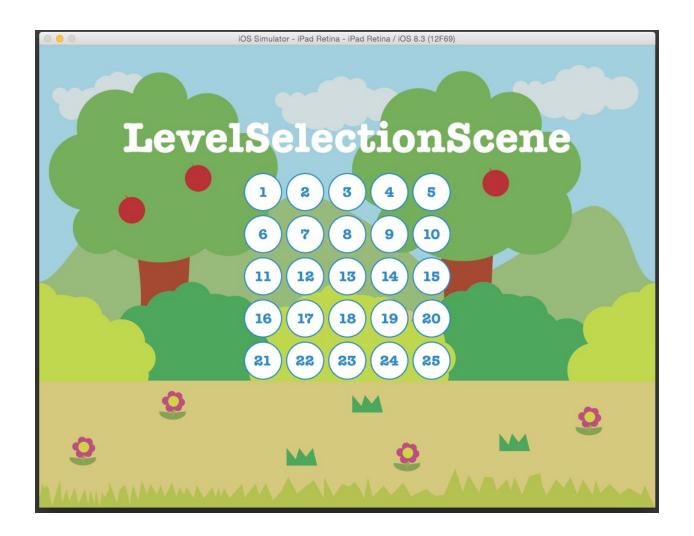




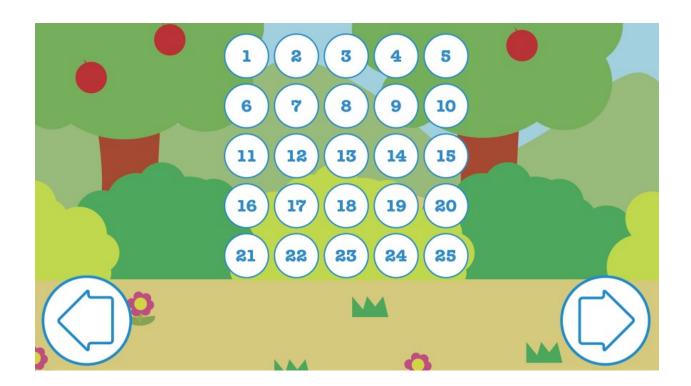


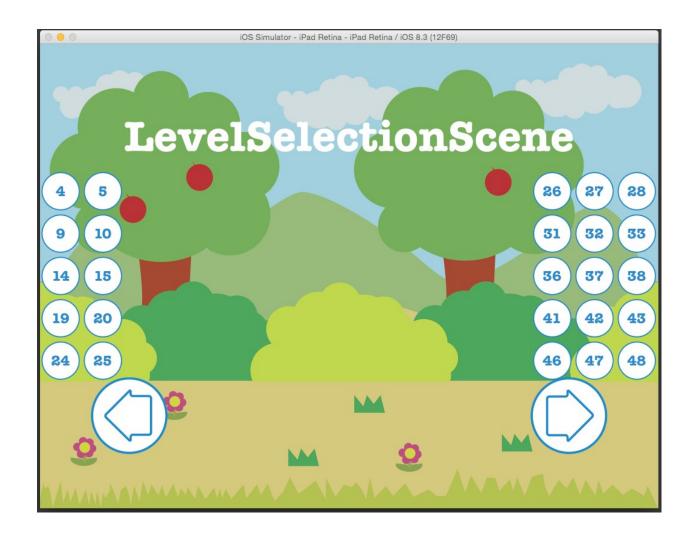












## Chapter 3: Gestures, Touches, and the Accelerometer

```
2015-07-06 08:10:15.671 Gestures[3727:31635] Swipe Up
2015-07-06 08:10:16.597 Gestures[3727:31635] Swipe Up
2015-07-06 08:10:17.134 Gestures[3727:31635] Swipe Up
2015-07-06 08:10:17.598 Gestures[3727:31635] Swipe Up
```

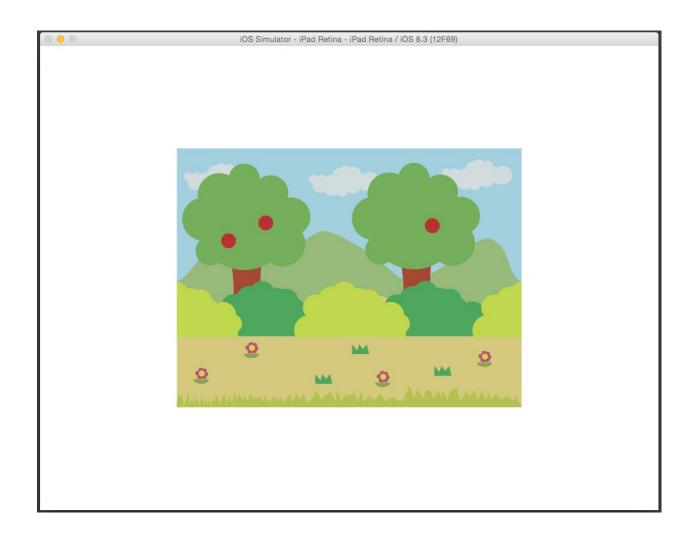
All Output \$

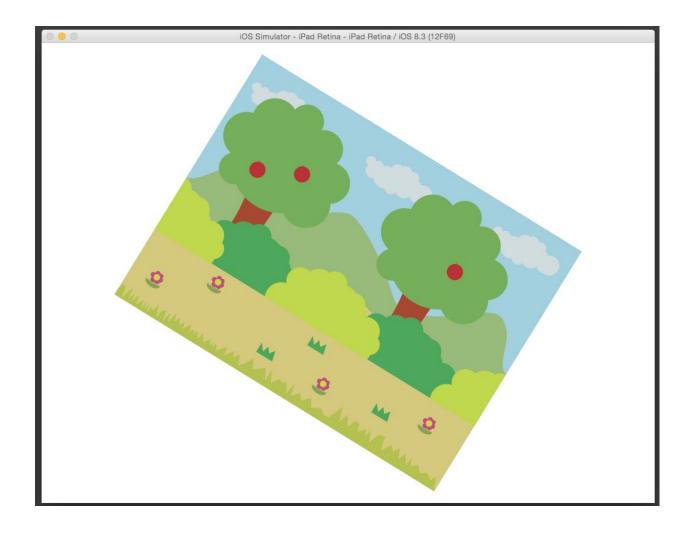
```
2015-07-06 08:29:10.215 Gestures[3853:39595] TAP
2015-07-06 08:29:10.403 Gestures[3853:39595] TAP
2015-07-06 08:29:11.002 Gestures[3853:39595] TAP
2015-07-06 08:29:11.140 Gestures[3853:39595] TAP
2015-07-06 08:29:11.336 Gestures[3853:39595] TAP
2015-07-06 08:29:11.469 Gestures[3853:39595] TAP
```

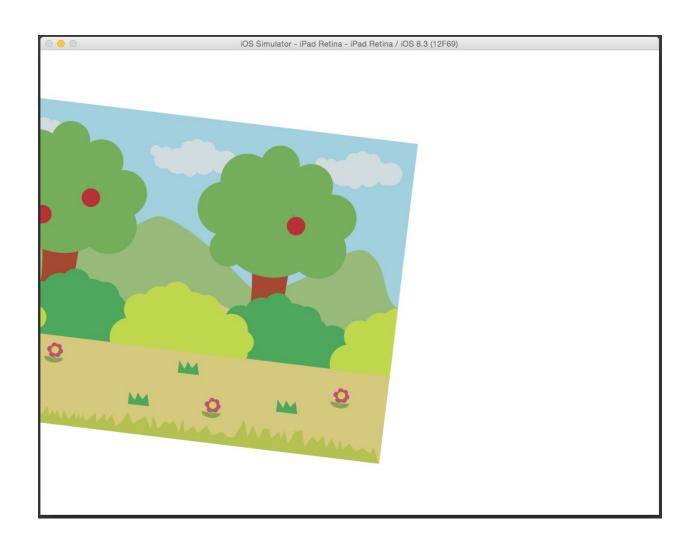
All Output \$

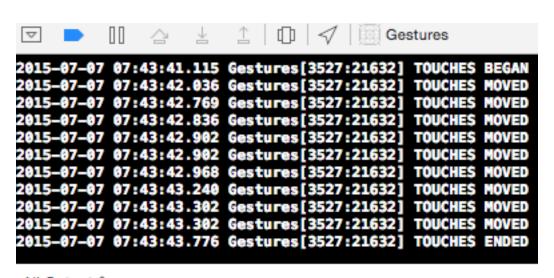
```
2015-07-06 08:46:37.230 Gestures[3880:44986] PRESS HOLD
2015-07-06 08:46:38.829 Gestures[3880:44986] PRESS HOLD
2015-07-06 08:46:40.303 Gestures[3880:44986] PRESS HOLD
2015-07-06 08:46:41.095 Gestures[3880:44986] TAP
2015-07-06 08:46:42.498 Gestures[3880:44986] PRESS HOLD
2015-07-06 08:46:43.963 Gestures[3880:44986] PRESS HOLD
```

