

SWIFT



SWIFTS ARE THE FASTEST OF BIRDS. LARGER SPECIES ARE AMONGST THE FASTEST FLIERS IN THE ANIMAL KINGDOM, WITH THE **WHITE-THROATED NEEDLETAIL** HAVING BEEN REPORTED FLYING AT UP TO 169 KM/H (105 MPH). EVEN THE **COMMON SWIFT** CAN CRUISE AT A MAXIMUM SPEED OF 31 **METRES PER SECOND** (112 KM/H; 70 MPH). IN A SINGLE YEAR THE COMMON SWIFT CAN COVER AT LEAST 200,000 KM. [HTTPS://EN.WIKIPEDIA.ORG/WIKI/SWIFT](https://en.wikipedia.org/wiki/Swift)



LENGUAJE DE PROGRAMACIÓN

SWIFT

Swift is a general-purpose programming language built using a modern approach to safety, performance, and software design patterns.

The goal of the Swift project is to create the best available language for uses ranging from systems programming, to mobile and desktop apps, scaling up to cloud services. Most importantly, Swift is designed to make writing and maintaining *correct* programs easier for the developer.

swift programming language creator: Chris Lattner

WORK WITH

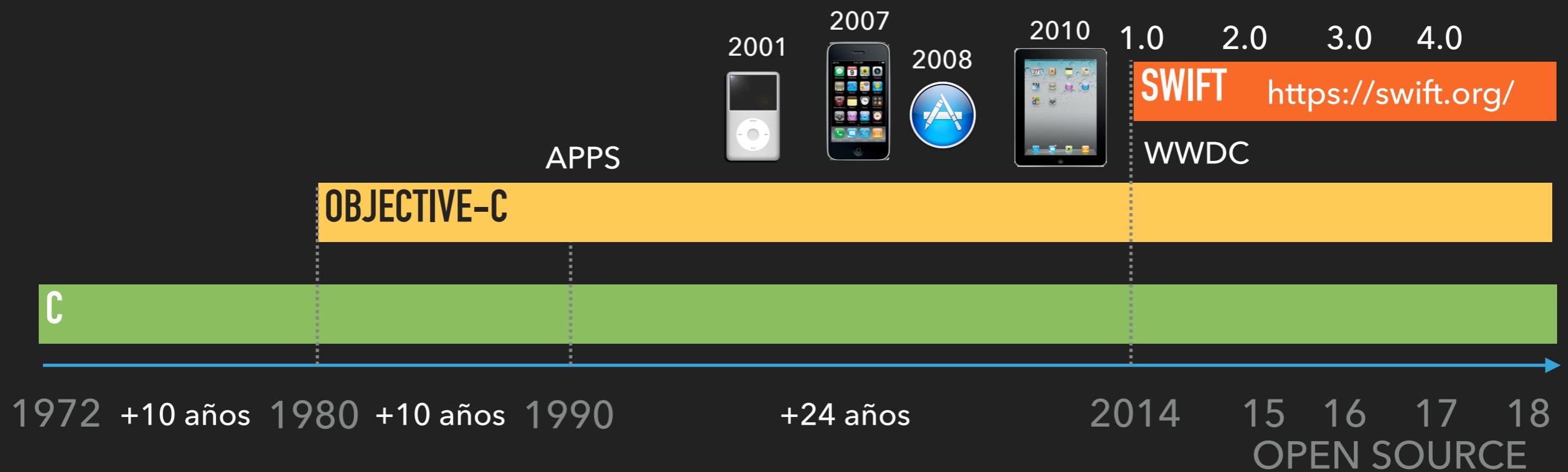
COCOA IS APPLE'S NATIVE OBJECT-ORIENTED APPLICATION PROGRAMMING INTERFACE (API) FOR THEIR OPERATING SYSTEM MACOS

COCOA CONSISTS OF THE FOUNDATION KIT, APPLICATION KIT, AND CORE DATA FRAMEWORKS, AS INCLUDED BY THE **COCOA.H** HEADER FILE, AND THE LIBRARIES AND FRAMEWORKS INCLUDED

