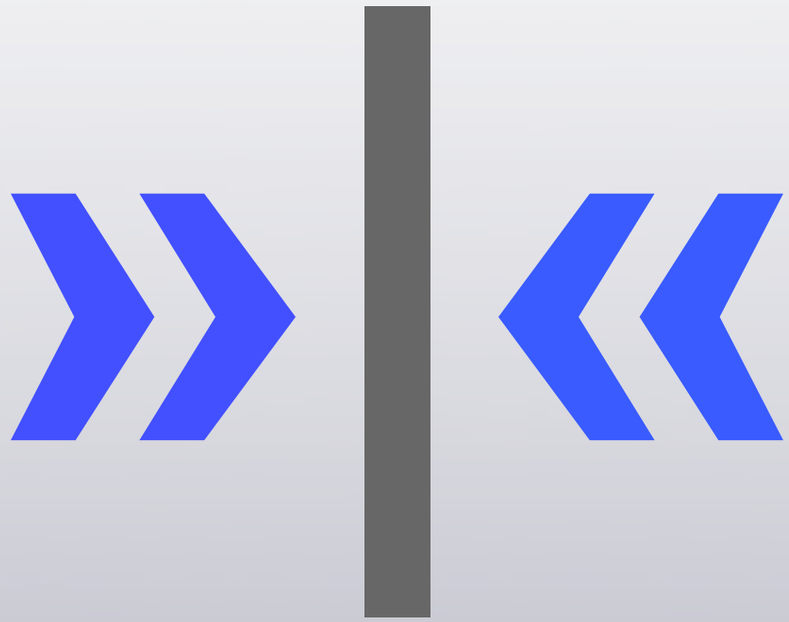
Jifty

Jesse Vincent



Best Practical

What we make (Big)

What we make (Big)

»|« RT

What we make (Big)

- »|« RT
- »|« SVK

What we make (Big)

- RT
- SVK
- Hiveminder

What we make (Big)

- »|« RT
- »|« SVK
- »|« Hiveminder
- »|« Jifty

What we make (Little)

What we make (Little)

- »|« CommitBit

What we make (Little)

- »|« CommitBit
- »|« Wifty

What we make (Little)

- »|« CommitBit
- »|« Wifty
- »|« Pushmi

What we make (Little)

- »|« CommitBit
- »|« Wifty
- »|« Pushmi
- »|« shoutwith.us

What we make (Little)

- »|« CommitBit
- »|« Wifty
- »|« Pushmi
- »|« shoutwith.us

RT

RT

»|« Predates web frameworks

RT

»|« Predates web frameworks

»|« 20th century technology

RT

- Predates web frameworks
- 20th century technology
- Painful to maintain!

Hiveminder

Hiveminder

»|« Multiplayer TODO

Hiveminder

- Multiplayer TODO
- Web Application

Hiveminder

- Multiplayer TODO
- Web Application
- Just like RT

Use a Framework

Use a Framework

- »|« We really want to

Use a Framework

- We really want to
- Looked all over

Use a Framework

- »|« We really want to
- »|« Looked all over
- »|« Nothing fits my head

Use a Framework

- We really want to
- Looked all over
- Nothing fits my head
- This can only mean…

I'm Crazy

Jifty

Jifty

- ✓ Web framework

Jifty

✓ Web framework

✓ Easy things easy

Jifty

✓ Web framework

✓ Easy things easy

✓ Impossible things *easy*

Jifty = JFDI

Jifty = JFDI

✓ Just Fucking Do It

Jifty = JFDI

✓ Just Fucking Do It

✓ Lets you JFDI

Jifty = JFDI

✓ Just Fucking Do It

✓ Lets you JFDI

✓ So let's JFDI!

Demo

Demo

- ✓ How about a Blog?

Demo

- ✓ How about a Blog?
- ✓ Glad you like it ;)

Demo

- ✓ How about a Blog?
- ✓ Glad you like it ;)
- ✓ No li[v]e demos

Demo

- ✓ How about a Blog?
- ✓ Glad you like it ;)
- ✓ No li[v]e demos
- ✓ Let's set it up!

```
$ jifty app --name Blog
```

```
$ jifty app --name Blog
Creating new application Blog
Creating directory lib
Creating directory lib/Blog
Creating directory bin
Creating directory etc
Creating directory doc
Creating directory log
Creating directory var
Creating directory var/mason
Creating directory share
Creating directory share/po
Creating directory share/web
Creating directory share/web/templates
Creating directory share/web/static
Creating directory lib/Blog/Model
Creating directory lib/Blog/Action
Creating directory t
Creating configuration file Blog/etc/config.yml
```

3 Files

3 Files

- ✔ `bin/jifty`

3 Files

✔ `bin/jifty`

✔ `etc/config.yml`

3 Files

- ✔ `bin/jifty`
- ✔ `etc/config.yml`
- ✔ `Makefile.PL`

Optional Files

Optional Files

- ✔ `bin/jifty`

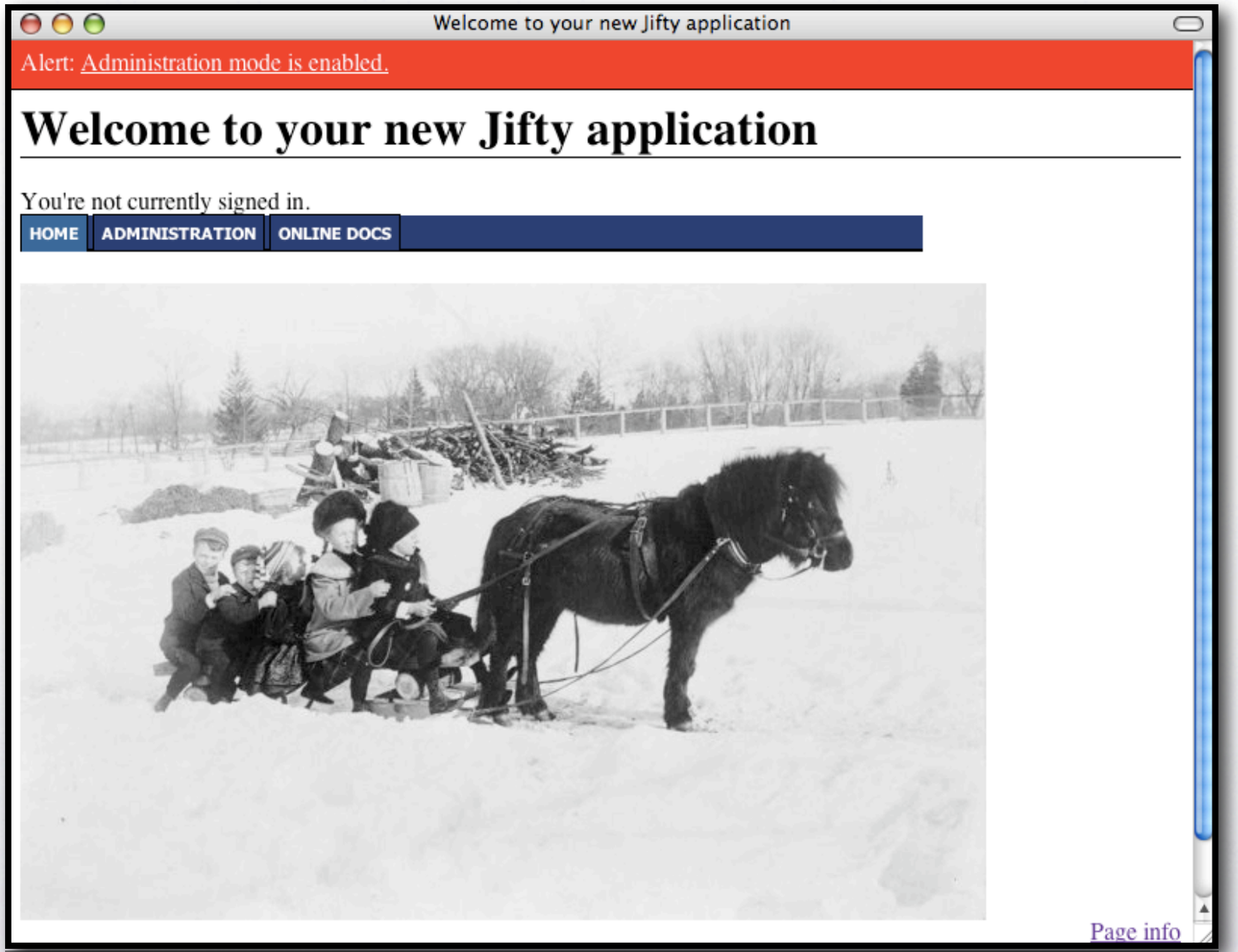
Optional Files

- ✔ `bin/jifty`
- ✔ `etc/config.yml`

Optional Files

- ✔ `bin/jifty`
- ✔ `etc/config.yml`
- ✔ `Makefile.PL`

It runs!


Welcome to your new Jifty application
Alert: Administration mode is enabled.
Welcome to your new Jifty application
You're not currently signed in.
HOME
ADMINISTRATION
ONLINE DOCS
Page info

It runs!

This is not a good blog.
(Good blogs have entries.)

```
$ cd Blog
```

```
$ cd Blog

$ jifty model --name Entry
```

```
$ cd Blog

$ jifty model --name Entry
Writing file t/00-model-Entry.t
Writing file lib/Blog/Model/Entry.pm
```

```
$ cd Blog

$ jifty model --name Entry
Writing file t/00-model-Entry.t
Writing file lib/Blog/Model/Entry.pm

$ vim lib/Blog/Model/Entry.pm
```

```
use strict;
use warnings;

package Blog::Model::Entry;
use Jifty::DBI::Schema;

use Blog::Record schema {



};

# Your model-specific methods go here.

1;
```

```
use strict;
use warnings;

package Blog::Model::Entry;
use Jifty::DBI::Schema;

use Blog::Record schema {

column title =>
    type is 'text',
    default is 'Untitled';

column body =>
    type is 'text',
    render as 'Textarea';

};

# Your model-specific methods go here.

1;
```

```
$ jifty schema
```

```
$ jifty schema
INFO - Generating SQL for application Blog...
INFO - Using Blog::Model::Entry
INFO - Using Jifty::Model::Session
INFO - Using Jifty::Model::Metadata
INFO - Set up version v0.0.1, jifty version 0.610250
```

```
$ jifty schema
INFO - Generating SQL for application Blog...
INFO - Using Blog::Model::Entry
INFO - Using Jifty::Model::Session
INFO - Using Jifty::Model::Metadata
INFO - Set up version v0.0.1, jifty version 0.610250

$ jifty server
```

```
$ jifty schema
INFO - Generating SQL for application Blog...
INFO - Using Blog::Model::Entry
INFO - Using Jifty::Model::Session
INFO - Using Jifty::Model::Metadata
INFO - Set up version v0.0.1, jifty version 0.610250

$ jifty server
INFO - You can connect to your server at
       http://localhost:8888/
```

Welcome to your new Jifty application

Alert: Administration mode is enabled.

Welcome to your new Jifty application

You're not currently signed in.

HOME | ADMINISTRATION | ONLINE DOCS

Page info

Welcome to your new Jifty application

Alert: Administration mode is enabled.

Welcome to your new Jifty application

You're not currently signed in.

HOME | ADMINISTRATION | ONLINE DOCS

Page info

Jifty Administrative Console

Alert: Administration mode is enabled.

Jifty Administrative Console

You're not currently signed in.

HOME | ADMINISTRATION | ONLINE DOCS

ENTRY

Database Administration

This console lets you manage the records in your Jifty database. Below, you should see a list of all your database tables. Feel free to go through and add, delete or modify records.

To disable this administrative console, add "framework: AdminMode: 0" to your application's configuration file.

Models

- Entry

Actions

- Jifty::Action::Autocomplete
- Jifty::Action::Redirect

Done?

Back to the application

Hotkeys: Page info

Jifty Administrative Console

Alert: Administration mode is enabled.

Jifty Administrative Console

You're not currently signed in.

HOME | ADMINISTRATION | ONLINE DOCS

ENTRY

Database Administration

This console lets you manage the records in your Jifty database. Below, you should see a list of all your database tables. Feel free to go through and add, delete or modify records.

To disable this administrative console, add "framework: AdminMode: 0" to your application's configuration file.

Models

- Entry

Actions

- Jifty::Action::Autocomplete
- Jifty::Action::Redirect

Done?

Back to the application

Hotkeys: Page info

Mozilla Firefox

Alert: Administration mode is enabled.

You're not currently signed in.

