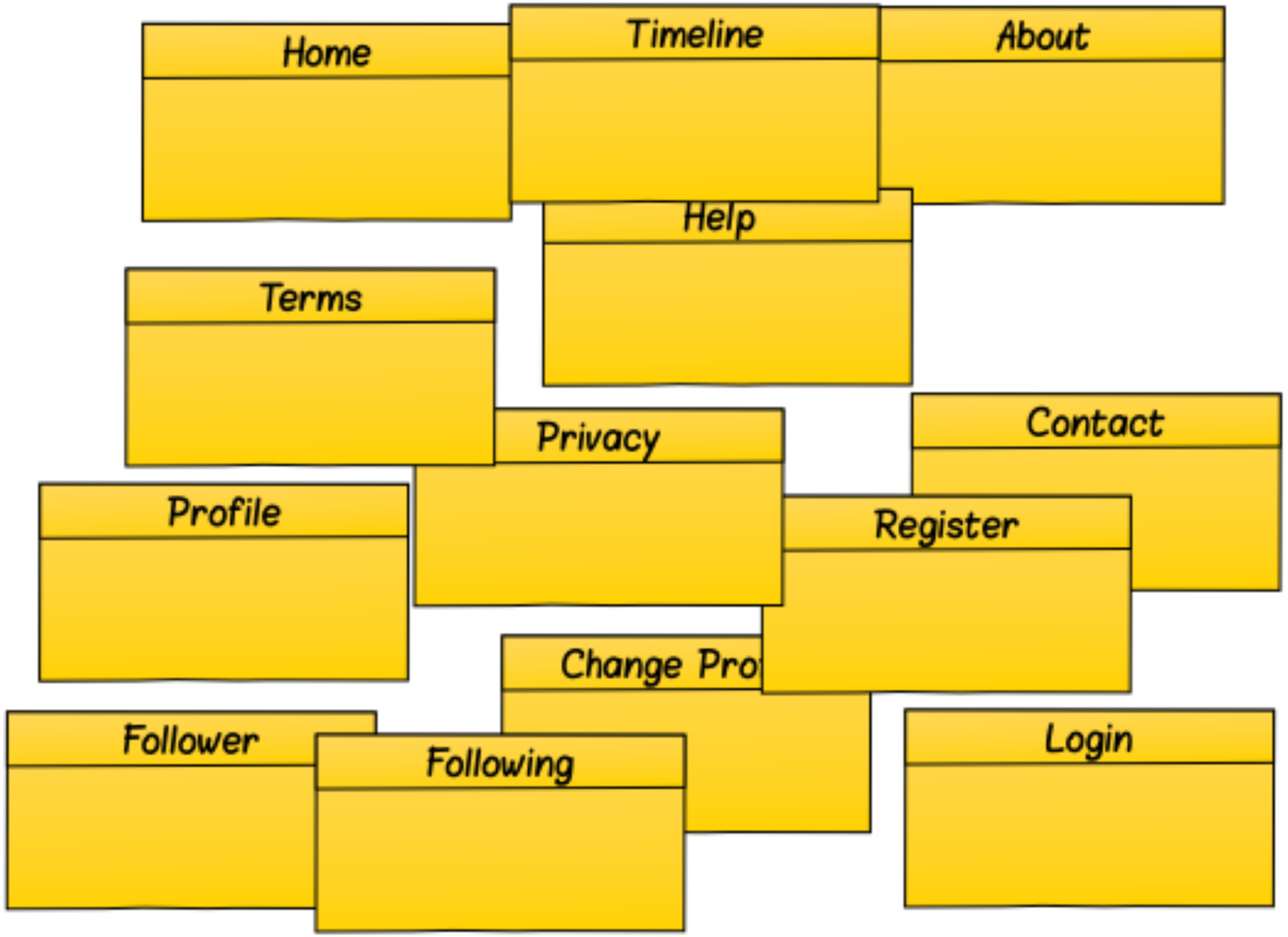
UI-ROUTER

“states” are the new “pages”


Home
Timeline
About
Help
Terms
Privacy
Contact
Profile
Register
Change Pro
Follower
Following
Login

NOT SINGLE PAGE APPLICATION

Server

Server

GET /

Server

GET /

index.html

Server

GET /

index.html

User clicks on link . . .