BY THOSE, SUCH AS THE C STANDARD LIBRARY AND THE OBJECTIVE-C RUNTIME

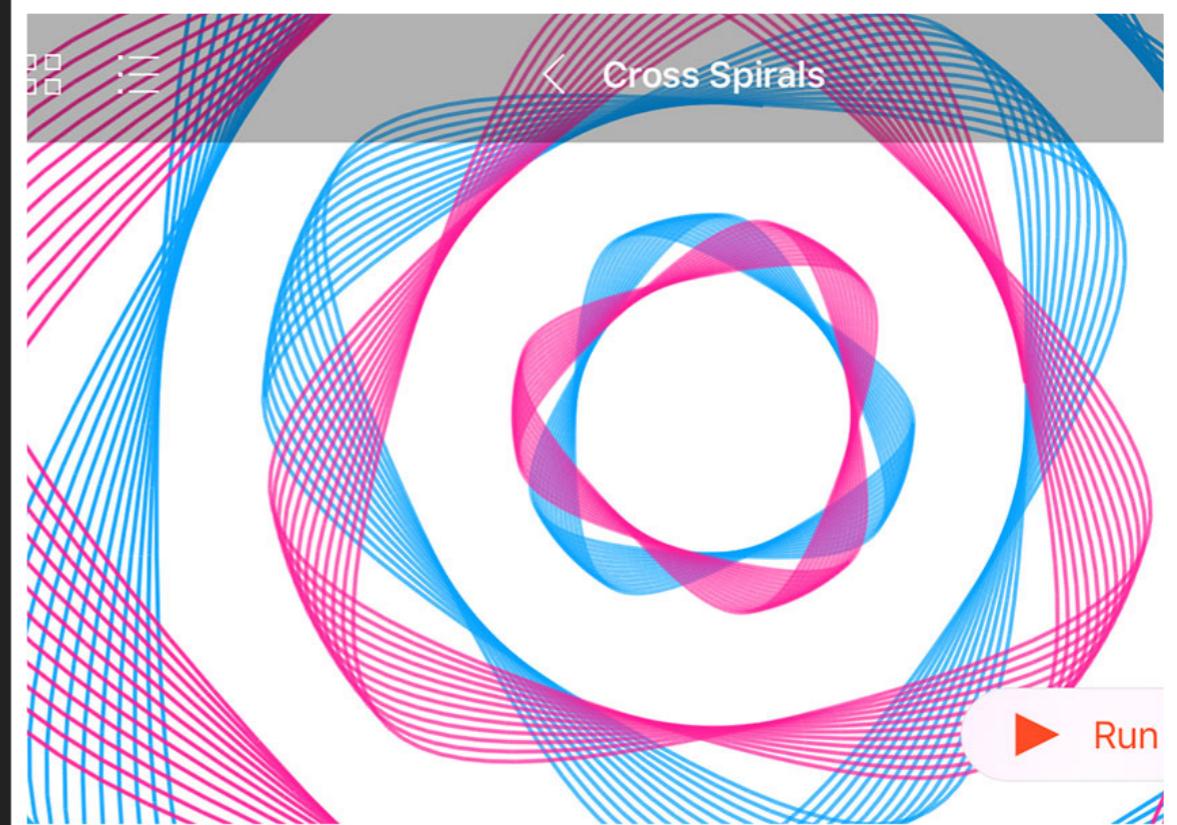
FOR **IOS, TVOS, AND WATCHOS**, A SIMILAR API EXISTS, NAMED COCOA TOUCH, WHICH INCLUDES GESTURE RECOGNITION, ANIMATION, AND A DIFFERENT SET OF GRAPHICAL CONTROL ELEMENTS. IT IS USED IN APPLICATIONS FOR APPLE DEVICES SUCH AS IPHONE, IPAD, IPOD TOUCH, APPLE TV, AND APPLE WATCH.

