Angular ngRoute and SPAs

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Angular and SPA

- Data binding: one-way and two-way
- MVC/MVVM/MVW framework support
- Views → Templates + Controller + Model
- Location and Routing

Role of Client and Server in SPA

- Server
  - Serves up data using REST API
  - Supplies the static HTML pages, Angular templates and resources
- Rendering of view is completely on the client-side
  - Templating and routing

Deep Linking

- Deep Linking: Hyperlink that specifies a link to a searchable or indexed piece of web content

- Example:

  hash

  http://www.conFusion.food/index.html#/menu/0

- Any change to the hash portion does not cause a page reload

The $location Service

- Exposes the current URL in the browser address bar:
  - Watch and observe the URL
  - Change the URL
- Synchronizes the URL with the browser when the user:
  - changes the address bar
  - clicks the back/forward buttons
  - Clicks on a link
- Allows you to manipulate the hash portion of a URL
  - url(): get/set the URL
  - path(): get/set the path
  - search(): get/set the search part
  - hash(): get/set the hash part

Routing

- Mapping the path portion of a URL to a handler for that particular route
  - Route is the hash portion of the URL in the context of SPAs
  - Example:

    http://www.conFusion.food/index.html#/menu/0

Angular ngRoute Module

- Installing the module:

  bower install angular-route –S

- Manages the interaction between the $location service and the rendered view

- Dependency injection into the module:

  angular.module('confusionApp', ['ngRoute'])

The $routeProvider

- Angular provider

- Enables mapping from the routes to handlers

- Handlers are an object that defines:
  - template URL
  - controller

$routeProvider Configuration

```
angular.module('confusionApp', ['ngRoute'])
.config(function($routeProvider) {
    $routeProvider
        .when('/contactus', { // route for the contactus page
            templateUrl : 'contactus.html', controller  : 'ContactController'
        })
        .when('/menu', { // route for the menu pag
            templateUrl : 'menu.html', controller  : 'MenuController'
        })
        .when('/menu/:id', { // route for the dish details pag
            templateUrl : 'dishdetail.html', controller  : 'DishDetailController'
        })
        .otherwise('/contactus');
    });
```

$routeParams

- menu.html:
  ```
  <div class="media-left media-middle">
      <a ng-href="#/menu/{{dish._id}}">
  ```
- DishDetailController:
  ```
  .controller('DishDetailController', ['$scope', '$routeParams',
      'menuFactory', function($scope, $routeParams, menuFactory) {
          var dish= menuFactory.getDish(parseInt($routeParams.id,10));
          $scope.dish = dish;
  }]);
  ```

The ngView Directive

- Directive that works together with $route service to include the rendered template of the current route into the main layout

- Usage:

  <div ng-view></div>

Exercise: Angular ngRoute and SPAs

- Design SPA using Angular support for SPA
- Use the ngRoute module to support SPA