



A framework for creating ambitious web Applications  
<http://emberjs.com>

# YEHUDA KATZ

- Tilde Inc
- Ember.js
- Jsonapi.org
- Ruby on Rails
- jQuery Project
- Strobe Inc.
- Engine Yard
- Google



# TOM DALE



- Tilde Inc.
- Apple Inc.
- Strobe Inc.



**GROUPON**

**NETFLIX**

Linked **in**

Travis CI

 Microsoft

zendesk

**twitch**

 DOCKYARD

**YAHOO!**

 elastic.io

 discourse New! 1.7

# MAIN CONCEPTS

- Routing
- Templates
- Components
- Controllers
- Models
- Store

# ROUTING

app/router.js

JS

```
1 Router.map(function() {  
2   this.route('about');  
3   this.route('favorites', { path: '/favs' });  
4 });
```

```
1 {{#link-to "index"}}<img class="logo">{{/link-to}}  
2  
3 <nav>  
4   {{#link-to "about"}}About{{/link-to}}  
5   {{#link-to "favorites"}}Favorites{{/link-to}}  
6 </nav>
```

HBS

# NESTED ROUTES

app/router.js

JS

```
1 Router.map(function() {  
2   this.route('posts', function() {  
3     this.route('favorites');  
4   });  
5 });
```

app/router.js

JS

```
1 Router.map(function(){  
2   this.route('index', { path: '/' });  
3   this.route('posts', function() {  
4     this.route('index', { path: '/' });  
5     this.route('favorites');  
6   });  
7 });
```



# DYNAMIC SEGMENTS AND ROUTES

app/router.js

JS

```
1 Router.map(function() {  
2   this.route('photo', { path: '/photos/:photo_id' });  
3 });
```

app/routes/photo.js

JS

```
1 import Ember from 'ember';  
2  
3 export default Ember.Route.extend({  
4   model(params) {  
5     return this.get('store').findRecord('photo', params.photo_id);  
6   }  
7 });
```



app/router.js

JS

```
1 Router.map(function() {  
2   this.route('photos');  
3 });
```

app/routes/photos.js

JS

```
1 import Ember from 'ember';  
2  
3 export default Ember.Route.extend({  
4   model() {  
5     return this.get('store').findAll('photo');  
6   }  
7 });
```

app/templates/photos.hbs

HBS

```
1 <h1>Photos</h1>  
2 {{#each model as |photo|}}  
3   <p>  
4     {{#link-to 'photo' photo.id}}  
5         
6     {{/link-to}}  
7   </p>  
8 {{/each}}
```

# SEVERAL MODELS IN ROUTE

app/routes/songs.js

JS

```
1 import Ember from 'ember';
2 import RSVP from 'rsvp';
3
4 export default Ember.Route.extend({
5   model() {
6     return RSVP.hash({
7       songs: this.get('store').findAll('song'),
8       albums: this.get('store').findAll('album')
9     });
10  }
11 });
```

app/templates/songs.hbs

HBS

```
1 <h1>Playlist</h1>
2
3 <ul>
4   {{#each model.songs as |song|}}
5     <li>{{song.name}} by {{song.artist}}</li>
6   {{/each}}
7 </ul>
8
9 <h1>Albums</h1>
10
11 <ul>
12   {{#each model.albums as |album|}}
13     <li>{{album.title}} by {{album.artist}}</li>
14   {{/each}}
15 </ul>
```

# ROUTES CALLBACKS

app/routes/posts.js

JS

```
1 import Ember from 'ember';
2
3 export default Ember.Route.extend({
4   afterModel(model, transition) {
5     if (model.get('length') === 1) {
6       this.transitionTo('post', model.get('firstObject'));
7     }
8   }
9 });
```

app/routes/index.js

JS

```
1 import Ember from 'ember';
2
3 export default Ember.Route.extend({
4   beforeModel(/* transition */) {
5     this.transitionTo('posts'); // Implicitly aborts the on-going t
6   }
7 });
```

# ROUTING SUBSTATES

Loading...

app/routes/slow-model.js

JS

```
1 import Ember from 'ember';
2
3 export default Ember.Route.extend({
4   model() {
5     return this.get('store').findAll('slow-model');
6   }
7 });
```

app/templates/loading.hbs (app/templates/photos/loading.hbs)

or app/templates/error.hbs (app/templates/photo/error.hbs)