HISTORIA



UN LENGUAJE MODERNO

- ▶ OBJETIVO: SEGURO, RAPIDO Y CLARO
- ▶ CARACTERÍSTICAS
 - ▶ OPEN SOURCE
 - ▶ SINTAXIS CLARA
 - ▶ INFERENCIA DE TIPOS
 - ▶ ESCRIBIR CÓDIGO CON SEGURIDAD
 - ▶ CONTEO DE REFERENCIA AUTOMÁTICO
 - ▶ TUPLAS Y MÚLTIPLES VALORES DE RETORNO
 - ▶ GENÉRICOS



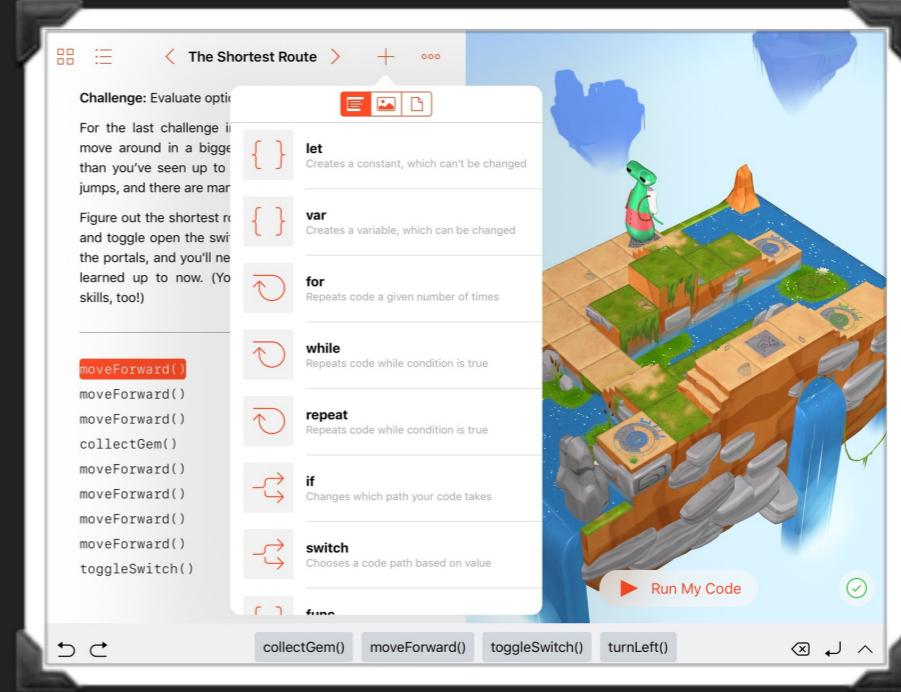
```
var spirals: [Spiral] = []  
  
// Spiral Colors  
let colorPrimary = UIColor(hue: 0.561, saturation:  
    0.973, brightness: 0.997, alpha: 0.600)  
let colorSecondary = UIColor(hue: 0.909, saturation:  
    0.878, brightness: 1.000, alpha: 0.600)  
  
// Configuration for spiral  
struct SpiralConfig {  
    let alpha: Double  
    let scale: Double
```



