MALAD KANDIVALI EDUCATION SOCIETY'S

NAGINDAS KHANDWALA COLLEGE OF COMMERCE, ARTS & MANAGEMENT STUDIES & SHANTABEN NAGINDAS KHANDWALA COLLEGE OF SCIENCE

MALAD [W], MUMBAI – 64

AUTONOMOUS INSTITUTION

(Affiliated To University Of Mumbai)

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CERTIFICATE

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This is certified to be a bonafide record of practical works done by the above student in the college laboratory for the course **Hybrid Application Development(classcode: 2037UCSMD)** for the partial fulfilment of Third Semester of BSc IT/CS during the academic year 2020-21.

The journal work is the original study work that has been duly approved in the year 2020-21 by the undersigned.

_____ External Examiner

_____ Mr. Gangashankar Singh (Subject-In-Charge)

Date of Examination: (College Stamp)

Class: S.Y. B.Sc. IT Sem- III **Roll No: 399__**

Subject: Hybrid Application Development
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Practical 1: AngularJS Data Binding

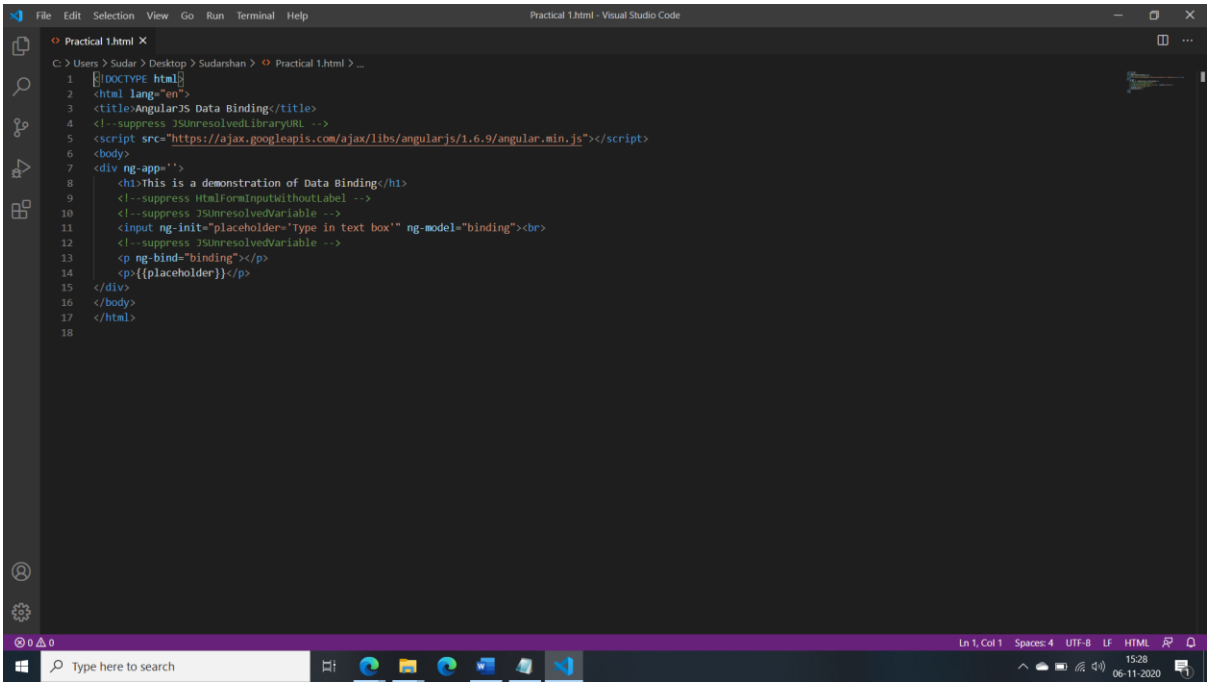
What is Data Binding in AngularJs?

Data-binding in AngularJS apps is the automatic synchronization of data between the model and view components. The way that AngularJS implements data-binding lets you treat the model as the single-source-of-truth in your application. The view is a projection of the model at all times. When the model changes, the view reflects the change, and vice versa.

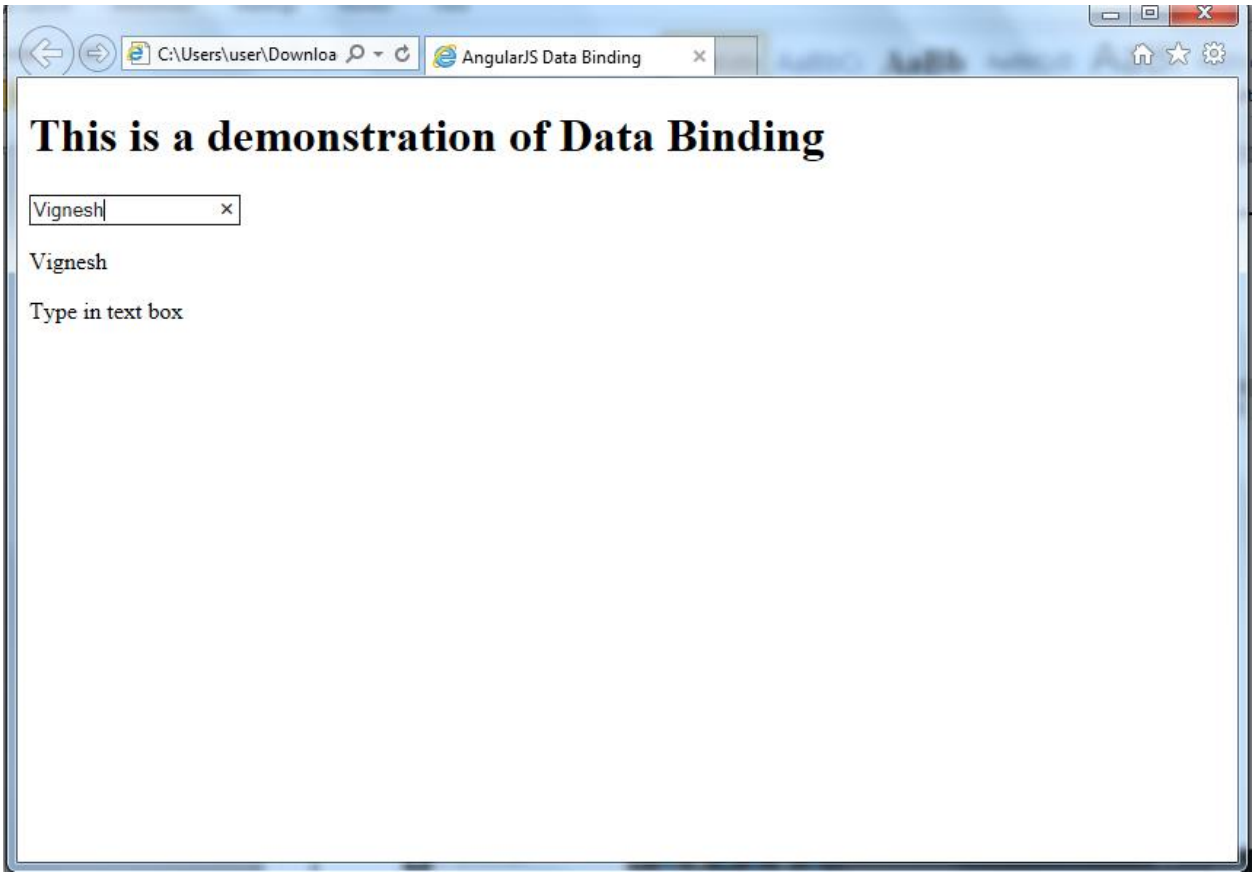
Data Binding in Classical Template Systems

Most templating systems bind data in only one direction: they merge template and model components together into a view. After the merge occurs, changes to the model or related sections of the view are NOT automatically reflected in the view. Worse, any changes that the user makes to the view are not reflected in the model. This means that the developer has to write code that constantly syncs the view with the model and the model with the view.

Code:



Output:



Practical 2 : AngularJS Directives

What are Directives in AngularJS?

