



Subtle Magic: Moving to `Dancer2/DBIx::Class/TT`



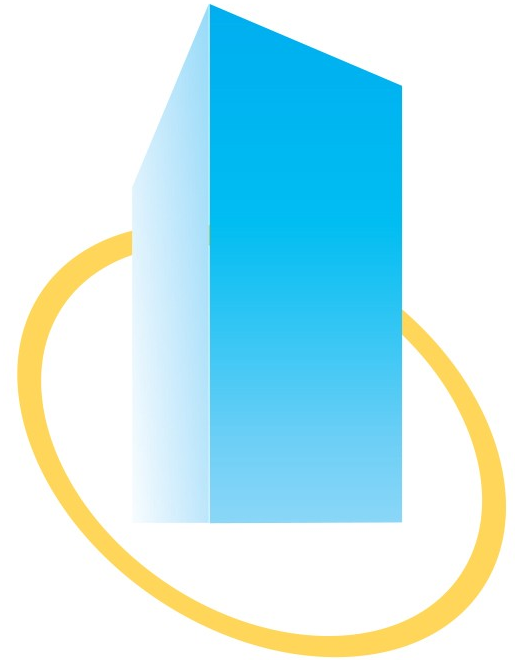
My Perl Journey

- Scripting/text wrangling for proprietary API
- Koha (CGI, DBI)
- cPanel & WHM(monolithic, massive, lots of home-rolled stuff)



Clearbuilt

- 20+ year old company, has always stayed small
- Lots of one-off applications
- Focused on business process automation, particularly for building trades and specialty manufacturing





“Full-Stack” of choice at Clearbuilt

- PostgreSQL
- DBIx::Class
- Dancer2
- Template Toolkit
- Nginx
- DevExtreme/jQuery



DBIx::Class

- (Mostly) Database-independent database-wrangling system
- Can CRUD complicated relational DB structures as coherent objects, output results in many formats as needed.
- Breathtakingly flexible and extensible
- “You're supposed to like SQL, but it makes it easy to metaprogram it” (mst)



Dancer2

- First and foremost, a routing engine for web applications
- Vast plugin infrastructure to make common tasks (authentication, database access, HTML templating, translation/localization, much more) easier
- Mixed applications (AJAX, REST-ey JSON apps, and/or HTML) are really easy to do



Template Toolkit

- Fast, flexible, extensible template processor
- Written in Perl
- Works for HTML, and can be used for PDFs and other types of documents, as well
- <http://template-toolkit.org/>



A little bitty demo app

D Ruth Holloway
Houston Perl Mongers
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Database design matters

- Don't end your table names with "s".
- Use 2NF/3NF design; you can use serial IDs as foreign keys, because they're handy, but you don't have to.
- Multiple-word table names: use underscores.
(like `order_line_item`)



DBIx::Class treachery

- There's an automagic tool for creating schema .pm files from a database: use it. We wrote a little script to do that quick-and-easy.
- Resultset names are the camel-case version of the table name: `OrderLineItem`
- `find()` and `search()` also fetch related objects, in the default behavior!



Accessing objects with DBIx::Class

- One-to-one relationships:

```
my $customer = $order->customer;
```

- One-to-many relationships:

```
my @line_items = $order->order_line_items;
```



fREW's Helpers

- <https://metacpan.org/release/DBIx-Class-Helpers>
- Some are pure syntactic sugar
- ResultSet formatting, RDBMS date handlers, random-row returns, exception-throwers, “explain” result-sets, and much more.



Template Toolkit data binding

- In Perl:

```
get '/customers' => sub {  
    my @customers=resultset('Customer')->search({});  
    template 'customer_list',  
    {  
        customers => \@customers,  
    };  
};
```



Template Toolkit data binding

- In views/customer_list.tt:

```
[% FOREACH customer IN customers %]
  <tr><td>[% customer.id %]</td>
    <td>[%customer.name %]</td>
    <td>[% IF customer.address %]
      [% customer.address.street %]<br>
      [% customer.address.city %],
      [% customer.address.state.abbreviation %]
      [% customer.address.zip_code %]
    [% END %]</td></tr>
```


So old-school



- Modern browsers are much more competent
- Wide variety of user environments & layout needs.
- Offload some of the work onto the user's browser



jQuery

- Feature-rich JavaScript library to simplify traversal of documents, event handling, animations, AJAX, and more
- Most-deployed JavaScript library on the Internet, by a wide margin
- <http://jquery.com/>

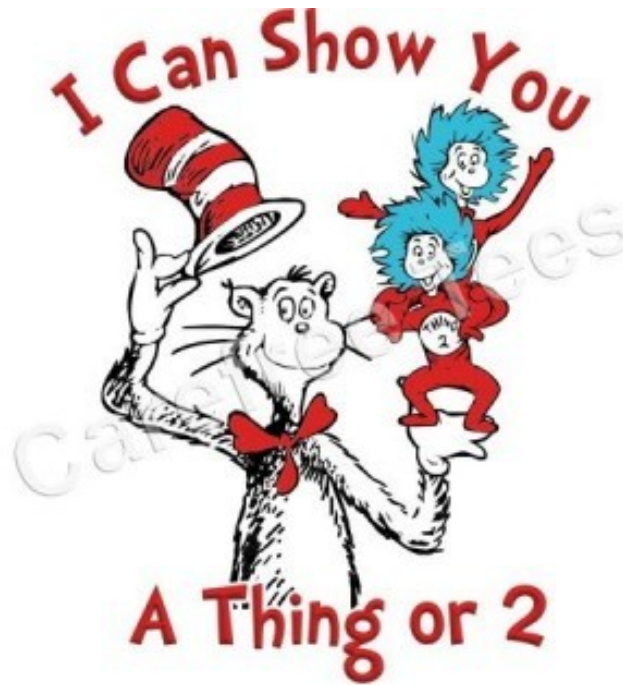


DevExtreme

- JavaScript component suite, providing data grids, charting, editing tools, maps, and more
- Integrates with jQuery, React, Vue, ASP.NET, Ionic, and more
- Proprietary, but free for use in open source projects
- <https://js.devexpress.com/>



Wanna see that?



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Hack on it for yourself!

<https://github.com/GeekRuthie/Subtle-Magic>

Thank you for your time!



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