Exercise (Instructions): Angular Factory and Service

Objectives and Outcomes

In this exercise you will explore dependency injection in Angular. You will also learn about designing custom services using the factory and the service approaches. At the end of this exercise, you will be able to:

* Use dependency injection to enable the use of custom services in Angular modules and controllers

* Design custom services using the Angular factory and service approaches

Creating controllers.js and services.js

* In the *scripts* sub-folder of the *app* folder, create two new files named *controllers.js* and *services.js*.

* Open *app.js* and copy the entire code there and copy it into *controllers.js*.

* Next, we will edit the code as follows. Remove the square brackets from the angular.module( ), so that it us updated as shown below:

```
angular.module('confusionApp')
```

* Next, go to *app.js* and delete all the controller code from it, so that your *app.js* file will contain only the following code:

```
'use strict';

angular.module('confusionApp', []);
```

* Next, open *menu.html* and at then include *controller.js* and *services.js* using <script> tag.

```
<script src="scripts/controllers.js"></script>
<script src="scripts/services.js"></script>
```

* Open services.js and add the following code:

```
'use strict';

angular.module('confusionApp')
        .factory('menuFactory', function() {
```

```
        });
```

- Next, add the following JavaScript array into the factory code above:

```
            var dishes=[
                        {
                         name:'Uthapizza',
                         image: 'images/uthapizza.png',
                         category: 'mains',
                          label:'Hot',
                         price:'4.99',
                         description:'A unique combination of Indian Uthappam (pancake)
and Italian pizza, topped with Cerignola olives, ripe vine cherry tomatoes, Vidalia onion
, Guntur chillies and Buffalo Paneer.',
                          comments: [
                              {
                                  rating:5,
                                  comment:"Imagine all the eatables, living in conFusion
!",
                                  author:"John Lemon",
                                  date:"2012-10-16T17:57:28.556094Z"
                              },
                              {
                                  rating:4,
                                  comment:"Sends anyone to heaven, I wish I could get my
mother-in-law to eat it!",
                                  author:"Paul McVites",
                                  date:"2014-09-05T17:57:28.556094Z"
                              },
                              {
                                  rating:3,
                                  comment:"Eat it, just eat it!",
                                  author:"Michael Jaikishan",
                                  date:"2015-02-13T17:57:28.556094Z"
                              },
                              {
                                  rating:4,
                                  comment:"Ultimate, Reaching for the stars!",
                                  author:"Ringo Starry",
```

```
                                                date:"2013-12-02T17:57:28.556094Z"
                                          },
                                          {
                                                rating:2,
                                                comment:"It's your birthday, we're gonna party!",
                                                author:"25 Cent",
                                                date:"2011-12-02T17:57:28.556094Z"
                                          }
]
                              },
                              {
                                name:'Zucchipakoda',
                                 image: 'images/zucchipakoda.png',
                                category: 'appetizer',
                                 label:'',
                                price:'1.99',
                                description:'Deep fried Zucchini coated with mildly spiced Chic
kpea flour batter accompanied with a sweet-tangy tamarind sauce',
                                comments: [
                                          {
                                                rating:5,
                                                comment:"Imagine all the eatables, living in conFusion
!",
                                                author:"John Lemon",
                                                date:"2012-10-16T17:57:28.556094Z"
                                          },
                                          {
                                                rating:4,
                                                comment:"Sends anyone to heaven, I wish I could get my
mother-in-law to eat it!",
                                                author:"Paul McVites",
                                                date:"2014-09-05T17:57:28.556094Z"
                                          },
                                          {
                                                rating:3,
                                                comment:"Eat it, just eat it!",
                                                author:"Michael Jaikishan",
                                                date:"2015-02-13T17:57:28.556094Z"
                                          },
```

```
                                {
                                        rating:4,
                                        comment:"Ultimate, Reaching for the stars!",
                                        author:"Ringo Starry",
                                        date:"2013-12-02T17:57:28.556094Z"
                                },
                                {
                                        rating:2,
                                        comment:"It's your birthday, we're gonna party!",
                                        author:"25 Cent",
                                        date:"2011-12-02T17:57:28.556094Z"
                                }
                        ]
                },
                {
                    name:'Vadonut',
                     image: 'images/vadonut.png',
                    category: 'appetizer',
                     label:'New',
                    price:'1.99',
                    description:'A quintessential ConFusion experience, is it a vad
a or is it a donut?',
                     comments: [
                                {
                                        rating:5,
                                        comment:"Imagine all the eatables, living in conFusion
!",
                                        author:"John Lemon",
                                        date:"2012-10-16T17:57:28.556094Z"
                                },
                                {
                                        rating:4,
                                        comment:"Sends anyone to heaven, I wish I could get my
mother-in-law to eat it!",
                                        author:"Paul McVites",
                                        date:"2014-09-05T17:57:28.556094Z"
                                },
                                {
                                        rating:3,
```

```
                            comment:"Eat it, just eat it!",
                            author:"Michael Jaikishan",
                            date:"2015-02-13T17:57:28.556094Z"
                        },
                        {
                            rating:4,
                            comment:"Ultimate, Reaching for the stars!",
                            author:"Ringo Starry",
                            date:"2013-12-02T17:57:28.556094Z"
                        },
                        {
                            rating:2,
                            comment:"It's your birthday, we're gonna party!",
                            author:"25 Cent",
                            date:"2011-12-02T17:57:28.556094Z"
                        }
                                        ]
                },
                {
                    name:'ElaiCheese Cake',
                     image: 'images/elaicheesecake.png',
                    category: 'dessert',
                     label:'',
                    price:'2.99',
                    description:'A delectable, semi-sweet New York Style Cheese Cak
e, with Graham cracker crust and spiced with Indian cardamoms',
                     comments: [
                        {
                            rating:5,
                            comment:"Imagine all the eatables, living in conFusion
!",
                            author:"John Lemon",
                            date:"2012-10-16T17:57:28.556094Z"
                        },
                        {
                            rating:4,
                            comment:"Sends anyone to heaven, I wish I could get my
mother-in-law to eat it!",
```

```
                                author:"Paul McVites",
                                date:"2014-09-05T17:57:28.556094Z"
                            },
                            {
                                rating:3,
                                comment:"Eat it, just eat it!",
                                author:"Michael Jaikishan",
                                date:"2015-02-13T17:57:28.556094Z"
                            },
                            {
                                rating:4,
                                comment:"Ultimate, Reaching for the stars!",
                                author:"Ringo Starry",
                                date:"2013-12-02T17:57:28.556094Z"
                            },
                            {
                                rating:2,
                                comment:"It's your birthday, we're gonna party!",
                                author:"25 Cent",
                                date:"2011-12-02T17:57:28.556094Z"
                            }
]
                    }
                    ];
```