HOME | ADMINISTRATION | ONLINE DOCS

ENTRY

Manage records: Entry

No items found.

title

First Post

body

This is my blog post!

Create

Done?

Back to the admin console

Hotkeys:

Page info

Mozilla Firefox

Alert: Administration mode is enabled.

You're not currently signed in.

HOME | ADMINISTRATION | ONLINE DOCS

ENTRY

Manage records: Entry

No items found.

title

First Post

body

This is my blog post!

Create

Done?

Back to the admin console

Hotkeys:

Page info

Mozilla Firefox

Alert: Administration mode is enabled.

You're not currently signed in.

HOME | ADMINISTRATION | ONLINE DOCS

ENTRY

Created

Manage records: Entry

Edit

title	body
First Post	This is my blog post!

title	body
Untitled	

Create

Done?

Back to the admin console

Hotkeys:

Page info

Mozilla Firefox

Alert: Administration mode is enabled.

You're not currently signed in.

HOME | ADMINISTRATION | ONLINE DOCS

ENTRY

Created

Manage records: Entry

Edit

title	body
First Post	This is my blog post!

title

Untitled

body

Create

Done?

Back to the admin console

Hotkeys:

Page info

Mozilla Firefox

Alert: Administration mode is enabled.

You're not currently signed in.

HOME | ADMINISTRATION | ONLINE DOCS

ENTRY

Manage records: Entry

title: First Post

body: This is my blog post! (Redux)

Save

title: Untitled

body:

Create

Done?

Back to the admin console

Hotkeys:

Page info

Mozilla Firefox

Alert: Administration mode is enabled.

You're not currently signed in.

HOME | ADMINISTRATION | ONLINE DOCS

ENTRY

Manage records: Entry

title: First Post

body: This is my blog post! (Redux)

Save

title: Untitled

body:

Create

Done?

Back to the admin console

Hotkeys:

Page info

Mozilla Firefox

Alert: Administration mode is enabled.

You're not currently signed in.

HOME | ADMINISTRATION | ONLINE DOCS

ENTRY

Updated

Manage records: Entry

Edit

title body

First Post This is my blog post! (Redux)

title

Untitled

body

Create

Done?

Back to the admin console

Hotkeys:

Page info

Mozilla Firefox

Alert: Administration mode is enabled.

You're not currently signed in.

HOME | ADMINISTRATION | ONLINE DOCS

ENTRY

Updated

Manage records: Entry

Edit

title	body
First Post	This is my blog post! (Redux)

title: Untitled

body

Create

Done?

Back to the admin console

Hotkeys:

Page info

Nice!
(Still, not really a blog.)

lib/Blog/Dispatcher.pm

(Map URLs to view logic.)

```
package Blog::Dispatcher;
use Jifty::Dispatcher -base;
```

```
package Blog::Dispatcher;
use Jifty::Dispatcher -base;

before '*' => run {
    my $top = Jifty->web->navigation;
    $top->child( 'List Entries' => url => '/');
    $top->child( 'New Entry' => url => '/new_entry');
};
```

```
package Blog::Dispatcher;
use Jifty::Dispatcher -base;

before '*' => run {
    my $top = Jifty->web->navigation;
    $top->child( 'List Entries' => url => '/');
    $top->child( 'New Entry' => url => '/new_entry');
};

on '/new_entry' => run {
    set create => Jifty->web->new_action(
        class => 'CreateEntry'
    );
};
```

```
package Blog::Dispatcher;
use Jifty::Dispatcher -base;

before '*' => run {
    my $top = Jifty->web->navigation;
    $top->child( 'List Entries' => url => '/');
    $top->child( 'New Entry' => url => '/new_entry');
};

on '/new_entry' => run {
    set create => Jifty->web->new_action(
        class => 'CreateEntry'
    );
};

on '/' => run {
    my $entries = Blog::Model::EntryCollection->new;
    $entries->unlimit;
    set entries => $entries;
};
```

share/web/templates/new_entry

Create an article
Alert: Administration mode is enabled.
Create an article
You're not currently signed in.
HOME
LIST ENTRIES
NEW ENTRY
ADMINISTRATION
ONLINE DOCS
title
Untitled
body
I'm in deep shit if the NSA intercept this
Save
Hotkeys:
Page info

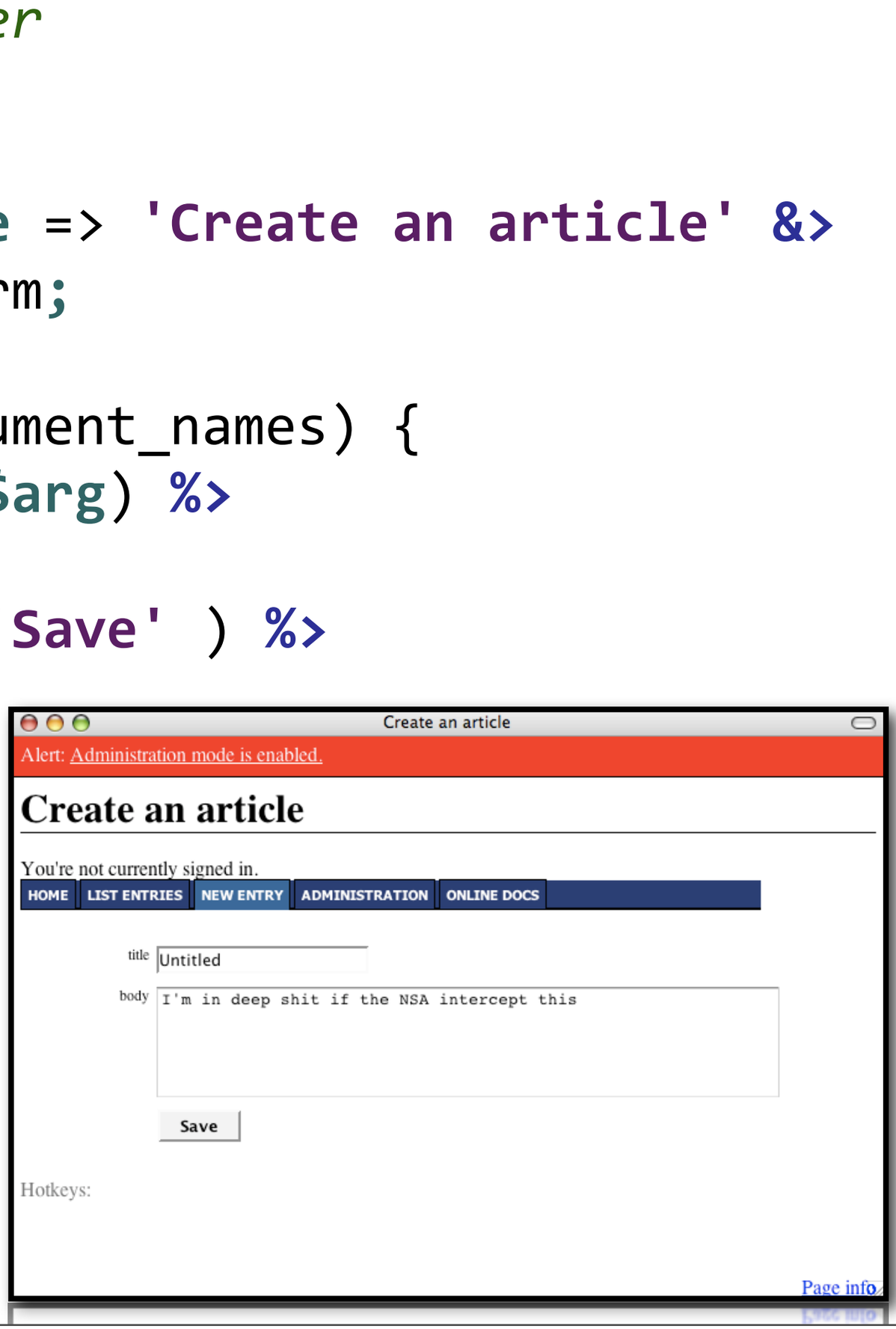
```
<%ARGS>
$create # From the dispatcher
</%ARGS>
```

```
<%ARGS>
$create # From the dispatcher
</%ARGS>

<&|/_elements/wrapper, title => 'Create an article' &>
```

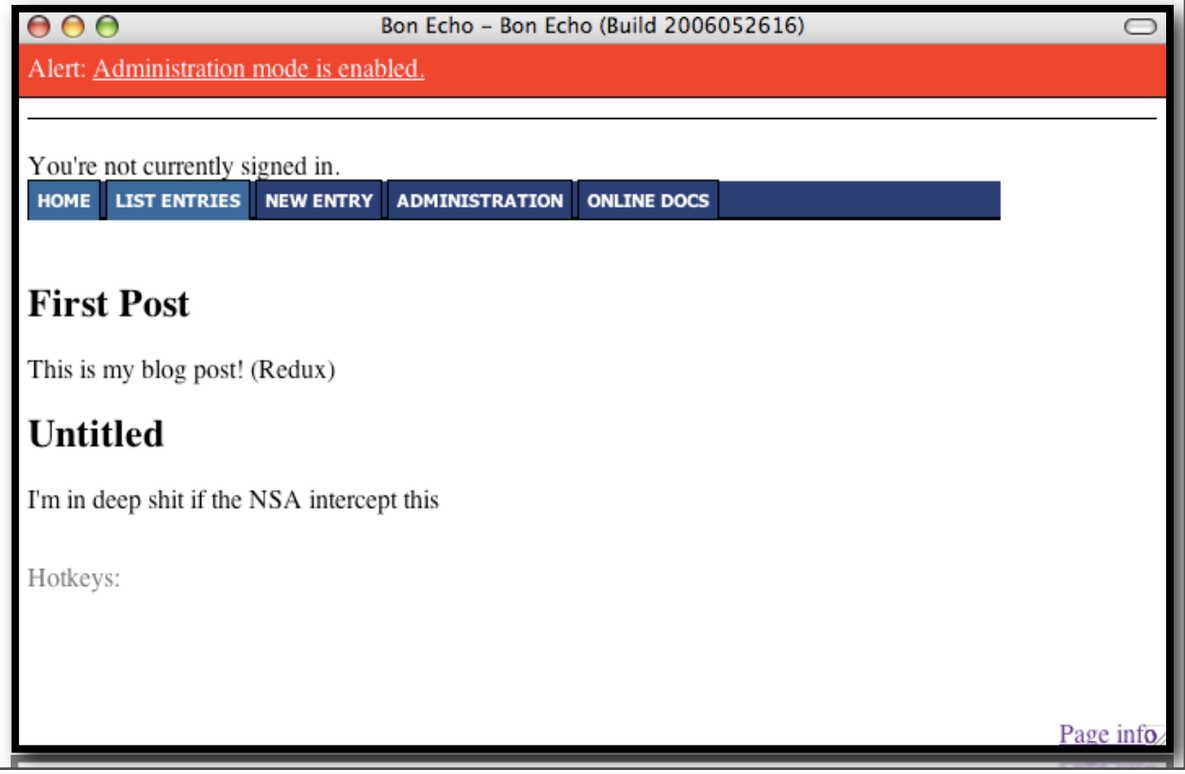
```
<%ARGS>
$create # From the dispatcher
</%ARGS>

<&|/_elements/wrapper, title => 'Create an article' &>
% my $form = Jifty->web->form;
<% $form->start %>
```

```
<%ARGS>
$create # From the dispatcher
</%ARGS>

<&|/_elements/wrapper, title => 'Create an article' &>
% my $form = Jifty->web->form;
<% $form->start %>
% for my $arg ($create->argument_names) {
    <% $create->form_field($arg) %>
% }
```