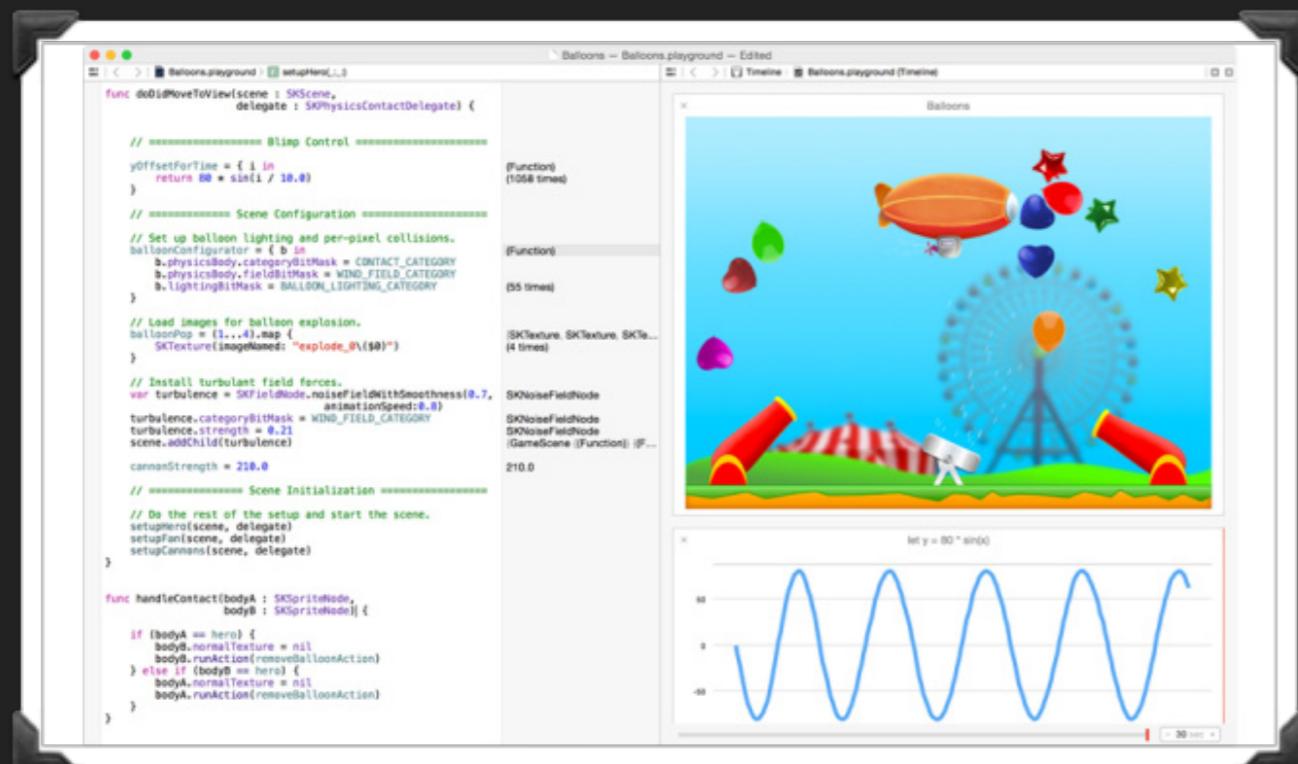
UN LENGUAJE MODERNO

- ▶ ITERACIÓN FÁCIL SOBRE COLECCIONES
- ▶ ESTRUCTURAS CON METODOS, EXTENSIONES Y PROTOCOLOS
- ▶ PATRONES FUNCIONALES. EJ. MAP, FILTROS, REDUCIR
- ▶ MANEJO DE ERRORES Y DE CONTROL DE FLUJO AVANZADO
- ▶ OPCIONALES
- ▶ CLOSURES