- Next, introduce an empty JavaScript object into the factory as follows:

```
        var menufac = {};
```

- Finally, add the following code to the factory to define the function and return the object:

```
        menufac.getDishes = function(){
                        return dishes;
                    };
            menufac.getDish = function (index) {
                        return dishes[index];
            };
```

```
            return menufac;
```

- Now, open *controllers.js* and then from the *MenuController* delete the dishes object. Then, add the following statement in its place:

```
        $scope.dishes= menuFactory.getDishes();
```

- Now we do dependency injection to introduce the *menuFactory* service into *MenuController*:

```
        .controller('MenuController', ['$scope', 'menuFactory', function($scope, menuFact
ory) {
```

- Next, we move to the DishDetailController and remove the dish object from it and replace it with the following:

```
        $scope.dish= menuFactory.getDish(3);
```

- Then, we do dependency injection into the DishDetailController as follows

```
        .controller('DishDetailController', ['$scope', 'menuFactory', function($scope, me
nuFactory) {
```

- After saving the changes, move to dishdetail.html and add in the following code to include the JS files:

```
    <script src="scripts/controllers.js"></script>
    <script src="scripts/services.js"></script>
```

Using Service instead of Factory

- Go to services.js and remove the following two statements from the code:

```
        var menufac = {};



        . . .



        return menufac;
```

- Then change the function code as follows, replacing *menufac* with *this*:

```
            this.getDishes = function(){
                        return dishes;
```

```
                                };
              this.getDish = function (index) {

                                return dishes[index];


         };

```

- Then, change the *factory* to *service* as follows:

```
      .service('menuFactory', function() {
```

- Save the changes and see the result.

Conclusions

In this exercise we explored dependency injection and the use of Angular services and defining custom services using the factory or the service approach.