**Module 10.1: Laboratory Exercises**

**Exercise 1: Testing Services**

#### Task 1: Creating the Test File

1. In the start menu click **Visual Studio Code**.
2. In the **Visual Studio Code** window click on **File** menu thenclick **Open Folder.**
3. In the dialog box navigate to **D:\ ITLCANGULAR\MOD10.1\Starter\Exercise1\LaptopWebApplication,** then click **Select Folder.**
4. In the **Visual Studio Code Explorer,** expand the **src** folder then expand the **app** folder then right click the **services** folder then click **New File.**
5. Name the New File to **laptops.service.spec.ts.**
6. In the **laptops.service.spec.ts,** add the following codes.

**import { TestBed } from ‘@angular/core/testing’;**

**import { HttpClientTestingModule,HttpTestingController,TestRequest } from ‘@angular/common/http/testing’;**

**import { LaptopService } from ‘./laptops.services’;**

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

**describe(‘Laptop Service’, ()=>{**

**});**

1. Inside the describe function, add the following code.

**let laptopService:LaptopService;**

**let httpTestingController:HttpTestingController;**

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

**beforeEach(()=>{**

**TestBed.configureTestingModule({**

**imports:[HttpClientTestingModule],**

**providers:[LaptopService]**

**});**

**laptopService=TestBed.get(LaptopService);**

**httpTestingController=TestBed.get(HttpTestingController);**

**});**

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

**it(‘should GET all laptops’,()=>{**

**});**

1. Inside the **it function**, add the following code.

**laptopService.getLaptops().subscribe();**

**let laptopRequest:TestRequest= httpTestingController.expectOne(‘http://localhost/laptopapi/api/laptop/’);**

**expect(laptopRequest.request.method).toEqual(‘POST’);**

**httpTestingController.verify();**

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

#### Task 2: Running the Test

1. In the **Start Menu,** click on **Node.js command prompt**
2. In the **Node.js command prompt,** enter the following command.

**>D:**

**>cd ITLCANGULAR\MOD10.1\Starter\Exercise1\LaptopWebApplication\**

1. In the **Node.js command prompt,** enter the following command.

**>npm test**

1. In the **Node.js command prompt,** verify the result of the test is **FAILED.** You will see the following message.

**Chrome 66.0.3359 (Windows 10.0.0): Executed 1 of 1 (1 FAILED) (0 secs / 0.125 secs)**

**Chrome 66.0.3359 (Windows 10.0.0) Laptop Service should GET all laptops FAILED**

**Expected 'GET' to equal 'POST'.**

***Note: The result fails because the request url that we use accepts only a GET request.***

1. In the **Node.js command prompt** window, click minimize.
2. In the **Visual Studio Code** window, click **laptops.service.spec.ts.**
3. In the **laptops.service.spec.ts,** locate the following code.

**expect(laptopRequest.request.method).toEqual(‘POST’);**

1. Replace the located code with the following code.

**expect(laptopRequest.request.method).toEqual(‘GET’);**

1. In the  **Visual Studio Code** window, click the **File** menu then click **Save All.**
2. Switch to **Node.js command prompt** then enter the following command.

**>npm test**

1. In the **Node.js command prompt,** verify the result of the test is **SUCCESS.** You will see the following message.

Chrome 66.0.3359 (Windows 10.0.0.0): Executed 1 of 1 SUCCESS

1. In the **Node.js command prompt** click **close.**
2. In the Visual Studio Code window click **close.**