Boilerplate Web Apps with Catalyst::Helper

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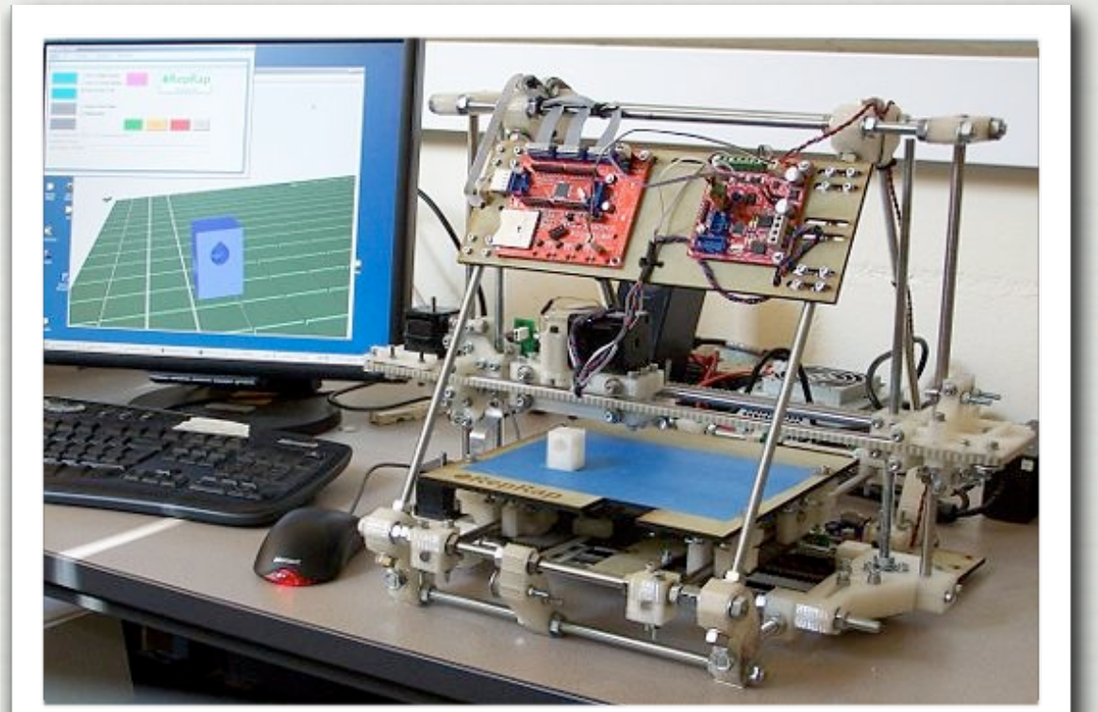
Concept

Set up a "clone-me" script and templates that can generate catalyst web apps...

- ☐ Ready to develop with
- ☐ Architecture implemented
  - ☐ Controllers
  - ☐ Data model
  - ☐ Views / templates
  - ☐ Shared resources
- ☐ Plugins configured



The RepRap

Use Cases

- [ ] Web consulting business: template application allowing developers to work on new projects in a standard way.
- [ ] portfolio of similar web sites: library providing common functionality and a shared data model, but allowing for extensive modifications in the UI.
- [ ] large-scale web application: components that are part of the same user experience and share that same library, data model, and UI, yet are running in their own web containers.
- [ ] tinkerer's web sites: you have a catalyst set-up that you want to re-use and refine.