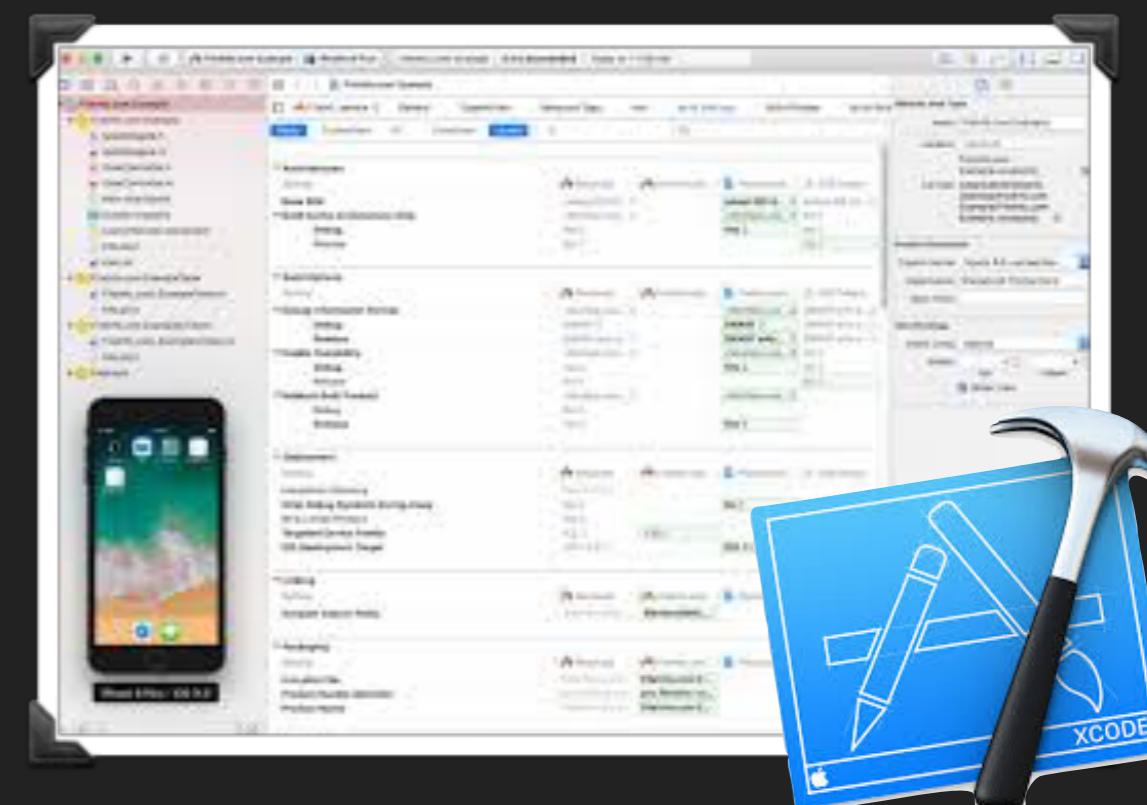
ENTORNOS DE DESARROLLO



Swift Playground



Playground



XCode 9.X

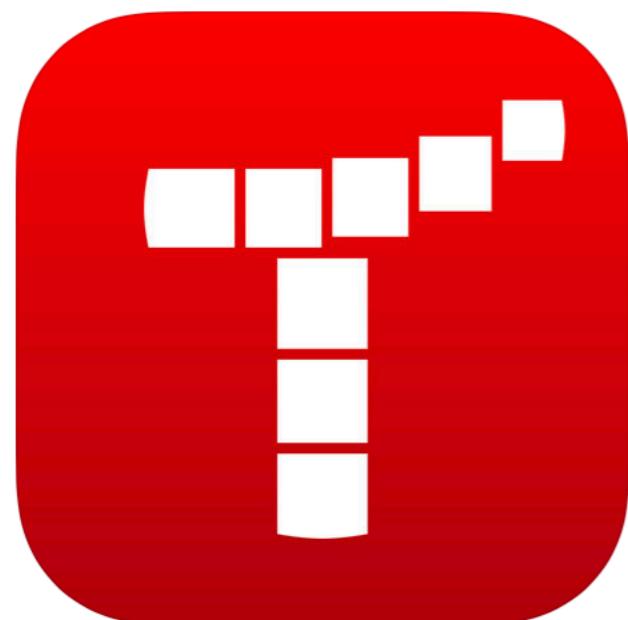
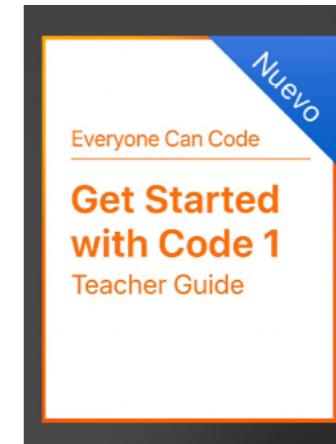


