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']

```
<html>
 <head>
  <script
src="https://ajax.googleapis.com/ajax/libs/angularjs/1.4.5/angular.min.js"><
/script>
 </head>

 <body ng-app="myApp">
    {{ 1 + 3 }}<br>
    {{"asdf" + 7}}<br>
    {{"Hello" + "there"}}<br>
    {{10*3}}<br>
    The Length of your name is: {{"james".length}}<br>
    {{ x =['a','b','c','d','e']}}<br>
    The 2nd element is {{ x[1]}}
 </body>
</html>
```

..... js .....

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

Part 2 – Built-in Directives

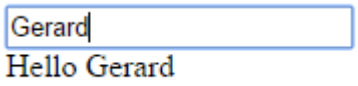
2. Write an Angular JS application that uses `ng-init` to initialise a variable to the string “Hello” and print out the variable.

```
<body ng-app="myApp">
  <div ng-init="x='Hello'">
   String: {{ x }}<br>
  </div>
 </body>
```

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

```
<div ng-init="x='Hello'; qty=100">
    String: {{ x }}<br>
    number: {{ qty+20}}
  </div>
```

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



Hello Gerard

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

```
<div>
    <input type="text" ng-model=x placeholder="Enter your name:"></input><br>
  hello {{x}}
  </div>
```

5. 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.

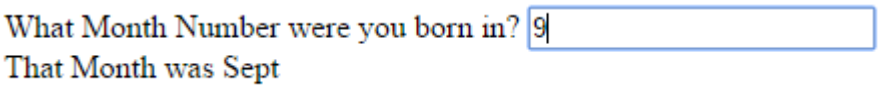
Array Element 4 is **e**

```
<div>
 Enter Element:
 <input type="text" ng-model="y">
 </div>
 <div>
 {{ x=["a","b","c","d","e","f"] }}
 Array Element {{y}} is {{ x[y] }}
 </div>
```

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

```
<body ng-app="myApp" ng-
init="x=['Jan','Feb','Mar','Apr','May','Jun','Jul','Aug','Sep','Oct','Nov','Dec']">
 <h4>
 Display months:
</h4>
 <div ng-repeat = "month in x">
 {{month}}
 </div>
</body>
```

7. 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.



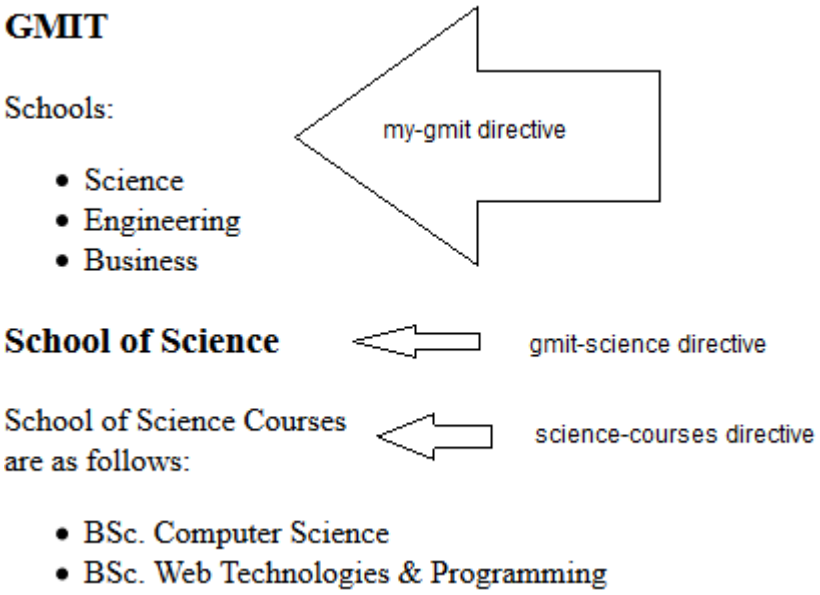

```
<body ng-app="myApp" ng-
init="x=['Jan','Feb','Mar','Apr','May','Jun','Jul','Aug','Sep','Oct','Nov','Dec']">
  What month number were you born in?
 <input type="number" ng-model="y" ng-init="y=1"></input>
 <br>
 That month was {{x[y-1]}}
 </body>
```

Part 3 – Custom Directives

8. 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.

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

app.directive("myGmit", function() {
 return {
  template:
"<h3>GMIT</h3><ul>Schools:<li>Science</li><li>Engineering</li><li>Business</li></
ul>",
 }
});
```

```
app.directive("gmitScience", function() {
  return {
    template: "<h3>School of Science</h3>",
  }
});

app.directive("scienceCourses", function() {
  return {
    template: "<p>School of Science Courses are as follows:</p>",
  }
});
```