



World 2011

Making iOS apps using Corona SDK

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OZ APPS

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Corona SDK



- ✦ www.anscamobile.com
- ✦ Lua Language

MAKE GAMES FOR
iOS & ANDROID

ON MAC & WINDOWS

CROSS PLATFORM
DEVELOPMENT

HIGH PERFORMANCE
OPENGL GRAPHICS

PHYSICS & SPRITE
ENGINES INCLUDED

NETWORK AWARE

ACCELEROMETER

GPS & MAPPING

OPENAL AUDIO

MULTITOUCH

FACEBOOK API

UNLIMITED TRIAL

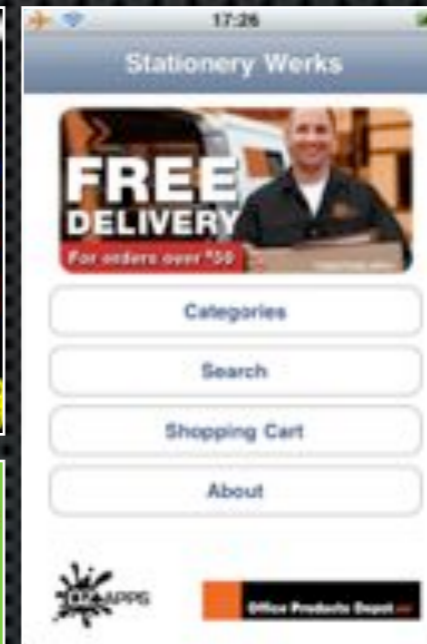
**CODE
LESS
PLAY
MORE**

Corona® SDK
www.anscamobile.com

Mobile Developer

What's Hot (Board & Puzzles) NZ

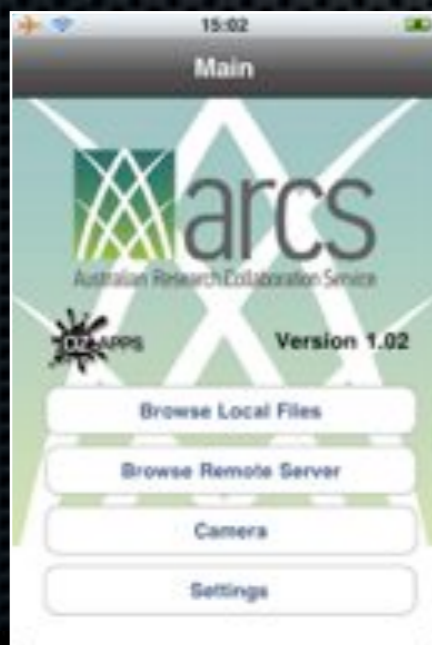
Top 5 Education



Top 5 Education

No#6 Bulgaria (Family)

Top 5 in TW, MA, SG, HK

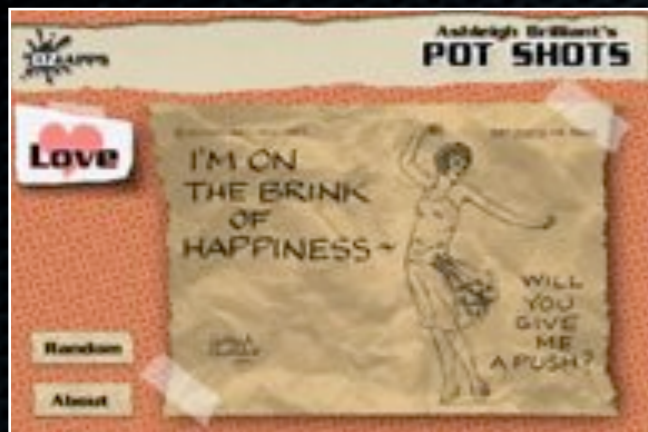


What's Hot (Productivity) AU

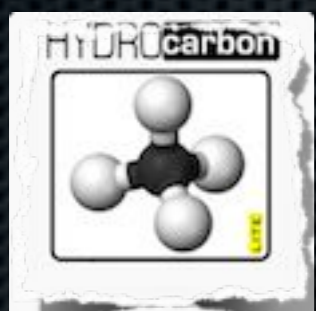
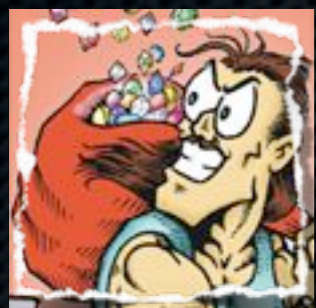
XWII



