Instructor No





AngularJS Angular JS Routing

Instructor Notes:

Add instructor notes here.

5.1: AngularJS Routing

Routing

- It is very important to navigate from one page view to another in single page application.
- We can achieve this by including multiple templates in the view using nginclude directive, but this will be unmanageable and also make it difficult to allow other developers to join in the development.
- We can break out the view into a layout and template views and only show the view which we want to show based upon the URL the user is accessing. Routing means loading sub-templates depending upon the URL of the page.
- Routes are a way for multiple views to be used within a single HTML page. This enables you page to look more "app-like" because users are not seeing page reloads happen within the browser.

Capgemini Public					
July 14, 2016	Proprietary and Confidential	-3-	capacitiii i abiic		

AngularJS Angular JS Routing

Instructor Notes:

Add instructor notes here.

5.1: AngularJS Routing

AngularJS Routes

- AngularJS routes enable us to create different URLs for different content in our application. Having different URLs for different content enables the user to bookmark URLs to specific content. In AngularJS each such bookmarkable URL is called a route.
- AngularJS routes enables us to show different content depending on what route is chosen. A route is specified in the URL after the # sign
 - http://igate.com/index.html#/training

July 14, 2016 Proprietary and Confidential - 4 -

Capgemini Public

Add instructor notes here.

5.1: AngularJS Routing

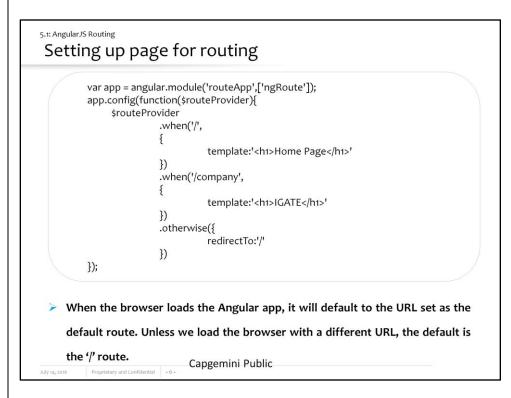
Setting up page for routing

- To setup a page for routing we need to follow the 4 steps given below
- AngularJS requires the route service, which is not part of the default Angular library. We need to load angular-route.js, as part of your script loading.
 - <script type="text/javascript" src="Scripts/angular-route.js"></script>
- We need to inject the route service in our app module
 - var app = angular.module('routeApp',['ngRoute']);
- Use ngView directive in the HTML tag(use div tag) to display the given route.
 - <div ng-view />
- Configure \$routeProvider in the module's config() function via calls to the when() and otherwise() functions.

Capgemini Public

July 14, 2016 Proprietary and Confidential -5 -

Add instructor notes here.

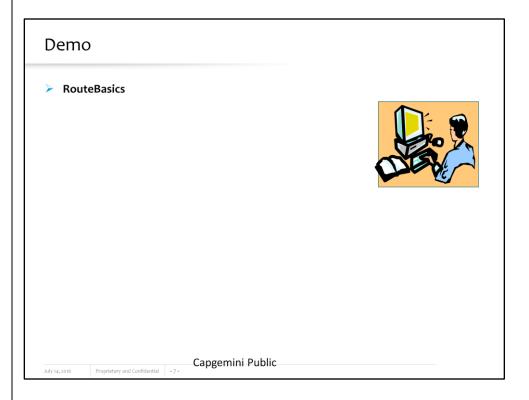


If the redirectTo property is set with a string, then the value will change the path and trigger a route change to the new path.

If the redirectTo property is set with a function, the result of the function will be set as the value of the new path, triggering a route-change request.

If the redirectTo property is a function, Angular will call it with one of the following parameters:

- 1: The route parameters extracted from the current path
- 2: The current path
- 3: The current search



Add instructor notes here.

5.1: AngularJS Routing

Routing Modes

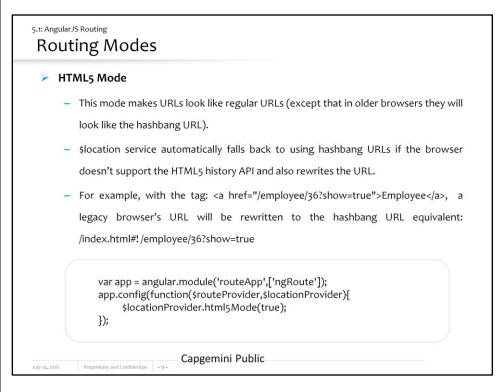
- Routing mode refers specifically to the format of the URL in the browser address bar. It determines the look of the URL. AngularJS has 2 routing modes
- Hashbang Mode
 - The default behavior of the \$location service is to route using the hashbang mode. It provides deep-linking capabilities to Angular apps. URL paths take a prepended '#' character. We can configure hashbang mode in the config function on an app module. We can also configure the hashPrefix, which is part of the fallback mechanism that Angular uses for older browsers.

July 14, 2016

Proprietary and Confidential - 8 -

Capgemini Public

Add instructor notes here.