Web Applications In Perl

Before Web Frameworks

- [ ] Controller is a "go" method in a cgi script

  > Progresses to: Controller is a mod_perl handler

- [ ] URLs follow the cgi directory structure

  > Progresses to: URLs follow the mod_perl handler hierarchy

- [ ] Home-brew HTML template system

  > Progresses to: Template Toolkit

- [ ] DBI calls in the controller

  > Progresses to: DBI calls in a separate data model

  > Progresses to: DBIx

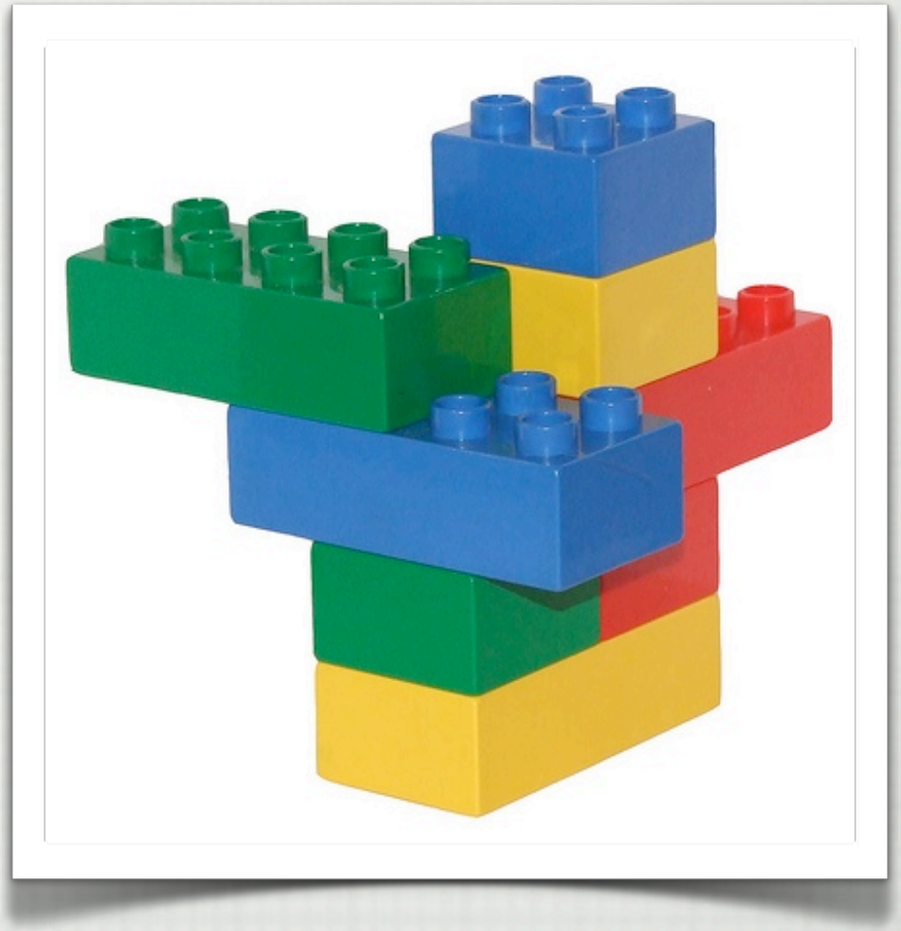
Problems with Proto-Frameworks

- ☐ often a single developer's brain-child
- ☐ often built for a particular use
- ☐ often built in a short period of time
- ☐ often poorly documented
- ☐ can't wait to start a new one

But... we keep building them because they are fun to build!

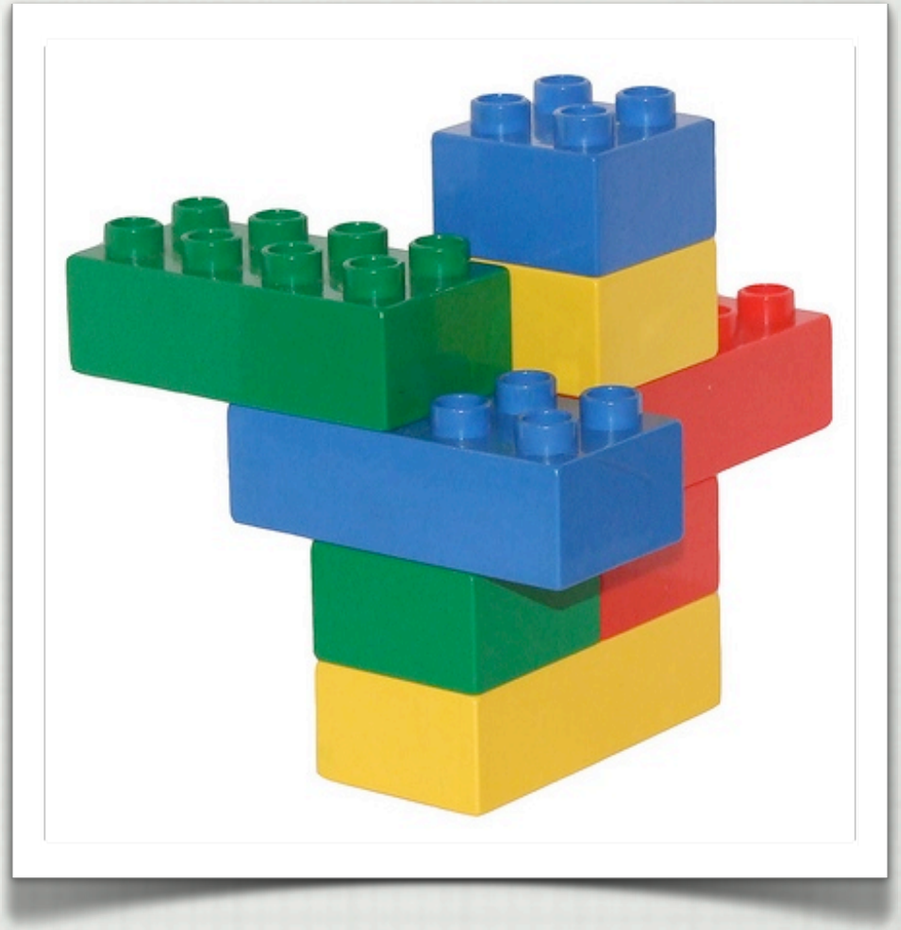
Era of Web Frameworks

- Segmented architecture:
  - Controller
  - Data model
  - Views / templates
- Conveniences:
  - URL Routes
  - SQL abstraction
- Documentation
- Community