Made with CoronaSDK



Apps on the iTunes Store



Requirements to start

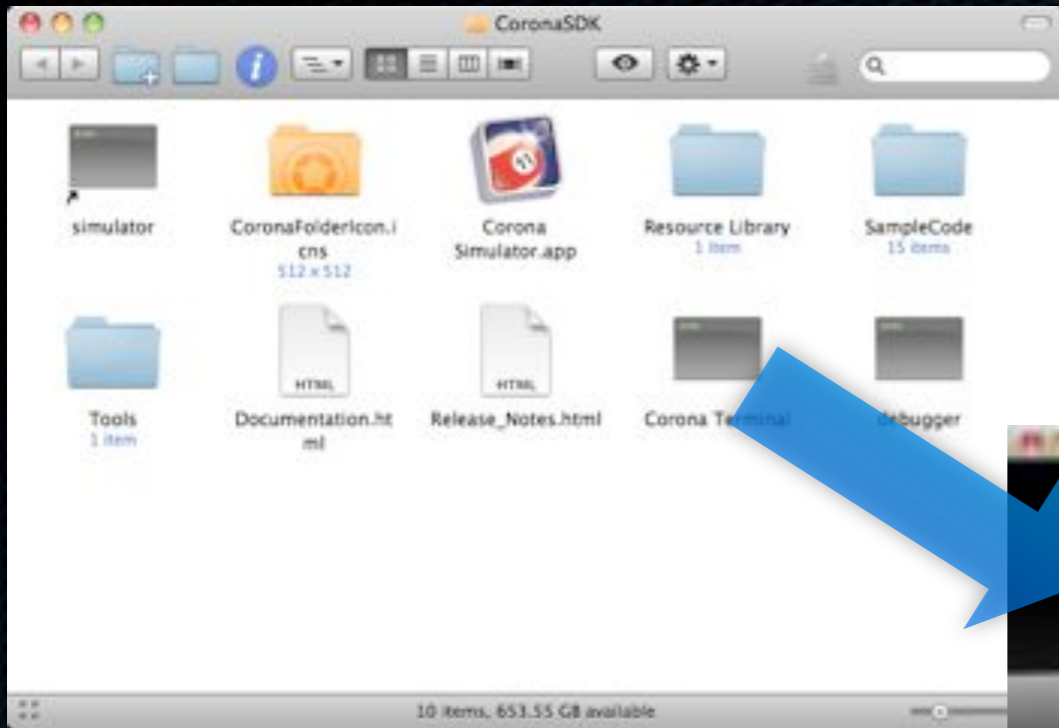
- ✦ CoronaSDK (<http://www.anscamobile.com>)
- ✦ TextWrangler (<http://www.barebones.com/products/textwrangler/>)
- ✦ Corona Project Manager (<http://www.coronaprojectmanager.com>)
- ✦ Lime (<http://www.justaddli.me>)
- ✦ Director
- ✦ SpriteHelper, Level Helper

TIOBE Language list 2011

Java	↑	1	2
C	↓	2	1
C++	↔	3	3
C#	↑↑	4	6
PHP	↓	5	4
Visual Basic	↓	6	5
Objective-C	↑↑↑	7	10
Python	↓	8	7
Perl	↓	9	8
Lua	↑↑↑↑↑↑↑↑↑↑	10	20

Lua - The Language

- ✦ A scripting language
- ✦ English like
- ✦ easy and flexible
- ✦ In the Top 10 list of languages used for development
(<http://www.tiobe.com/index.php/content/paperinfo/tpci/index.html>)



XWII

CoronaSDK contents

- ✦ Lua scripting language
- ✦ iOS/Android Simulator
- ✦ UI Elements
- ✦ JSON
- ✦ OpenFeint
- ✦ Virtual Currency
- ✦ Box 2D Engine

New App with CoronaSDK

- ✦ Entry point - `main.lua`
- ✦ Folder is the project
- ✦ All resources reside in the folder
- ✦ So how to start creating a new project?

Simple Project with CoronaSDK

- ✦ Create a folder on the Desktop called “Hello World”
- ✦ Start TextEditor (TextEdit, TextWrangler, etc)
- ✦ enter the following code in the file

```
print (“Hello World”)
```
- ✦ Save the file as main.lua in the “Hello World” directory
- ✦ Start CoronaSDK Terminal
- ✦ Click on Open Folder and select the “Hello World” folder

Complete Source Code Available for...