Server

GET /settings

index.html

Server

settings.html

index.html

GET /settings

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settings.html

GET /settings

NOT SINGLE PAGE APPLICATIONS

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- Views stored on the server, served up as HTML pages.

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- Views stored on the server, served up as HTML pages.
- When user goes to a new page, the browser navigates in totality, navigating, refreshing and retrieving a brand new HTML.
- Each page, since it is a new page, retrieves stylesheets, script files, etc.

SINGLE PAGE APPLICATION (SPA)

Server

Server

GET /

Server

GET /

index.html

Server

index.html

Server

index.html

User clicks on link . . .

Server

index.html

Instantiate settings state

Server

GET /user/1/settings

index.html

Instantiate settings state

Server

```
{
  “billingInfo”: {},
  “notifyMe”: true
}
```

GET /user/1/settings

index.html

Instantiate settings state

Server

```
{
  “billingInfo”: {},
  “notifyMe”: true
}
```

GET /user/1/settings

index.html

Instantiate settings state

SINGLE PAGE APPLICATIONS

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- On page change, a new page is not loaded. The front-end application replaces elements on existing DOM to update view.

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- On page change, a new page is not loaded. The front-end application replaces elements on existing DOM to update view.

- AJAX plays a big part to fill in data that would normally be served up by the server (think swig).

- Browser History API allows for control of URL and back/forward button, even though pages are not visited.


UI

WHAT IS UI-ROUTER?

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- Ties into URL and history to allow for easy navigation to and between different parts of your application.

WHAT IS UI-ROUTER?

- An Angular-specific tool for management of different views in a single page application.
- Ties into URL and history to allow for easy navigation to and between different parts of your application.
- Easily integrates nesting of views.

STATE = URL + VIEW + CONTROLLER

GETTING STARTED

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1.
```
# in project root
npm install --save angular-ui-router
```

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npm install --save angular-ui-router
```

2.
```
<!-- in index.html -->
...
<script src="/route/for/angular-ui-router.js"></script>
...
```

GETTING STARTED

1.
```
# in project root
npm install --save angular-ui-router
```

2.
```
<!-- in index.html -->
...
<script src="/route/for/angular-ui-router.js"></script>
...
```

3.
```
// in main app script
var theApp = angular.module('kittens', ['ui.router']);
```

CONFIGURING A STATE

```
// main app script
theApp.config(function ($stateProvider) {
  // registers a 'home' state for the url '/'
  $stateProvider.state('home', {
    url: '/',
    template: '<p>Best landing page ever</p>'
  });
});
```

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// main app script
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});
```

```
<!-- index.html -->
<html>
  <head>...</head>
  <body>
    <div>I am common to all state views</div>
    <ui-view></ui-view>
  </body>
</html>
```

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// main app script
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<html>
  <head>...</head>
  <body>
    <div>I am common to all state views</div>
    <ui-view></ui-view>
  </body>
</html>
```

when a user visits the ‘/‘ route, view loads as...

```
<html>
  <head>...</head>
  <body>
    <div>I am common to all state views</div>
    <ui-view>
      <p>Best landing page ever</p>
    </ui-view>
  </body>
</html>
```

TWO STATES

```
theApp.config(function ($stateProvider) {
  $stateProvider.state('home', {
    url: '/',
    template: '<p>Best landing page ever</p>'
  });
});

theApp.config(function ($stateProvider) {
  $stateProvider.state('contact', {
    url: '/about',
    template: '<p>Just shout really loudly</p>'
  });
});
```

TWO STATES

```
theApp.config(function ($stateProvider) {
  $stateProvider.state('home', {
    url: '/',
    template: '<p>Best landing page ever</p>'
  });
});

theApp.config(function ($stateProvider) {
  $stateProvider.state('contact', {
    url: '/about',
    template: '<p>Just shout really loudly</p>'
  });
});
```