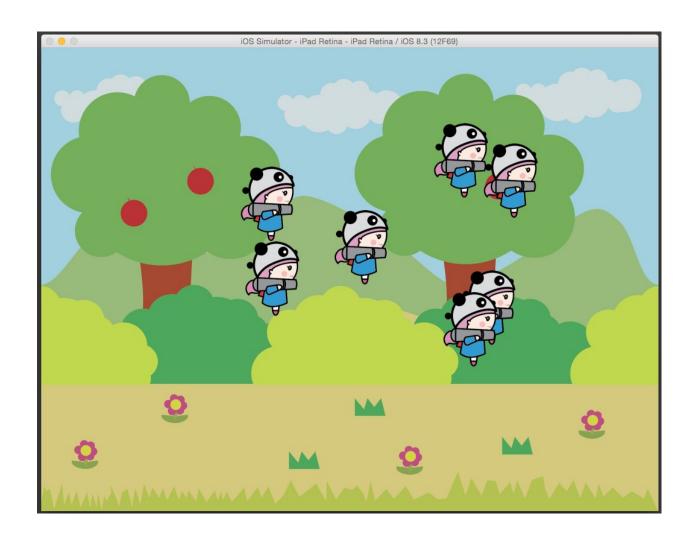
All Output \$

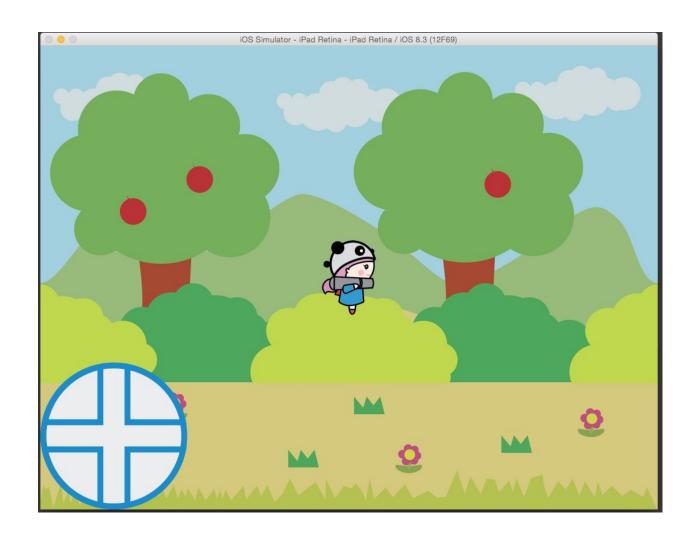


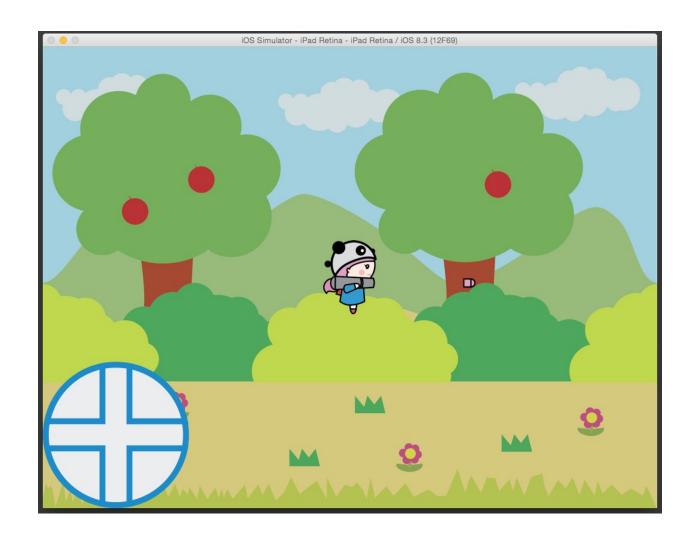




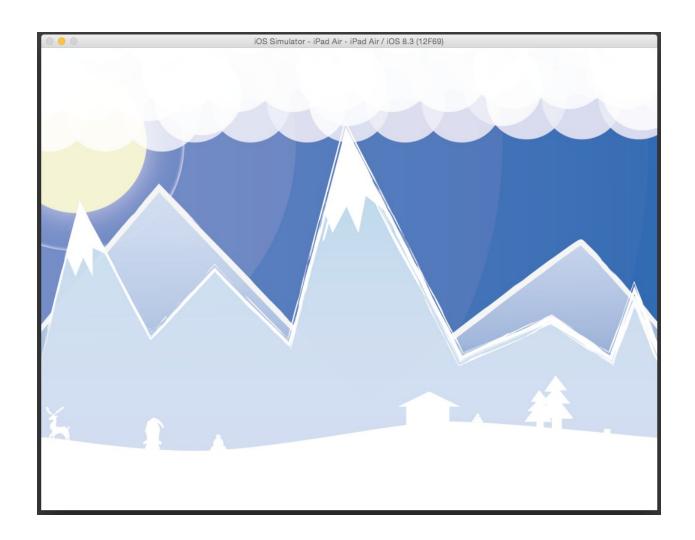


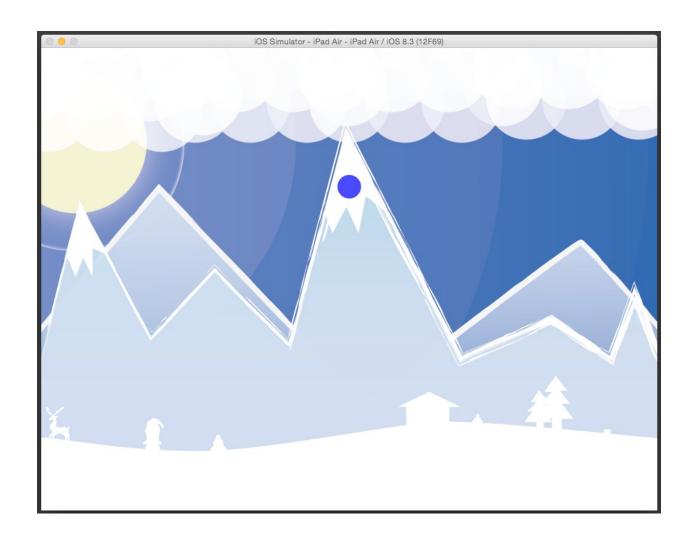


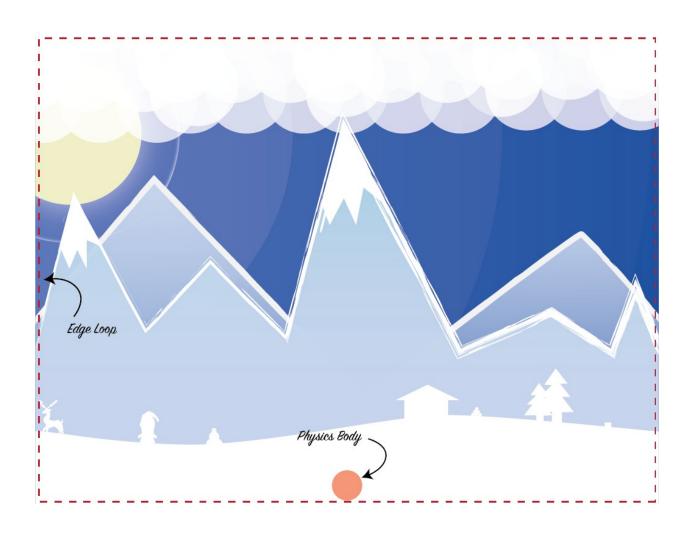


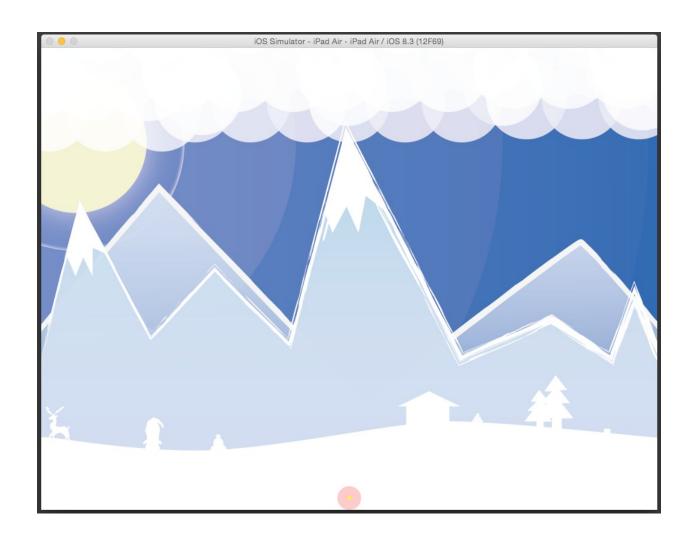


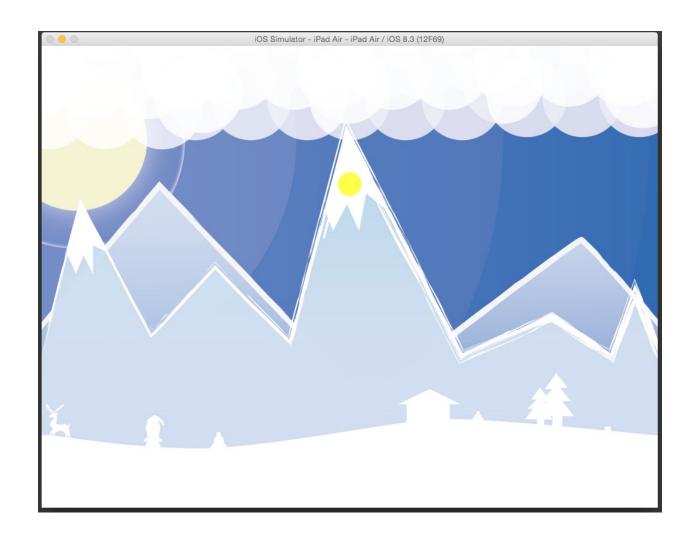
**Chapter 4: Physics** 



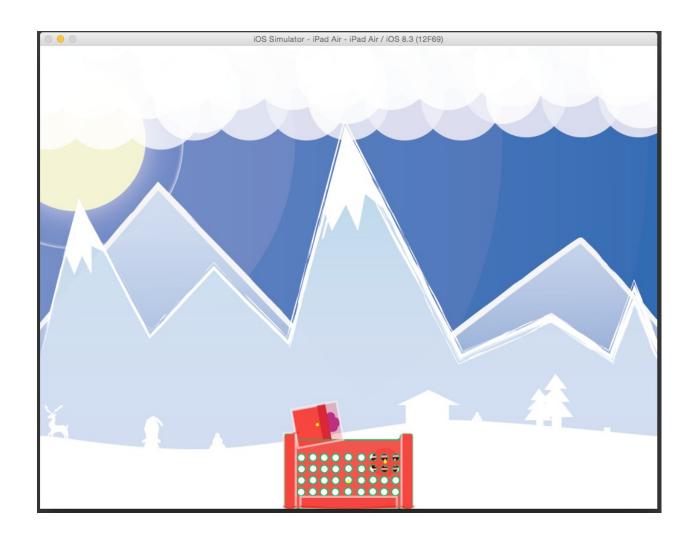


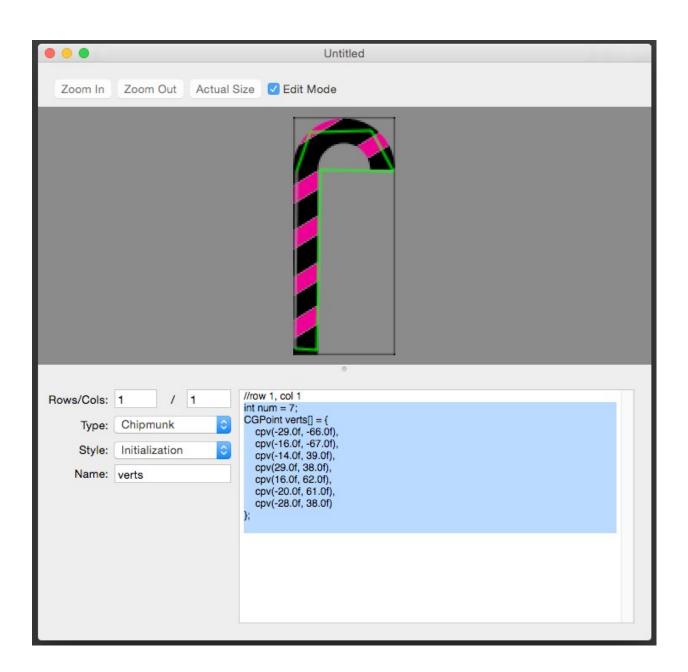




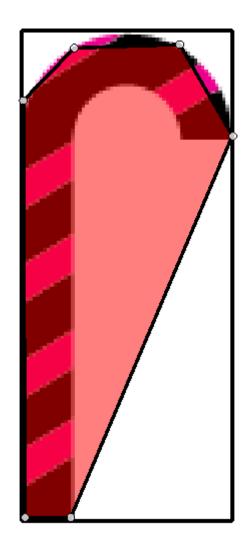


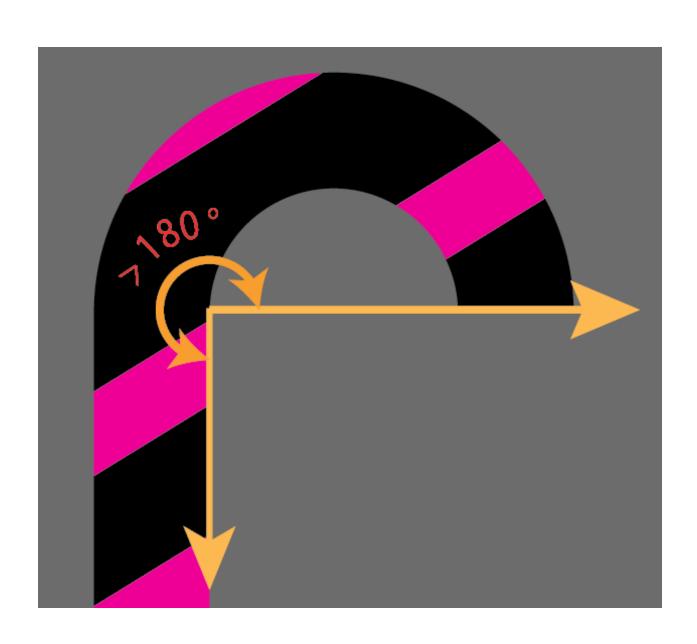




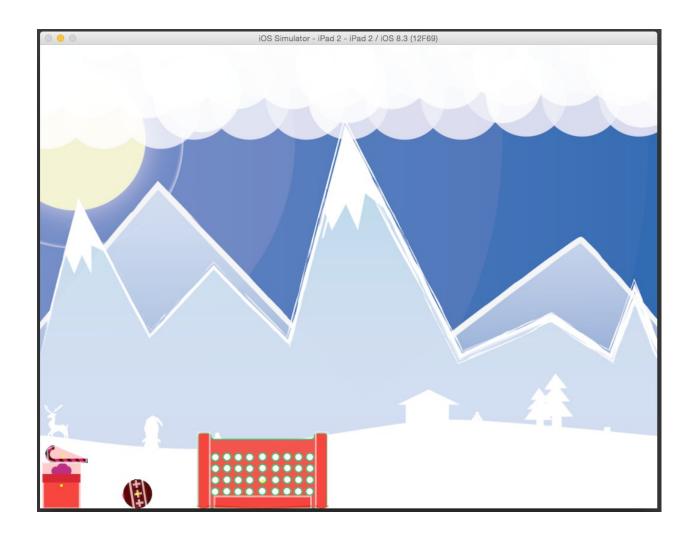




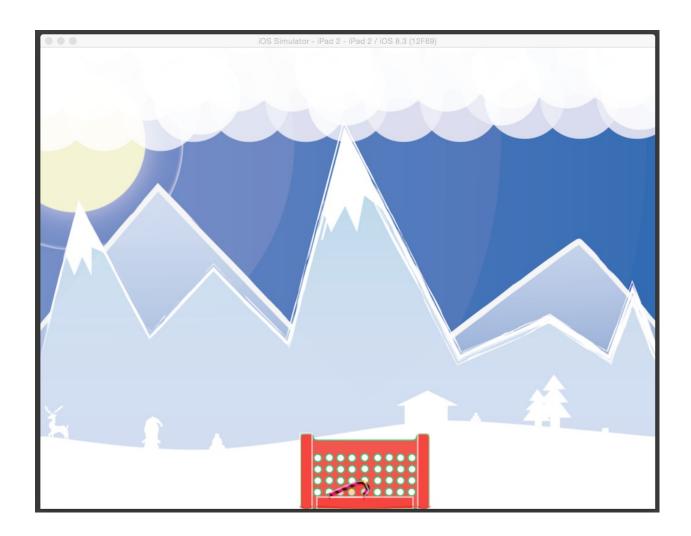


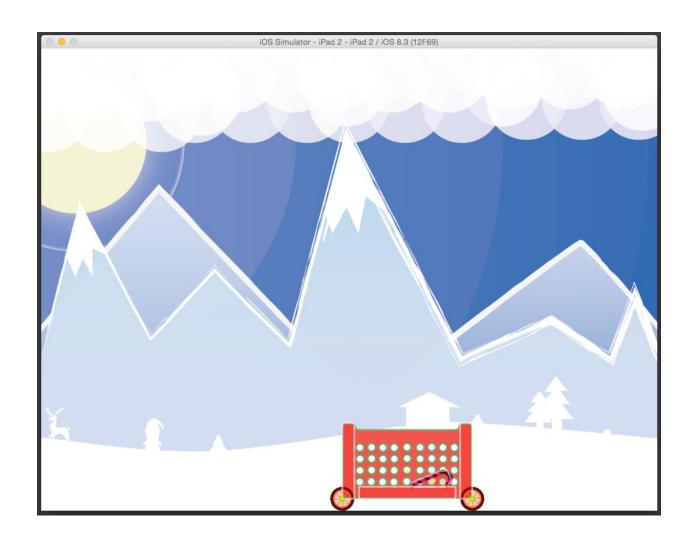


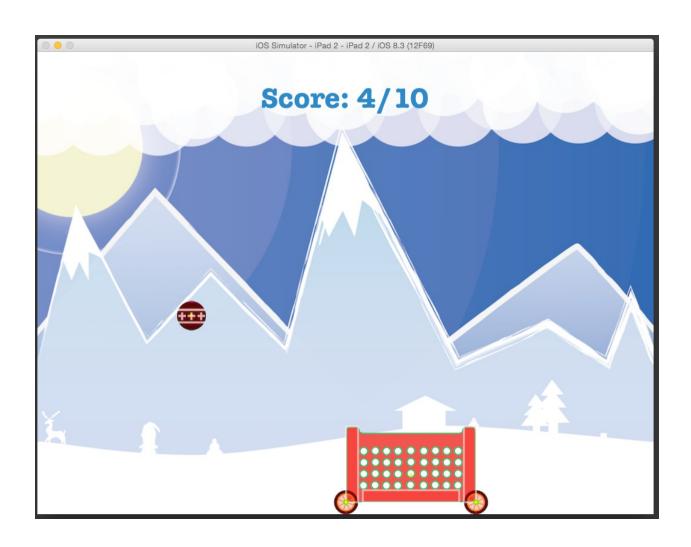


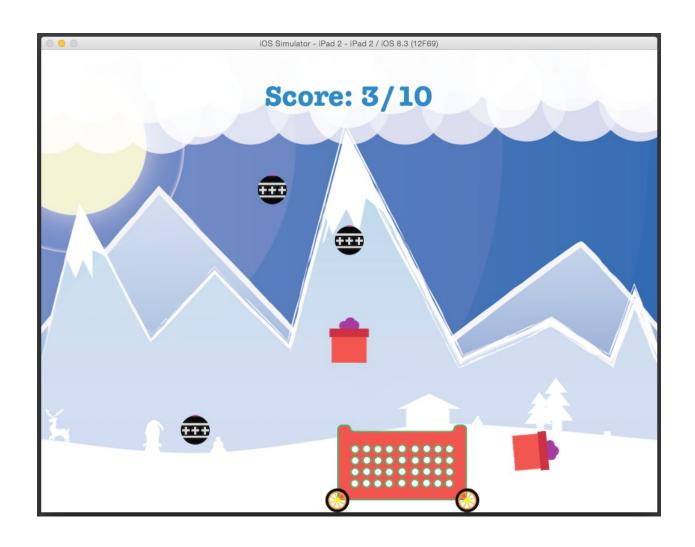


Initializing cpSpace - Chipmunk v7.0.0 (Debug Enabled)
Compile with -DNDEBUG defined to disable debug mode and runtime assertion checks
2015-07-20 13:08:14.815 Physics[3352:91188] collided with ornament or gift
2015-07-20 13:08:17.249 Physics[3352:91188] collided with ornament or gift



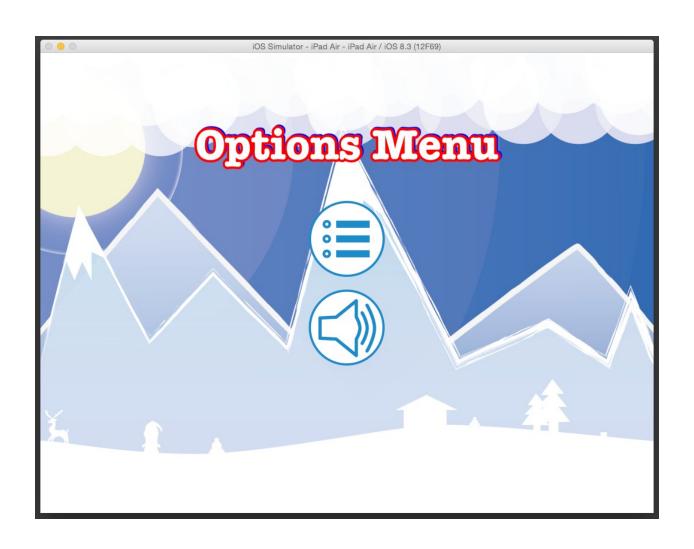






**Chapter 5: Audio** 

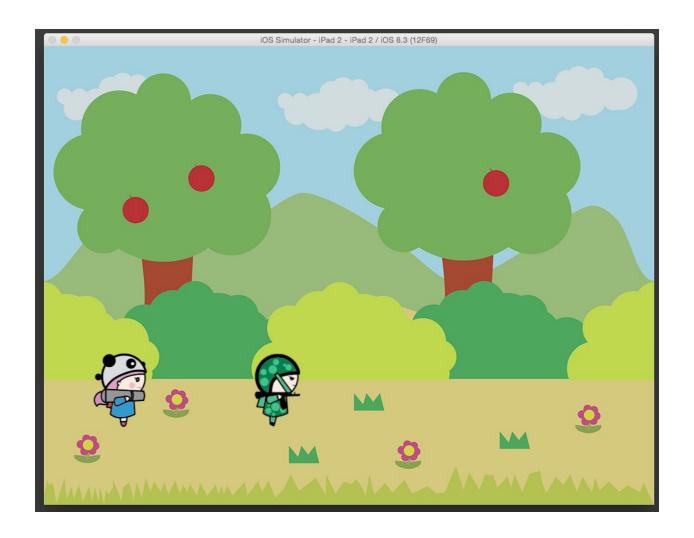


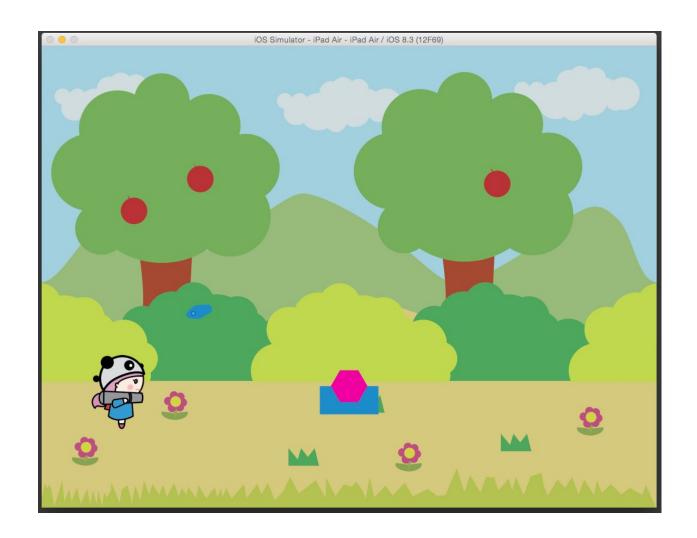


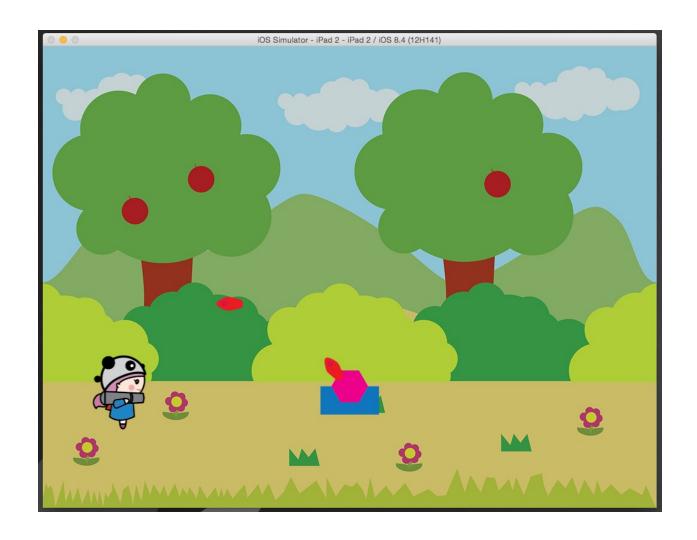


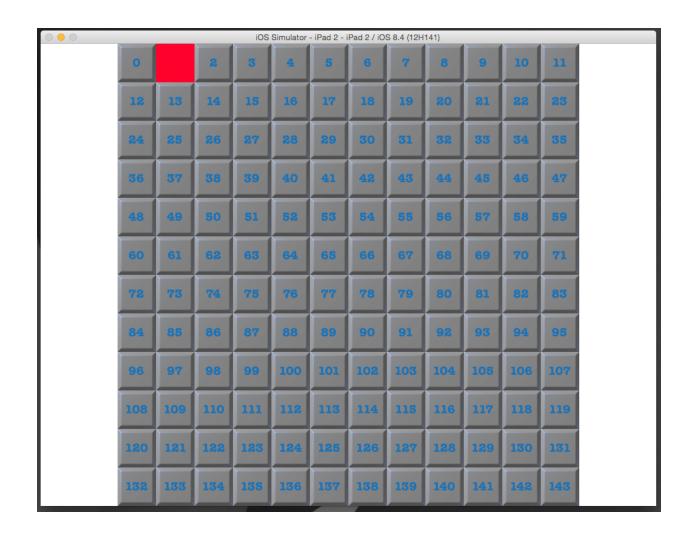


Chapter 6: Al and A\* Pathfinding

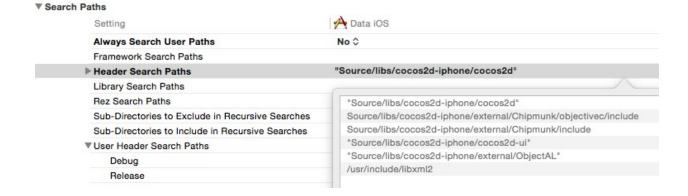








## **Chapter 7: Data Storage and Retrieval**

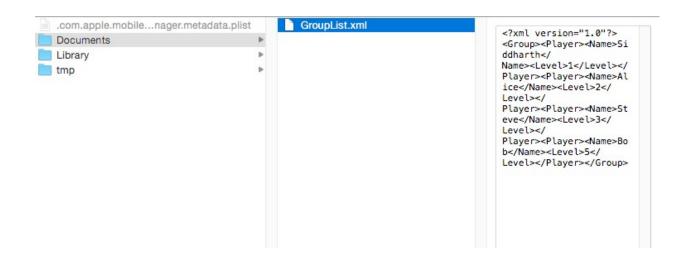


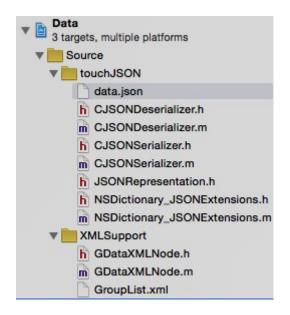
## ▼ Linking

Setting	A Data iOS
Display Mangled Names	No ≎
Link With Standard Libraries	Yes \$
Other Linker Flags	-lz -ObjC -lxml2

```
2015-10-18 18:15:09.981 Data[2978:40985] Name: Siddharth
2015-10-18 18:15:09.981 Data[2978:40985] Level: 1