The back-end server will have to support URL rewriting on the server side. To support HTML5 mode, the server will have to make sure to deliver the index.html page for all apps. That ensures that our Angular app will handle the route.

When writing links inside of our Angular app in html5mode, we'll never want to use relative links. If you are serving your app using the root, it won't be a problem; however, if you are serving in any other base route, our Angular app won't be able to handle it.

Alternatively, you can set the base URL of your app using the <base> tag in the HEAD section of the HTML document: <base href="/base/url"/>

Add instructor notes here.

Soute Parameters

AngularJS will parse a route param with a colon (:) and pass it to strouteParams.

Var app = angular.module('routeApp',['ngRoute']); app.config(function(\$routeProvider){
 \$routeProvider
 .when('/Employees/:id',
 {
 templateUrl:'partials/employees.html',
 controller:'EmployeeController'
 });
});

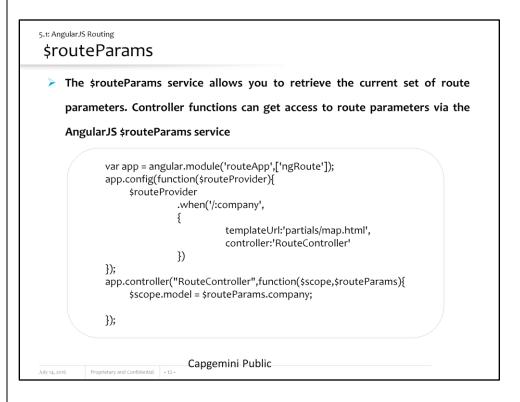
Angular will populate the \$routeParams with the key of :id, and the value of key will be populated with the value of the loaded URL. If the browser loads

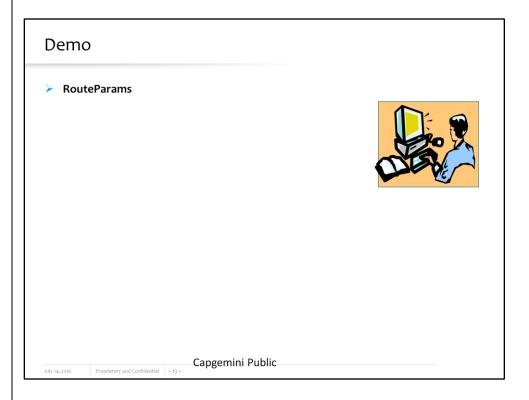
Angular will populate the srouteParams with the key of :id, and the value of key will be populated with the value of the loaded URL. If the browser loads the URL /Employees/714709, then the \$routeParams object will look like: {id:714709}

July 14, 2016 Proprietary and Confidential - 10 -

Capgemini Public

```
5.1: AngularJS Routing
 Route Parameters
     Parameter samples
      - '/igate' : Matches exactly igate
      - '/employee/:id': Matches employee /714709, employee /desigan
  We can also specify parameters as query parameters following a '?'
      - '/employee/:id': Matches employee /714709?department=training&company=IGATE
             var app = angular.module('routeApp',['ngRoute']);
             app.config(function($routeProvider){
                  $routeProvider .when('/employee/:id',
                            redirectTo:function(routeParams,path,search){
                              console.log(routeParams); // Object {id: "714709"}
                               console.log(path);
                                                        // /employee/714709
                              // Object {department: "training", company: "IGATE"}
         console.log(search);
                                return "/";
                  })
             });
                               Capgemini Public
          Proprietary and Confidential - 11 -
```





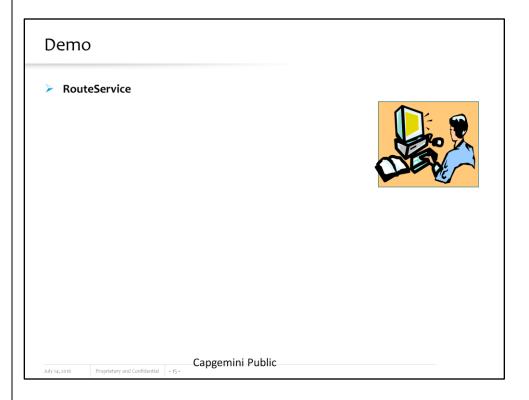
Add instructor notes here.

5.1: AngularJS Routing

\$route

- \$route service is used for deep-linking URLs to controllers and views (HTML partials).
- It watches \$location.url() and tries to map the path to an existing route definition.
- Using route service in the controller, we can access
 - custom property defined in routing (\$route.current.propertyName)
 - URL of the template(\$route.current.templateUrl)
 - contents of the template(\$route.current.locals.\$template)
 - route parameters(\$route.current.pathParams)
 - query string passed in URL (\$route.current.params)
- We can reload the partial page using \$route.reload()

July 14, 2016 Proprietary and Confidential - 14 -



Add instructor notes here.