```
<!-- index.html -->
...
<div>
  <p>I am common to all state views</p>
  <div>
    <!-- ui-sref allows us to link to another state -->
    <a ui-sref="home">Home</a>
    <a ui-sref="contact">Contact</a>
  </div>
</div>
<ui-view></ui-view>
...
```

TWO STATES

```
theApp.config(function ($stateProvider) {
  $stateProvider.state('home', {
    url: '/',
    template: '<p>Best landing page ever</p>'
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theApp.config(function ($stateProvider) {
  $stateProvider.state('contact', {
    url: '/about',
    template: '<p>Just shout really loudly</p>'
  });
});
```

```
<!-- index.html -->
...
<div>
  <p>I am common to all state views</p>
  <div>
    <!-- ui-sref allows us to link to another state -->
    <a ui-sref="home">Home</a>
    <a ui-sref="contact">Contact</a>
  </div>
</div>
<ui-view></ui-view>
...
```

user clicks first link

```
...
<ui-view>
  <p>Best landing page ever</p>
</ui-view>
...
```

user clicks second link

```
...
<ui-view>
  <p>Just shout really loudly</p>
</ui-view>
...
```

STATE CONTROLLER

```
theApp.config(function ($stateProvider) {
  $stateProvider.state('contact', {
    url: '/about',
    template: '<p>Just shout {{ adjective }} loudly</p>',
    controller: function ($scope) {
      $scope.adjective = 'really';
    }
  });
});
```

DYNAMIC STATE TRANSITION

```
theApp.config(function ($stateProvider) {
  $stateProvider.state('contact', {
    url: '/about',
    template: '<p>Just shout really loudly</p>',
    controller: function ($state) {
      setTimeout(function () {
        // $state.go allows us to trigger state change from javascript
        $state.go('home');
      }, 3000);
    }
  });
});
```

TEMPLATE URL

```
theApp.config(function ($stateProvider) {
  $stateProvider.state('gallery', {
    url: '/kittens',
    template: '<div ng-repeat="kitten in kittens"><p>{{ kitten.name }}</p></div>',
    controller: function ($scope, KittenFactory) {
      KittenFactory.fetchAll(function (kittens) {
        $scope.kittens = kittens;
      });
    }
  });
});
```

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    }
  });
});
```

```
<!-- kitten-gallery.html -->
<div ng-repeat="kitten in kittens">
  <p>{{ kitten.name }}</p>
</div>
```

TEMPLATE URL

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theApp.config(function ($stateProvider) {
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<!-- kitten-gallery.html -->
<div ng-repeat="kitten in kittens">
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theApp.config(function ($stateProvider) {
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    url: '/kittens',
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      KittenFactory.fetchAll(function (kittens) {
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      KittenFactory.fetchAll(function (kittens) {
        $scope.kittens = kittens;
      });
    }
  });
});
```

PARAMETERIZED STATES

register state

```
theApp.config(function ($stateProvider) {
  $stateProvider.state('detail', {
    // specifying a state parameter 'kittenId'
    url: '/kittens/:kittenId',
    template: '<img ng-src="kitten.photoURL">',
    controller: function ($scope, KittenFactory, $stateParams) {
      var theId = $stateParams.kittenId;
      KittenFactory.fetchById(theId, function (theKitten) {
        $scope.kitten = theKitten;
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    }
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```

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      KittenFactory.fetchById(theId, function (theKitten) {
        $scope.kitten = theKitten;
      });
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  });
});
```

create link to state in html

```
<a ui-sref="detail({kittenId: someKitten.id})"></a>
```

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    url: '/kittens/:kittenId',
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      var theId = $stateParams.kittenId;
      KittenFactory.fetchById(theId, function (theKitten) {
        $scope.kitten = theKitten;
      });
    }
  });
});
```

create link to state in html

```
<a ui-sref="detail({kittenId: someKitten.id})"></a>
```

transition to state in javascript

```
$state.go('detail', {kittenId: someKitten.id});
```

