LAST TIME ON IOLAB

Course Recap & Overview
TODAY

Misc. Topics

Flask Lab

Final Project Open Lab
MISCELLANEOUS TOPICS

• **backbone.js** ([http://backbonejs.org/](http://backbonejs.org/))

• **Local Servers** (Python or MAMP/LAMP/WAMP)
  - Simple server: `python -m SimpleHTTPServer [port]`
    - Then go here: [http://127.0.0.1:[port]](http://127.0.0.1:[port])
  - Mac: [http://www.mamp.info/](http://www.mamp.info/)
  - Everyone: [http://bitnami.org/stacks](http://bitnami.org/stacks)
FLASK
A Python Micro-framework

- Routing (WSGI)
- Templating (jinja2)
- Database access (sqlite3)
FLASK

Links & Additional Info

- Installation: http://flask.pocoo.org/docs/installation/
- Documentation: http://flask.pocoo.org/docs/
- Tutorial: http://flask.pocoo.org/docs/tutorial/
FLASK
Hello World!

In hello.py

```python
from flask import Flask
app = Flask(__name__)

@app.route('/')
def hello_world():
    return 'Hello World!'

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

Command prompt

```
$ python hello.py
  * Running on http://127.0.0.1:5000/
```
FLASK

Basics

• Routing (WSGI)
• Templating (jinja2)
• Database access (sqlite3)
FLASK
Routing

Routes: binds a function to a URL

```python
@app.route('/

def index():
    return 'Index Page!!'

@app.route('/hello')
def hello():
    return 'Is it me you’re looking for?
```

Source: [http://flask.pocoo.org/docs/quickstart/](http://flask.pocoo.org/docs/quickstart/)
**FLASK**

Routing

**Variables**

Designate w/ `<variable>` in route & use in function

```python
@app.route('/user/<username>')
def show_user(username):
    return 'User %s' % username
```

Can convert w/ `<converter:variable>` (int/float/path)

```python
@app.route('/post/<int:post_id>')
def show_post(post_id):
    return 'Post %d' % post_id
```

Source: http://flask.pocoo.org/docs/quickstart/
**Static Files**

To point to `static/style.css` in a template

```python
url_for('static', filename='style.css')
```

**Templating**

```python
@app.route('/')
def index():
    return render_template('index.html')
```

Source: [http://flask.pocoo.org/docs/quickstart/](http://flask.pocoo.org/docs/quickstart/)
FLASK

Databases

Sqlite3

- Simple to administer
- Simple to operate
- Simple to embed in a larger program
- Simple to maintain and customize

Source: http://www.sqlite.org/whentouse.html
Databases

**Schema.sql**

- Databases need a schema to map how your data is intended to interact.

- *wiki definition:* A database schema (/ˈski.mə/skee-ma) of a database system is its structure described in a formal language supported by the database management system (DBMS) and refers to the organization of data to create a blueprint of how a database will be constructed (divided into database tables)

FLASK

Databases

Datatypes

- **NULL**. The value is a NULL value.
- **INTEGER**. The value is a signed integer, stored in 1, 2, 3, 4, 6, or 8 bytes depending on the magnitude of the value.
- **REAL**. The value is a floating point value, stored as an 8-byte IEEE floating point number.
- **TEXT**. The value is a text string, stored using the database encoding (UTF-8, UTF-16BE or UTF-16LE).
- **BLOB**. The value is a blob of data, stored exactly as it was input.

Source: [http://www.sqlite.org/datatype3.html](http://www.sqlite.org/datatype3.html)
FOR NEXT TIME
for the last time

Final Project

Due 12/10/12 by 11:59PM

Presentations 12/12/12 (!) - 3-5PM

You can find links to help with all of these on the course website at http://courses.ischool.berkeley.edu/290ta-iol/f12
THANK YOU
for an awesome semester!