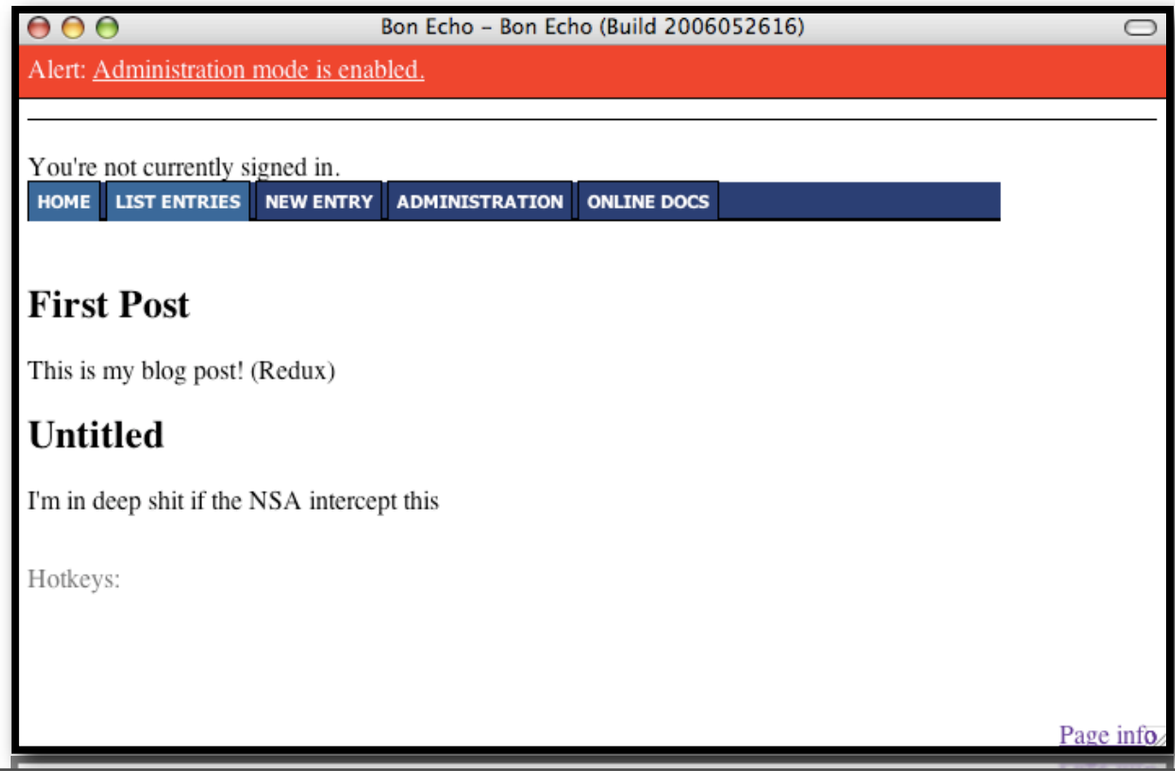
```
<%ARGS>
$create # From the dispatcher
</%ARGS>

<&|/_elements/wrapper, title => 'Create an article' &>
% my $form = Jifty->web->form;
<% $form->start %>
% for my $arg ($create->argument_names) {
    <% $create->form_field($arg) %>
% }
<% $form->submit( label => 'Save' ) %>
<% $form->end %>
</&>
```



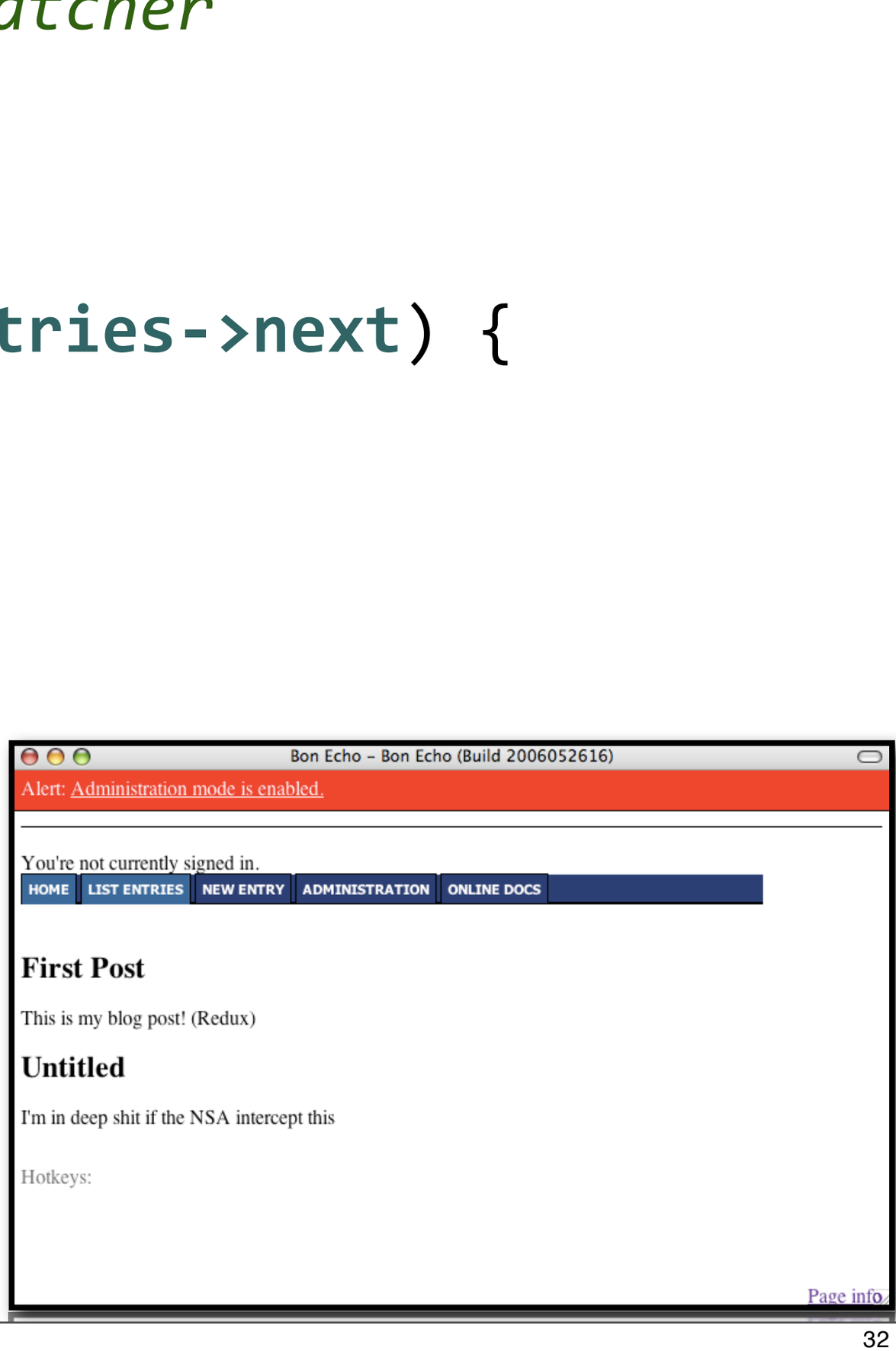
share/web/templates/index.html


Bon Echo – Bon Echo (Build 2006052616)
Alert: Administration mode is enabled.
You're not currently signed in.
HOME
LIST ENTRIES
NEW ENTRY
ADMINISTRATION
ONLINE DOCS
First Post
This is my blog post! (Redux)
Untitled
I'm in deep shit if the NSA intercept this
Hotkeys:
Page info

```
<%ARGS>
$entries # From the dispatcher
</%ARGS>
```



```
<%ARGS>
$entries # From the dispatcher
</%ARGS>

<&|/_elements/wrapper&>
% while (my $entry = $entries->next) {
```



```
<%ARGS>
$entries # From the dispatcher
</%ARGS>

<&|/_elements/wrapper&>
% while (my $entry = $entries->next) {

    <h2><% $entry->title %></h2>
    <div class="body">
        <% $entry->body %>
</div>
```

```
<%ARGS>
$entries # From the dispatcher
</%ARGS>

<&|/_elements/wrapper&>
% while (my $entry = $entries->next) {

    <h2><% $entry->title %></h2>
    <div class="body">
        <% $entry->body %>
    </div>

% }
</&>
```

All Done!

All Done!

✓ `lib/Blog/Dispatcher.pm`

All Done!

- ✓ `lib/Blog/Dispatcher.pm`
- ✓ `lib/Blog/Model/Entry.pm`

All Done!

- ✓ lib/Blog/Dispatcher.pm
- ✓ lib/Blog/Model/Entry.pm
- ✓ web/templates/new_entry

All Done!

- ✓ lib/Blog/Dispatcher.pm
- ✓ lib/Blog/Model/Entry.pm
- ✓ web/templates/new_entry
- ✓ web/templates/index.html

Blog Demo

Blog Demo

☺ It runs!

Blog Demo

☺ It runs!

☺ Ship it!

Blog Demo

☺ It runs!

☺ Ship it!

☺ Oh wait…

New U.S. Law

New U.S. Law

☺ Banning profanity

New U.S. Law

☺ Banning profanity

☺ To protect the children

New U.S. Law

☺ Banning profanity

☺ To protect the children

☺ …from the internet

Blog Censorship

Blog Censorship

☺ No problem

Blog Censorship

☺ No problem

☺ Back to the code!

Blog Censorship

☺ No problem

☺ Back to the code!

☺ `lib/Blog/Model/Entry.pm`

```
package Blog::Model::Entry;
```

```
package Blog::Model::Entry;

use Regexp::Common 'profanity_us';
```

```perl
package Blog::Model::Entry;

use Regexp::Common 'profanity_us';

sub validate_body {
    my ($self, $body) = @_;
```

```
package Blog::Model::Entry;

use Regexp::Common 'profanity_us';

sub validate_body {
    my ($self, $body) = @_;

    if ($body =~ /$RE{profanity}/i) {
        return (
            0, 'Would you speak like that '.
                'in front of your mother? *cough*'
        );
    }
```

```perl
package Blog::Model::Entry;

use Regexp::Common 'profanity_us';

sub validate_body {
    my ($self, $body) = @_;

    if ($body =~ /$RE{profanity}/i) {
        return (
            0, 'Would you speak like that '.
                'in front of your mother? *cough*'
        );
    }

    return 1;
}
```

Create an article

http://127.0.0.1:8888/new_entry

Alert: Administration mode is enabled.

Create an article

You're not currently signed in.

HOME | LIST ENTRIES | NEW ENTRY | ADMINISTRATION | ONLINE DOCS

title: My life

body:

```
I am in deep shit if the NSA have been monitoring my phone
calls
```

Would you speak like that in front of your mother? *cough*

Save

Hotkeys:

Page info

Validator

Validator

☺ Not good enough

Validator

☺ Not good enough

☺ Stops people from blogging

Validator

☺ Not good enough

☺ Stops people from blogging

☺ Let's clean it up directly!

```perl
package Blog::Model::Entry;
use Regexp::Common 'profanity_us';

sub canonicalize_body {
    my ($self, $body) = @_;

    $body =~ s/$RE{profanity}/**expletives**/gi;
    return $body;
}
```

Create an article

Alert: Administration mode is enabled.

Create an article

You're not currently signed in.

HOME | LIST ENTRIES | NEW ENTRY | ADMINISTRATION | ONLINE DOCS

title: Untitled

body:

```
I'm in deep **expletives** if the NSA intercept this
```

Save

Hotkeys:

Page info

Canonicalizer

Canonicalizer

☺ Part of the model

Canonicalizer

☺ Part of the model

☺ Same for autocompleters

Canonicalizer

☺ Part of the model

☺ Same for autocompleters

☺ *Now* we ship it!