2015-10-18 18:15:09.981 Data[2978:40985] Name: Alice
2015-10-18 18:15:09.981 Data[2978:40985] Level: 2
2015-10-18 18:15:09.981 Data[2978:40985] Name: Steve
2015-10-18 18:15:09.981 Data[2978:40985] Level: 3
```

```
2015-10-18 18:45:56.157 Data[3137:49639] Name: Siddharth
2015-10-18 18:45:56.157 Data[3137:49639] Level: 1
2015-10-18 18:45:56.157 Data[3137:49639] Name: Alice
2015-10-18 18:45:56.157 Data[3137:49639] Level: 2
2015-10-18 18:45:56.157 Data[3137:49639] Name: Steve
2015-10-18 18:45:56.157 Data[3137:49639] Level: 3
2015-10-18 18:45:56.157 Data[3137:49639] Name: Bob
2015-10-18 18:45:56.157 Data[3137:49639] Level: 5
```





```
2015-10-19 10:18:12.801 Data[2759:111868] SpriteFileName: tree.png
2015-10-19 10:18:12.801 Data[2759:111868] xPos: 250.000000, yPos: 50.000000
2015-10-19 10:18:12.801 Data[2759:111868] Scale: 0.900000
2015-10-19 10:18:12.801 Data[2759:111868] found spriteFile
2015-10-19 10:18:12.801 Data[2759:111868] SpriteFileName: tree_shadow.png
2015-10-19 10:18:12.801 Data[2759:111868] xPos: 195.000000, yPos: 51.000000
2015-10-19 10:18:12.802 Data[2759:111868] Scale: 0.900000
2015-10-19 10:18:12.802 Data[2759:111868] SpriteFileName: cheshire_cat.png
2015-10-19 10:18:12.802 Data[2759:111868] xPos: 120.000000, yPos: 70.000000
2015-10-19 10:18:12.802 Data[2759:111868] Scale: 0.300000
2015-10-19 10:18:12.802 Data[2759:111868] Scale: 0.300000
2015-10-19 10:18:12.802 Data[2759:111868] SpriteFileName: actor_shadow.png
2015-10-19 10:18:12.802 Data[2759:111868] SpriteFileName: actor_shadow.png
2015-10-19 10:18:12.802 Data[2759:111868] Scale: 1.750000
2015-10-19 10:18:12.802 Data[2759:111868] Scale: 1.750000
2015-10-19 10:18:12.802 Data[2759:111868] Scale: 1.750000
2015-10-19 10:18:12.803 Data[2759:111868] found spriteFile
```