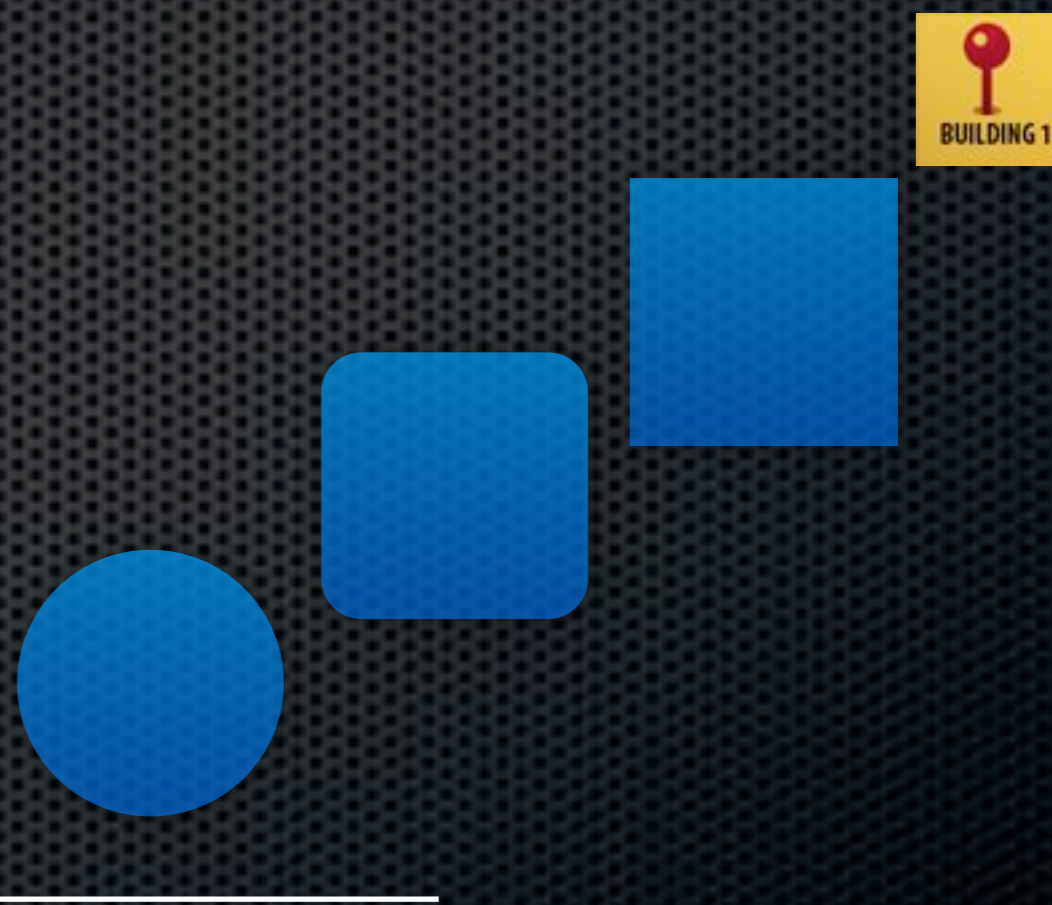


Complete Source Code Available for...



Display Objects

- ✦ `display.newImage`
- ✦ `display.newRect`
- ✦ `display.newRoundedRect`
- ✦ `display.newCircle`
- ✦ `display.newLine`



Put an image on the screen

```
local image = display.newImage("image01.png")
```

Handling touches

```
local image = display.newImage("image01.png")
```

```
local function move(event)
```

```
end
```

```
image:addEventListener("touch",move)
```

touches (contd...)

```
local function move(event)
```

```
  if "began" == event.phase then
```

```
    image.x = event.x
```

```
    image.y = event.y
```

```
  end
```

```
end
```