# TEMPLATES HANDLEBARS

```
1 <div>
2   {{if isFast "zoooom" "putt-putt-putt"}}
3 </div>
```

HBS

```
1 <div class="is-car {{if isFast "zoooom" "putt-putt-putt"}}">
2 </div>
```

HBS

```
1 {{#if person}}
2   Welcome back, <b>{{person.firstName}} {{person.lastName}}</b>!
3 {{/if}}
```

HBS

```
1 {{#if person}}
2   Welcome back, <b>{{person.firstName}} {{person.lastName}}</b>!
3 {{else}}
4   Please log in.
5 {{/if}}
```

HBS

# TEMPLATES: HELPERS

```
7 // or products
8     this.set('categories', {
9         'Bourbons': ['Bulleit', 'Four Roses', 'Woodford Reserve'],
10        'Ryes': ['WhistlePig', 'High West']
11    });
```

/app/templates/components/store-categories.hbs

HBS

```
1  <ul>
2      {{#each-in categories as |category products|}}
3          <li>{{category}}
4              <ol>
5                  {{#each products as |product|}}
6                      <li>{{product}}</li>
7                  {{/each}}
8              </ol>
9          </li>
10      {{/each-in}}
11 </ul>
```

# TEMPLATES: HELPERS

app/helpers/sum.js

JS

```
1 import Ember from 'ember';
2
3 export function sum(params) {
4   return params.reduce((a, b) => {
5     return a + b;
6   });
7 };
8
9 export default Ember.Helper.helper(sum);
```

```
1 <p>Total: {{sum 1 2 3}}</p>
```

# COMPONENTS

```
1 ember generate component my-component-name
```

app/templates/components/blog-post.hbs

HBS

```
1 <article class="blog-post">
2   <h1>{{title}}</h1>
3   <p>{{yield}}</p>
4   <p>Edit title: {{input type="text" value=title}}</p>
5 </article>
```

app/templates/index.hbs

HBS

```
1 {{#each model as |post|}}
2   {{#blog-post title=post.title}}
3     {{post.body}}
4   {{/blog-post}}
5 {{/each}}
```



# COMPONENTS PARAMS

app/templates/index.hbs

HBS

```
1 {{#each model as |post|}}  
2   {{blog-post title=post.title body=post.body}}  
3 {{/each}}
```

```
1 {{blog-post title=title body=body}}
```

HBS

app/templates/components/blog-post.hbs

HBS

```
1 <h1>{{title}}</h1>  
2 <div class="body">{{body}}</div>
```

# DYNAMIC COMPONENTS

app/templates/index.hbs

HBS

```
1 {{#each model as |post|}}  
2   {{!-- either foo-component or bar-component --}}  
3   {{component post.componentName post=post}}  
4 {{/each}}
```

# COMPONENTS LIFECYCLE

## On Initial Render

- init
- didReceiveAttrs
- willRender
- didInsertElement
- didRender

## On Re-Render

- didUpdateAttrs
- didReceiveAttrs
- willUpdate
- willRender
- didUpdate
- didRender

## On Destroy

- willDestroyElement
- willClearRender
- didDestroyElement

# MODELS

app/models/person.js

JS

```
1 import DS from 'ember-data';
2
3 export default DS.Model.extend({
4   firstName: DS.attr('string'),
5   birthday: DS.attr('date')
6 });
```

app/models/order.js

JS

```
1 import DS from 'ember-data';
2 export default DS.Model.extend({
3   lineItems: DS.hasMany('line-item')
4 });
```

app/models/line-item.js

JS

```
1 import DS from 'ember-data';
2
3 export default DS.Model.extend({
4   order: DS.belongsTo('order')
5 });
```



# THE STORE AND A SINGLE SOURCE OF TRUTH



# JSON

```
1  {
2    "posts": {
3      "id": 5,
4      "title": "I'm Running to Reform the W3C's Tag",
5      "author": "Yehuda Katz",
6      "comments": [1, 2]
7    },
8    "comments": [{
9      "id": 1,
10     "author": "User 1",
11     "message": "First!",
12   }, {
13     "id": 2,
14     "author": "User 2",
15     "message": "Good Luck!",
16   }]
17 }
```

MOVE ON...