5.1: AngularJS Routing

\$location service

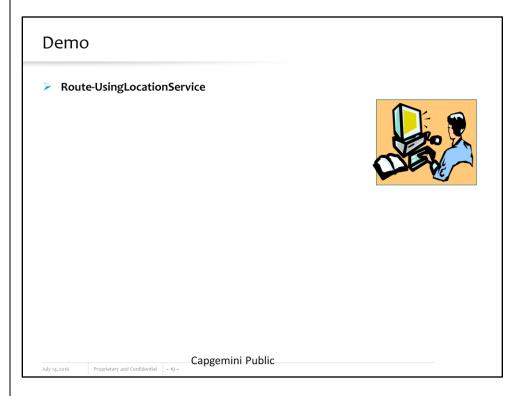
- \$location service parses the URL in the browser address bar and makes the URL available to the application. The route parameters are a combination of \$location's search() and path()
- Route service watches \$location.url() and tries to map the path to an existing route definition.
- \$location service is used when application needs to react to a change in the current URL or there is a need to change the current URL in the browser.

July 14, 2016 Proprietary and Confidential

Capgemini Public

The \$location service:

- 1. Exposes the current URL in the browser address bar, so you can
 - Watch and observe the URL.
 - Change the URL.
- 2. Synchronizes the URL with the browser when the user
 - Changes the address bar.
 - Clicks the back or forward button (or clicks a History link).
 - Clicks on a link.
- 3. Represents the URL object as a set of methods (protocol, host, port, path, search, hash).



Add instructor notes here.

5.1: AngularJS Routing

Route Events

- > \$route service fires events at different stages of the routing flow. We can set up event listeners for these different routing events and react.
- > It is useful when we want to manipulate events based upon routes and is particularly useful for detecting when users are logged in and authenticated.
- Using \$rootScope, we can set up an event listener to listen for routing events.
- \$routeChangeStart
 - Angular broadcasts \$routeChangeStart before the route changes. This step is where
 the route services begin to resolve all of the dependencies necessary for the route
 change to happen and where templates and the resolve keys are resolved.
 - The \$routeChangeStart event fires with two parameters:
 - · The next URL to which we are attempting to navigate
 - · The URL that we are on before the route change

July 14, 2016 Proprietary and Confidential -20 -

Add instructor notes here.

5.1: AngularJS Routing

Route Events

\$routeChangeSuccess

- Angular broadcasts the \$routeChangeSuccess event after the route dependencies have been resolved.
- The \$routeChangeSuccess event fires with three parameters:
 - · The raw Angular evt object
 - · The route where the user currently is
 - The previous route (or undefined if the current route is the first route)

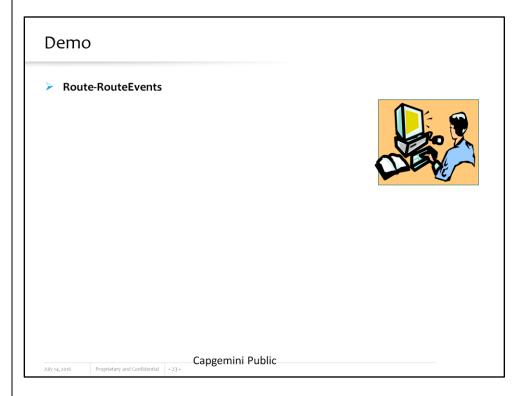
\$routeChangeError

- Angular broadcasts the \$routeChangeError event if any of the promises are rejected or fail.
- The \$routeChangeError event fires with three parameters:
 - · The current route information
 - · The previous route information

• The rejection promise error Capgemini Public July 14, 2016

Add instructor notes here.

5.1: AngularJS Routing **Route Events** \$routeUpdate Angular broadcasts the \$routeUpdate event if the reloadOnSearch property has been set to false and we're reusing the same instance of a controller. angular.module('myApp',[]) .run(['\$rootScope', '\$location', function(\$rootScope, \$location) { \$rootScope.\$on('\$routeChangeStart', function(evt, next, current) { }) }]) angular.module('myApp',[]) .run(['\$rootScope', '\$location', function(\$rootScope, \$location) { \$rootScope.\$on('\$routeChangeSuccess', function(evt, next, previous) { }) }]) angular.module('myApp',[]) .run(['\$rootScope', '\$location', function(\$rootScope, \$location) { \$rootScope.\$on('\$routeChangeError', function(current, previous, rejection) { }) }]) Capgemini Public Proprietary and Confidential - 22 -



Add instructor notes here.

Summary

- \$routeProvider service use to create routes.
- otherwise \$routeProvider function allows us to set a default route.
- Using \$routeParams service we can access the parameters passed on a route.
- \$route.reload() allows us to refresh a view without refreshing the entire app.
- We can enable HTML5 routing using \$locationProvider service \$locationProvider.html5Mode(true), but it requires server-side configuration.
- resolve route property allows us to delay loading a view until the data which needs to get render is loaded.

July 14, 2016 Proprietary and Confidential - 24 -

Add the notes here.



Add instructor notes here.

Summary

- We can navigate to a new view from the code using \$location.url('newUrl').
- \$location.search() gives us the access to the query string parameters on the URL.



July 14, 2016 Proprietary and Confidential

Capgemini Public

Add the notes here.