- AngularJS lets you extend HTML with new attributes called Directives.
- AngularJS has a set of built-in directives which offers functionality to your applications.
- AngularJS also lets you define your own directives.

Most of the directives in AngularJS are starting with ng- where ng stands for Angular. AngularJS includes various built-in directives. In addition to this, you can create custom directives for your application.

ng-app

The ng-app directive initializes AngularJS and makes the specified element a root element of the application. Visit ng-app section for more information.

ng-init

The ng-init directive can be used to initialize variables in AngularJS application.

The following example demonstrates ng-init directive that initializes variable of string, number, array, and object.

ng-model

The ng-model directive is used for two-way data binding in AngularJS. It binds <input>, <select> or <textarea> elements to a specified property on the $scope object. So, the value of the element will be the value of a property and vica-versa.

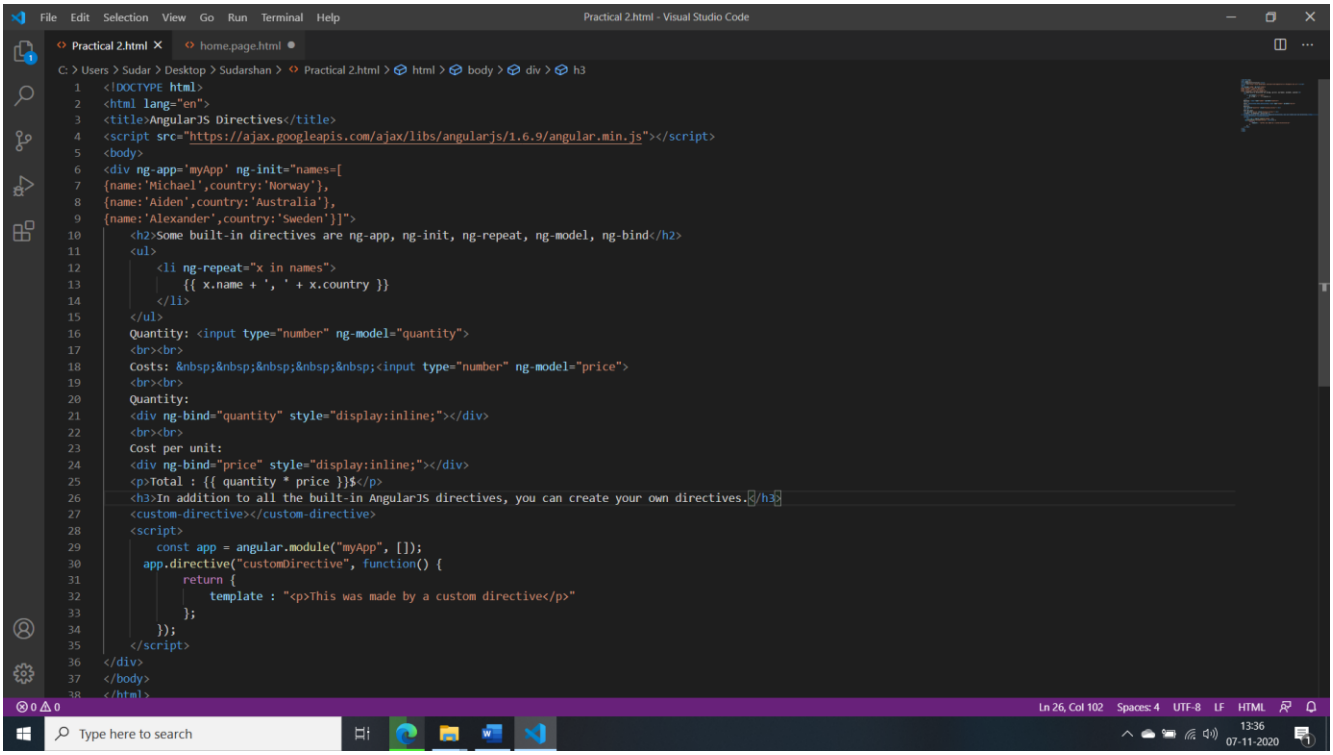
Directive Syntax

AngularJS directives can be applied to DOM elements in many ways. It is not mandatory to use **ng-** syntax only.

Directive can start with **x-** or **data-** for example ng-model directive can be written as data-ng-model or x-ng-model.

Also, the - in the directive can be replaced with **:** or **_** or both. For example, ng-model can be written as ng_model or ng:model. It can also be a mix with **data-** or **x- .**

Code:


File Edit Selection View Go Run Terminal Help
Practical 2.html - Visual Studio Code
Practical 2.html
home.page.html
C: > Users > Sudar > Desktop > Sudarshan > Practical 2.html > html > body > div > h3
<!DOCTYPE html>
<html lang="en">
<title>AngularJS Directives</title>
<script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.6.9/angular.min.js"></script>
<body>
<div ng-app='myApp' ng-init="names=[
{name:'Michael',country:'Norway'},
{name:'Aiden',country:'Australia'},
{name:'Alexander',country:'Sweden'}]">
<h2>Some built-in directives are ng-app, ng-init, ng-repeat, ng-model, ng-bind</h2>

<li ng-repeat="x in names">
{{ x.name + ', ' + x.country }}

Quantity: <input type="number" ng-model="quantity">

Costs: <input type="number" ng-model="price">

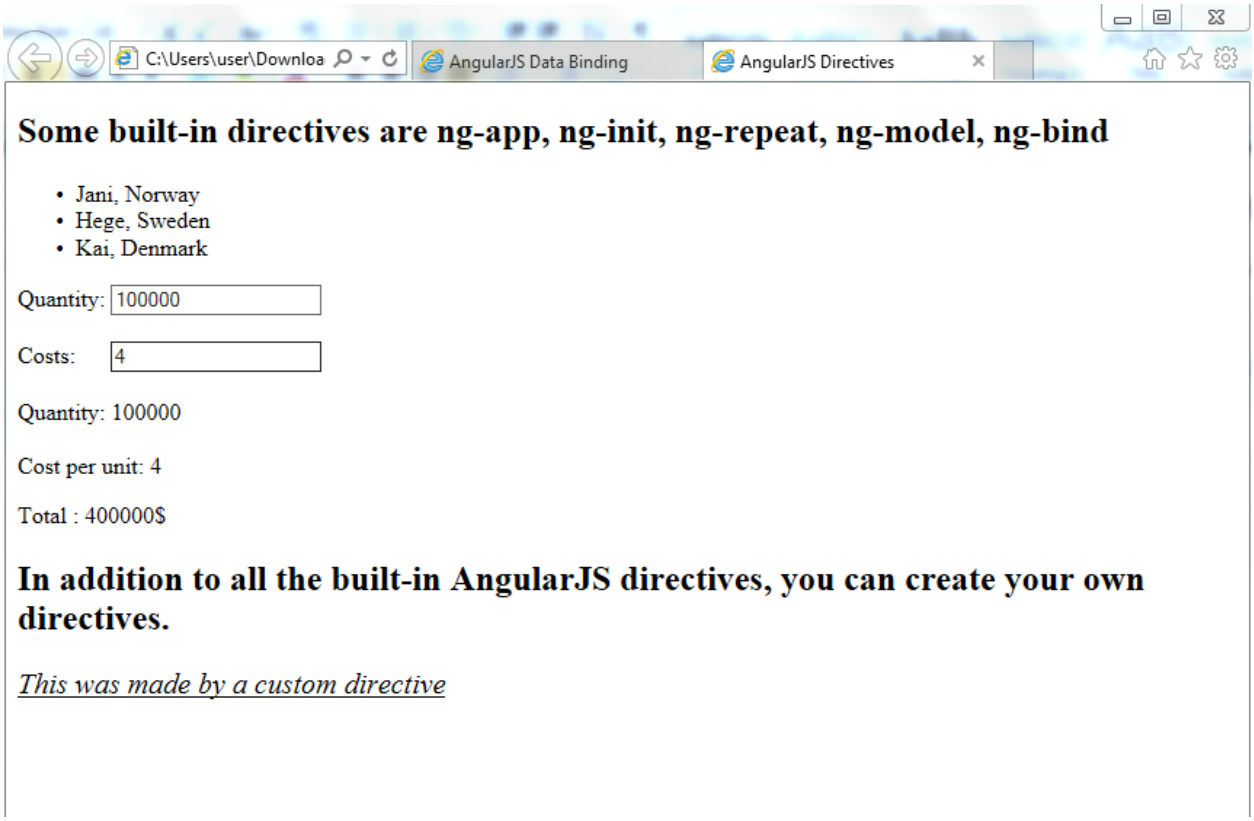
Quantity:

