# Integrated Mobile Applications Development

# Lab 4 AngularJS Expressions, Built-in Directives

## Part 1 - Expressions

1. Write an AngularJS application that outputs the result of the following expressions:
   * 1 + 3
   * “asdf” + 7
   * “Hello “ + “there”
   * 10 \* 3
   * The length of your name
   * The 2nd element of the following array: ['a','b','c','d','e']

### Answer

HTML

<body ng-app="myApp">

{{ 1 + 3 }}

<br>{{ "asdf" + 7 }}

<br>{{ "Hello " + "there" }}

<br>{{ 10 \* 3 }}

<br>{{ "gerard".length }}

<br>{{ ['a','b','c','d','e'][1] }}

</body>

JS

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

## Part 2 – Built-in Directives

1. Write an Angular JS application that uses ng-init to initialise a variable to the string “Hello” and print out the variable.

### Answer

HTML

<body ng-app="myApp">

<div ng-init="x='Hello'">

{{ x }}

</div>

</body>

JS

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

1. Write an Angular JS application that uses ng-init to initialise a variable to 100 and print out the value of that variable + 20.

### Answer

HTML

<body ng-app="myApp">

<div ng-init="x=100">

{{ x + 20 }}

</div>

</body>

JS

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

1. Write an Angular JS application that allows a user to enter his/her name and then outputs Hello Name as follows:



The initial value in the input box should be: “Enter your Name”.

### Answer

HTML

<body ng-app="myApp">

<div ng-init="firstName='Enter Your Name'">

<input type="text" ng-model="firstName">

<br>Hello {{ firstName }}

</div>

</body>

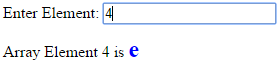
JS

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

1. Write an Angular JS application that has an array of the following values 'a','b','c','d','e','f'; and an input field that allows the user to input an array element.

When the array element is input the corresponding array element is automatically shown.

The default array element shown is element 0.



### Answer

HTML

<body ng-app="myApp">

<div ng-init="myArr = ['a','b','c','d','e','f']; element=0">

Enter Element: <input type="text" ng-model="element">

<br>Array Element {{ element }} is <span>{{ myArr[element] }}<span>

</div>

</body>

JS

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

CSS

span {

color: blue;

font-weight: bold;

font-size: 150%;

}

1. Write an Angular JS application that has an array consisting of the months of the year and displays each one.

### Answer

HTML

<body ng-app="myApp">

<div ng-init="months=['Jan','Feb','Mar','Apr','May','Jun','Jul','Aug','Sept','Oct','Nov','Dec']">

<div ng-repeat="month in months">

{{ month }}

</div>

</div>

</body>

JS

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

1. Write an Angular JS application that has an array consisting of the months of the year and an input field that asks the user to enter the month number he/she was born in (Jan=1, … Dec=12).

When the month number is input the month name is automatically shown.

The default month is January.



### Answer

HTML

<body ng-app="myApp">

<div ng-init="months=['Jan','Feb','Mar','Apr','May','Jun','Jul','Aug','Sept','Oct','Nov','Dec']; thisMonth=1">

<div>

What Month Number were you born in? <input ng-model="thisMonth">

<br>That Month was {{ months[thisMonth-1] }}

</div>

</div>

</body>

JS

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

## Part 3 – Custom Directives

1. Write an AngularJS application that includes the following HTML:

<my-first-directive></my-first-directive>

and looks as follows:

#### This is My First Directive

(The text above should be in a h4 element).

Write the custom AngularJS directive to achieve this.

### Answer

HTML

<body ng-app="myApp">

<my-first-directive></my-first-directive>

</body>

JS

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

app.directive("myFirstDirective", function() {

return {

template: "<h4>This is My First Directive</h4>",

}

});

1. Given the following HTML code:

<body ng-app="myApp">

<my-gmit></my-gmit>

<gmit-science></gmit-science>

<div science-courses></div>

<ul>

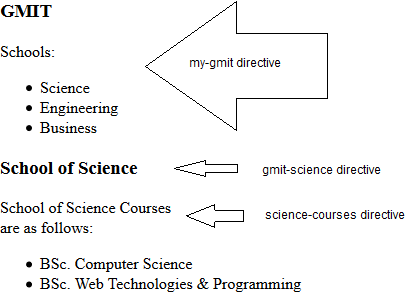
<li>BSc. Computer Science</li>

<li>BSc. Web Technologies & Programming</li>

</ul>

</body>

Write the AngularJS directives so that when displayed, the above webpage looks as follows:



Test this on Firefox, as it won’t work on Chrome or Edge.

### Answer

HTML - gmit-template.html

<h3>GMIT</h3>

Schools:

<ul>

<li>Science</li>

<li>Engineering</li>

<li>Business</li>

</ul>

HTML - gmit-science-template.html

<h3>School of Science</h3>

HTML - science-courses-template.html

<div>School of Science Courses

<br>are as follows:</div>

JS

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

app.directive("myGmit", function() {

return {

restrict: 'E',

templateUrl: 'templates/gmit-template.html'

}

});

app.directive("gmitScience", function() {

return {

restrict: 'E',

templateUrl: 'templates/gmit-science-template.html'

}

});

app.directive("scienceCourses", function() {

return {

restrict: 'A',

templateUrl: 'templates/science-courses-template.html'

}

});