**Module 3.1: Laboratory Exercises**

Estimated Time: 30 Minutes

**Exercise 1: Setting the Development Environment.**

#### Task 1: Setting up the development environment.

1. In the start menu click in **Node.js command prompt.**
2. In the **NodeJs command prompt** navigate to **D:\ITLCANGULAR\MOD3.1\Starter\Exercise 1,** by entering

**> D:**

**> cd ITLCANGULAR\MOD3.1\Starter\Exercise1**

1. In the **NodeJs command prompt** create a new angular project by entering the following command.

**>ng new LaptopWebApplication**

1. Verify that the download and installation of the project is done or completed.
2. In the **NodeJs command prompt**  navigate inside the project by entering the following command.

**>cd LaptopWebApplication**

#### Task 2: Installing Bootstrap

1. In the start menu click **Visual Studio Code.**
2. In the **Visual Studio Code** click **File** then click **Open Folder.**
3. In the **Open Folder** dialog box navigate to **D:\ITLCANGULAR\MOD3.1\Starter\Exercise 1\LaptopWebApplication** then click **Select Folder.**
4. In the **Node.JS Command Prompt** install bootstrap by entering the following command.

**>npm install - -save bootstrap**

1. Verify that bootstrap installation is done.
2. In the **Visual Studio Code Explorer,**expand **src** folder then click the **styles.css** file.
3. Inside the **styles.css** add the following code**.**

**@import “../node\_modules/bootstrap/dist/css/bootstrap.min.css”**

1. In the **Visual Studio Code,** click **File** then click **Save All.**
2. In the **Visual Studio Code,** under **src** folder click the **index.html** then locate the ff. code

**<title>LaptopWebApplication</title>**

1. **Replace** the located code with the following codes.

**<title> ABC Laptop Store</title>**

1. In the **Visual Studio Code,** under **src/app** folder click the **app.component.html.**
2. In the **app.component.html** replace all the codes with the following codes.

**<div class=”container-fluid”>**

**<h1 class=”jumbotron”> Welcome to ABC Laptop Store</h1>**

**</div>**

1. In the **File Explorer** navigate to **D:\ITLCANGULAR\MOD3.1\Template\data**
2. Open **data.txt** in notepad then copy all of its content. Press ctrl+A then ctrl+C.
3. In the **Visual Studio Code,** under **src/app** folder click the **app.component.ts.**
4. In the **app.component.ts** locate the following codes.

**title=’app’;**

1. After the located code paste the copied code from data.txt. **ctrl+V**
2. In the **app.component.ts** locate the following codes.

**title=’app’;**

1. Before the located code add the following code.

**constructor(){**

**console.log(this.laptops);**

**}**

1. In the **Visual Studio Code,** click **File** then click **Save All.**

#### Task 2: Using Developer tools to check index.html

1. In the **Node.JS command prompt** build the project by entering the command.

**>ng serve**

1. In the start menu click **Google Chrome** then browse the following url.

**http://localhost:4200**

1. Verify that the page displays the Banner “Welcome to ABC Laptop Store”.
2. In the Google Chrome Window press **F12** to open the developer tools.
3. In the developer tools, click the **Console** tab.
4. Verify that it displays 4 items.
5. In the developer tools, click **Close**.
6. In the Google Chrome Window, click **Close.**
7. In the **NodeJS command prompt** click **Close.**
8. In the **Visual Studio Code** click **Close.**

**Exercise 2: Building the Angular Application**

#### Task 1. Displaying the products.

1. In the Start menu click **Visual Studio Code.**
2. In the **Visual Studio Code** click **File** then click **Open Folder.**
3. In the **Open Folder** dialog box navigate to **D:\ITLCANGULAR\MOD3.1\Starter\Exercise 2\LaptopWebApplication** then click **Select Folder.**

*Note: Run npm install if necessary*

1. In the **Visual Studio Code,** expand the **src** folder then under the **app** folder click the **app.component.html**
2. In the **app.component.html,** add the following code after the **</h1>** element.

**<div class=”container”></div>**

1. Between the <div> element that you add, type the following code.

**<ul class=”list-group-item”></ul>**

1. Inside the **ul** element add the following code.

**<li class=”list-group-item”>**

**<h3>{{laptops[0].name}}**

**<em class=”float-right”>{{laptops[0].price}}</em>**

**</h3>**

**</li>**

1. After the code that you just added, add the following code.

**<li class=”list-group-item”>**

**<h3>{{ laptops[1].name}}**

**<em class=”float-right”>{{ laptops[1].price}}</em>**

**</h3>**

**</li>**

1. After the code that you just added, add the following code.

**<li class=”list-group-item”>**

**<h3>{{ laptops[2].name}}**

**<em class=”float-right”>{{ laptops[2].price}}</em>**

**</h3>**

**</li>**

1. After the code that you just added, add the following code.

**<li class=”list-group-item”>**

**<h3>{{ laptops[3].name}}**

**<em class=”float-right”>{{ laptops[3].price}}</em>**

**</h3>**

**</li>**

1. In the **Visual Studio Code** click **File** then click **Save All.**
2. In the **Start Menu** click **Node.js command prompt**
3. In the **Node.JS command prompt** navigate to **D:\ ITLCANGULAR\MOD3.1\Starter\Exercise2\LaptopWebApplication** by entering the following command.

**>D:**

**>cd ITLCANGULAR\MOD3.1\Starter\Exercise2\LaptopWebApplication**

1. In the **Node.JS command prompt** build the project by entering the command.

**>ng serve**

1. In the start menu click **Google Chrome** then browse the following url.

[**http://localhost:4200**](http://localhost:4200)

1. In the Google Chrome Browser, verify that it displays **4 products.**
2. Close the Google Chrome Browser

#### Task 2: Iterating the data.

1. In the **Visual Studio Code,** under **src/app** click **app.component.html.**
2. In the **app.component.html,** delete the last three **li** elements.
3. In the **app.component.html** locate the following code.

**<li class=”list-group-item”>**

1. Replace the located code with the following.

**<li class=”list-group-item” \*ngFor=”let laptop of laptops; let i=index"”>**

1. In the **app.component.html** locate the following code.

**<h3>{{laptops[0].name}}**

**<em class=”float-right”>{{laptops[0].price}}</em>**

**<h3>**

1. Replace the located code with the following code.

**<h3>{{laptop.name}}**

**<em class=”float-right”>{{laptop.price}}</em>**

**<h3>**

1. In the start menu click **Google Chrome** then browse the following url.

[**http://localhost:4200**](http://localhost:4200)

1. In the Google Chrome Browser, verify that it still displays **4 products.**
2. Close the Google Chrome Browser