Cost per unit:

Total : {{ quantity * price }}$
<h3>In addition to all the built-in AngularJS directives, you can create your own directives.</h3>
<custom-directive></custom-directive>
<script>
const app = angular.module("myApp", []);
app.directive("customDirective", function() {
return {
template : " This was made by a custom directive "
};
});
</script>

</body>
</html>
Ln 26, Col 102 Spaces: 4 UTF-8 LF HTML
Type here to search
13:36
07-11-2020

Output



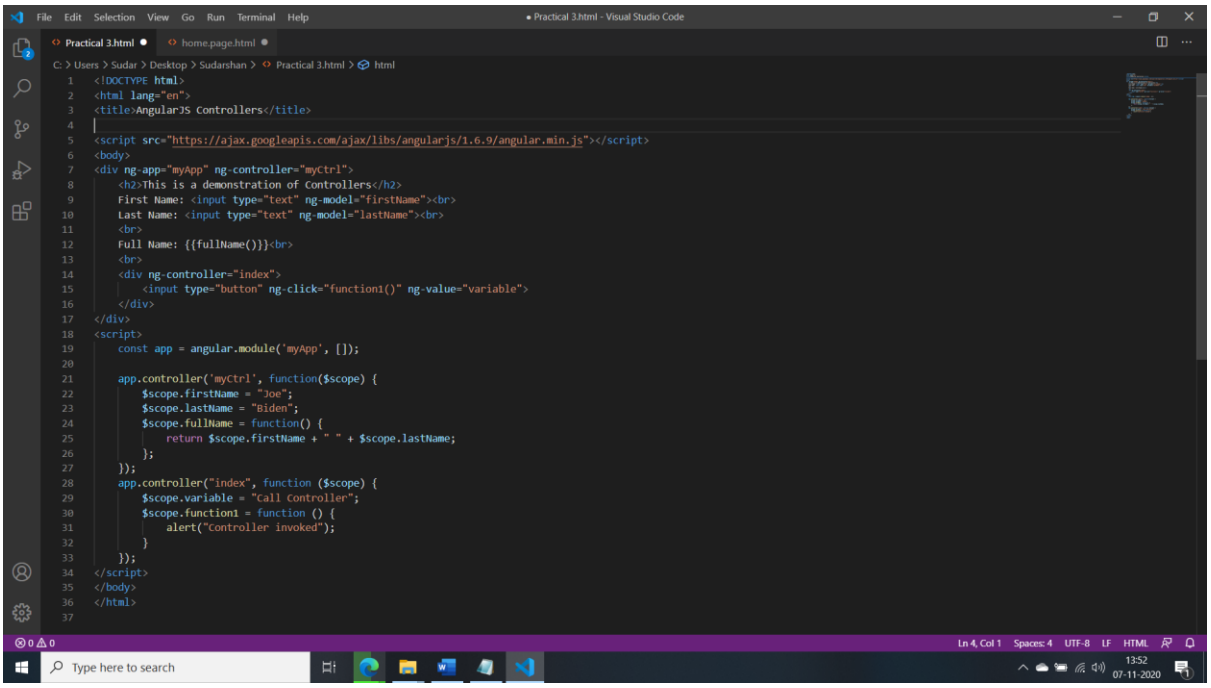
Practical 3 : AngularJS Controllers

What are Controllers in AngularJS?

AngularJS application mainly relies on controllers to control the flow of data in the application. A controller is defined using ng-controller directive. A

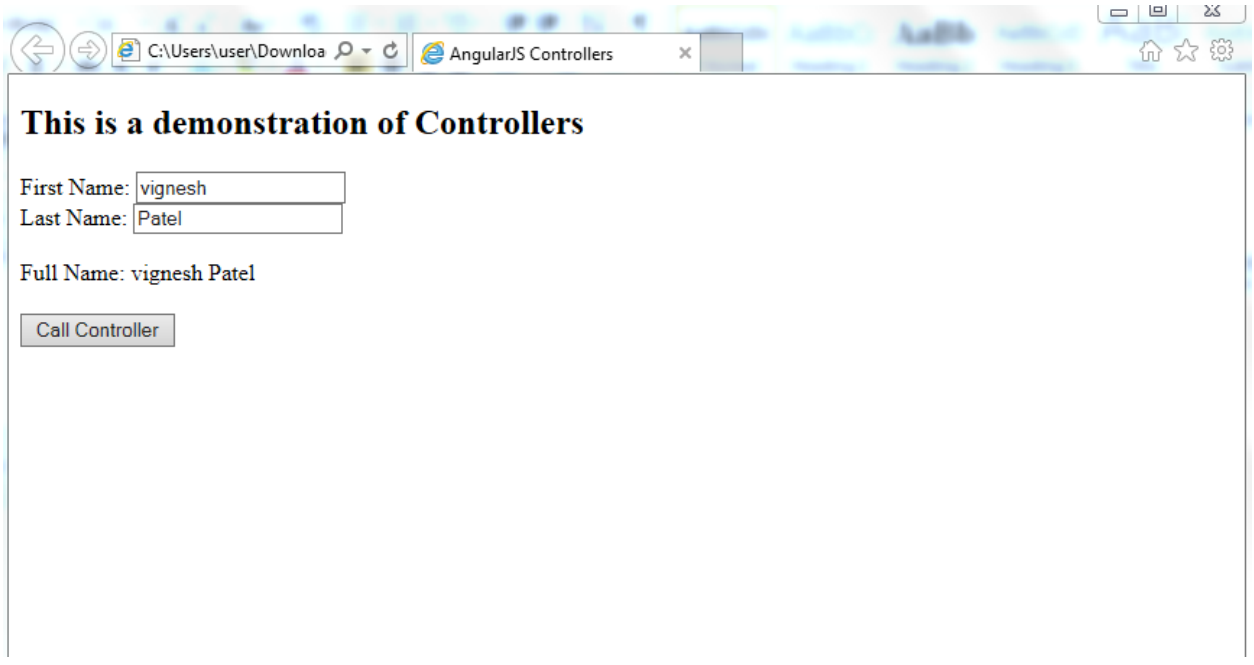
controller is a JavaScript object that contains attributes/properties, and functions. Each controller accepts $scope as a parameter, which refers to the application/module that the controller needs to handle.