Data Data	Key		Туре	Value
3 targets, multiple platforms	▼Root		Dictionary	(1 item)
▼ iii Source	▼nodes	00	Array	(4 items)
▶ im touchJSON	▼ Item 0		Dictionary	(4 items)
▶ MLSupport	type		String	spriteFile
▼ iii PLIST	file		String	cactus1_00.png
whackamole_template.plist	▼ position		Dictionary	(2 items)
scene1.plist	×		String	100
▶ Platforms	у		String	100
MainScene.h	scale		String	1
m MainScene.m	▼Item 1		Dictionary	(4 items)
▶ MetalShaders	type		String	spriteFile
▼ Resources	file		String	cactus2_00.png
▶ Platforms	▼ position		Dictionary	(2 items)
▶ im res	x		String	246
▶ in Icons	у		String	262
▼ Published-iOS	scale		String	1
▶ ccbresources	▶ Item 2		Dictionary	(4 items)
configCocos2d.plist	▶ Item 3		Dictionary	(4 items)
ileLookup.plist				

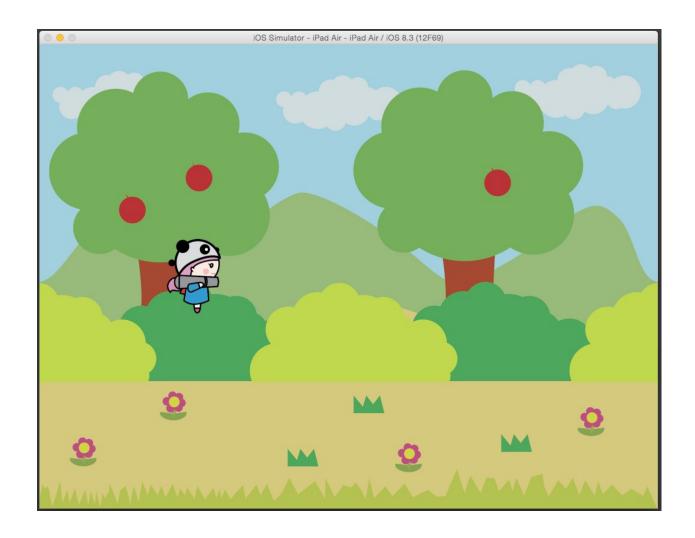
```
2015-10-19 13:55:28.178 Data[4857:204473] SpriteFileName: cactus1_00.png
2015-10-19 13:55:28.179 Data[4857:204473] xPos: 100.000000, yPos: 100.000000
2015-10-19 13:55:28.179 Data[4857:204473] Scale: 1.000000
2015-10-19 13:55:28.179 Data[4857:204473] found spriteFile
2015-10-19 13:55:28.179 Data[4857:204473] SpriteFileName: cactus2_00.png
2015-10-19 13:55:28.179 Data[4857:204473] xPos: 246.000000, yPos: 262.000000
2015-10-19 13:55:28.179 Data[4857:204473] Scale: 1.000000
2015-10-19 13:55:28.179 Data[4857:204473] SpriteFileName: cactus3_00.png
2015-10-19 13:55:28.179 Data[4857:204473] SpriteFileName: cactus3_00.png
2015-10-19 13:55:28.180 Data[4857:204473] xPos: 342.000000, yPos: 124.000000
2015-10-19 13:55:28.180 Data[4857:204473] Scale: 1.000000
2015-10-19 13:55:28.180 Data[4857:204473] SpriteFileName: cactus4_00.png
2015-10-19 13:55:28.180 Data[4857:204473] xPos: 100.000000, yPos: 200.0000000
2015-10-19 13:55:28.180 Data[4857:204473] Scale: 1.0000000, yPos: 200.00000000
2015-10-19 13:55:28.180 Data[4857:204473] Scale: 1.0000000
```

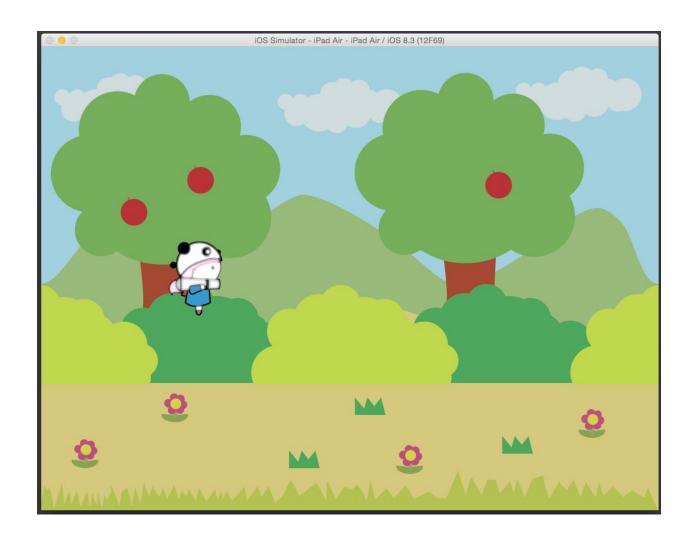
```
2015-10-19 14:32:19.354 Data[5910:261357] [loadHighScore] playerName: Player1 , playerScore: 0 2015-10-19 14:32:19.357 Data[5910:261357] [addHighScore] playerName: Player1 , playerScore: 0 2015-10-19 14:32:19.357 Data[5910:261357] [addHighScore] playerName: siddharth , playerScore: 24 2015-10-19 14:32:19.366 Data[5910:261357] [loadHighScore] playerName: Player1 , playerScore: 0 2015-10-19 14:32:19.366 Data[5910:261357] [loadHighScore] playerName: siddharth , playerScore: 24 2015-10-19 14:32:19.367 Data[5910:261357] Hi scores deleted! 2015-10-19 14:32:19.373 Data[5910:261357] [loadHighScore] playerName: Player1 , playerScore: 0
```

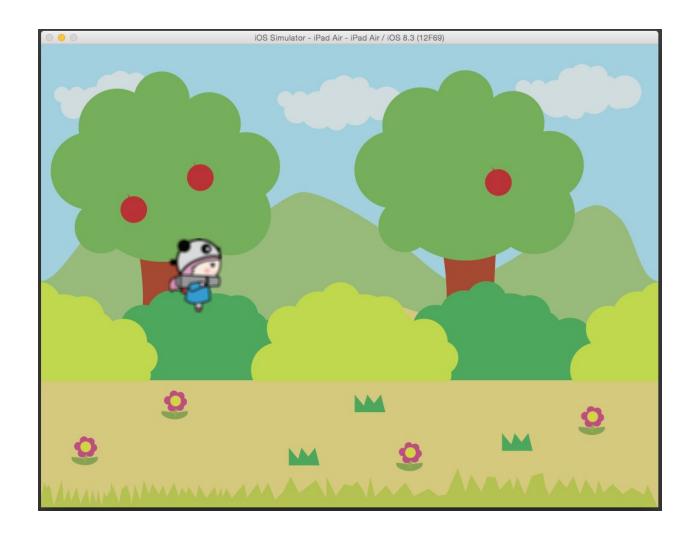
## 2015-10-19 14:47:01.802 Data[6294:283261] [NSUSERDefault] Score: 24

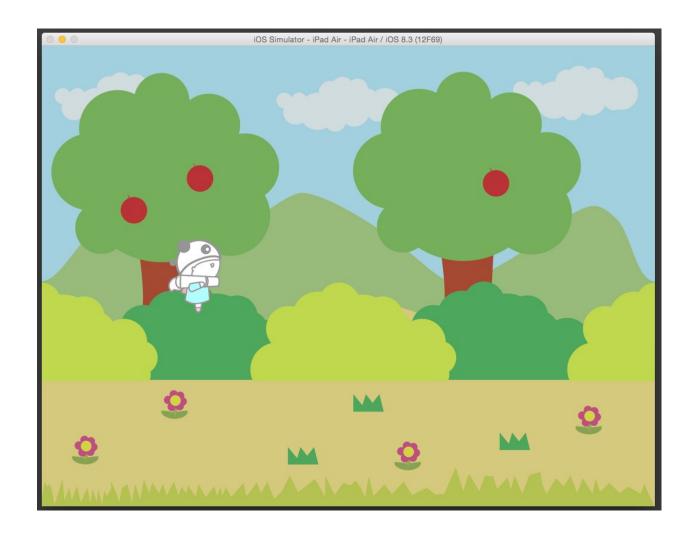
```
M void setBool:(B00L) forKey:(NSString *)
M void setDouble:(double) forKey:(NSString *)
M void setFloat:(float) forKey:(NSString *)
M void setInteger:(NSInteger) forKey:(NSString *)
```

