Internet Programming

AngularJS - Lab 3

Dept. of Software and Information Systems Engineering

By Shir Frumerman Based on Hasidi Netanel slides

Some Notes

- Head Controller in index.html
- Different inputs with ng-repeats
- Developer Tool

- If a controller needs to store some state for the entire application, it should be stored
  in a service, and not $rootScope. Never $rootScope.

Services - Why?

- Controllers:
  - instances that get created and destroyed as we navigate across our application
  - one controller cannot directly communicate with another controller to share state or behavior

Services

- AngularJS services are functions or objects that can hold behavior across our application
- Each AngularJS service is instantiated only once (so each part of our application gets access to the same instance of the AngularJS service) - Singeltons

Services vs. Controllers

- Controllers responsible to control the presentation logic and handle user interaction.
- Services responsible to perform global and more big functionality.

Controllers	Services
Presentation logic	Business logic
Directly linked to a view	Independent of views
Drives the UI	Drives the application
One-off, specific	Reusable
Responsible for decisions like what data to fetch, what data to show, how to handle user interactions, and styling and display of UI	Responsible for making server calls, common validation logic, application-level stores, and reusable business logic

Built-in Services

- AngularJS prefixes all the services that are provided by the AngularJS library with the '$' sign

- Examples:
  - $scope
  - $rootScope

  - $location – $location.path() for hashbang url
    Allows us to interact with the URL in the browser bar, and get and manipulate its value

  - $http
    Make requests to the server from the application

$http Service

```
$http.get("someUrl")
    .then(function (response) {
        //First function handles success
        self.content = response.data;
    }, function (response) {
        //Second function handles error
        self.content = "Something went wrong";
    });
```

```
$http.post(serverUrl + "Users/", user)
    .then(function (response) {
        //First function handles success
        self.signUp.content = response.data;
    }, function (response) {
        //Second function handles error
        self.signUp.content = "Something went wrong";
    });
```

Services (Custom)

- We can create our own services
- Holds :
  - *It needs to be reusable-*
    More than one controller or service will need to access the particular function that is being implemented.
  - *Application-level state*
    Controllers get created and destroyed. If we need state stored across our application, it belongs in a service.
  - *It is independent of the view*
    If what we are implementing is not directly linked to a view, it probably belongs in a service.

Services (Custom)- Example

Services (Custom)- Example

```
.controller('serviceController', ['$location', '$http', 'setHeadersToken', function ($location, $http, setHeadersToken) {


    self = this;

    self.directToPOI = function () {
        $location.path('/poi')
    }

    let serverUrl = 'http://localhost:8080/'

    self.login = function () {
        // register user
        $http.post(serverUrl + "Users/login", user)
            .then(function (response) {
                //First function handles success
                self.login.content = response.data.token;
                setHeadersToken.set(self.login.content)

            }, function (response) {
                //Second function handles error
                self.login.content = "Something went wrong";
            });
    }
```

We inject the service in order to use it

Use the service funcionality

Local-Storage Service

- Allows us to save data within the browser.
- Save data objects in json format.
- Save cookies.
- Load previous session data when the app starts.

Local-Storage Service

- Local-Storage service is not part of the core angular module, so we need to download it:
  npm and add in the index.html file:
  <script src="node_modules/angular-local-storage/dist/angular-local-storage.min.js"></script>

- Using the module:

```
var app = angular.module("myApp",['LocalStorageModule']);
```

- Inject the service wherever we want to use it (controller, custom service).

```
angular.module("myApp")
    .controller('StorageExampleController', ['localStorageService','$window', function (localStorageService, $window)
```

Local-Storage Service (Methods)

- Gets a value by key from the local storage

  localStorageService.get(key)
- Add key-value pair to the local storage

  localStorageService.set(key,value)
- Get an array of current stored keys

  localStorageService.keys()
- Remove an item by key

  localStorageService.remove(key)
- Remove all the items for this app

  localStorageService.clearAll()

Any Questions?

And I'll come shortly..