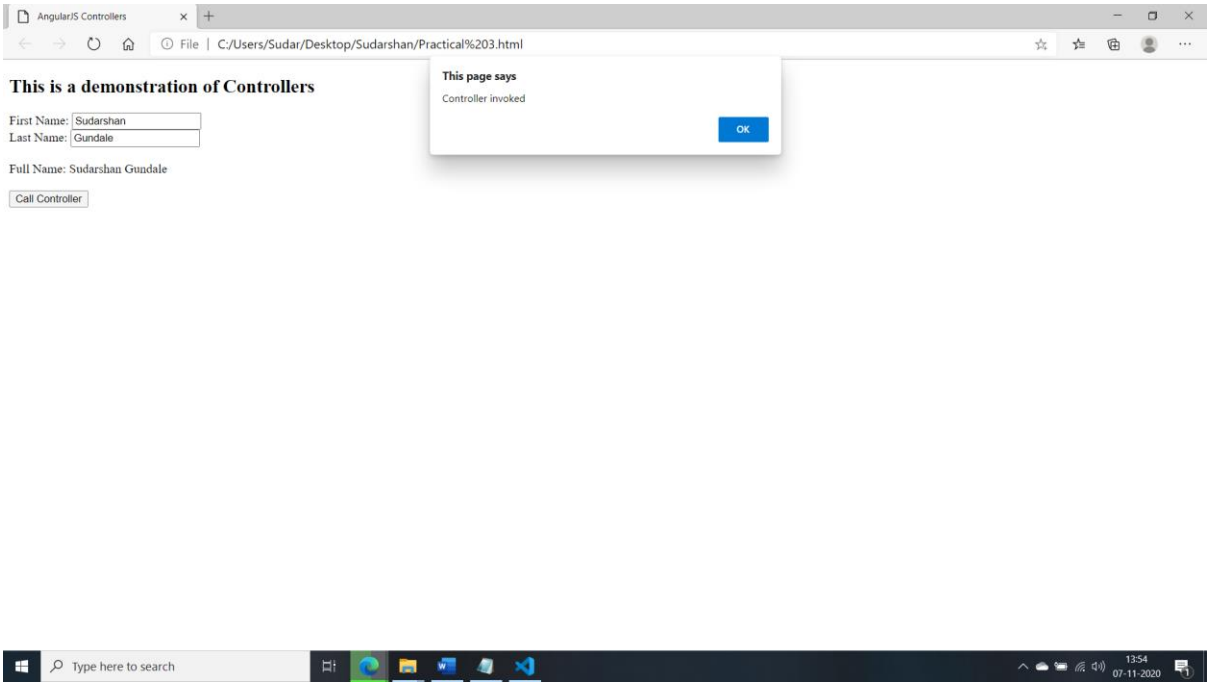
Code:



```
<!DOCTYPE html>
<html lang="en">
<title>AngularJS Controllers</title>

<script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.6.9/angular.min.js"></script>
<body>
<div ng-app="myApp" ng-controller="myCtrl">
    <h2>This is a demonstration of Controllers</h2>
    First Name: <input type="text" ng-model="firstName"><br>
    Last Name: <input type="text" ng-model="lastName"><br>
    <br>
    Full Name: {{fullName()}}<br>
    <br>
    <div ng-controller="index">
        <input type="button" ng-click="function1()" ng-value="variable">
    </div>
</div>
<script>
    const app = angular.module('myApp', []);

    app.controller('myCtrl', function($scope) {
        $scope.firstName = "Joe";
        $scope.lastName = "Biden";
        $scope.fullName = function() {
            return $scope.firstName + " " + $scope.lastName;
        };
    });
    app.controller("index", function ($scope) {
        $scope.variable = "Call Controller";
        $scope.function1 = function () {
            alert("Controller invoked");
        }
    });
</script>
</body>
</html>
```

Output:





Practical 4: AngularJS Events

AngularJS includes certain directives which can be used to provide custom behavior on various DOM events, such as click, dblclick, mouseenter etc. You can add AngularJS event listeners to your HTML elements by using one or more of these directives:

- ng-blur,ng-change
- ng-click
- ng-copy
- ng-cut
- ng-dblclick
- ng-focus
- ng-keydown
- ng-keypress
- ng-keyup

- ng-mousedown
- ng-mouseenter

The event directives allows us to run AngularJS functions at certain user events.

An AngularJS event will not overwrite an HTML event, both events will be executed.

Mouse Events

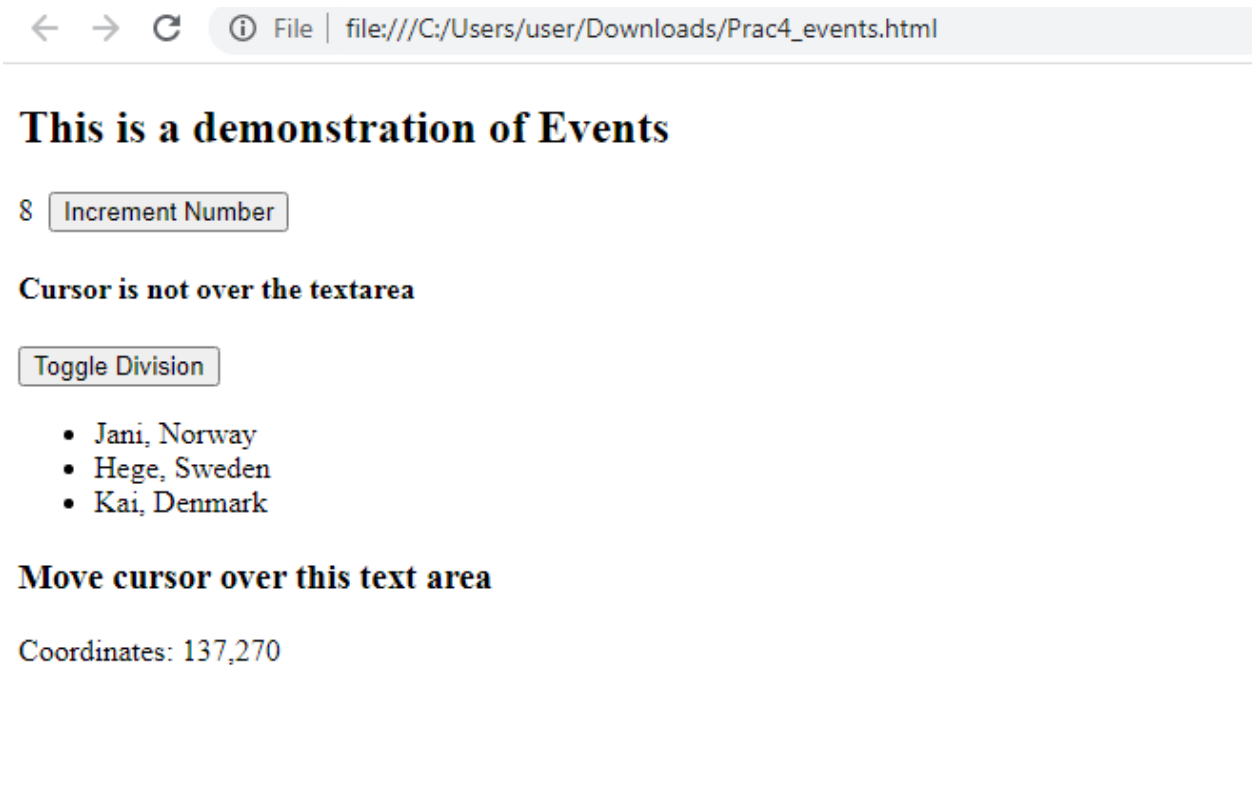
Mouse events occur when the cursor moves over an element, in this order:

- ng-mouseover
- ng-mouseenter
- ng-mousemove
- ng-mouseleave

Code:

Practical4_Events.html

```
<!DOCTYPE html>
<html lang="en">
<title>AngularJS Events</title>
<script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.6.9/angular.min.js"></script>
<body>
<div ng-app="event">
    <h2>This is a demonstration of Events</h2>
    <div ng-controller="eventController1" ng-init="value=0">
        {{value}} 
        <button ng-click="value=value+1">Increment Number</button>
        <br>
        <h4 ng-mouseover="mouseover()" ng-mouseleave="mouseleft()" style="width: fit-content;cursor: pointer">{{text}}</h4>
        <button ng-click="show()">Toggle Division</button>
        <div ng-show="showNames"  ng-init="names=[
        {name:'Sudarshan',country:'India'},
        {name:'Vasu',country:'Sweden'},
        {name:'Akash',country:'Denmark'}]">
            <ul>
                <li ng-repeat="x in names">
                    {{ x.name + ', ' + x.country }}
                </li>
            </ul>
        </div>
        <h3 ng-mousemove="move($event)" style="width: fit-content">Move cursor over this text area</h3>
        <p>Coordinates: {{x + ',' + y}}</p>
    </div>
</div>
```



Practical 5: Ionic Create and Build First Project

What is a hybrid app?

Like native apps, run on the device, and are written with web technologies (HTML5, CSS and JavaScript). Hybrid apps run inside a native container,
and leverage the device's browser engine (but not the browser) to render the HTML and process the JavaScript locally. A web-to-native abstraction
layer enables access to device capabilities that are not accessible in Mobile Web applications, such as the accelerometer, camera and local storage.

