Kivy: a sweet new app development framework

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hey who let you in here

my experience with mobile/desktop apps:

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- I tried to do something with pygame once but got bored

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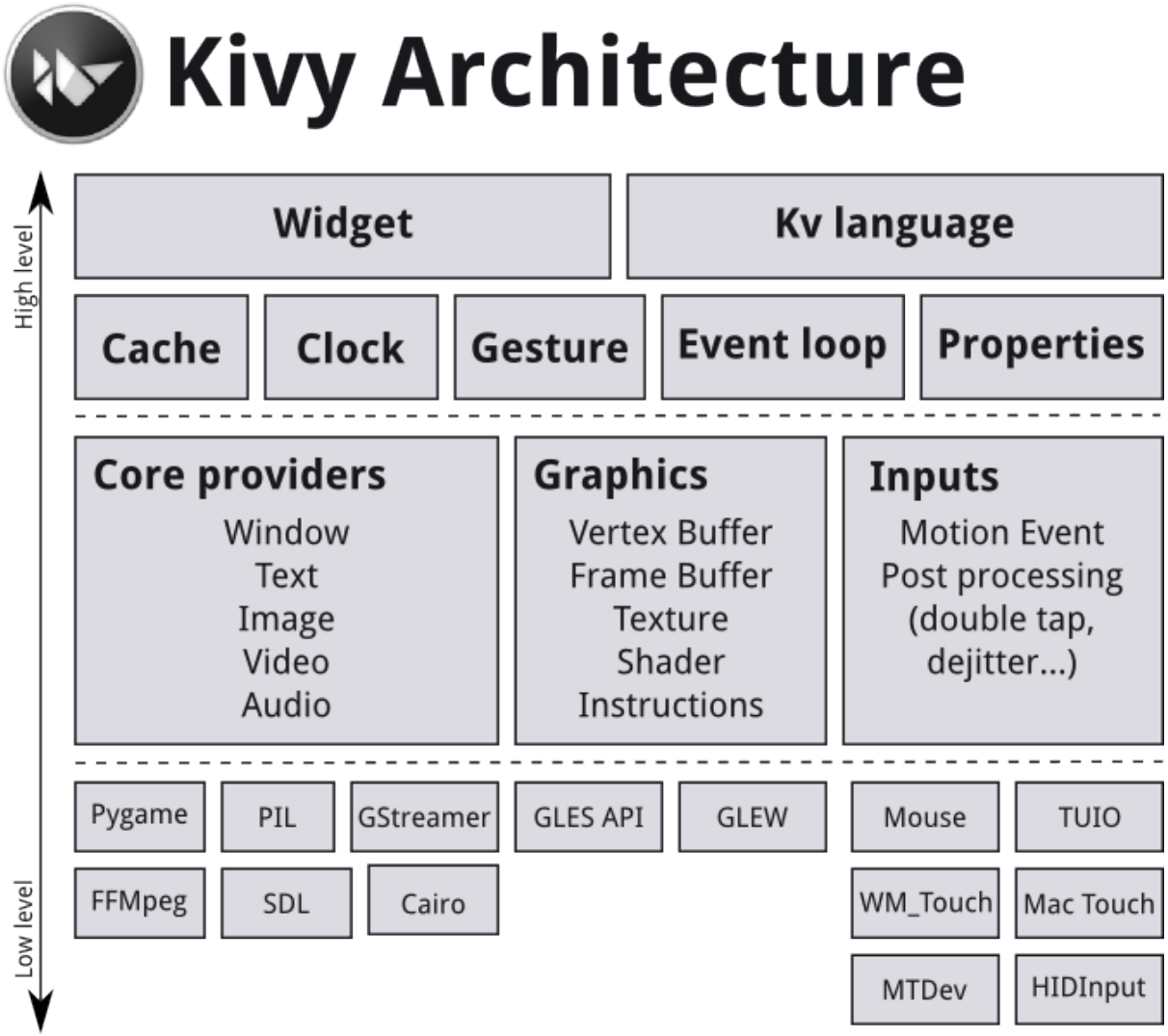
- License: LGPL3

howsisworkthen?



source: http://kivy.org/docs/guide/architecture.html

widgets

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  - parent.remove_widget(child) - remove a widget
  - parent.clear_widgets() - remove all widgets

hello world

```
from kivy.app import App
from kivy.uix.widget import Widget
from kivy.uix.label import Label

class HelloWidget(Widget):
    def __init__(self, **kwargs):
        super(HelloWidget, self).__init__(**kwargs)
        with self.canvas:
            Label(text='hello world!')

class WorldApp(App):
    def build(self):
        return HelloWidget()

if __name__ == '__main__':
    WorldApp().run()
```

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Examples:

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- ObjectProperty

property example

```
from kivy.properties import StringProperty
from kivy.uix.widget import Widget

def some_callback(instance, value):
    print "callback fired: property changed to " + value

class Foo(Widget):
    bar = StringProperty('starting value')

    def __init__(self, **kwargs):
        super(Foo, self).__init__(**kwargs)
        self.bind(bar=some_callback)

if __name__ == '__main__':
    f = Foo()
    f.bar = 'changeit'
    # callback fired: property changed to changeit
```

clock

There's also a clock.

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It does what you think it does.

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widgets can choose to intercept a touch or pass it along to their underwidgets

graphics

Every widget has a canvas, and it works like this:

```
    class Foo(Widget):
        def __init__(self, **kwargs):
            super(Foo, self).__init__(**kwargs)
            with self.canvas:
                # set color
                Color(1., 0., 0.)
                # draw stuff with primitives
                Rectangle(pos=(20, 30), size=(100, 100))
            # nevermind; erase what we just did
            self.canvas.clear()
```

graphics

Canvas instructions get translated to OpenGL instructions.
It's very snappy.

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It's very snappy.
But when building something non-trivial, you end up having to keep track of canvas state yourself (when to clear, when to draw).

kivy language (.kv)

Enter the kivy language.

```
<Foo>:
    canvas:
        Color:
            rgb: 1., .0, .0
        Rectangle:
            pos: (20, 30)
            size: (100, 100)
```

Now widgets know how to draw themselves.

stop

demo time

other nicities

- cache

other nicities

- cache
- vectors!

other nicities

- cache
- vectors!
- gesture recognition

[CITATION NEEDED]

homepage: `http://kivy.org`
on github: `http://github.com/kivy/kivy`

two (wo)men enter one (wo)man leaves

`http://kivy.org/#contest`

- make a game with Kivy
- put it on github
- prizes: android tablets, github subscriptions, t-shirts
- registration deadline is Jan 25th - contest ends Jan 31st