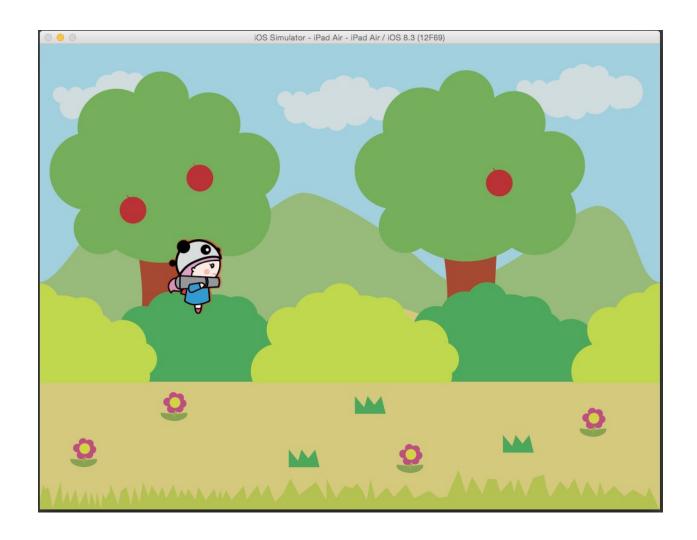
**Chapter 8: Effects** 

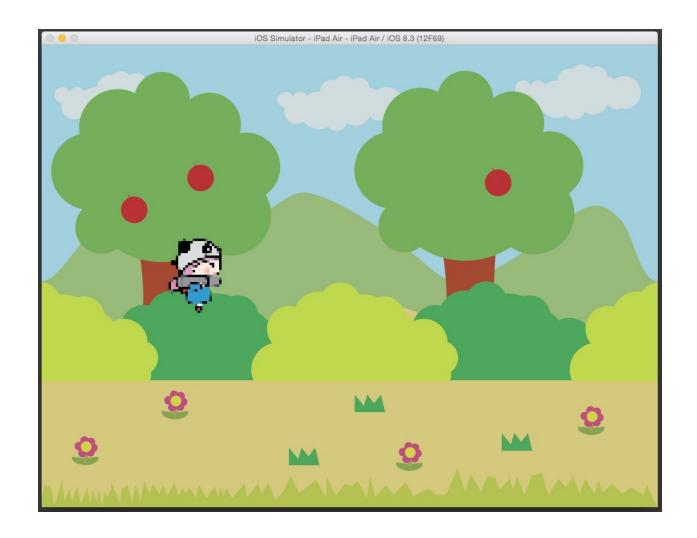


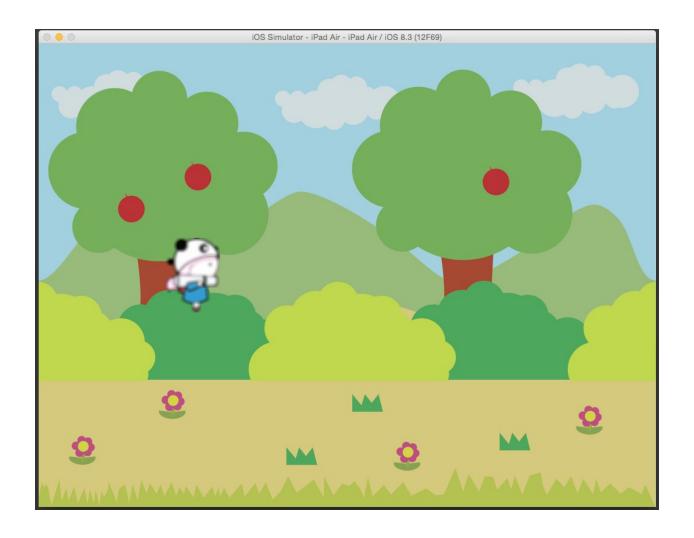


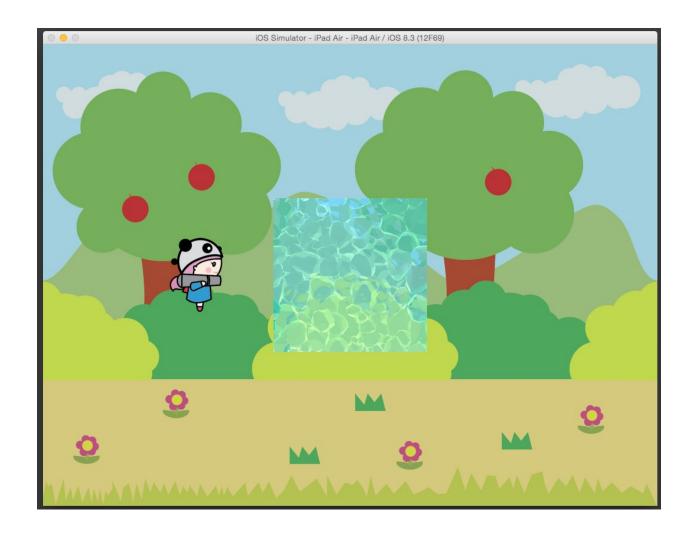


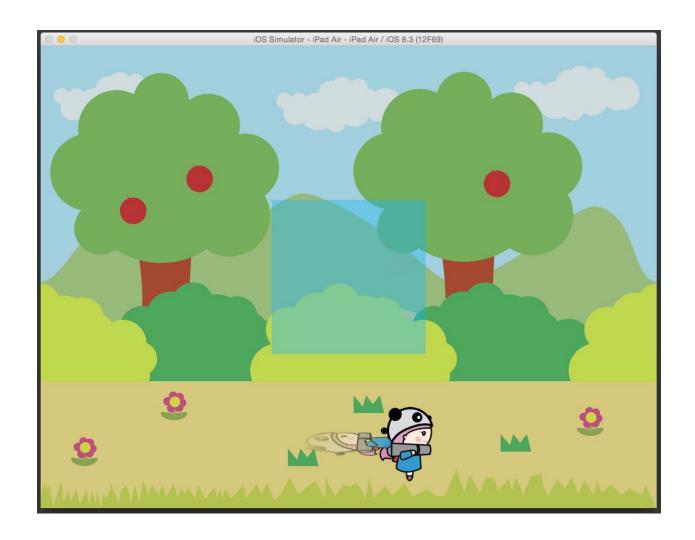


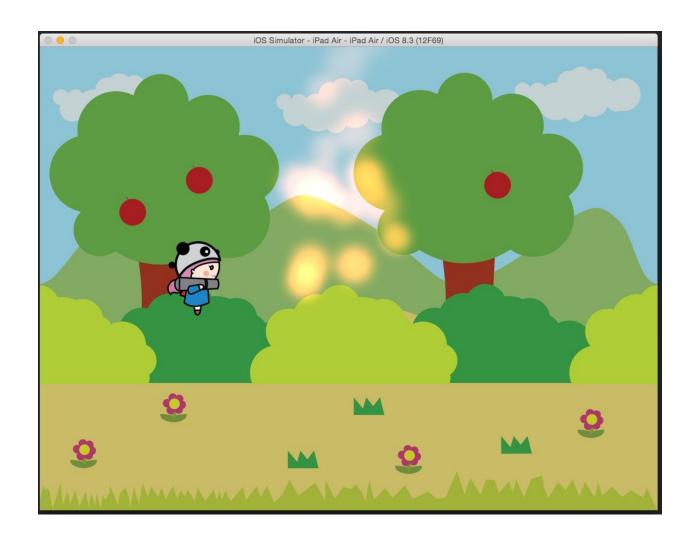






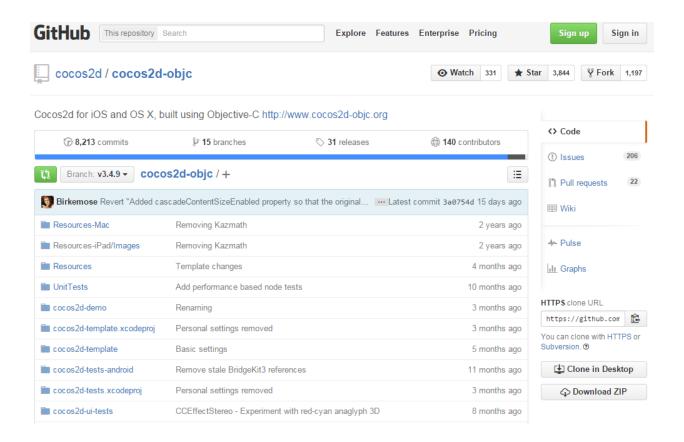




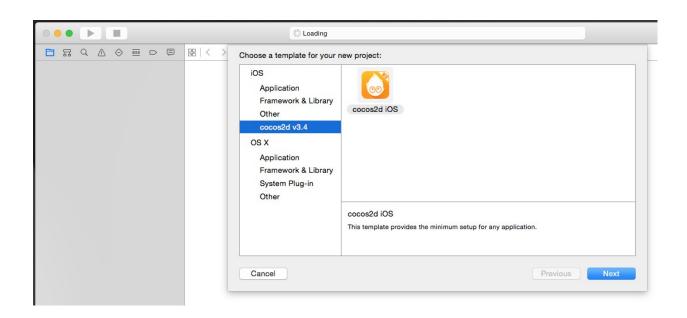


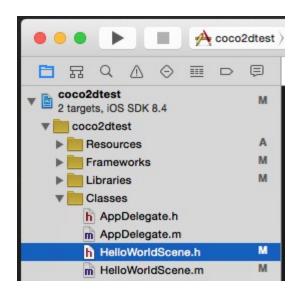


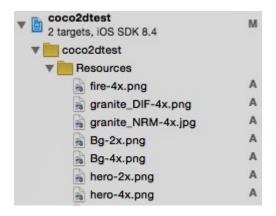


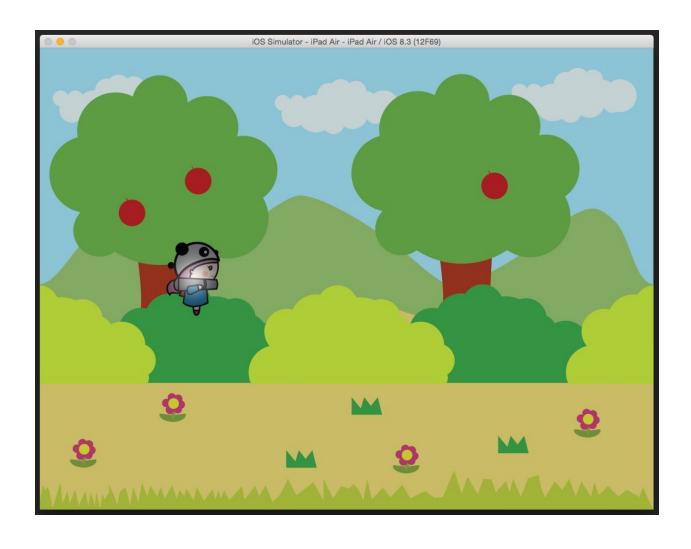












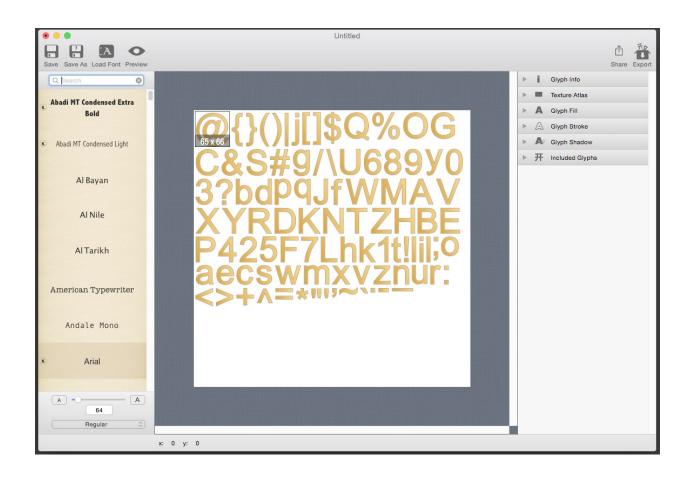
## **Chapter 9: Game Tools**

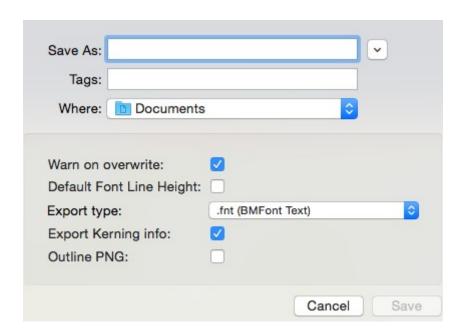
## Glyph Designer

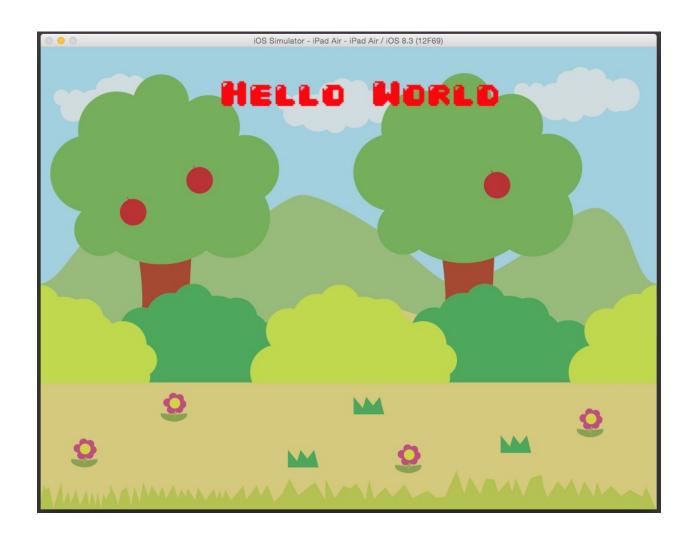
Bitmap font design software for Mac OS X