Requirements:

Node.js with npm in path

Steps:

1. Open command prompt as administrator

2. Run **npm install -g ionic**

3. Create a folder for your ionic project by running **md <folder_name>**

4. Navigate to the folder by running **cd <folder_name>**

5. To create an ionic app run **ionic start <app_name> blank**

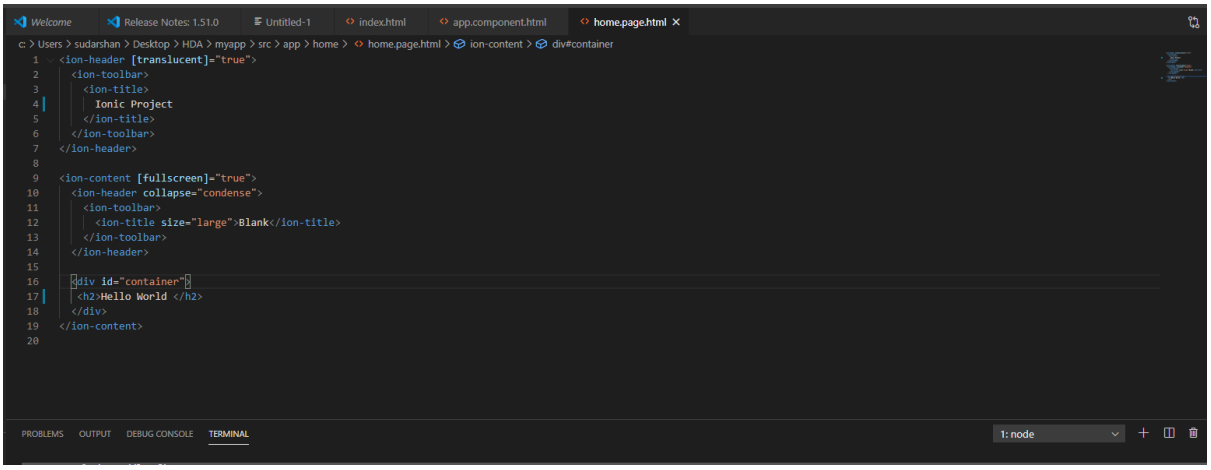
6. Then it will ask to choose a framework so choose **Angular JS**

7. Navigate to the folder by running **cd <app_name>**

8. Then to start running the ionic web page on the servertype ionic serve

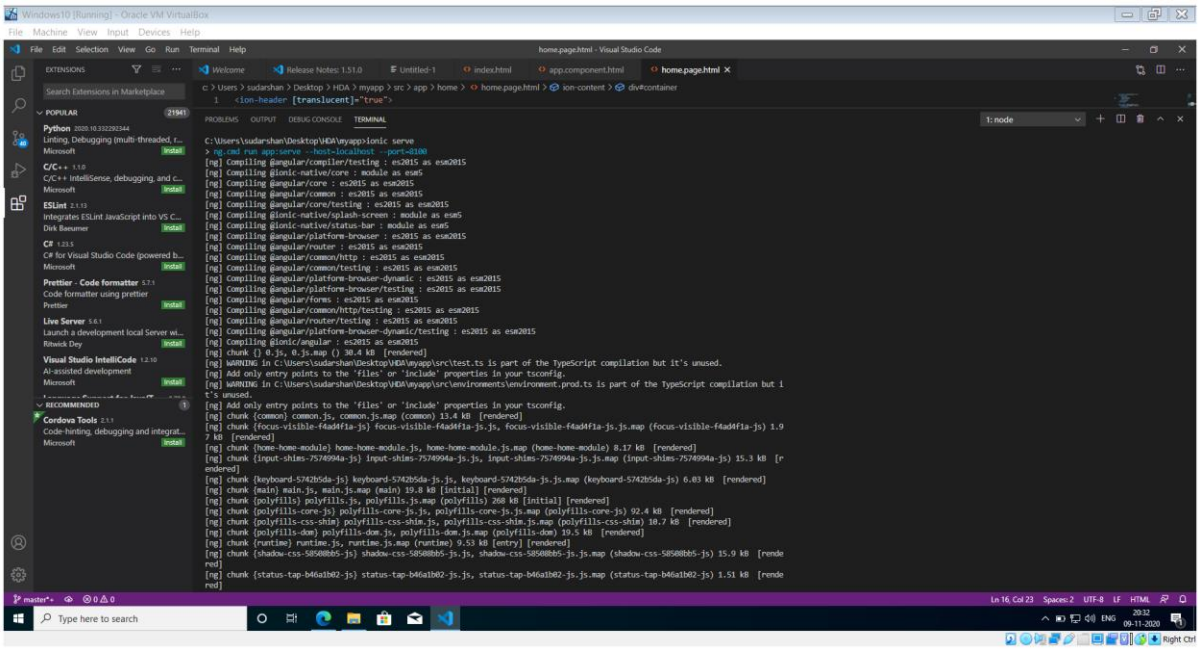
9. To access the web page, go on **http://localhost:810**

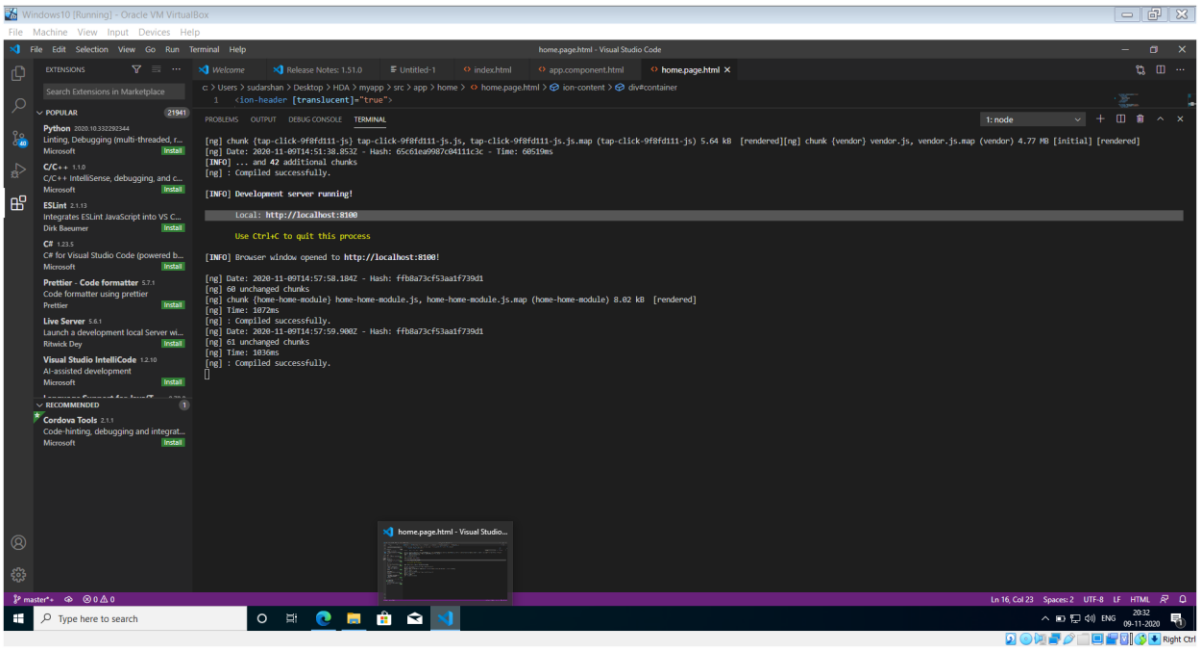
Code:


Welcome
Release Notes: 1.51.0
Untitled-1
index.html
app.component.html
home.page.html
c > Users > sudarshan > Desktop > HDA > myapp > src > app > home > home.page.html > ion-content > div#container
<ion-header [translucent]="true">
<ion-toolbar>
<ion-title>
Ionic Project
</ion-title>
</ion-toolbar>
</ion-header>
<ion-content [fullscreen]="true">
<ion-header collapse="condense">
<ion-toolbar>
<ion-title size="large">Blank</ion-title>
</ion-toolbar>
</ion-header>