Anatomy of a Jifty App

Anatomy of a Jifty App

- ☺ Model : Columns

Anatomy of a Jifty App

- ☺ Model : Columns
- ☺ Action : Parameters

Anatomy of a Jifty App

- ☺ Model : Columns
- ☺ Action : Parameters
- ☺ Template : Fragments

More Components

More Components

☺ Dispatcher

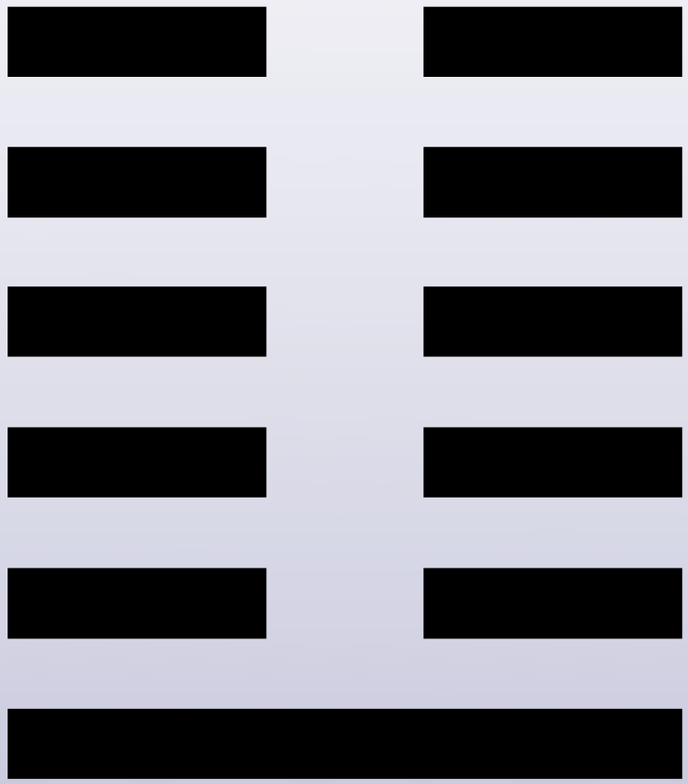
More Components

☺ Dispatcher

☺ ClassLoader

More Components

- ☺ Dispatcher
- ☺ ClassLoader
- ☺ Continuations



Jifty::DBI

Jifty::DBI

- ∅ CREATE TABLE

Jifty::DBI

- ∅ CREATE TABLE
- ∅ ALTER TABLE

Jifty::DBI

- CREATE TABLE
- ALTER TABLE
- CREATE FOREIGN KEY

Object Relational Mapper

Object Relational Mapper

- ∅ SELECT

Object Relational Mapper

- ∅ SELECT
- ∅ INSERT

Object Relational Mapper

- ∅ SELECT
- ∅ UPDATE
- ∅ INSERT

Object Relational Mapper

- ∅ SELECT
- ∅ UPDATE
- ∅ INSERT
- ∅ DELETE

Jifty::DBI::Handle

Jifty::DBI::Handle

- SQLite

Jifty::DBI::Handle

- SQLite
- Postgres

Jifty::DBI::Handle

- SQLite
- MySQL
- Postgres

Jifty::DBI::Handle

- SQLite
- MySQL
- Postgres
- Oracle

Jifty::DBI::Collection

Jifty::DBI::Collection

- Joins and Limits

Jifty::DBI::Collection

- Joins and Limits
- `Paging = Data::Page`

Jifty::DBI::Collection

- Joins and Limits
- `Paging = Data::Page`
- `Caching = Memcached`

Jifty::DBI::Schema

Jifty::DBI::Schema

- Declarative Columns

Jifty::DBI::Schema

- Declarative Columns
- Remember our Blog?

Jifty::DBI::Schema

- Declarative Columns
- Remember our Blog?
- Time for 0.0.2!

```
package Blog::Model::Comment;
use Jifty::DBI::Schema;
use Blog::Record schema {

since '0.0.2';
```

```
package Blog::Model::Comment;
use Jifty::DBI::Schema;
use Blog::Record schema {

since '0.0.2';

column entry  => refers to Blog::Model:Entry;
column author => refers to Blog::Model::User;
```

```
package Blog::Model::Comment;
use Jifty::DBI::Schema;
use Blog::Record schema {

since '0.0.2';

column entry  => refers to Blog::Model:Entry;
column author => refers to Blog::Model::User;

column body =>
    label   is 'Content',
    type    is 'Text',
    render  as 'Textarea',
    default is 'First Post!';
```

```
package Blog::Model::Comment;
use Jifty::DBI::Schema;
use Blog::Record schema {

since '0.0.2';

column entry  => refers to Blog::Model:Entry;
column author => refers to Blog::Model::User;

column body =>
    label   is 'Content',
    type    is 'Text',
    render  as 'Textarea',
    default is 'First Post!';

  column title =>
    is mandatory,
    label   is 'Title',
    length  is 40,
    hints   is '40 bytes max';
```

```
package Blog::Model::Comment;
use Jifty::DBI::Schema;
use Blog::Record schema {

since '0.0.2';

column entry  => refers to Blog::Model:Entry;
column author => refers to Blog::Model::User;

column body =>
   label   is 'Content',
   type    is 'Text',
   render  as 'Textarea',
   default is 'First Post!';

column title =>
   is mandatory,
   label   is 'Title',
   length  is 40,
   hints   is '40 bytes max';

};
```

Database Upgrade

Database Upgrade

- Used to be painful

Database Upgrade

- Used to be painful
- Not anymore

Database Upgrade

- Used to be painful
- Not anymore
- Jifty fixed it!

```
$ vim etc/config.yml
```

```
$ vim etc/config.yml
```

(Set version to 0.0.2)

```
$ vim etc/config.yml
```
(Set version to 0.0.2)

```
$ jifty server
```

```
$ vim etc/config.yml
```
(Set version to 0.0.2)

```
$ jifty server
Application schema version in database (v0.0.1)
doesn't match application schema version (0.0.2)
Please run `bin/jifty schema --setup` to upgrade
the database.
```

$ vim etc/config.yml

(Set version to 0.0.2)

$ jifty server

```
Application schema version in database (v0.0.1)
doesn't match application schema version (0.0.2)
Please run `bin/jifty schema --setup` to upgrade
the database.
```

$ jifty schema --setup

```
$ vim etc/config.yml
```
(Set version to 0.0.2)

```
$ jifty server
Application schema version in database (v0.0.1)
doesn't match application schema version (0.0.2)
Please run `bin/jifty schema --setup` to upgrade
the database.
```

```
$ jifty schema --setup
Jifty version 0.605070 up to date.
INFO - Generating SQL to upgrade Blog
       v0.0.1 database to v0.0.2
INFO - Upgraded to version v0.0.2
```

```
$ vim etc/config.yml
```
(Set version to 0.0.2)

```
$ jifty server
Application schema version in database (v0.0.1)
doesn't match application schema version (0.0.2)
Please run `bin/jifty schema --setup` to upgrade
the database.
```

```
$ jifty schema --setup
Jifty version 0.605070 up to date.
INFO - Generating SQL to upgrade Blog
       v0.0.1 database to v0.0.2
INFO - Upgraded to version v0.0.2
```

```
$ jifty server
```

```
$ vim etc/config.yml
```
(Set version to 0.0.2)

```
$ jifty server
Application schema version in database (v0.0.1)
doesn't match application schema version (0.0.2)
Please run `bin/jifty schema --setup` to upgrade
the database.
```

```
$ jifty schema --setup
Jifty version 0.605070 up to date.
INFO - Generating SQL to upgrade Blog
       v0.0.1 database to v0.0.2
INFO - Upgraded to version v0.0.2
```

```
$ jifty server
INFO - You can connect to your server at
       http://localhost:8888/
```

```
column tags =>
    since '0.0.3',
    refers to Blog::Model::TagCollection by 'entry';
```

```
column tags =>
    since '0.0.3',
    refers to Blog::Model::TagCollection by 'entry';

column mood =>
    since '0.0.4',
    default is 'happy',
    valid are
        { display => 'Sad', value => 'sad' },
        { display => 'Happy', value => 'happy' };
```

```
column tags =>
    since '0.0.3',
    refers to Blog::Model::TagCollection by 'entry';

column mood =>
    since '0.0.4',
    default is 'happy',
    valid are
        { display => 'Sad', value => 'sad' },
        { display => 'Happy', value => 'happy' };

column created =>
    since '0.0.5',
    is immutable,
    type is 'timestamp',
    default is literal 'now()',
    filters are 'Jifty::DBI::Filter::DateTime';
```

```
$ vim etc/config.yml
```

```
$ vim etc/config.yml
```
(Set version to 0.0.5)

```
$ vim etc/config.yml
```
(Set version to 0.0.5)

```
$ jifty schema --setup
```

```
$ vim etc/config.yml
```
(Set version to 0.0.5)

```
$ jifty schema --setup
Jifty version 0.605070 up to date.
INFO - Generating SQL to upgrade Blog
       v0.0.2 database to v0.0.5
INFO - Upgraded to version v0.0.5
```

```
$ vim etc/config.yml
```
(Set version to 0.0.5)

```
$ jifty schema --setup
Jifty version 0.605070 up to date.
INFO - Generating SQL to upgrade Blog
       v0.0.2 database to v0.0.5
INFO - Upgraded to version v0.0.5

$ jifty server
```

```
$ vim etc/config.yml
```
(Set version to 0.0.5)

```
$ jifty schema --setup
Jifty version 0.605070 up to date.
INFO - Generating SQL to upgrade Blog
       v0.0.2 database to v0.0.5
INFO - Upgraded to version v0.0.5

$ jifty server
INFO - You can connect to your server at
       http://localhost:8888/
```

Action = APIs

Action = APIs

⇛ **Method Calls**

Action = APIs

⇛ Method Calls

⇛ Typed named arguments

Action = APIs

⟹ Method Calls

⟹ Typed named arguments

⟹ Returns results or errors

Action ≠ URLs

Action ≠ URLs

⇛ Many actions on one page

Action ≠ URLs

⇛ Many actions on one page

⇛ Called with web forms

Action ≠ URLs

⇛ Many actions on one page

⇛ Called with web forms

⇛ Sounds like RPC?

Action = RPC

Action = RPC

⇛ Web form encoding

Action = RPC

⟹ Web form encoding

⟹ XML/YAML encoding

Action = RPC

⇛ Web form encoding

⇛ XML/YAML encoding

⇛ Web services for free!

Model ⇛ Action

Model ⇛ Action

⇛ Blog::Action::CreateEntry

Model ⇛ Action

⇛ Blog::Action::CreateEntry

⇛ Blog::Action::SearchEntry

Model ⇛ Action

⇛ Blog::Action::CreateEntry

⇛ Blog::Action::SearchEntry

⇛ Blog::Action::UpdateEntry

Model ⇛ Action

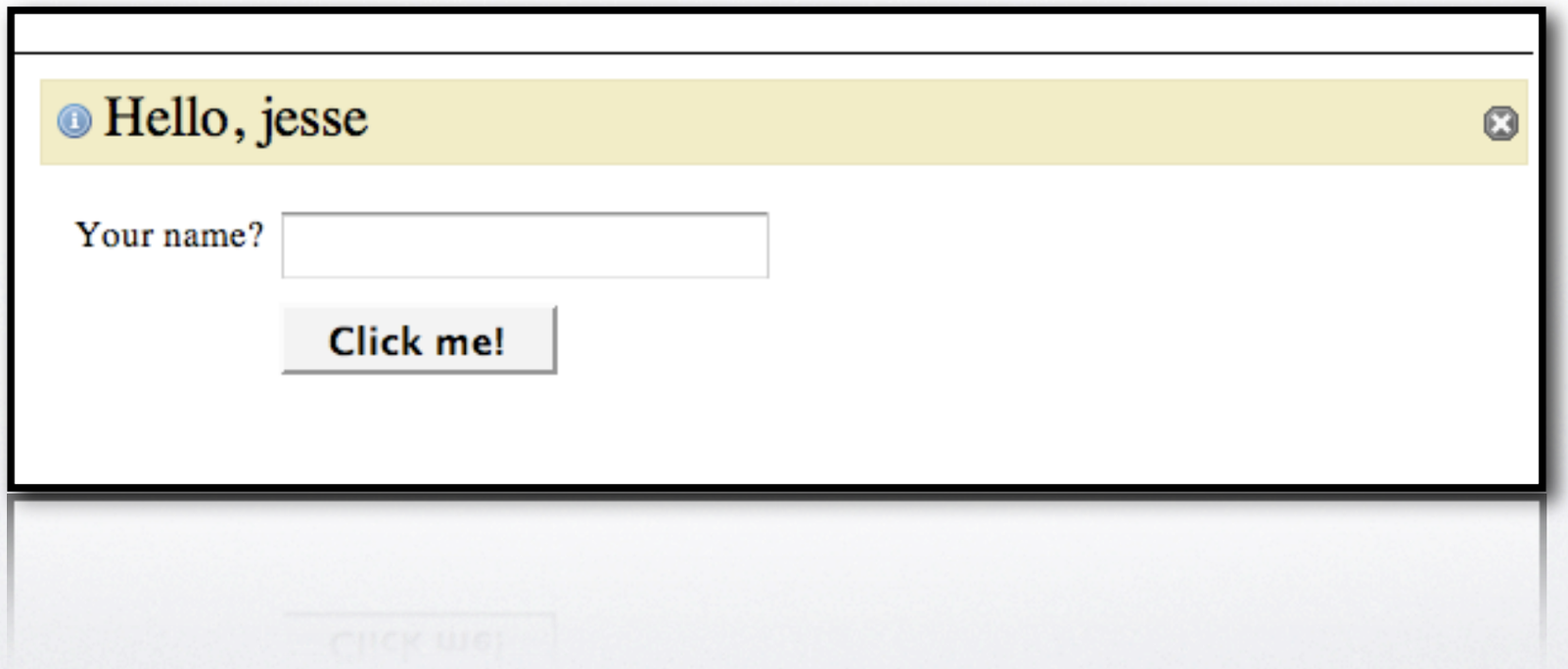
⇛ Blog::Action::CreateEntry

⇛ Blog::Action::SearchEntry

⇛ Blog::Action::UpdateEntry

⇛ Blog::Action::DeleteEntry

Make your own Actions



```
package Hello::Action::SayHi;
use Jifty::Param::Schema;
use Jifty::Action schema {

param name =>
    label is 'Your name?';

};
```

```
package Hello::Action::SayHi;
use Jifty::Param::Schema;
use Jifty::Action schema {

param name =>
    label is 'Your name?';

};

sub take_action {
    my $self = shift;
    my $name = $self->argument_value('name');
    $self->result->message( "Hello, $name" );
}
```

