Pyjamas

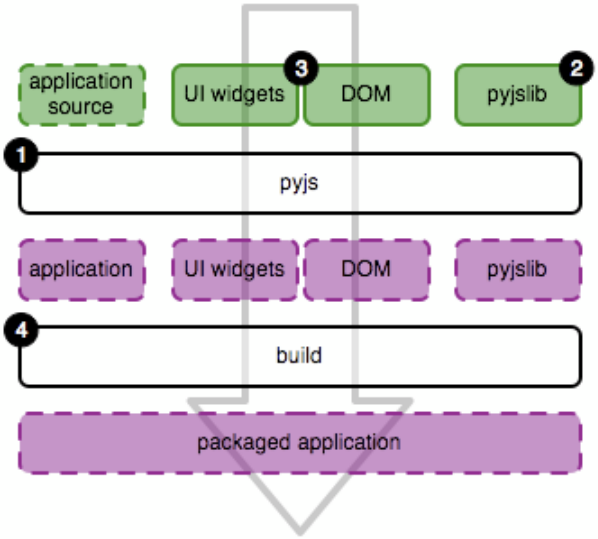
Support this project

**Python-based Web Application Development Framework**



# Overview

Like GWT, Pyjamas translates a Python application and libraries (including UI widgets and DOM classes) into a Javascript application and libraries, and packages it all up:




1 **pyjs** translates Python code to Javascript by walking the Python abstract syntax tree and generating Javascript.

2 **pyjslib** takes care of Python types that require a custom Javascript implementation for pyjs to work. For example, even though Python lists are similar to Javascript arrays, Python lists are converted to custom objects that implement methods such as *append*.

3 **UI widgets and a DOM library** are provided as a convenience. They are written in Python and, like everything else, they are translated to Javascript for deployment. These are based on those in GWT.

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## Hello World

The omnipresent hello world example, let's call it 'Hello Pyjamas':

```
from pyjamas.ui.RootPanel import RootPanel
from pyjamas.ui.Label import Label

l = Label('Hello Pyjamas')
RootPanel().add(l)
```

Now run `pyjsbuild hello.py` to generate a plain Javascript application: pyjs creates an `./output` folder containing all files you need to move to your webspace later. Of course you can test locally, too.

Add 3 additional lines in total and your application can run with both Pyjamas (i.e. plain Javascript) *and* Pyjamas Desktop:

```
import pyjd # this is dummy in pyjs
from pyjamas.ui.RootPanel import RootPanel
from pyjamas.ui.Label import Label

pyjd.setup('public/hello.html')
l = Label('Hello Pyjamas')
RootPanel().add(l)
pyjd.run()
```

Execute `pyjd hello.py`, or `python hello.py`, to run the very same application native on Python, giving you a Python stack trace on errors. Pyjamas Desktop gives you much more control making testing and debugging a piece of a cake. No more web development pain – hooray! Note the `hello.html` file referenced above: this is a container for your application generated by Pyjamas (pyjs) that you can adjust to your needs.

Ready for more? Let's get started!

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Site

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This site is a Pyjamas application, designed by Luke Leighton and adapted by the Pyjamas community. The source code is available in the Pyjamas dowr here.