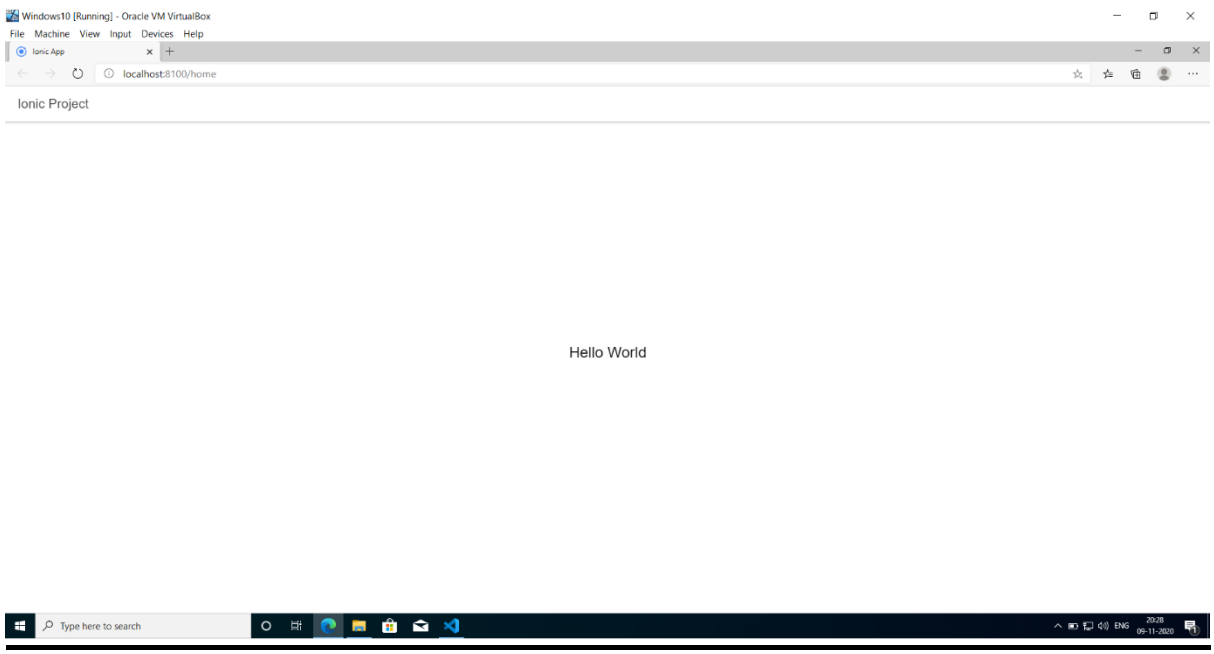
<h2>Hello World </h2>

</ion-content>
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
1: node


Windows10 [Running] - Oracle VM VirtualBox
home.page.html - Visual Studio Code
C:\Users\sudarshan\Desktop\HDA\myapp>ionic serve
> ng.cmd run app:serve --host=localhost --port=8100
[ng] Compiling @angular/compiler/testing : es2015 as esm2015
[ng] Compiling @ionic-native/core : module as esm5
[ng] Compiling @angular/core : es2015 as esm2015
[ng] Compiling @angular/common : es2015 as esm2015
[ng] Compiling @angular/core/testing : es2015 as esm2015
[ng] Compiling @ionic-native/splash-screen : module as esm5
[ng] Compiling @ionic-native/status-bar : module as esm5
[ng] Compiling @angular/platform-browser : es2015 as esm2015
[ng] Compiling @angular/router : es2015 as esm2015
[ng] Compiling @angular/common/http : es2015 as esm2015
[ng] Compiling @angular/common/testing : es2015 as esm2015
[ng] Compiling @angular/platform-browser-dynamic : es2015 as esm2015
[ng] Compiling @angular/platform-browser/testing : es2015 as esm2015
[ng] Compiling @angular/forms : es2015 as esm2015
[ng] Compiling @angular/common/http/testing : es2015 as esm2015
[ng] Compiling @angular/router/testing : es2015 as esm2015
[ng] Compiling @angular/platform-browser-dynamic/testing : es2015 as esm2015
[ng] Compiling @ionic/angular : es2015 as esm2015
[ng] chunk {} 0.js, 0.js.map () 30.4 kB [rendered]
[ng] WARNING in C:\Users\sudarshan\Desktop\HDA\myapp\src\test.ts is part of the TypeScript compilation but it's unused.
[ng] Add only entry points to the 'files' or 'include' properties in your tsconfig.
[ng] WARNING in C:\Users\sudarshan\Desktop\HDA\myapp\src\environments\environment.prod.ts is part of the TypeScript compilation but it's unused.
[ng] Add only entry points to the 'files' or 'include' properties in your tsconfig.
[ng] chunk {common} common.js, common.js.map (common) 13.4 kB [rendered]
[ng] chunk {focus-visible-f4ad4f1a-js} focus-visible-f4ad4f1a-js.js, focus-visible-f4ad4f1a-js.js.map (focus-visible-f4ad4f1a-js) 1.97 kB [rendered]
[ng] chunk {home-home-module} home-home-module.js, home-home-module.js.map (home-home-module) 8.17 kB [rendered]
[ng] chunk {input-shims-7574994a-js} input-shims-7574994a-js.js, input-shims-7574994a-js.js.map (input-shims-7574994a-js) 15.3 kB [rendered]
[ng] chunk {keyboard-5742b5da-js} keyboard-5742b5da-js.js, keyboard-5742b5da-js.js.map (keyboard-5742b5da-js) 6.03 kB [rendered]
[ng] chunk {main} main.js, main.js.map (main) 19.8 kB [initial] [rendered]
[ng] chunk {polyfills} polyfills.js, polyfills.js.map (polyfills) 268 kB [initial] [rendered]
[ng] chunk {polyfills-core-js} polyfills-core-js.js, polyfills-core-js.js.map (polyfills-core-js) 92.4 kB [rendered]
[ng] chunk {polyfills-css-shim} polyfills-css-shim.js, polyfills-css-shim.js.map (polyfills-css-shim) 10.7 kB [rendered]
[ng] chunk {polyfills-dom} polyfills-dom.js, polyfills-dom.js.map (polyfills-dom) 19.5 kB [rendered]
[ng] chunk {runtime} runtime.js, runtime.js.map (runtime) 9.53 kB [entry] [rendered]
[ng] chunk {shadow-css-58508bb5-js} shadow-css-58508bb5-js.js, shadow-css-58508bb5-js.js.map (shadow-css-58508bb5-js) 15.9 kB [rendered]
[ng] chunk {status-tap-b46a1b02-js} status-tap-b46a1b02-js.js, status-tap-b46a1b02-js.js.map (status-tap-b46a1b02-js) 1.51 kB [rendered]
Type here to search


Windows10 [Running] - Oracle VM VirtualBox
home.page.html - Visual Studio Code
[ng] chunk {tap-click-9f8fd111-js} tap-click-9f8fd111-js.js, tap-click-9f8fd111-js.js.map (tap-click-9f8fd111-js) 5.64 kB [rendered][ng] chunk {vendor} vendor.js, vendor.js.map (vendor) 4.77 MB [initial] [rendered]
[ng] Date: 2020-11-09T14:51:38.853Z - Hash: 65c61ea9987c04111c3c - Time: 60519ms
[INFO] ... and 42 additional chunks
[ng] : Compiled successfully.
[INFO] Development server running!
Local: http://localhost:8100
Use Ctrl+C to quit this process
[INFO] Browser window opened to http://localhost:8100!
[ng] Date: 2020-11-09T14:57:58.184Z - Hash: ffb8a73cf53aa1f739d1
[ng] 60 unchanged chunks
[ng] chunk {home-home-module} home-home-module.js, home-home-module.js.map (home-home-module) 8.02 kB [rendered]
[ng] Time: 1872ms
[ng] : Compiled successfully.
[ng] Date: 2020-11-09T14:57:59.900Z - Hash: ffb8a73cf53aa1f739d1
[ng] 61 unchanged chunks
[ng] Time: 1830ms
[ng] : Compiled successfully.
home.page.html - Visual Studio...
Type here to search

Output:



Practical 6: Ionic Adding Cordova Android Platform

What is Cordova?