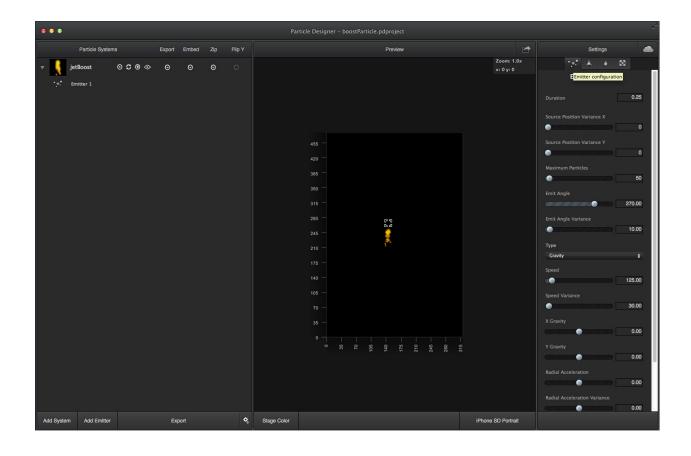


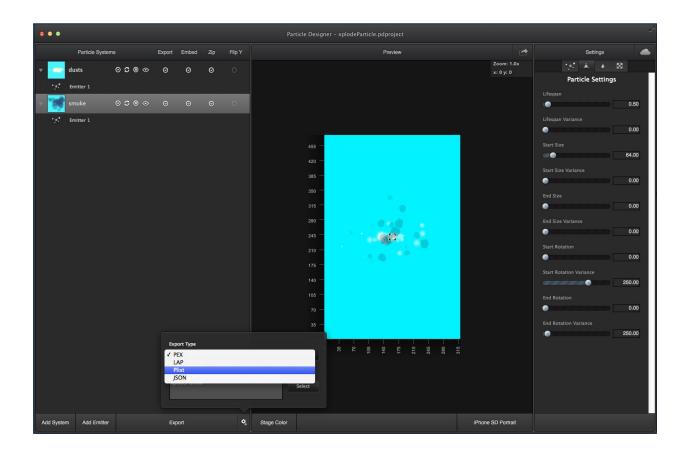


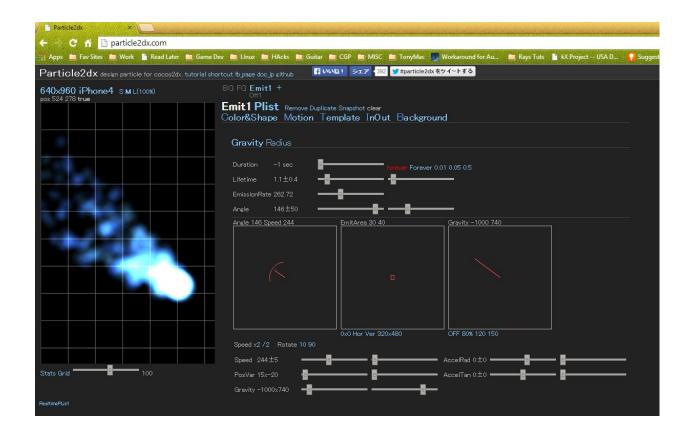


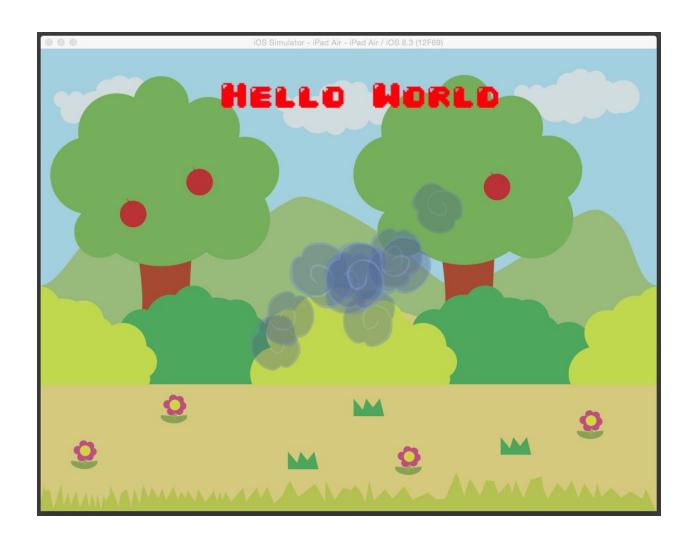








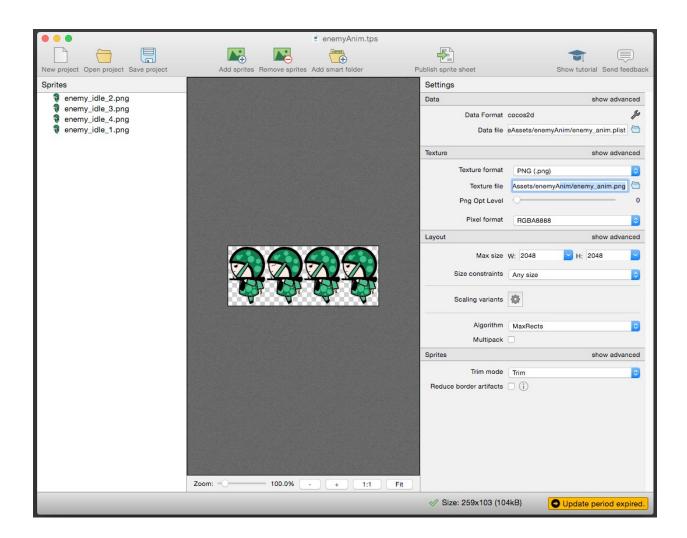


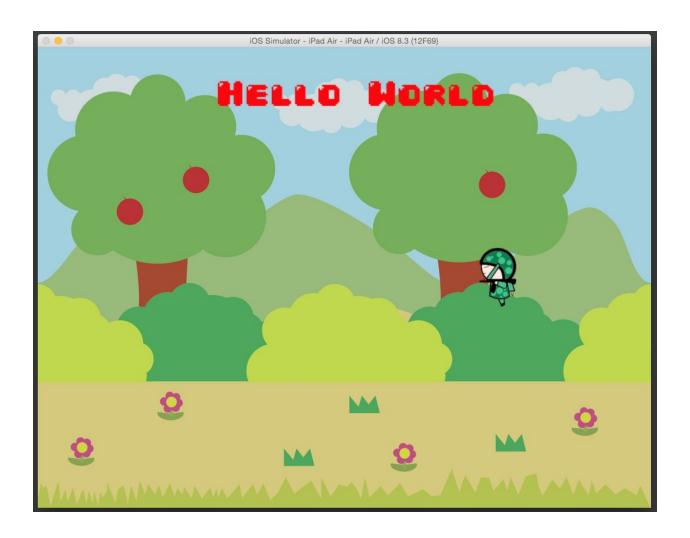








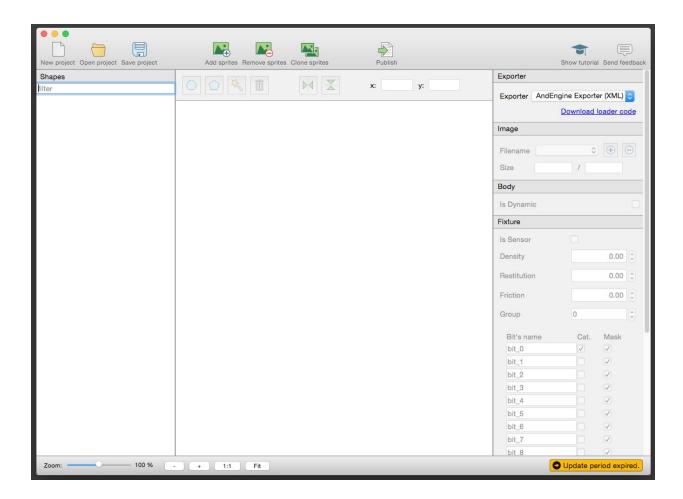


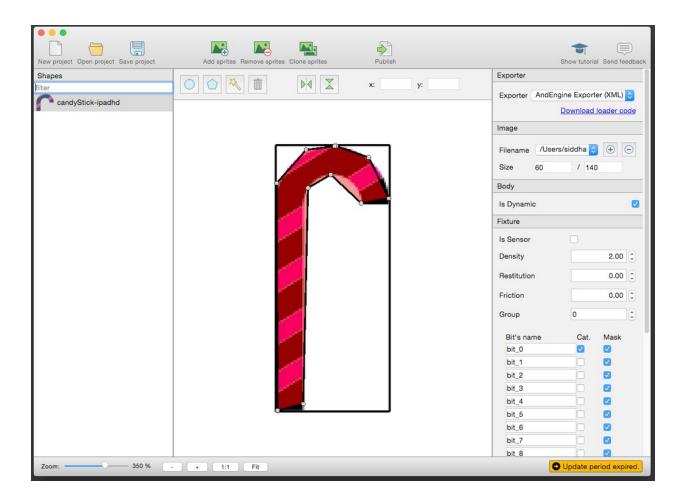


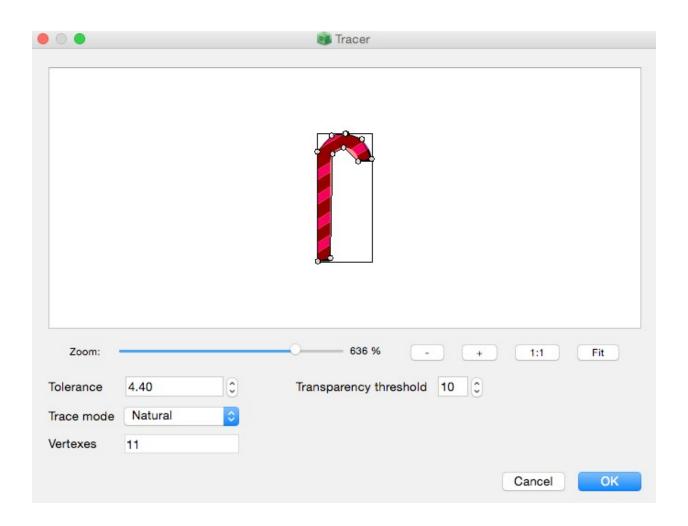


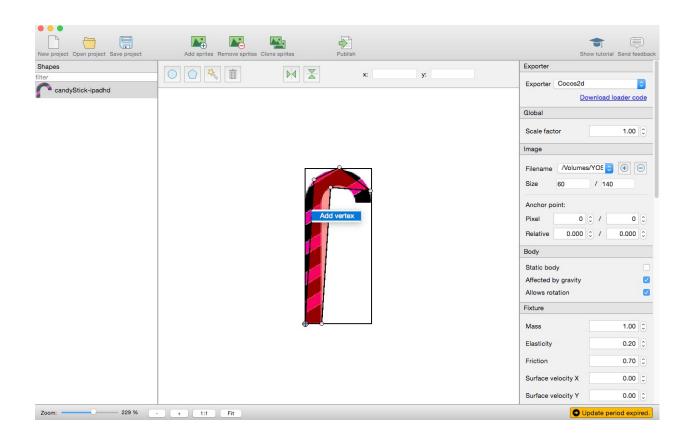
## Your physics shapes in 17 seconds

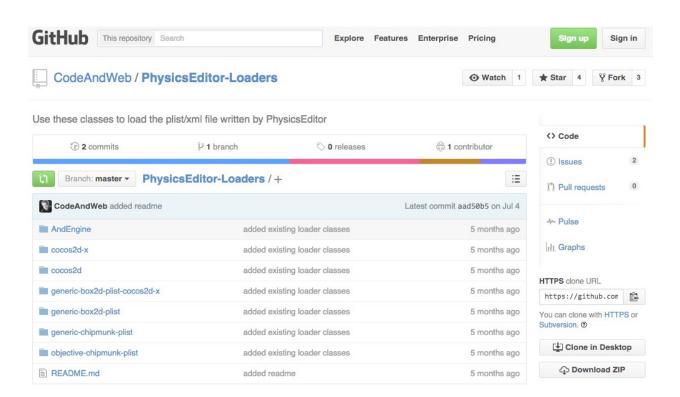


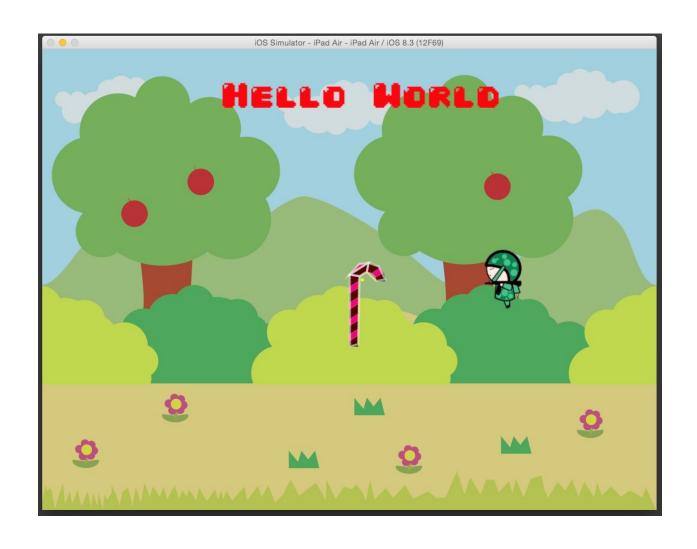




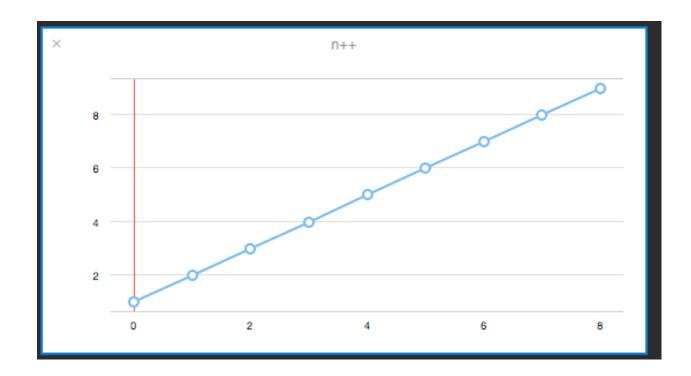


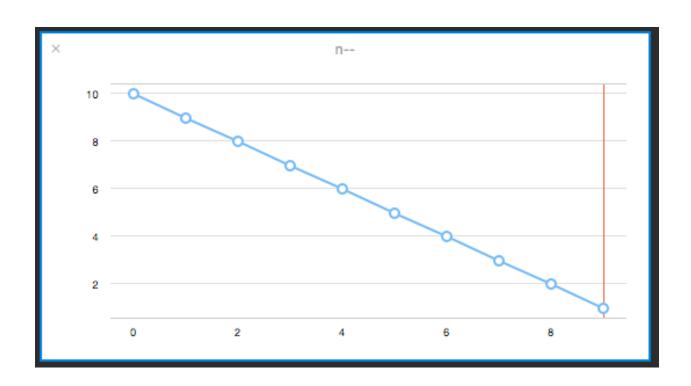


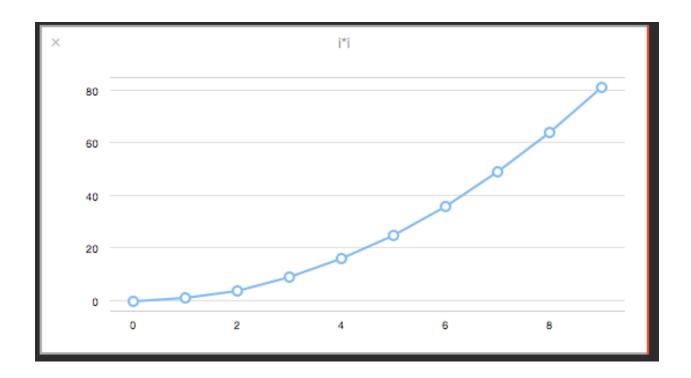


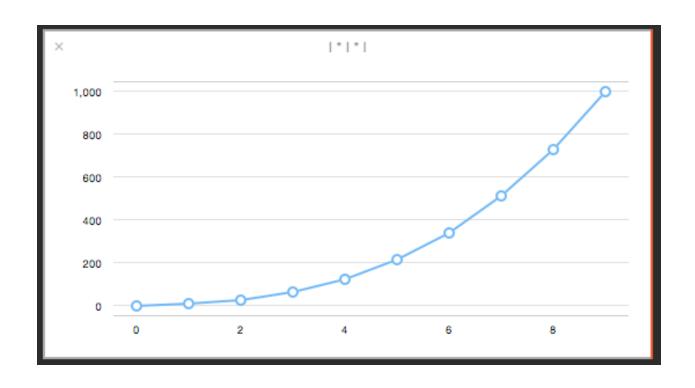


**Chapter 10: Swift/SpriteBuilder Basics** 

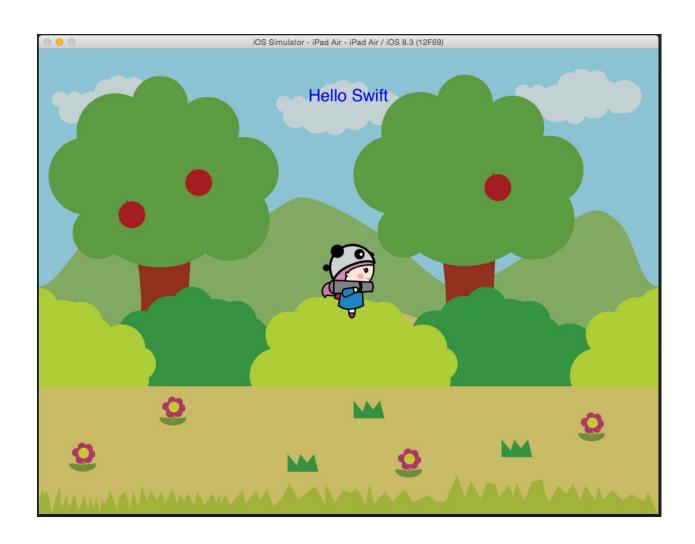








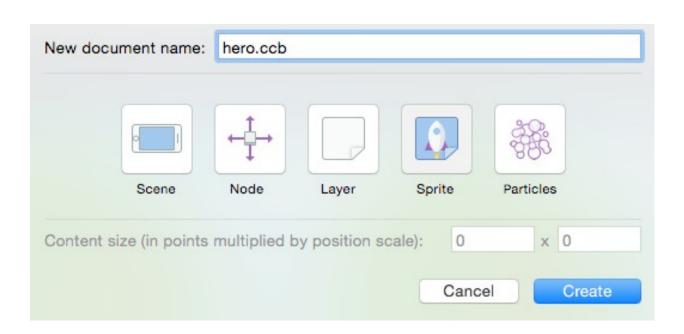


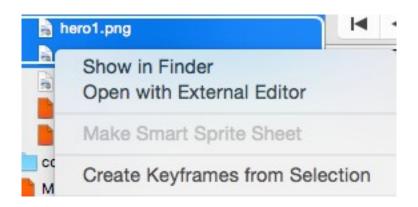


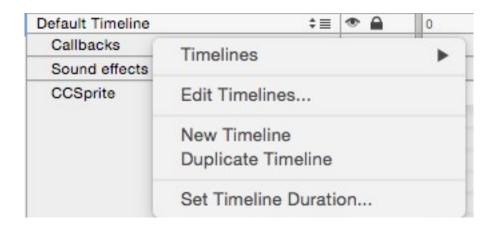
Touch Location 278.0 , 231.0 Touch Location 278.0 , 230.5 Touch Location 278.0 , 230.5 Touch Location 278.0 , 230.0

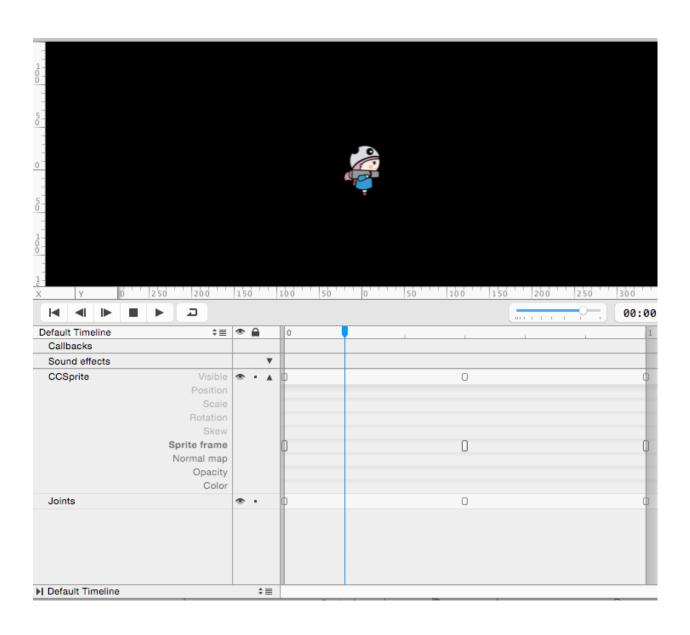


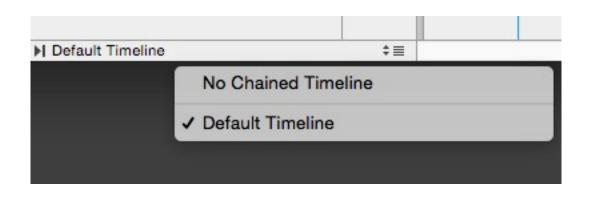




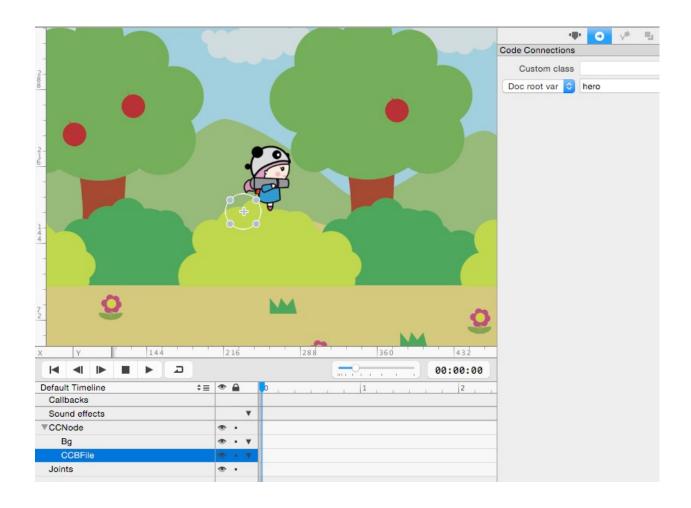