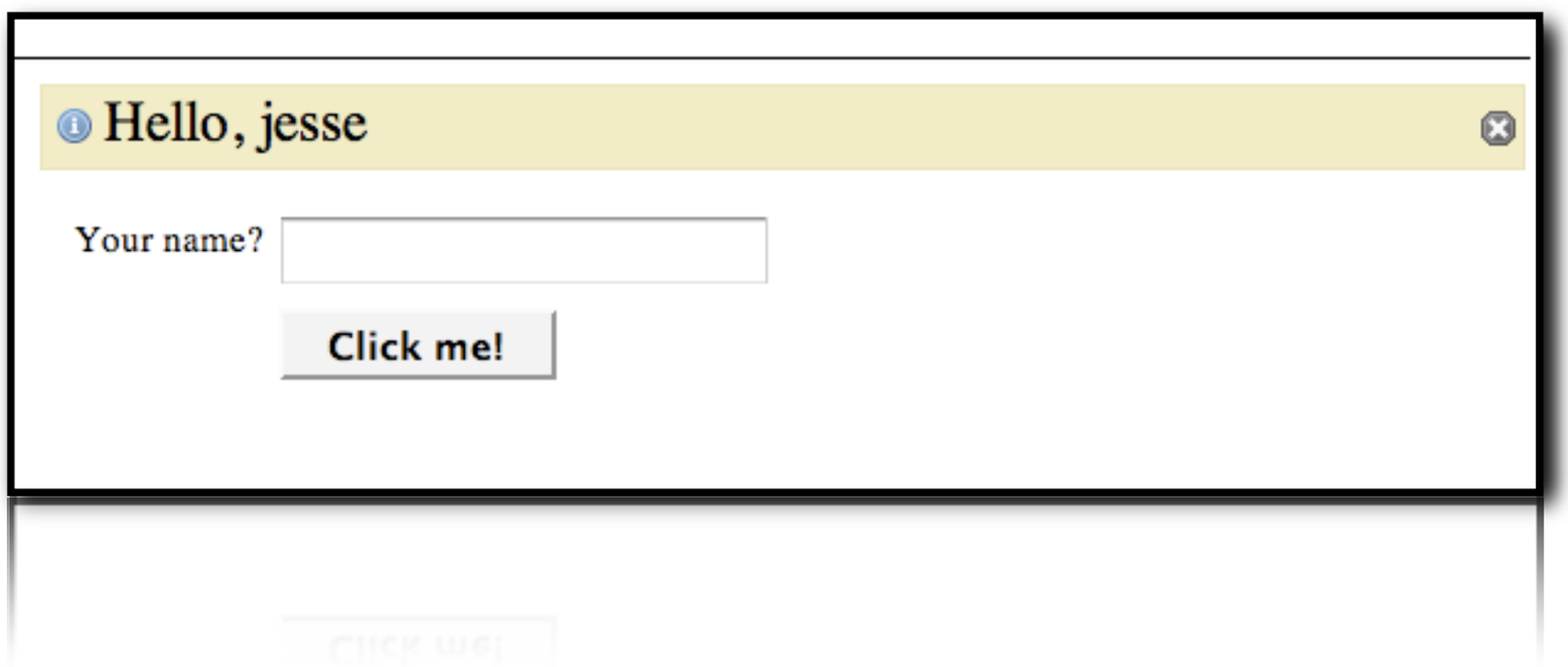
Your name?
Click me!

```
<%init>
my $action = Jifty->web->new_action(
    class => 'SayHi'
);
</%init>
```

```
<%init>
my $action = Jifty->web->new_action(
    class => 'SayHi'
);
</%init>

<&|/_elements/wrapper&>
<% Jifty->web->form->start %>
<% $action->form_field('name') %>
<% Jifty->web->form->submit %>
<% Jifty->web->form->end %>
</&>
```

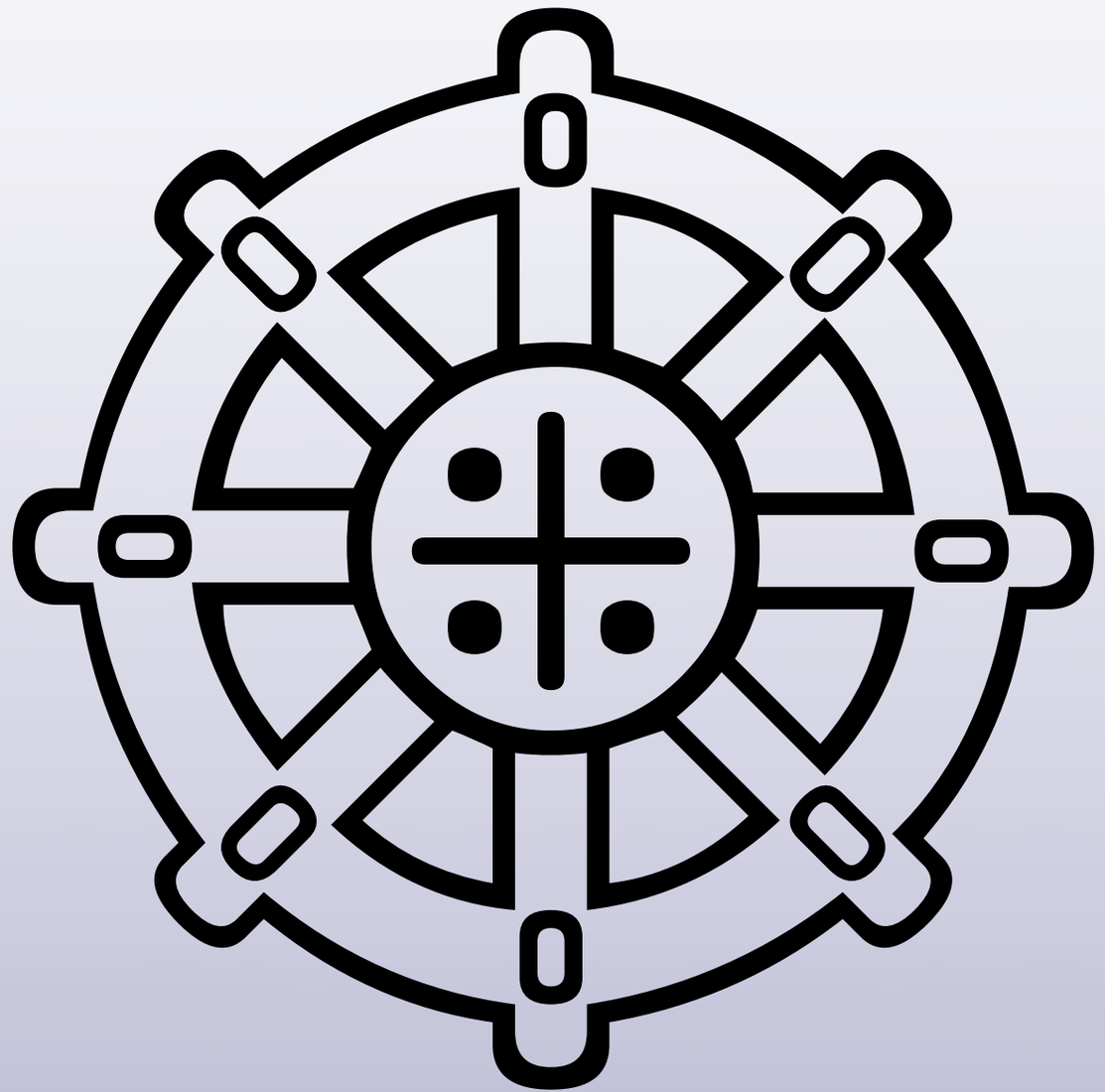
```
<%init>
my $action = Jifty->web->new_action(
    class => 'SayHi'
);
</%init>

<&|/_elements/wrapper&>
<% Jifty->web->form->start %>
<% $action->form_field('name') %>
<% Jifty->web->form->submit %>
<% Jifty->web->form->end %>
</&>
```

```
<%init>
my $action = Jifty->web->new_action(
    class => 'SayHi'
);
</%init>

<&|/_elements/wrapper&>
<% Jifty->web->form->start %>
<% $action->form_field('name') %>
<% Jifty->web->form->submit %>
<% Jifty->web->form->end %>
</&>
```



```
$ curl \
  http://localhost:8888/__jifty/webservices/yaml?\
  J:A-1=SayHi;J:A:F-name-1=Jesse
```

```
$ curl \
  http://localhost:8888/__jifty/webservices/yaml?\
  J:A-1=SayHi;J:A:F-name-1=Jesse

1: !!perl/hash:Jifty::Result
  _content: {}
  action_class: Hello::Action::SayHi
  failure: 0
  field_errors:
    name: ~
  field_warnings:
    name: ~
  message: 'Hello, Jesse'
```



Jifty::Dispatcher

Dispatcher = Kernel

Dispatcher = Kernel

- Simple

Dispatcher = Kernel

- Simple
- Declarative

Dispatcher = Kernel

- Simple
- Declarative
- Encapsulates view logic

Three Stages

Three Stages

- Before: Sets up state

Three Stages

- Before: Sets up state
- On: Shows your pages

Three Stages

- Before: Sets up state
- On: Shows your pages
- After: Cleans up state

Jifty::ClassLoader

Scaffolding Bad

Scaffolding Bad

- Ugly

Scaffolding Bad

- Ugly
- Redundant

Scaffolding Bad

- Ugly
- Redundant
- Fragile

Scaffolding Bad

- Ugly
- Annoying
- Redundant
- Fragile

Scaffolding Bad

- Ugly
- Annoying
- Redundant
- Redundant
- Fragile

Scaffolding Bad

- Ugly
- Annoying
- Redundant
- Redundant
- Fragile
- Redundant

Why *Empty* Classes?

Why *Empty* Classes?

- Jifty::ClassLoader

Why *Empty* Classes?

- Jifty::ClassLoader
- Auto-creates classes

Why *Empty* Classes?

- Jifty::ClassLoader
- Auto-creates classes
- Never writes them to disk

Auto-created Classes

Auto-created Classes

- Blog

Auto-created Classes

- Blog
- Blog::Record

Auto-created Classes

- Blog
- Blog::Record
- Blog::Collection

Auto-created Classes

- Blog
- Blog::Record
- Blog::Collection
- Blog::Bootstrap

Auto-created Classes

- Blog
- Blog::Record
- Blog::Collection
- Blog::Bootstrap
- Blog::Upgrade

Auto-created Classes

- Blog
- Blog::Record
- Blog::Collection
- Blog::Bootstrap
- Blog::Upgrade
- Blog::Dispatcher

Auto-created Classes

- Blog
- Blog::Record
- Blog::Collection
- Blog::Bootstrap
- Blog::Upgrade
- Blog::Dispatcher
- Blog::CurrentUser

Auto-created Classes

- Blog
- Blog::Record
- Blog::Collection
- Blog::Bootstrap
- Blog::Upgrade
- Blog::Dispatcher
- Blog::CurrentUser
- Blog::Model::EntryCollection

Auto-created Classes

- Blog
- Blog::Record
- Blog::Collection
- Blog::Bootstrap
- Blog::Upgrade
- Blog::Dispatcher
- Blog::CurrentUser
- Blog::Model::EntryCollection
- Blog::Action::CreateEntry

Auto-created Classes

- Blog
- Blog::Record
- Blog::Collection
- Blog::Bootstrap
- Blog::Upgrade
- Blog::Dispatcher
- Blog::CurrentUser
- Blog::Model::EntryCollection
- Blog::Action::CreateEntry
- Blog::Action::SearchEntry

Auto-created Classes

- Blog
- Blog::Record
- Blog::Collection
- Blog::Bootstrap
- Blog::Upgrade
- Blog::Dispatcher
- Blog::CurrentUser
- Blog::Model::EntryCollection
- Blog::Action::CreateEntry
- Blog::Action::SearchEntry
- Blog::Action::UpdateEntry

Auto-created Classes

- Blog
- Blog::Record
- Blog::Collection
- Blog::Bootstrap
- Blog::Upgrade
- Blog::Dispatcher
- Blog::CurrentUser
- Blog::Model::EntryCollection
- Blog::Action::CreateEntry
- Blog::Action::SearchEntry
- Blog::Action::UpdateEntry
- Blog::Action::DeleteEntry

Auto-created Classes

- Blog
- Blog::Record
- Blog::Collection
- Blog::Bootstrap
- Blog::Upgrade
- Blog::Dispatcher
- Blog::CurrentUser
- Blog::Model::EntryCollection
- Blog::Action::CreateEntry
- Blog::Action::SearchEntry
- Blog::Action::UpdateEntry
- Blog::Action::DeleteEntry
- *...et cetera*

Continuation = Job Control

Continuation = Job Control

- Continuations in Perl?

