Game Development
with Corona SDK and Lua

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Spiral Code Studio

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

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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

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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

```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

```lua
local function newBase(params)
  local base = {}
  function base:makeTheConsoleDirty()
    print('dirt-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.

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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

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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