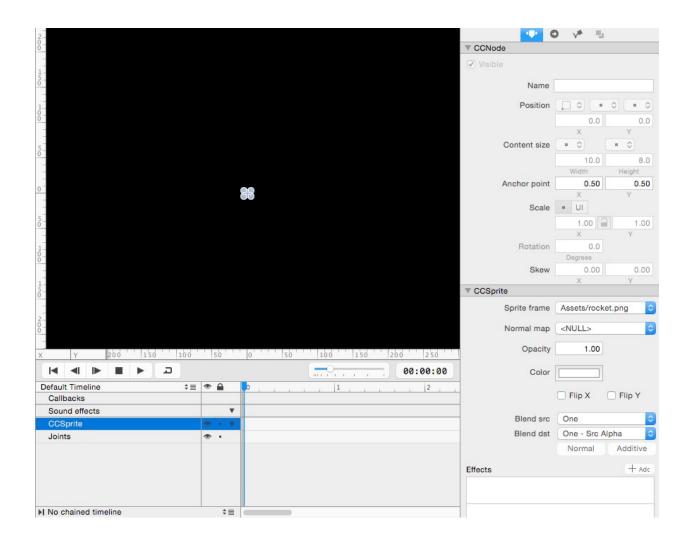


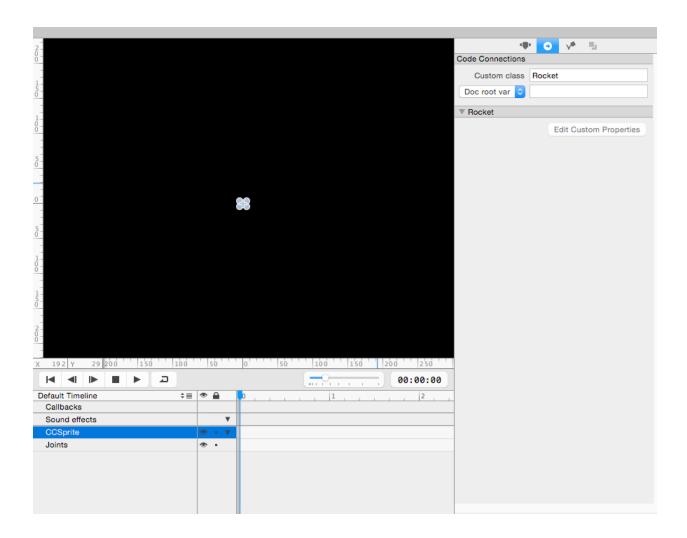


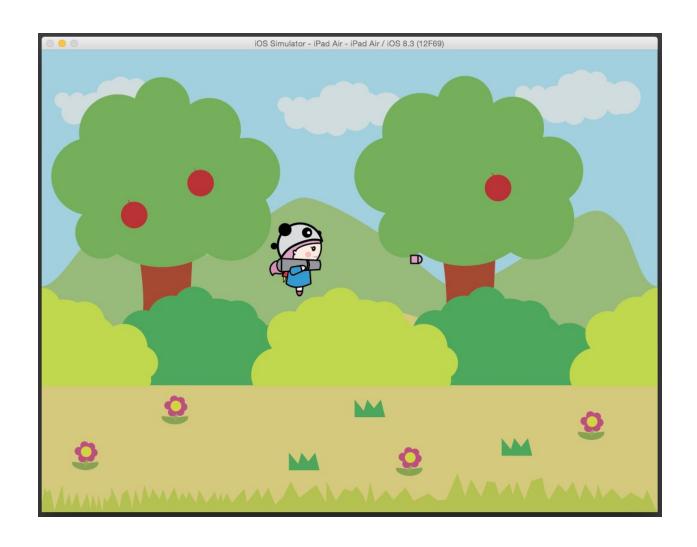












**Chapter 11: Porting to Android** 



## Android Community Plugin



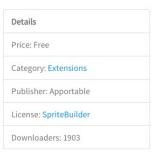
#### Downloaded

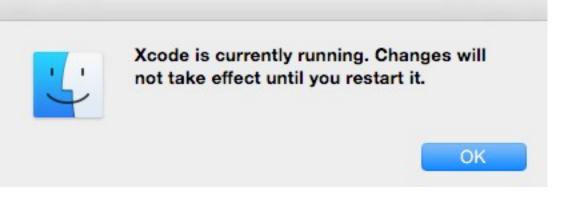
With the SpriteBuilder Android Plugin, you can seamlessly build, run, and debug your SpriteBuilder projects on Android from the comfort of Xcode 6.

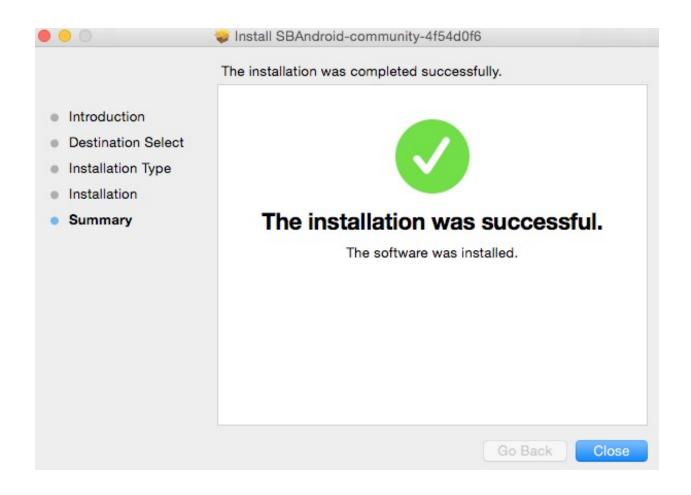
The Community version supports games using Cocos2D-SpriteBuilder and Foundation APIs. You can build and deploy your SpriteBuilder project for Android devices and publish to Android marketplaces such as the Google Play Store and Amazon App Store. You can also incorporate art and music assets from the SpriteBuilder Store. For support of even more features, please see the Indie

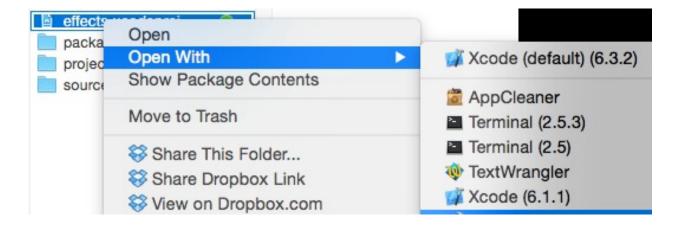
The SpriteBuilder Android Plugin is compatible with SpriteBuilder 1.4 / Cocos2D-SpriteBuilder 3.4 and above. Please be sure to press "Register" when prompted by the installer. Visit the Android Plugin Documentation to get started, and post in the SpriteBuilder Forums with any questions.