Continuation = Job Control

- Continuations in Perl?
- Not Full Continuations

Continuation = Job Control

- Continuations in Perl?
- Not Full Continuations
- Delimited Continuations

Full Continuations

Full Continuations

- Serialize everything

Full Continuations

- Serialize everything
- %ENV, STDIN, STDOUT

Full Continuations

- Serialize everything
- %ENV, STDIN, STDOUT
- DBI Handle, Log Handle

Full Continuations

- Serialize everything
- %ENV, STDIN, STDOUT
- DBI Handle, Log Handle
- Phase of the moon

Jifty Continuations

Jifty Continuations

- Only the application state

Jifty Continuations

- Only the application state
- Requests and Actions

Jifty Continuations

- Only the application state
- Requests and Actions
- That's all we need

Why Continuations?

Why Continuations?

- The web is built on GOTO

Why Continuations?

- The web is built on GOTO
- Do you *like* GOTO?

Why Continuations?

- The web is built on GOTO
- Do you *like* GOTO?
- Continuations are GOSUB

Why Continuations?

- The web is built on GOTO
- Do you *like* GOTO?
- Continuations are GOSUB
- Welcome to Civilization!

A Brief Tangent…

A Brief Tangent…

- Back to our Blog

A Brief Tangent...

- Back to our Blog
- Requiring Login

A Brief Tangent...

- Back to our Blog
- Requiring Login
- `lib/Blog/Dispatcher.pm`

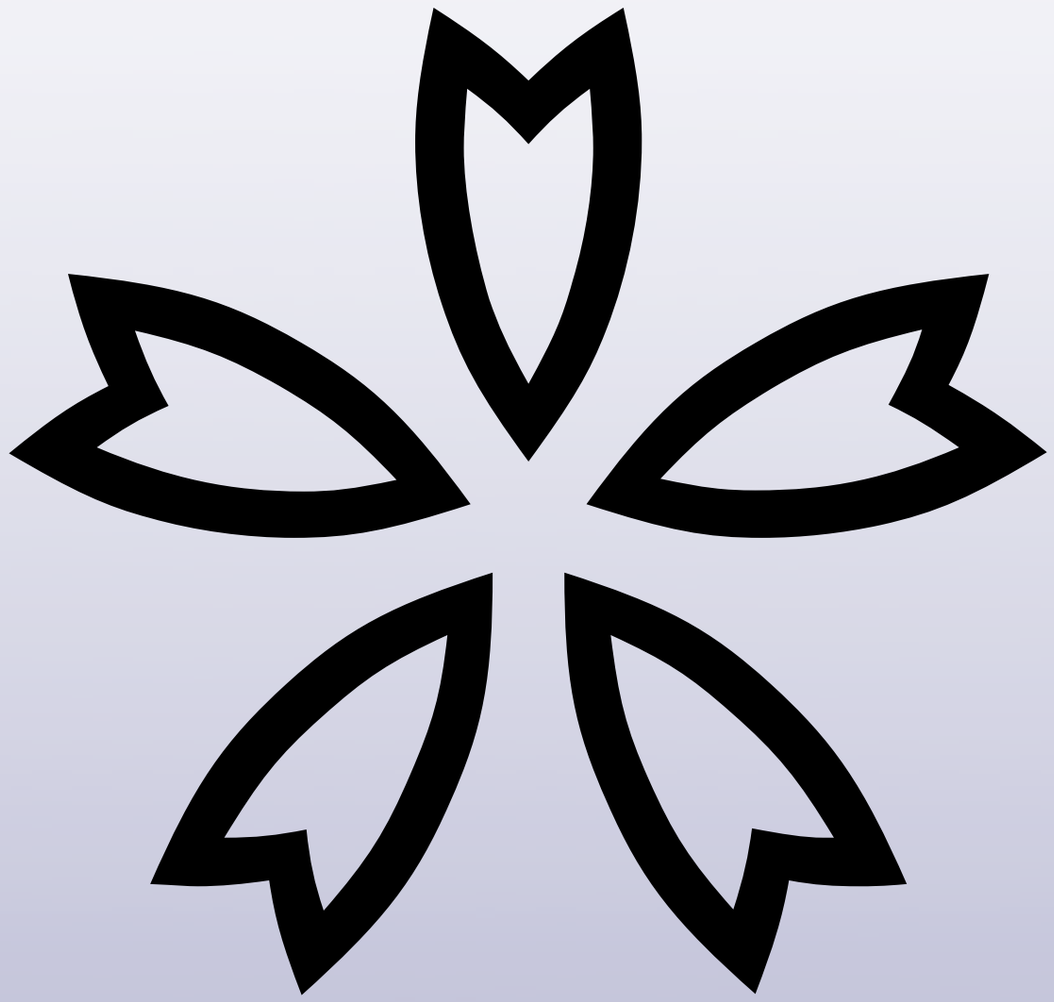
```
package Blog::Action::Login;
use Jifty::Param::Schema;
use Jifty::Action schema {

param address =>
    is mandatory,
    ajax validates,
    label is 'Email address';

param password =>
    is mandatory,
    type  is 'Password',
    label is 'Password';

};
```

```
package Blog::Action::Login;
use Jifty::Param::Schema;
use Jifty::Action schema {

param address =>
    is mandatory,
    ajax validates,
    label is 'Email address';

param password =>
    is mandatory,
    type  is 'Password',
    label is 'Password';

};

sub take_action {
    my $self = shift;
    if ( $self->validate_login ) {
        $self->login_as_user( $self->user );
        return 1;
    }
    return 0;
}
```

```
package Blog::Dispatcher;

## Auth and login
## (Contrived demo. ‘*’ will match /login)

before '*' => run {
    if (not Jifty->web->current_user->id ) {
        tangent '/login';
    }
};
```

```
%# share/web/templates/login
<%init>
my $action = Jifty->web->new_action(
    class   => 'Login',
);
</%init>
```

```
%# share/web/templates/login
<%init>
my $action = Jifty->web->new_action(
    class   => 'Login',
);
</%init>

<&|/_elements/wrapper, title => 'Login' &>
<h2>Login</h2>
    <% Jifty->web->form->start %>
        <% $action->form_field('address') %>
        <% $action->form_field('password') %>
        <% Jifty->web->return( label => 'Login') %>
    <% Jifty->web->form->end %>
</&>
```



Templates = View

Templates = View

- HTML::Mason

Templates = View

- HTML::Mason
- Mason has Components

Templates = View

- HTML::Mason
- Mason has Components
- Server-side inclusion

Fragments

Fragments

- Components 2.0

Fragments

- Components 2.0
- Client-side for AJAX

Fragments

- Components 2.0
- Client-side for AJAX
- Server-side for Lynx

```
<% Jifty->web->region(
    name => "myweblog-posts",
    path => "/fragments/page_of_posts"
) %>
```

PubSub

(Come to the scary talk this afternoon)

PubSub

- Just fragments

(Come to the scary talk this afternoon)

PubSub

- Just fragments
- Server-push (Comet)

(Come to the scary talk this afternoon)

PubSub

- Just fragments
- Server-push (Comet)
- Message Bus Backed

(Come to the scary talk this afternoon)

