Creating Games With Python And Java

Davis Silverman

December 19, 2013

About Me

- Amateur programmer and game developer
- High school now, college in the future
- Seeking a job as a developer! *wink wink, nudge nudge*

Jython

- CPython is the reference implementation for Python.
- Jython is a Python implementation in Java
- Offers superb interoperability with Java libraries, along with the amazing benefits of the JVM
- 2.7 betas are out!

Comparisons of CPython and Jython

```
#Jython                          |  #CPython
def fibonacci():                 |  def fibonacci():
    a, b = 0, 1                  |      a, b = 0, 1
    while True:                  |      while True:
        yield a                  |          yield a
        a, b = b, a + b          |          a, b = b, a + b
```

LibGDX

- A cross-platform Java game development framework based on OpenGL (ES) that works on Windows, Linux, Mac OS X, Android, your WebGL enabled browser and iOS.

doesnt work :(

My Work with LibGDX

- Translated the LibGDX wiki (GoogleCode -> Github)
- Worked on Polyglot LibGDX (as shown in this very talk!)
- Regular on IRC
- Started Game-dev club at my school to teach and create games with LibGDX

LibGDX Classes Of Use

- `ApplicationListener` is the base java interface for a LibGDX game
- `OrthographicCamera` for camera magic
- `SpriteBatch` to draw on the screen
- Standard math classes `Vector2`, `Rectangle`, etc.

Small example!

- Small game from wiki translated to Python
- To the demo! (lets hope this works!)

Limitations of LibGDX with Jython

- GWT
- This backend is java only, so HTML LibGDX backend is a pipe dream

Future

- Android Support
- Once jython can attain DynamicProxy support, it might be possible to have Jython on android!
- iOS support
  - the RoboVM backend runs the Android class library, so if it can anddroid, theres a good chance it can iOS!
- packaging
  - There has been some work on compiling/packaging jython into jars, this will make distribution of your awesome Python games very easy!

Links!

- Jython: http://jython.org
- Jython Book: http://www.jython.org/jythonbook/en/1.0/
- LibGDX: http://libgdx.badlogicgames.com/
- LibGDX Wiki: https://www.github.com/libgdx/libgdx/wiki
- This talk: https://www.github.com/sinistersnare/JythonTalk (needs latex-beamer and pandoc)