Web Framework Frustrations

- [ ] Frameworks are opinionated: architectural decisions are already made.
- [ ] Frameworks are constraining: edge cases take too long to build.
- [ ] Over-advocacy: crowds out alternatives, drowns out rational discussions.
- [ ] You failed to trademark the "X on Rails" snowclone



Catalyst

The Un-opinionated Framework

- [ ] ... so that you can be opinionated
- [ ] Define your architecture using Catalyst Plugins:
  - [ ] auth credential
  - [ ] auth store
  - [ ] session store
  - [ ] data model
  - [ ] caching
  - [ ] logging
  - [ ] template system
  - [ ] static files

Catalyst

The Un-opinionated Framework

- [ ] Highly opinionated parts:
  - [ ] Authentication
  - [ ] Template naming conventions
  - [ ] Configuration style:
    - [ ] YAML, JSON, XML, Perl
  - [ ] URL dispatch types:
    - [ ] path, chained, and regex

Share Your Opinions

Creating the Clone-Me

Step 1: The Bootstrap

- [ ] Who will be using the Clone-Me?
- [ ] Create a bootstrap application with catalyst.pl
  - [ ] Or use an existing one that has a good set-up
- [ ] Wire in the critical moving parts:
  - [ ] configuration style: perl
  - [ ] dispatch style: REST
  - [ ] model: DBIC
  - [ ] authentication, authorization, session store
  - [ ] template naming conventions, php tag style

Creating the Clone-Me

Step 2: The Common Library

- [ ] Move controllers into the common library, then subclass
  - [ ] Root controller
  - [ ] Auth controller
- [ ] Move models into the common library, then subclass
  - [ ] User model
  - [ ] Consider implementing an API
- [ ] Context class
  - [ ] Can be moved and subclassed, but it is simpler to just create a Catalyst::Helper template

Creating the Clone-Me

Step 3: The Clone-Me System

- ☐ catalyst.pl is an interface to Catalyst::Helper
  - ☐ uses template toolkit to build a skeleton application
- ☐ Create a Clone-Me directory: CLONEME_webservice
  - ☐ CLONEME.pl script
  - ☐ lib directory: for the library templates
  - ☐ templates directory: for the templates templates

    [% tags %] are used by Catalyst::Helper

    <? tags ?> are used by the bootstrap application

Creating the Clone-Me

Step 4: The Clone-Me Script

- ☐ CLONEME.pl creates the component directory
- ☐ Interacts with your implementation of Catalyst::Helper
- ☐ Prompts for variables:

```
$component_dir: user_mgr, video_list

$class_name: TigerLead::UserManager, TigerLead::VideoList

$default_realm: client, lead, support
```

- ☐ Adds files to svn

Creating the Clone-Me

Step 5: The Helper

- [ ] Subclass Catalyst::Helper in the common library
- [ ] Overload the mk_app method
  - [ ] add relevant variables: dir, realm
  - [ ] add new mk calls
- [ ] Implement your own template renderer
- [ ] Overload or create new mk methods
  - [ ] Cover all aspects of your catalyst bootstrap application
  - [ ] dirs, models, appclass, rootcontroller, auth controller, readme, symlinks, templates, favicon, images

Creating the Clone-Me

Step 6: Helper Templates

- [ ] CLONEME
- [ ] Create templates where your mk methods require it
  - [ ] Make your bootstrap templates generic
  - [ ] Create a README or welcome page
- [ ] Helper template variables:

  `[% dir %]` for referring to the generated component directory

  `[% name %]` for package declarations, configurations

Creating the Clone-Me

Step 8: Refinement

1. Clone a test_app using the CLONEME.pl

   > overwrite test clones during refinement

2. Make the test_app

   ```
   $ cd ../test_app

   $ perl MakeFile.PL
   ```

3. Run and test the test_app

   ```
   # script/test_app_server.pl -p 8080

   http://localhost:8080
   ```

4. Go back to ../CLONEME_webservice and refine

Find Some Catalyst Newbies

And Get Them Started