A

Development Tools

Development Tools

∀ Standalone Server

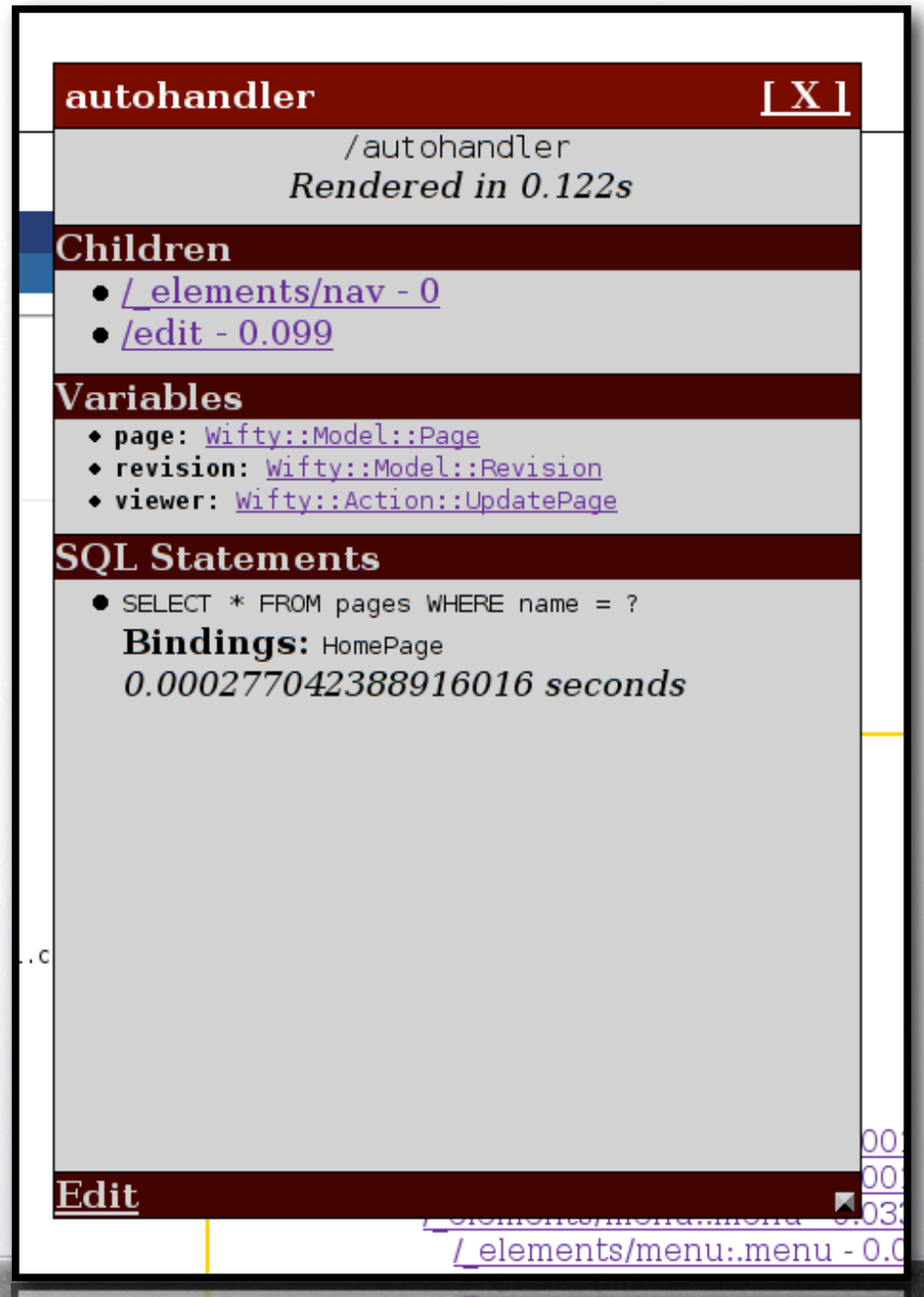
Development Tools

- ∀ Standalone Server
- ∀ Module::Install

Development Tools

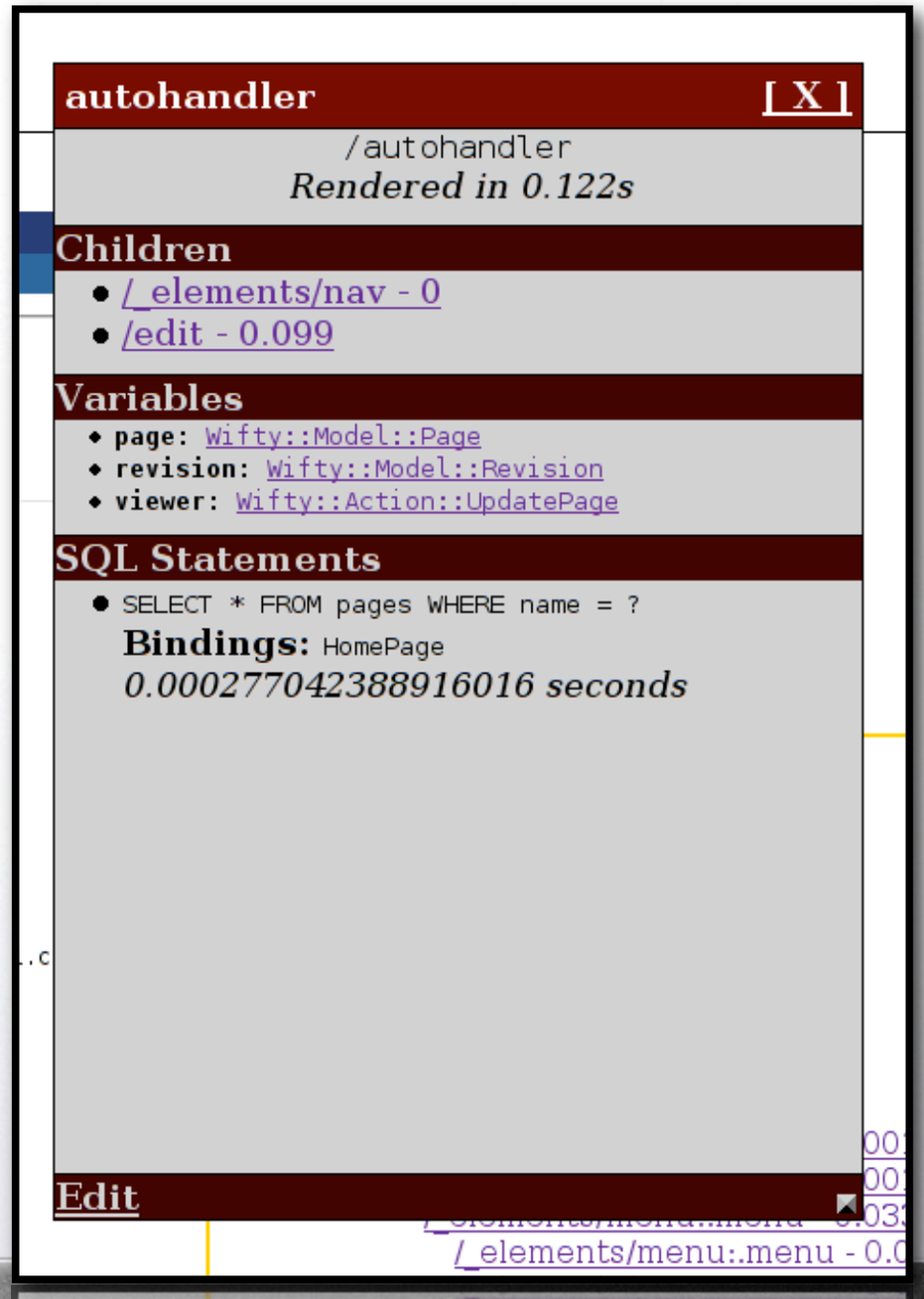
- ∀ Standalone Server
- ∀ Module::Install
- ∀ PAR Distribution

Halos


autohandler
[X]
/autohandler
Rendered in 0.122s
Children
/_elements/nav - 0
/edit - 0.099
Variables
page: Wifty::Model::Page
revision: Wifty::Model::Revision
viewer: Wifty::Action::UpdatePage
SQL Statements
SELECT * FROM pages WHERE name = ?
Bindings: HomePage
0.0002770423889160 16 seconds
Edit
/_elements/menu:.menu - 0.0