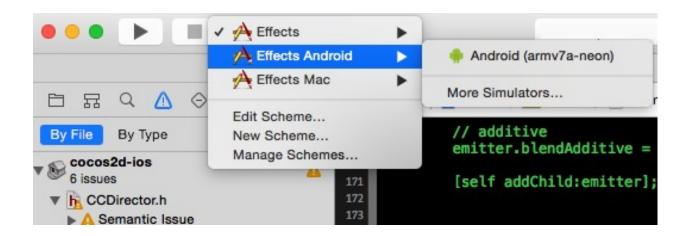
Current version: SBAndroid-community-4f54d0f6 released on 2015.04.30.



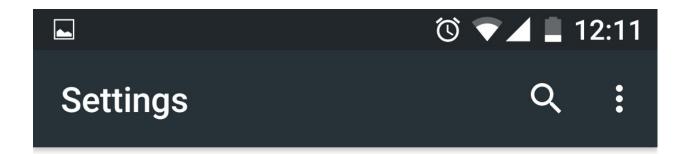












Backup & reset

## **System**

O Date & time

† Accessibility

🖶 Printing

{ } Developer options



# ← About phone

### Model number

Nexus 5

## Android version

6.0

# Android security patch level

November 1, 2015

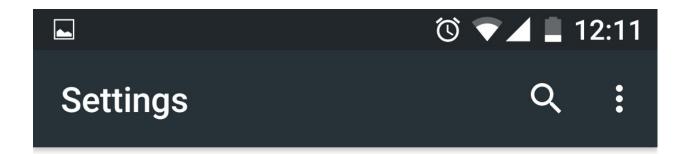
## Baseband version

M8974A-2.0.50.2.27

## Kernel version

3.4.0-g2aa165e android-build@wped19.hot.corp.google.com

No need, you are already a



Backup & reset

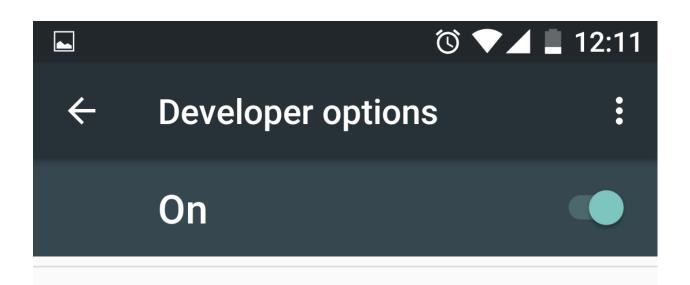
## **System**

O Date & time

† Accessibility

🖶 Printing

{ } Developer options



# Stay awake

Screen will never sleep while charging



# Enable Bluetooth HCI snoop log

Capture all bluetooth HCI packets in a file

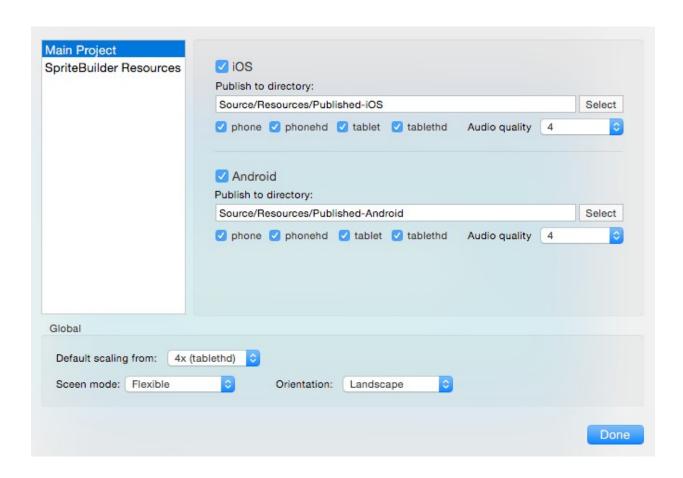


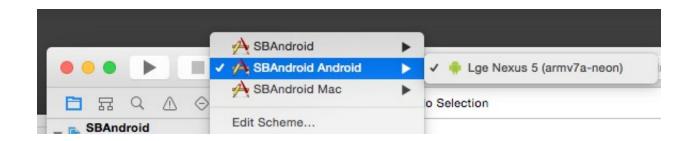
## Running services

View and control currently running services

## **Debugging**

**USB** debugging

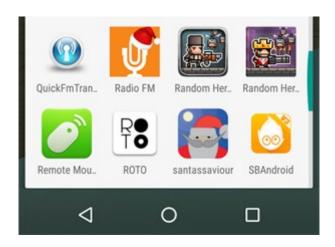


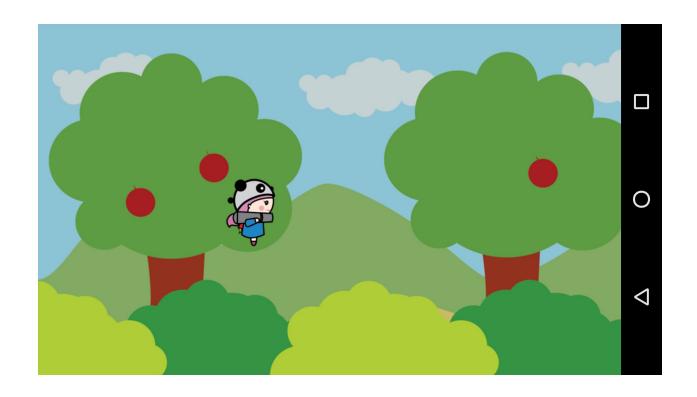


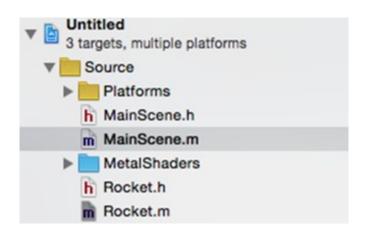
Preparing to run org.cocos2d.SBAndroid on device 06256689f0d4da57 7466 KB/s (18415391 bytes in 2.408s) pkg: /data/local/tmp/SBAndroid Android-debug.apk Success

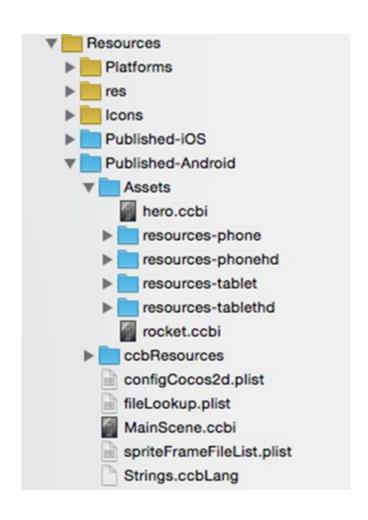


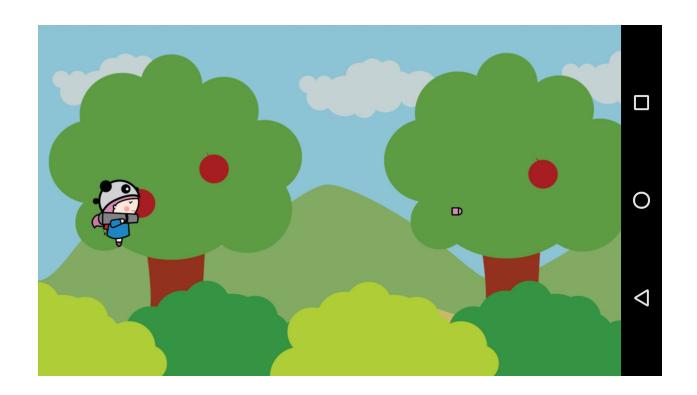




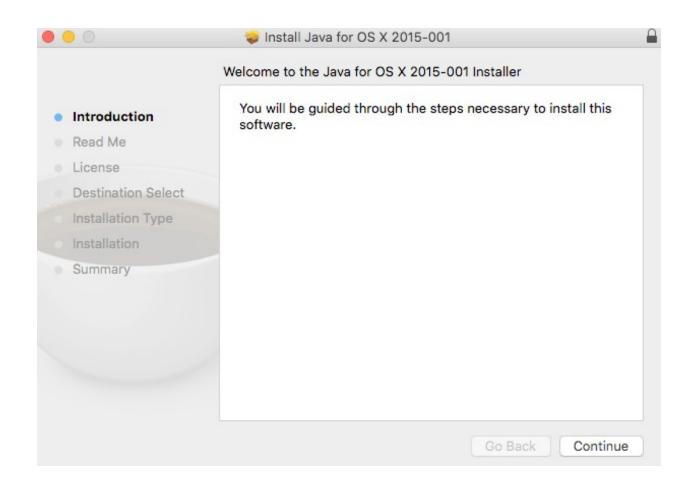


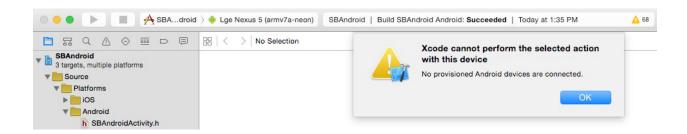






No Java runtime present, requesting install. Error: Error creating keystore





```
Preparing to run org.cocos2d.SBAndroid on device 06256689f0d4da57
6431 KB/s (18415391 bytes in 2.796s)
pkg: /data/local/tmp/SBAndroid Android-debug.apk
Success

OOPS cannot just_attach because process not found
5807 KB/s (22068 bytes in 0.003s)
creating temp file for environment /tmp/tmpxVlkm049 KB/s (122 bytes in 0.002s)
am start -e PARLY_LIFECYCLE_DEBUG 1 -e WAIT_FOR_ATTACH 1 -e DEBUGGER_PATH /data/data/org.cocos2d.SBAndroid/lib/gdbserver -e DEBUGGER_PORT 5039 -n org.cocos2d.SBAndroid/
com.apportable.GLActivity
Starting: Intent { comparog.cocos2d.SBAndroid/com.apportable.GLActivity (has extras) }
QNU gdb (GOB) 7.5-https://github.com/apportable/gdb Feb 20 2014 18:49:38
Copyright (C) 2012 Free Software Foundation, Inc
License GPLv3+: GNU GPL version 3 or later <a href="http://gnu.org/licenses/gpl.html">http://gnu.org/licenses/gpl.html</a>
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law. Type "show copying"
and "show warranty" for details.
This GOB was configured as "—host=x86_64-apple-darwin12.4.0 —target=arm-elf-linux".
For bug reporting instructions, please see:
<a href="http://www.gnu.org/Software/gdb/bugs/>"host=x86_64-apple-darwin12.4.0">http://www.gnu.org/Software/gdb/bugs/>"host=x86_64-apple-darwin12.4.0" —target=arm-elf-linux".

Warning: unrecognized item "timeout" in "gSupported" response
```

### SpriteBuilder

### SpriteBuilder Android Plugin Documentation

About

Download

Getting Started

Requirements

Installation

Setup Developer Options

Test Deployment

Technical Support

Simple Porting Example

Looking for the SpriteBuilder/Cocos2D Developer Guide?

This documentation is specifically about Android development with the SpriteBuilder Android Plugin.

### **About**

The SpriteBuilder Android Plugin allows you to publish and run your SpriteBuilder app on Android devices. The full functionality of Cocos2D is available for you on both iOS and Android platforms.

The plugin currently supports running and compiling Objective-C code to native Android machine code instructions (armv7a-NEON).

• Note: Swift support for Android is in development.

There are **no virtual machines, emulators, or Java translation layers** involved. This means your app will **run at full speed,** and definitely faster than an equivalent Android app built with Java.

In addition you have full access to every iOS and Android API, giving you complete control over how your application is built, what features it uses and how it looks on both platforms. You can use a unified look and feel or you can customize your app for each platform - this is entirely up to you.



#### Documentation

#### **Getting Started**

Quick start

Additional resources

#### Command-Line Interface

Common build commands

Other installation methods

Updating the SDK

Uninstalling the SDK

#### Sample Apps

Tweejump

Spin

Cocos2DSimpleGame

CocosBuilderExample

TextureFun

RippleDemo

## **Release Notes**

### 1.1.26

March 24th, 2015

### BridgeKit

Fixed a memory leak of JNI localRefs in some cases.

#### **CFNetwork**

 $Added\ initial\ implementation\ of\ CFNetServiceCreateTXTDataWithDictionary, CFNetServiceCreateDictionaryWithTXTData,\ and\ CFNetServiceSetTXTData.$ 

Implemented multiple mDNS implementation improvements.

#### CoreGraphics

Fixed memory management errors in CGFontDB.