codeSpark Academy 4+

Kids Coding with The Foos
codeSpark

★★★★★ 1.3K Ratings

Free • Offers In-App Purchases

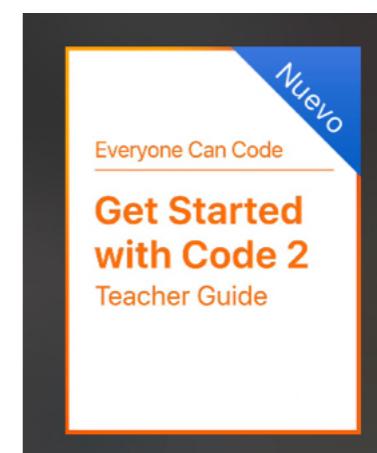


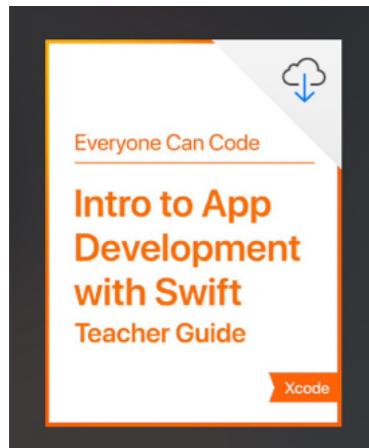
Tynker: Coding for Kids 4+

Coding and Minecraft Modding
Tynker

★★★★★ 1.3K Ratings

Free • Offers In-App Purchases





Balloons — Balloons.playground — Edited

```
func didMoveToView(scene : SKScene, delegate : SKPhysicsContactDelegate) {  
    // ===== Blimp Control =====  
    yOffsetForTime = { t in  
        return 80 * sin(t / 10.0)  
    }  
  
    // ===== Scene Configuration =====  
    // Set up balloon lighting and per-pixel collisions.  
    balloonConfigurator { b in  
        b.physicsBody.categoryBitMask = CONTACT_CATEGORY  
        b.physicsBody.fieldBitMask = WIND_FIELD_CATEGORY  
        b.lightingBitMask = BALLOON_LIGHTING_CATEGORY  
    }  
  
    // Load images for balloon explosion.  
    balloonPop = [1..4].map {  
        SKTextureImageNamed: "explode_$(\$0)"  
    }  
  
    // Install turbulent field forces.  
    var turbulence = SKFieldNode.noiseFieldWithSmoothness(0.7,  
        animationSpeed:0.8)  
    turbulence.categoryBitMask = WIND_FIELD_CATEGORY  
    turbulence.strength = 0.21  
    scene.addChild(turbulence)  
    cannonStrength = 210.0  
  
    // ===== Scene Initialization =====  
    // Do the rest of the setup and start the scene.  
    setupHeroicScene(delegate)  
    setupFanScene(delegate)  
    setupCarnivalScene(delegate)  
}  
  
func handleContact!(bodyA : SKSpriteNode, bodyB : SKSpriteNode){  
    if (bodyA == hero) {  
        bodyB.normalTexture = nil  
        bodyB.runAction(removeBalloonAction)  
    } else if (bodyB == hero) {  
        bodyA.normalTexture = nil  
        bodyA.runAction(removeBalloonAction)  
    }  
}
```

(Function)
(1058 times)

(Function)
(55 times)

(SKTexture, SKTexture, SKTexture...
(4 times)

