Game Development with Corona SDK and Lua

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Who is that guy on the stage?

PHP/JavaScript/HTML

C

Python

PHP

Lua

Go



What is Corona SDK

- coronalabs.com, #corona
- Android, iOS, Windows Phone 8
- Development on Win or Mac
- 2D only (2.5D)
- Lua
- Fast and easy to use Simulator
- No need for Xcode



Corona's Language Stack

- Core is pure C++ and OpenGL
- Objective-C and Java only in wrappers
- Lua for actual code and libraries



I U+2665 Lua

- Overall good language
- Simple, easy to learn
- Crossplatform and embeddable
- Small overhead
- But no JIT on iOS



Corona SDK

- High performance, similar to Unity3D
- Vast API
- Starter- Basic- Pro- Enterprise- plans



3rd Party SDK and Libs

- Ad: Admob, iAd, Vungle, Chartboost...
- Facebook, Twitter, GameCenter, Google Play Game Services
- In-Apps: Apple, Google, Amazon, OUYA
- Analytics, zip, SQLite, JSON, LFS, bit, video, maps, native UI, PayPal...
- Scene manager, transitions and easings, timers, physics, gamepads
- Custom plugins



Rapid Development

- Works on all platforms with little to no adjustments
- Fast
 - Simulator
 - Compiling (packaging)
 - Mini framework
- Hard to crash



Fragmentation Zoo

- Aspect ratios
- Content Scaling
- config.lua
- Reference screen coordinates



config.lua

```
local w, h = display.pixelWidth, display.pixelHeight
while w >= 600 do
   w, h = w * 0.5, h * 0.5
end
application = {
   content = {
     width = w, height = h,
     scale = 'letterbox', fps = 60,
     imageSuffix = {['@2x'] = 1.2}
}}
```



When you deal with Lua

Everything looks like a table



params

```
local function some(params)
  local self = {}
  self.x, self.y = params.x or 0, params.y or 0
  return self
end
```



Lua is too forgiving



MOAR Punishment

- strict.lua
- type checking
- strict syntax style
- unused variables
- non-nil type casting
- safe indexing
- memory leaks
- lost values on return



Inheritance

- Classless inheritance is great
- Metatables most of the time are overkill



Inheritance

```
local function newBase(params)
  local base = {}
  function base:makeTheConsoleDirty()
   print('dirt-dirt-dirt')
 end
 base.heavyFunction = heavyFunction
  return base
end
local function newChild(params)
  local child = newParent()
  function child:cry() print('plak plak') end
  return child
```

end

More Lua

- Inline conditionals a = b and b.c or c
- Globals
- Automatic local variables
- Ad-hoc or monkey patching



Weakened tables

- Weak values
- Weak keys
- Weak programmer



Bad Lua code

- Forgiveness
- Many beginners
- Internet
- Mixed whitespace
- Mixed quotes
- JavaLua, JSLua, PascalLua.



Metatables magic

- Vector2D
- Transition a number



wxLua

- ZeroBrane Studio by Paul Kulchenko
- studio.zerobrane.com
- IRC #zerobrane



Blog

- spiralcodestudio.com
- Corona/Lua tips
- 30+ are ready
- More than 30 are planned



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Corona SDK Pro Tip of the Day #34 Transition.to() for simple numbers

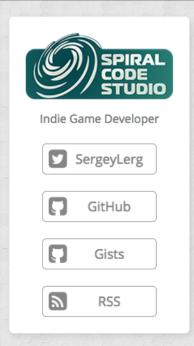
30 Jul 2014 Socorona sdk, pro tip

transition.to() and other similar functions are designed to work only on display objects. But what if you need to smoothly transition a simple number instead?

A <u>recent tutorial</u> from Corona Labs pushed me to share this method. The idea is to use a simple table instead of a display object and with help of a metatable track a variable being transitioned inside this table.

I'll take the code from that tutorial as a base and modify it to use a metatable and transition.to().

CONTINUE READING ▶





Clean

- Clear your mind and keyboard
- Clean keyboard leads to clean code



Thank you

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Questions and Offers

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