Apache Cordova is an open-source mobile development framework. It allows you to use standard web technologies - HTML5, CSS3, and JavaScript for cross-platform development. Applications execute within wrappers targeted to each platform, and rely on standards-compliant API bindings to access each device's capabilities such as sensors, data, network status, etc. Cordova can be used an integration for Ionic to export Ionic web apps to Native mobile applications like an Android APK. **Requirements:**

1. Java 8 in path and JAVA_HOME set
2. Android SDK with ANDROID_SDK_ROOT set
3. Gradle in path

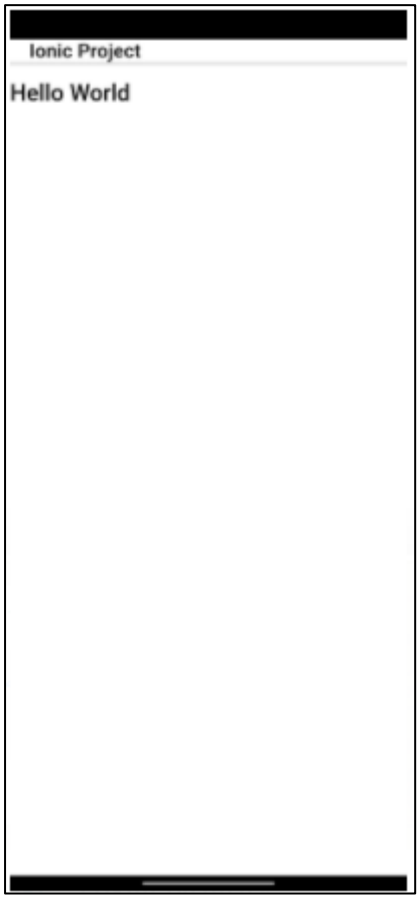
Steps:

1. Install cordova resources by running **npm install -g cordova-res**
Android APK run **ionic cordova build android**
Install in your device from ionic cordova platform add android
{project_root}\platforms\android\app\build\outputs\apk\debug

```
> cordova.cmd platform add android
Using cordova-fetch for cordova-android@^9.0.0
Adding android project...
Creating Cordova project for the Android platform:
        Path: platforms\android
        Package: io.ionic.starter
        Name: MyApp
        Activity: MainActivity
        Android target: android-29
Subproject Path: CordovaLib
Subproject Path: app
Android project created with cordova-android@9.0.0
Plugin 'cordova-plugin-whitelist' found in config.xml... Migrating it to package.json
Plugin 'cordova-plugin-statusbar' found in config.xml... Migrating it to package.json
Plugin 'cordova-plugin-device' found in config.xml... Migrating it to package.json
Plugin 'cordova-plugin-splashscreen' found in config.xml... Migrating it to package.json
Plugin 'cordova-plugin-ionic-webview' found in config.xml... Migrating it to package.json
Plugin 'cordova-plugin-ionic-keyboard' found in config.xml... Migrating it to package.json
Discovered plugin "cordova-plugin-whitelist". Adding it to the project
Installing "cordova-plugin-whitelist" for android

             This plugin is only applicable for versions of cordova-android greater than 4.0. If you have a previous platform version, you do *not* need this plugin since the whitelist will be built in.

Adding cordova-plugin-whitelist to package.json
Discovered plugin "cordova-plugin-statusbar". Adding it to the project
Installing "cordova-plugin-statusbar" for android
Adding cordova-plugin-statusbar to package.json
Discovered plugin "cordova-plugin-device". Adding it to the project
Installing "cordova-plugin-device" for android
Adding cordova-plugin-device to package.json
Discovered plugin "cordova-plugin-splashscreen". Adding it to the project
Installing "cordova-plugin-splashscreen" for android
Adding cordova-plugin-splashscreen to package.json
Discovered plugin "cordova-plugin-ionic-webview". Adding it to the project
Installing "cordova-plugin-ionic-webview" for android
```

```
Subproject Path: CordovaLib
Subproject Path: app
Adding cordova-plugin-ionic-webview to package.json
Discovered plugin "cordova-plugin-ionic-keyboard". Adding it to the project
Installing "cordova-plugin-ionic-keyboard" for android
Adding cordova-plugin-ionic-keyboard to package.json
> ionic cordova resources android --force
> cordova-res.cmd android
[cordova-res] Generated 18 resources for Android
[cordova-res] Wrote to config.xml
```

Output:

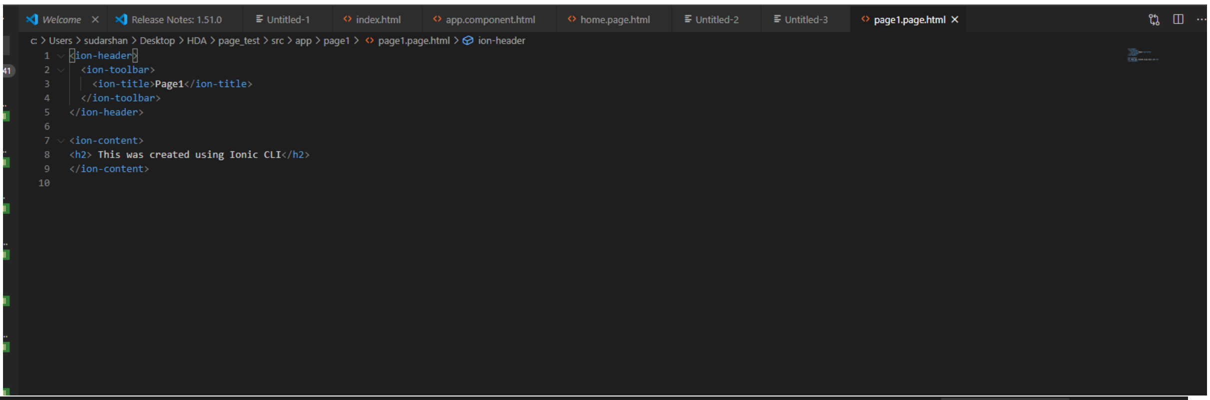


Practical 7: Ionic Create, Generate and Add Pages

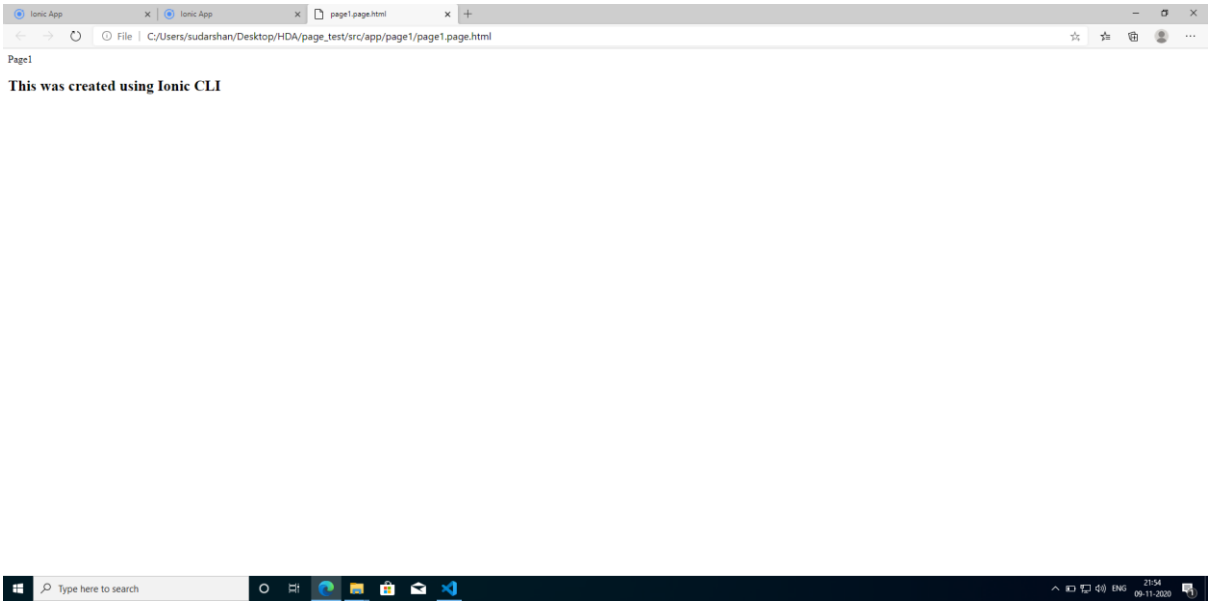
What are Ionic Pages?