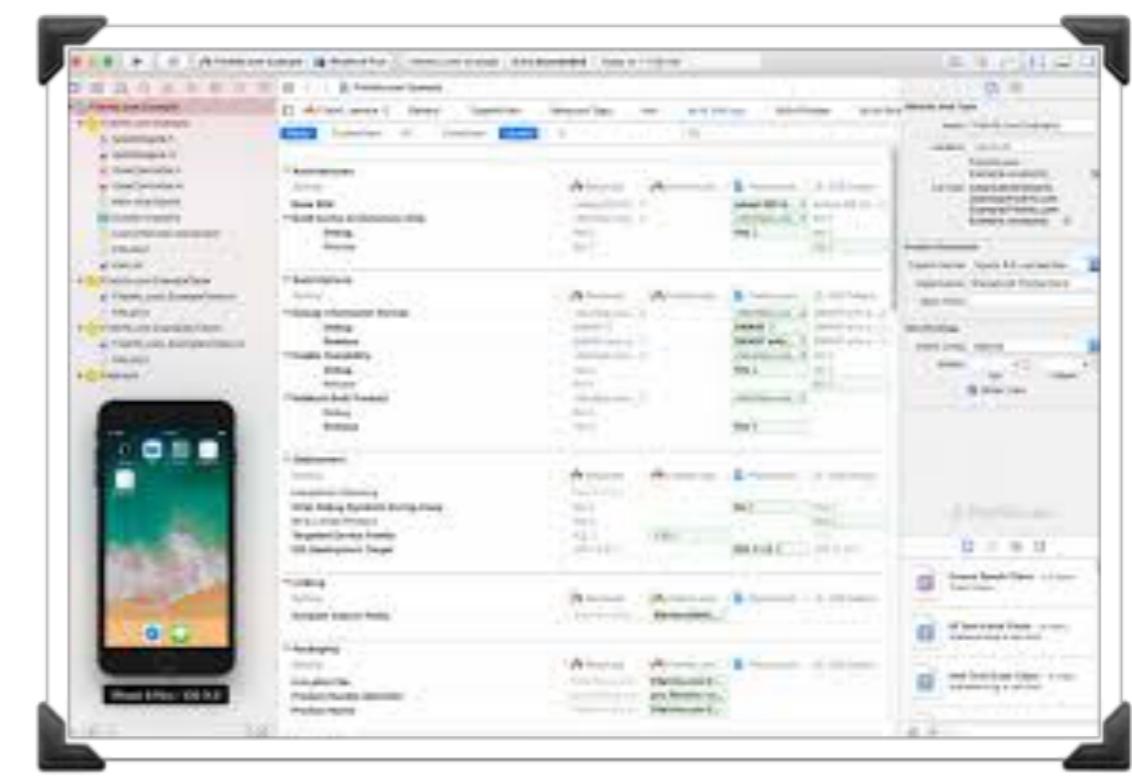
SKNoiseFieldNode
SKNoiseFieldNode
SKNoiseFieldNode
(GameScene : Function) : F...

210.0

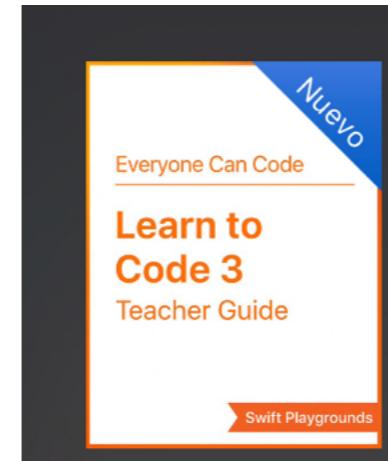
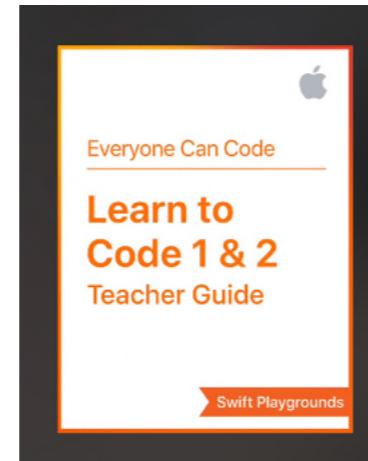
Balloons

let y = 80 * sin(x)

30 sec.



SWIFT PLAYGROUND



Cancelar

Agregar suscripción Editar



Aprende a programar 1
Swift 4 Edition



Aprende a programar 2
Swift 4 Edition



Aprende a programar 3
Swift 4 Edition

OBTENER

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Retos



Máquina de código
Principiante
Swift 4 Edition

OBTENER



El mensaje cifrado
(parte 1)
Intermedio
Swift 4 Edition

OBTENER



Piedra, papel
o tijeras
Principiante
Swift 4 Edition

OBTENER



Hora del código
Principiante
Swift 4 Edition

OBTENER



Batalla naval
Intermedio
Swift 4 Edition

OBTENER



Escapa del laberinto
Intermedio
Swift 4 Edition

OBTENER



Realidad aumentada
Intermedio
Swift 4 Edition

OBTENER



Brick Breaker
Intermedio
Swift 4 Edition

OBTENER

Puntos de partida



En blanco
Swift 4 Edition

OBTENER



Respuestas
Swift 4 Edition

OBTENER



Mundo de
rompecabezas
Swift 4 Edition

OBTENER

MATERIAL DE APOYO DISPONIBLE

IBOOKS

Everyone Can Code

Apple Education