Physics

<http://www.raywenderlich.com/457/intro-to-box2d-with-cocos2d-tutorial-bouncing-balls>

```
CGSize winSize = [CCDirector sharedDirector].winSize;

// Create sprite and add it to the layer
_ball = [CCSprite spriteWithFile:@"Ball.jpg" rect:CGRectMake(0, 0, 52, 52)];
_ball.position = ccp(100, 100);
[self addChild:_ball];

// Create a world
b2Vec2 gravity = b2Vec2(0.0f, -30.0f);
bool doSleep = true;
_world = new b2World(gravity, doSleep);

// Create edges around the entire screen
b2BodyDef groundBodyDef;
groundBodyDef.position.Set(0,0);
b2Body *groundBody = _world->CreateBody(&groundBodyDef);
b2PolygonShape groundBox;
b2FixtureDef boxShapeDef;
boxShapeDef.shape = &groundBox;
groundBox.SetAsEdge(b2Vec2(0,0), b2Vec2(winSize.width/PTM_RATIO, 0));
groundBody->CreateFixture(&boxShapeDef);
groundBox.SetAsEdge(b2Vec2(0,0), b2Vec2(0, winSize.height/PTM_RATIO));
groundBody->CreateFixture(&boxShapeDef);
groundBox.SetAsEdge(b2Vec2(0, winSize.height/PTM_RATIO),
    b2Vec2(winSize.width/PTM_RATIO, winSize.height/PTM_RATIO));
groundBody->CreateFixture(&boxShapeDef);
groundBox.SetAsEdge(b2Vec2(winSize.width/PTM_RATIO,
    winSize.height/PTM_RATIO), b2Vec2(winSize.width/PTM_RATIO, 0));
groundBody->CreateFixture(&boxShapeDef);

// Create ball body and shape
b2BodyDef ballBodyDef;
ballBodyDef.type = b2_dynamicBody;
ballBodyDef.position.Set(100/PTM_RATIO, 100/PTM_RATIO);
ballBodyDef.userData = _ball;
_body = _world->CreateBody(&ballBodyDef);

b2CircleShape circle;
circle.m_radius = 26.0/PTM_RATIO;

b2FixtureDef ballShapeDef;
ballShapeDef.shape = &circle;
ballShapeDef.density = 1.0f;
ballShapeDef.friction = 0.2f;
ballShapeDef.restitution = 0.8f;
_body->CreateFixture(&ballShapeDef);

[self schedule:@selector(tick:)];
```

Part of Code to bounce a ball using Box2D 



Physics CoronaSDK Style

```
local physics = require("physics")
```

```
physics.start()
```

```
local rect = display.newRect(10,10,50,50)
```

```
rect:setFillColor(255,0,0)
```

```
physics.addBody(rect,  
{density=1,friction=1,bounce=0.7})
```

Now...

```
local physics = require("physics")
```

```
physics.start()
```

```
local rect = display.newRect(10,10,50,50)
```

```
rect:setFillColor(255,0,0)
```

```
local ground = display.newRect(0,470,320,10)
```

```
ground:setFillColor(0,255,0)
```

```
physics.addBody(rect, {density=1, friction=1, bounce=0.7})
```

The fix...

```
local ground = display.newRect(0,470,320,10)

ground:setFillColor(0,255,0)

physics.addBody(ground,{friction=0.5, density=0.5,
bounce=0.5})
```


The fix...Really!!

```
local ground = display.newRect(0,470,320,10)
```

```
ground:setFillColor(0,255,0)
```

```
physics.addBody(ground,"static",{friction=0.5,  
density=0.5, bounce=0.5})
```

Full Code

```
local physics = require("physics")  
physics.start()  
local rect = display.newRect(10,10,50,50)  
rect:setFillColor(255,0,0)  
local ground = display.newRect(0,470,320,10)  
ground:setFillColor(0,255,0)  
physics.addBody(ground,"static",{friction=0.5, density=0.5,  
bounce=0.2})  
physics.addBody(rect,{density=1,friction=0.5,bounce=0.5})
```

8 Lines of Code

DIY - Using Images

Change `newRect` to `newImage` and use the image
“`crates.png`”

Make some noise

```
local laserSound = audio.loadSound("sound1.wav")
```

```
audio.play(laserSound)
```

```
media.playSound("music.mp3")
```

Using the Camera/Images

```
media.show(<source>, listener)
```

Sources

media.PhotoLibrary

media.Camera

media.SavedPhotosAlbum

WebPage

```
native.showWebPopup(<URL>)
```

```
native.cancelWebPopup()
```

```
native.showWebPopup("http://www.oz-apps.com")
```

MapView

`native.newMapView(x,y,width,height)`

`native.newMapView(10,200,280,150)`



Some Tools

- ✦ Corona Code Generator

<http://files.oz-apps.com/CoronaCodeGenerator.dmg>

<http://files.oz-apps.com/CodeGen.zip>

- ✦ Try it out

Using CPM

- ✦ Project Management Tool
- ✦ 30 Day Trial Edition
- ✦ Consolidate all assets
- ✦ Manage assets for a project