“PROBLEM”

currently at /kittens route

```
<html>
  <head>...</head>
  <body>
    <div>I am common to all state views</div>
    <ui-view>
      <div ng-repeat="kitten in kittens">
        <p>
          <a ui-sref="detail({kittenId: kitten.id})">
            {{ kitten.name }}
          </a>
        </p>
      </div>
    </ui-view>
  </body>
</html>
```

when user clicks on a kitten

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            {{ kitten.name }}
          </a>
        </p>
      </div>
    </ui-view>
  </body>
</html>
```

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   $stateProvider.state('detail', {
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      template: '<img ng-src="kitten.photoURL">',
      controller: function ($scope, KittenFactory, $stateParams) {
         var theId = $stateParams.kittenId;
         KittenFactory.fetchById(theId, function (theKitten) {
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         });
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          <a ui-sref="detail({kittenId: kitten.id})">
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        </p>
      </div>
    </ui-view>
  </body>
</html>
```

when user clicks on a kitten

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  <head>...</head>
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    <ui-view>
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when user clicks on a kitten

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Kitten list gets replaced by single image...

“PROBLEM”

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when user clicks on a kitten

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    <div>I am common to all state views</div>
    <ui-view>
      <img ng-src="kitten.photoURL">
    </ui-view>
  </body>
</html>
```

Kitten list gets replaced by single image...

Instead how could we show the image off to the right?

CHILD STATES

```
...
<ui-view>
  <div ng-repeat="kitten in kittens">
    <p>
      <a ui-sref="detail({kittenId: kitten.id})">
        {{ kitten.name }}
      </a>
    </p>
  </div>
</ui-view>
...
```

CHILD STATES

```
...
<ui-view>
  <div ng-repeat="kitten in kittens">
    <p>
      <a ui-sref="detail({kittenId: kitten.id})">
        {{ kitten.name }}
      </a>
    </p>
  </div>
  <div style="position:fixed; right:0;">
    <ui-view></ui-view>
  </div>
</ui-view>
...
```

CHILD STATES

```
...
<ui-view>
  <div ng-repeat="kitten in kittens">
    <p>
      <a ui-sref="detail({kittenId: kitten.id})">
        {{ kitten.name }}
      </a>
    </p>
  </div>
  <div style="position:fixed; right:0;">
    <ui-view></ui-view>
  </div>
</ui-view>
...
```

¡nested ui view!

CHILD STATES

```
theApp.config(function ($stateProvider) {
  $stateProvider.state('gallery', {...});
});
```

```
theApp.config(function ($stateProvider) {
  $stateProvider.state('detail', {...}});
});
```

CHILD STATES

```
theApp.config(function ($stateProvider) {
  $stateProvider.state('gallery', {...});
});
```

```
theApp.config(function ($stateProvider) {
  $stateProvider.state('gallery.detail', {...}});
});
```

CHILD STATES

```
theApp.config(function ($stateProvider) {
  $stateProvider.state('gallery', {...});
});
```

now detail is a child state of gallery

```
theApp.config(function ($stateProvider) {
  $stateProvider.state('gallery.detail', {...}});
});
```

“SOLUTION”

currently at /kittens route

```
...
<ui-view>
  <div ng-repeat="kitten in kittens">
    <p>
      <a ui-sref=“gallery.detail({kittenId: kitten.id})">
        {{ kitten.name }}
      </a>
    </p>
  </div>
  <div style="position:fixed; right:0;">
    <ui-view></ui-view>
  </div>
</ui-view>
...
```

when user clicks on a kitten

“SOLUTION”

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    <ui-view></ui-view>
  </div>
</ui-view>
...
```

when user clicks on a kitten

```
theApp.config(function ($stateProvider) {
   $stateProvider.state(‘gallery.detail', {
      url: '/:kittenId',
      template: '<img ng-src="kitten.photoURL">',
      controller: function ($scope, KittenFactory, $stateParams) {
         var theId = $stateParams.kittenId;
         KittenFactory.fetchById(theId, function (theKitten) {
            $scope.kitten = theKitten;
         });
      }
   });
});
```

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currently at /kittens route

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```

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- $state.go is a method that can trigger transition to a state
- states can be parameterized
- child states “nest” into parent’s ui-view directive
- all of this is FRONTEND ONLY
- ...er, except the templateUrl, which makes an HTTP req.

ANGULAR SUMMARY


Views
$scope
Controllers

views and controllers interact via the $scope

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Defined for a URL