



Luban: use just python to create web services for scientific applications

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What is *luban*

- <http://luban.danse.us>
- A python package
- Simple, natural syntax for creating user interface using a generic UI specification (a hierarchical structure of UI elements and actions)
- Auto-translation to html and javascript for web UI app, and to wxpython for native UI app.
- Make it easy to create dynamic web user interface
- Auto-translation of data objects to forms
- Easy to create UI for scientific applications

What can *luban* do?

Demo: VNF (the virtual neutron facility)

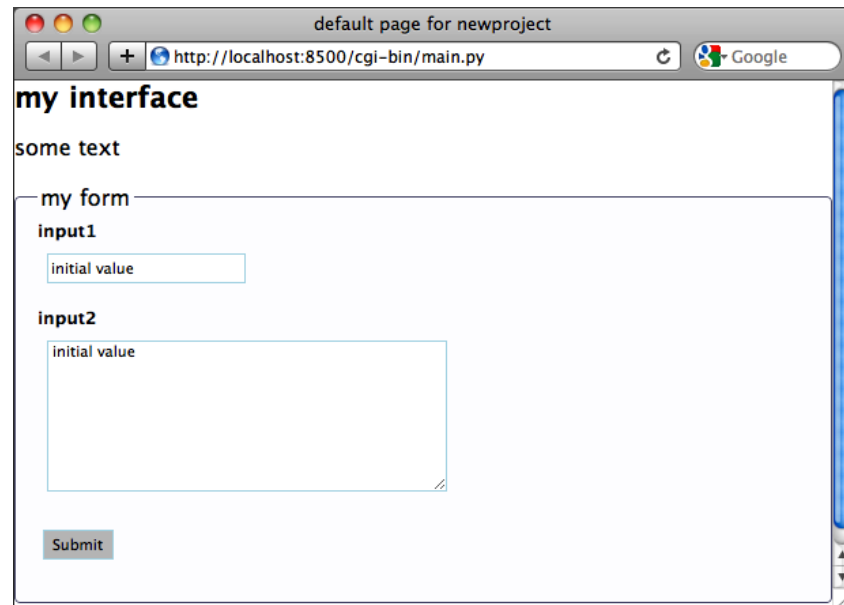
- <https://vnf.caltech.edu>
- Run virtual neutron experiments/material simulations/material modelings
- An online database of computations and datasets
- A web application built using just *luban*

Concepts of *luban*

- Simple, generic descriptions of UI elements and actions can be used to describe useful, dynamic, and sophisticate user interface

Concepts of *luban*: UI representation as a tree of UI elements

```
+ document(title="my interface")  
|-- paragraph(text=['some text'])  
|+ form(title='my form')  
  |-- textfield(label='input1', value='initial value')  
  |-- textarea(label='input2', value='initial value')  
  |-- submitbutton(label='Submit')
```



Concepts of *luban*: actions

```
>>> <element>.<eventhandler> = <action>
```

Example:

```
>>> button.onclick = alert("clicked")
```

```
>>> button.onclick = load(actor='login',  
                           routine='onsubmit', ...)
```

```
>>> button.onclick = select(element=textfield).hide()
```

Demo: aokuang

- <http://luban.danse.us/aokuang>
- A online demo/documentation of luban API



Demo: orm

Demo: gongshuzi

- <http://docs.danse.us/pyre/luban/sphinx/tutorials/video/gongshuzidemo.html>
- A UI builder for luban applications
- Built by using luban itself

Documentation

- Homepage: <http://luban.danse.us>
- Demos: <http://docs.danse.us/pyre/luban/sphinx/Demos.html>
- Installation:
<http://docs.danse.us/pyre/luban/sphinx/Installation.html>
- Tutorials: <http://docs.danse.us/pyre/luban/sphinx/Tutorials.html>
- API: <http://docs.danse.us/pyre/luban/sphinx/API.html>
- API demo: <http://luban.danse.us/aokuang>