Halos

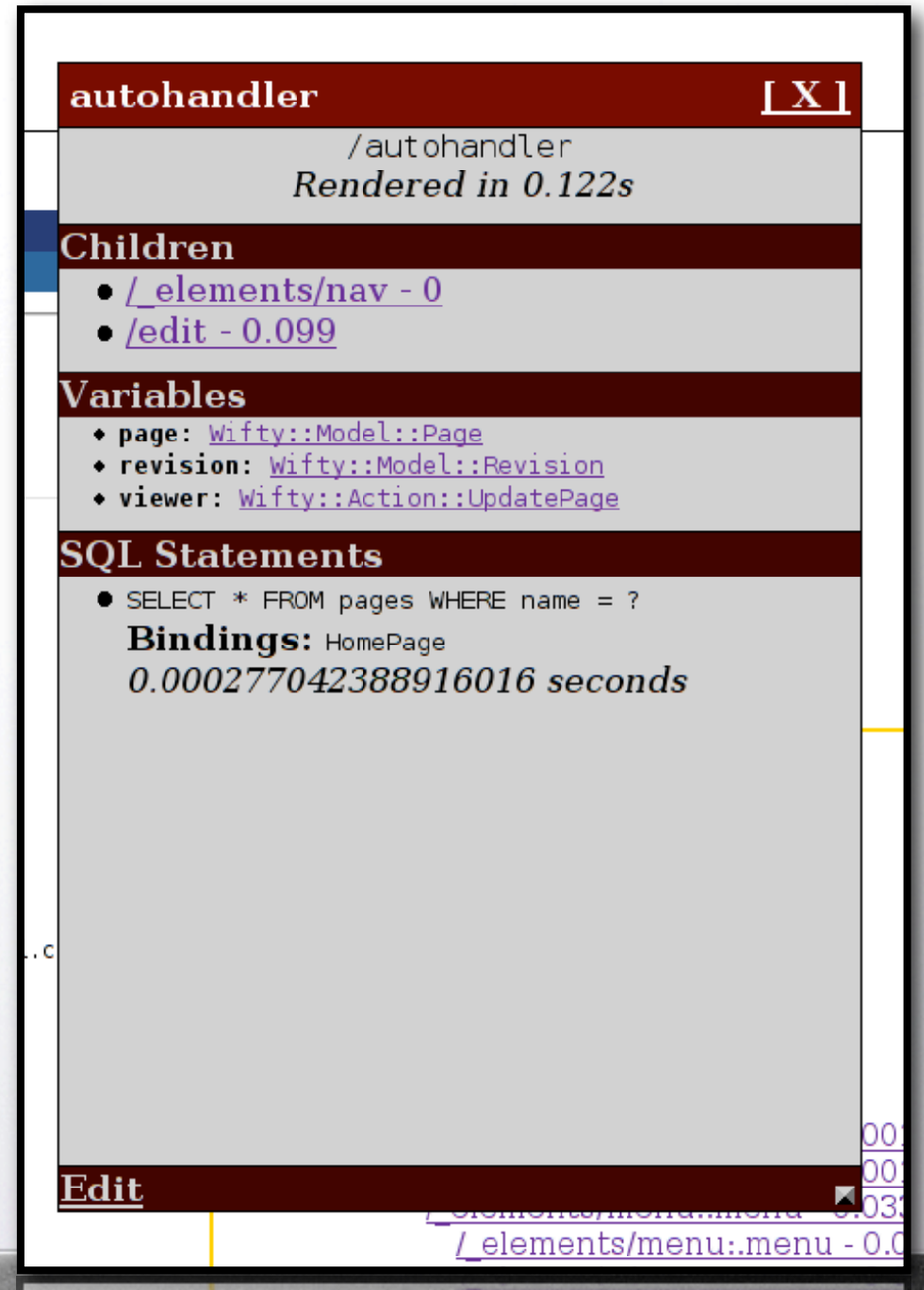
∀ SQL Logging



Halos

∀ SQL Logging

∀ SQL Profiling

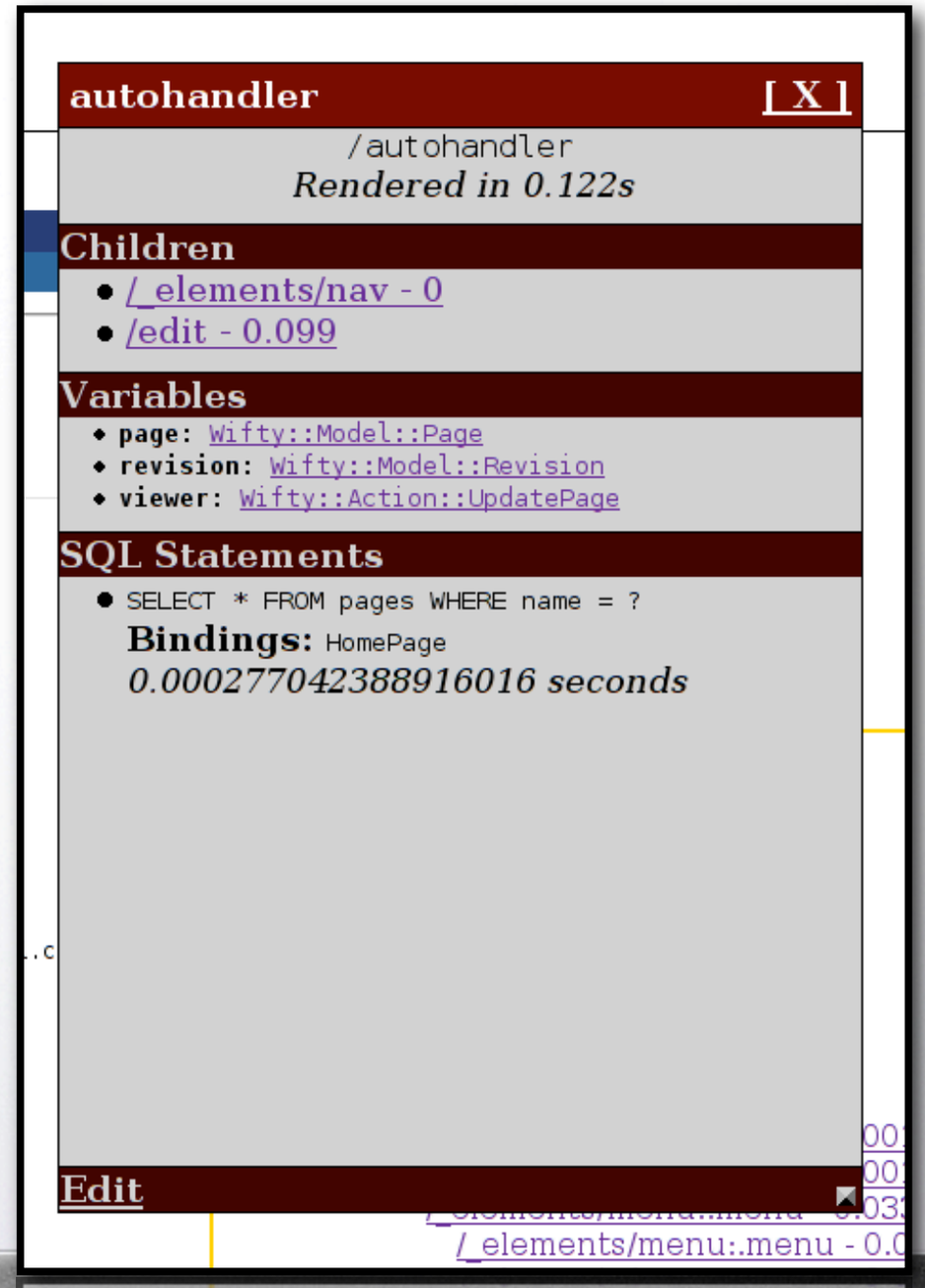


Halos

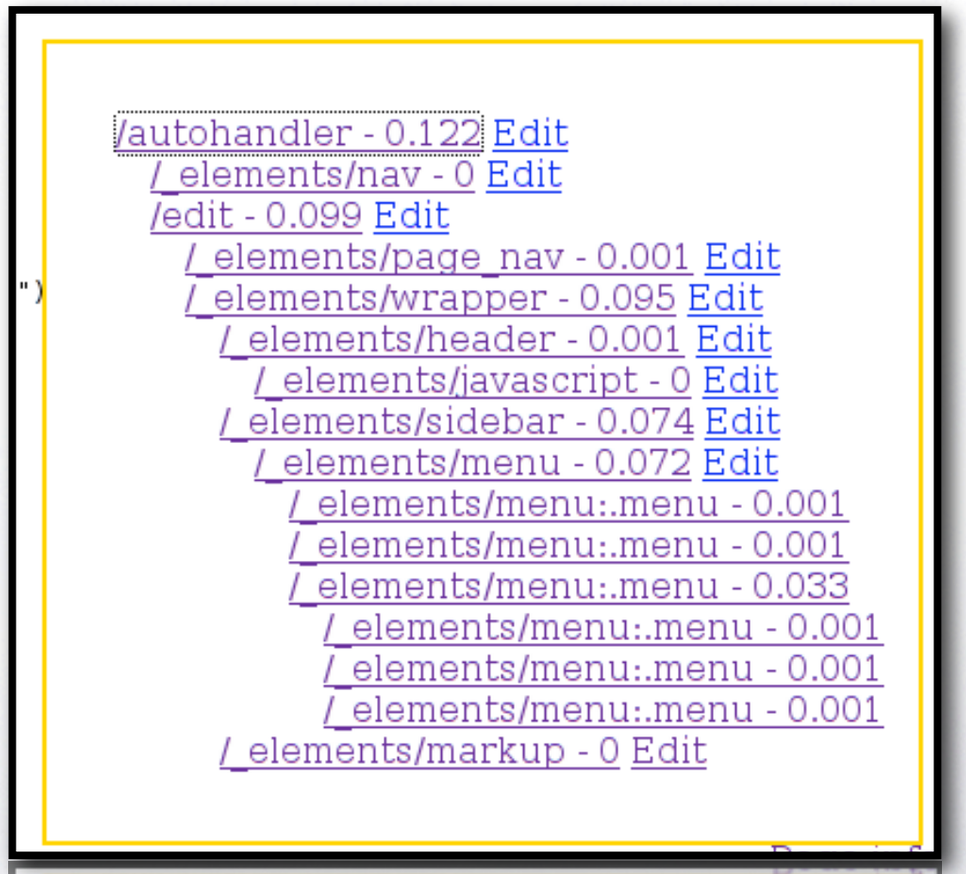
∀ SQL Logging

∀ SQL Profiling

∀ Template Profiling

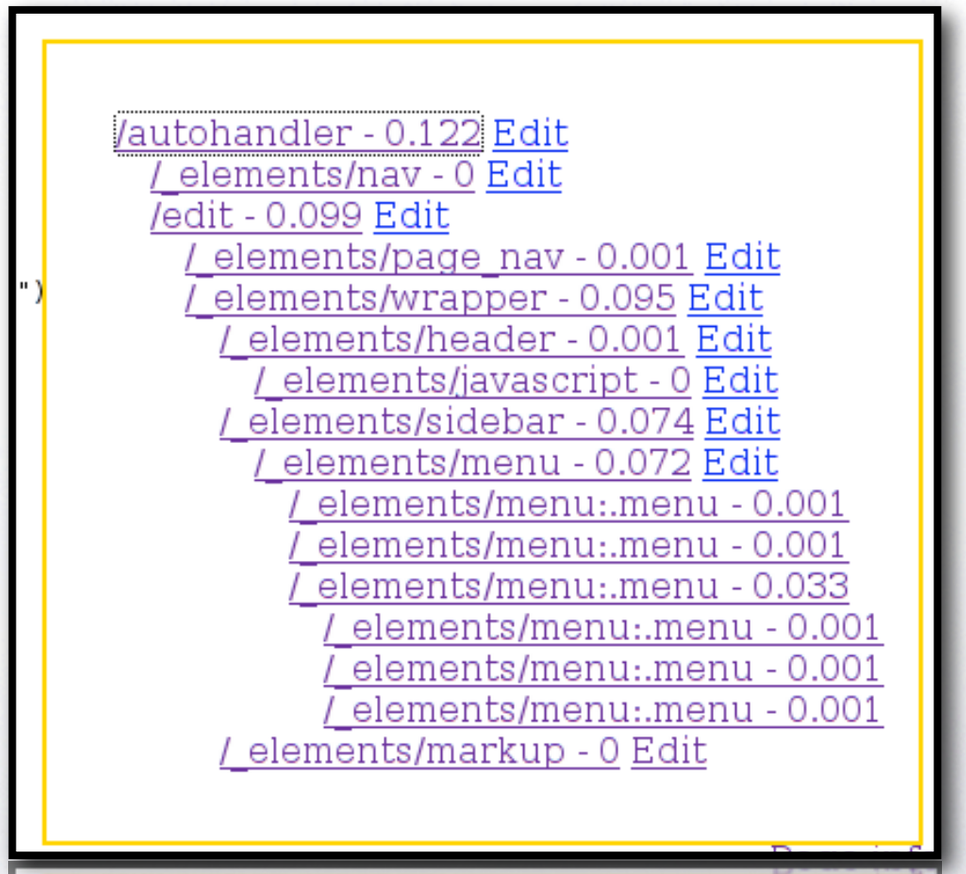


Halos


/autohandler - 0.122 Edit
/_elements/nav - 0 Edit
/edit - 0.099 Edit
/_elements/page_nav - 0.001 Edit
/_elements/wrapper - 0.095 Edit
/_elements/header - 0.001 Edit
/_elements/javascript - 0 Edit
/_elements/sidebar - 0.074 Edit
/_elements/menu - 0.072 Edit
/_elements/menu:.menu - 0.001
/_elements/menu:.menu - 0.001
/_elements/menu:.menu - 0.033
/_elements/menu:.menu - 0.001
/_elements/menu:.menu - 0.001
/_elements/menu:.menu - 0.001
/_elements/markup - 0 Edit

Halos

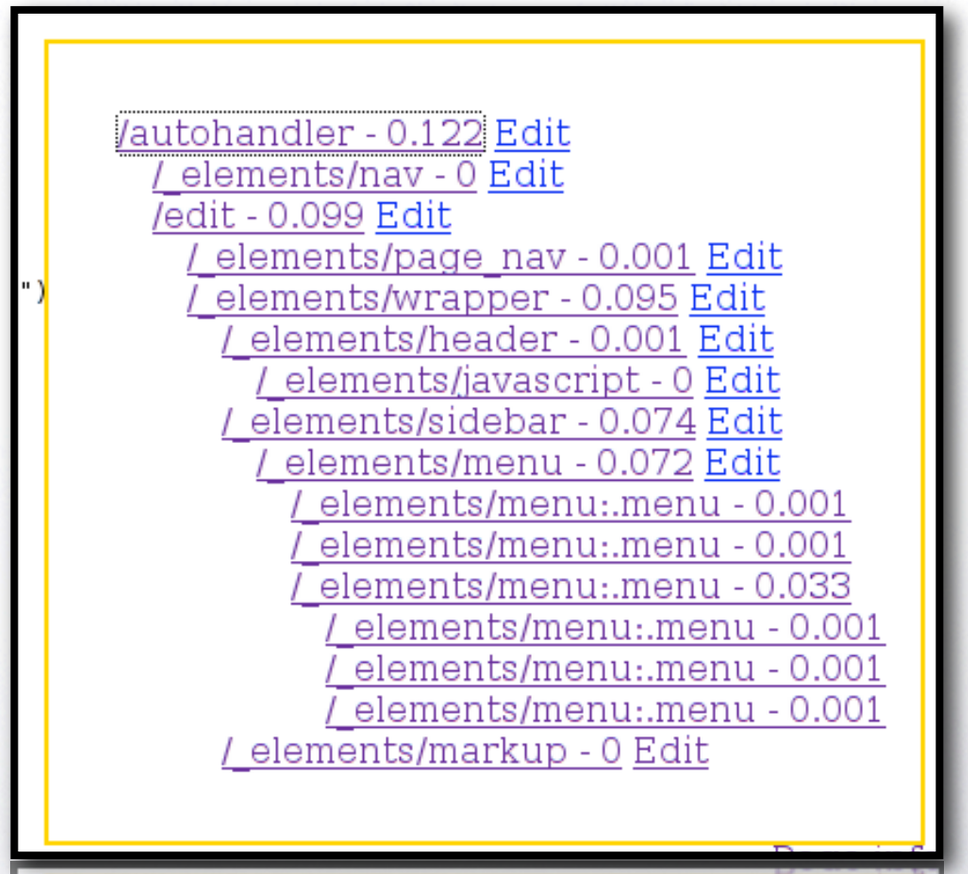
∀ View Tracing



Halos

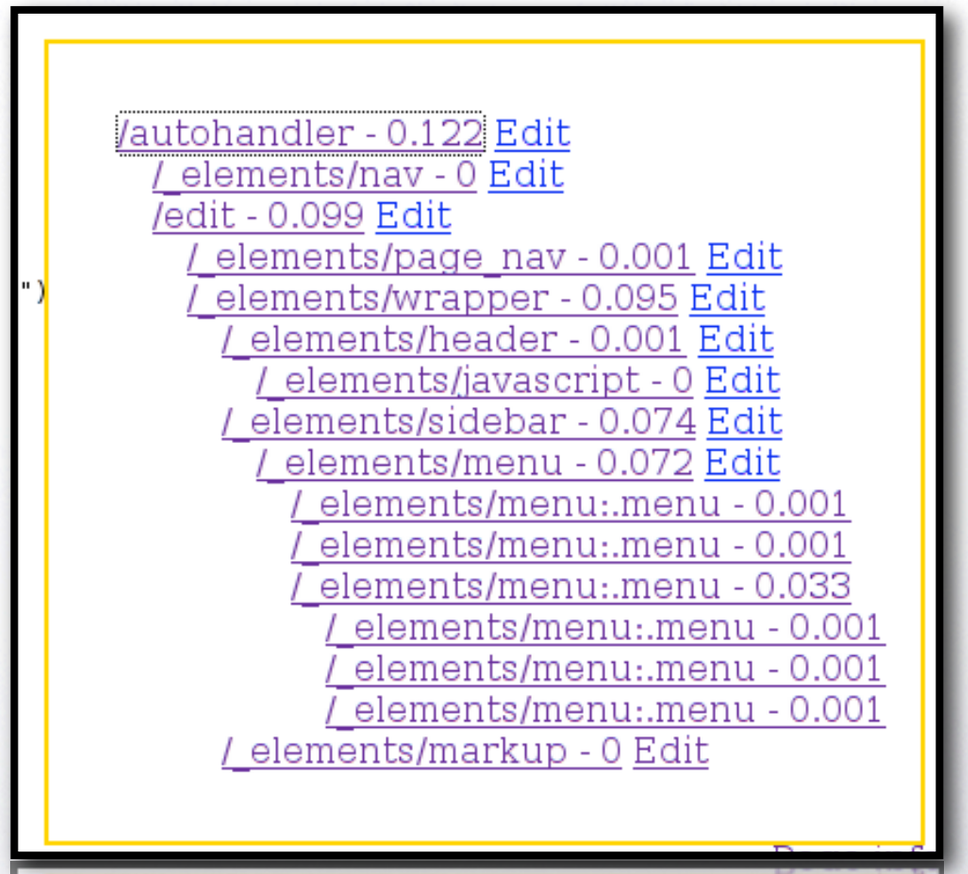
∀ View Tracing

∀ Online Editing



Halos

- ∀ View Tracing
- ∀ Online Editing
- ∀ ...and more!



Devel Mode

Devel Mode

∀ Module::Refresh

Devel Mode

- ∀ Module::Refresh
- ∀ Tracing with Log4Perl

Devel Mode

- ∀ Module::Refresh
- ∀ Tracing with Log4Perl
- ∀ Administrative Console

Deployment

Deployment

∀ Lighttpd / Apache

Deployment

- Lighttpd / Apache
- Fast Static Server

Deployment

- ∀ Lighttpd / Apache
- ∀ Fast Static Server
- ∀ CSS::Squish, JS::Squish

More Goodies

More Goodies

∀ Comprehensive I18N

More Goodies

- ∀ Comprehensive I18N
- ∀ Client-Side Sessions

More Goodies

- ∀ Comprehensive I18N
- ∀ Client-Side Sessions
- ∀ Events and Subscriptions

Future Plans

Future Plans

✈ Wiki-style UI Editor

Future Plans

- ✈ Wiki-style UI Editor
- ✈ Even less code

Future Plans

- ✈ Wiki-style UI Editor
- ✈ Even less code
- ✈ "Jifty in a Jiffy" MTVs

Sample Applications

Sample Applications

✈ Wifty

Sample Applications

- ✈ Wifty
- ✈ CommitBit

Sample Applications

- ✈ Wifty
- ✈ CommitBit
- ✈ Ping / Chat / Clock

Get Jifty

Get Jifty

```
cpan Jifty
```

Get Jifty

✈ `cpan Jifty`

✈ svn.jifty.org/svn/jifty.org

Get Jifty

- ✈ `cpan Jifty`
- ✈ svn.jifty.org/svn/jifty.org
- ✈ http://jifty.org/

Getting Started

Getting Started

✈ Jifty::Manual::Tutorial

Getting Started

- Jifty::Manual::Tutorial
- irc.freenode.net #jifty

Getting Started

- Jifty::Manual::Tutorial
- irc.freenode.net #jifty
- jifty-devel@lists.jifty.org

Thank you!

We're hiring!