An Ionic page is just an Angular component. The Ionic Page handles registering and displaying specific pages based on URLs. It's used underneath **NavController** so it will never have to be interacted with directly. When a new page is pushed with **NavController**, the URL is updated to match the path to this page. Unlike traditional web apps, URLs don't dictate navigation in Ionic apps. Instead, URLs help us link to specific pieces of content as a breadcrumb. The current URL gets updated as we navigate, but we use the **NavController** push and pop, or **NavPush** and **NavPop** to move around. This makes it much easier to handle complicated nested navigation. The or command uses the Angular CLI to generate features such as pages, components, directives, services, etc.

Code:



Output:



Practical 8: Ionic Use Tabs Starter Template

What are Ionic Starter Templates?

Ionic Starter Templates are ready-to-go starter packs for your next Ionic app. Between all project types, there are three templatesavailable: tabs: A tab-based layout sidemenu: A sidemenu based layout blank: An empty project with a single page We will be using tabs in the practical

Code:

Untitled-1 | tab1.page.html

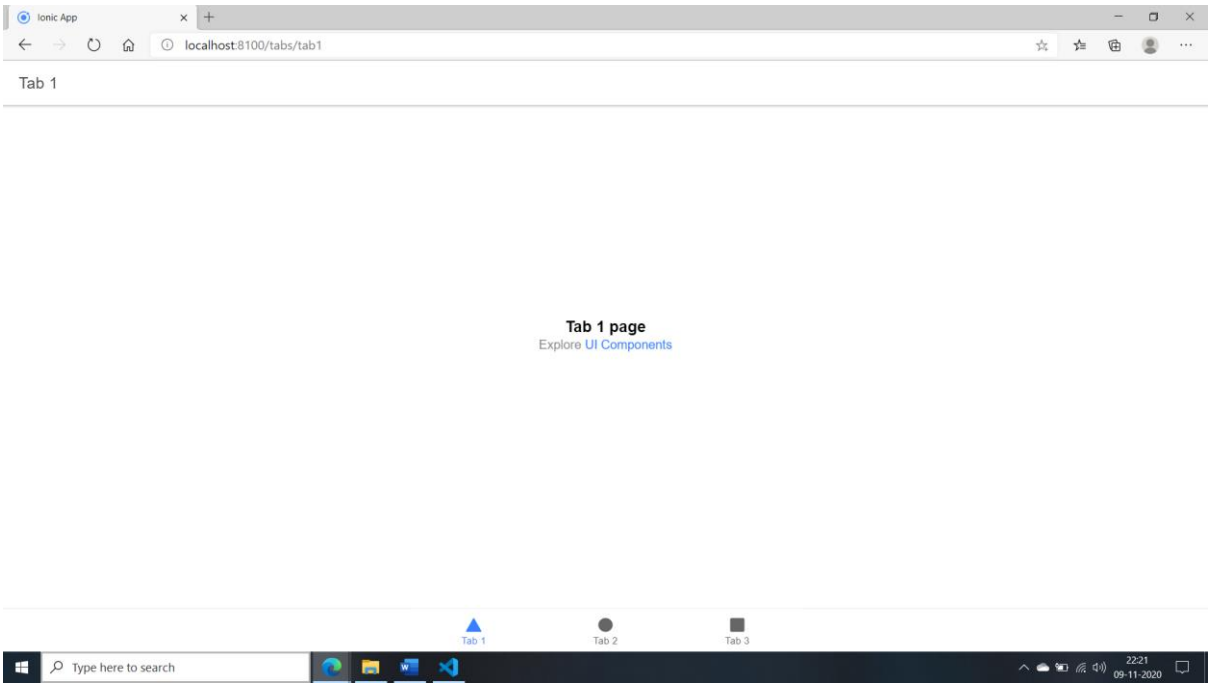
hda > starters > src > app > tab1 > tab1.page.html > ion-content > ion-header

```
<ion-header [translucent]="true">
  <ion-toolbar>
    <ion-title>
      Tab 1
    </ion-title>
  </ion-toolbar>
</ion-header>

<ion-content [fullscreen]="true">
  <ion-header collapse="condense">
    <ion-toolbar>
      <ion-title size="large">Tab 1</ion-title>
    </ion-toolbar>
  </ion-header>

  <app-explore-container name="Tab 1 page"></app-explore-container>
</ion-content>
```

```
The system cannot find the path specified.

C:\Users\Sudar\Desktop\Sudarshan\hda>cd starters

C:\Users\Sudar\Desktop\Sudarshan\hda\starters>ionic serve
> ng.cmd run app:serve --host=localhost --port=8100
[ng] Compiling @angular/core : es2015 as esm2015
[ng] Compiling @ionic-native/core : module as esm5
[ng] Compiling @angular/compiler/testing : es2015 as esm2015
[ng] Compiling @angular/common : es2015 as esm2015
[ng] Compiling @angular/core/testing : es2015 as esm2015
[ng] Compiling @ionic-native/splash-screen : module as esm5
[ng] Compiling @ionic-native/status-bar : module as esm5
[ng] Compiling @angular/platform-browser : es2015 as esm2015
[ng] Compiling @angular/router : es2015 as esm2015
[ng] Compiling @angular/common/http : es2015 as esm2015
[ng] Compiling @angular/common/testing : es2015 as esm2015
[ng] Compiling @angular/forms : es2015 as esm2015
[ng] Compiling @angular/platform-browser/testing : es2015 as esm2015
[ng] Compiling @angular/platform-browser-dynamic : es2015 as esm2015
[ng] Compiling @angular/common/http/testing : es2015 as esm2015
[ng] Compiling @angular/router/testing : es2015 as esm2015
[ng] Compiling @angular/platform-browser-dynamic/testing : es2015 as esm2015
[ng] Compiling @ionic/angular : es2015 as esm2015
[ng] chunk {} 0.js, 0.js.map () 30.4 kB  [rendered]
[ng] WARNING in C:\Users\Sudar\Desktop\Sudarshan\hda\starters\src\test.ts is part of the TypeScript compilation but it's unused.
[ng] Add only entry points to the 'files' or 'include' properties in your tsconfig.
[ng] WARNING in C:\Users\Sudar\Desktop\Sudarshan\hda\starters\src\environments\environment.prod.ts is part of the TypeScript compilation but it's unused.
[ng] Add only entry points to the 'files' or 'include' properties in your tsconfig.
[ng] chunk {common} common.js, common.js.map (common) 20.4 kB  [rendered]
[ng] chunk {focus-visible-f4ad4f1a-js} focus-visible-f4ad4f1a-js.js, focus-visible-f4ad4f1a-js.js.map (focus-visible-f4ad4f1a-js) 1.97 kB  [rendered]
[ng] chunk {input-shims-7574994a-js} input-shims-7574994a-js.js, input-shims-7574994a-js.js.map (input-shims-7574994a-js) 15.3 kB  [rendered]
[ng] chunk {keyboard-5742b5da-js} keyboard-5742b5da-js.js, keyboard-5742b5da-js.js.map (keyboard-5742b5da-js) 6.03 kB  [rendered]
[ng] chunk {main} main.js, main.js.map (main) 19.7 kB [initial] [rendered]
[ng] chunk {polyfills} polyfills.js, polyfills.js.map (polyfills) 268 kB [initial] [rendered]
[ng] chunk {polyfills-core-js} polyfills-core-js.js, polyfills-core-js.js.map (polyfills-core-js) 92.4 kB  [rendered]
[ng] chunk {polyfills-css-shim} polyfills-css-shim.js, polyfills-css-shim.js.map (polyfills-css-shim) 10.7 kB  [rendered]
[ng] chunk {polyfills-dom} polyfills-dom.js, polyfills-dom.js.map (polyfills-dom) 19.5 kB  [rendered]
[ng] chunk {runtime} runtime.js, runtime.js.map (runtime) 9.64 kB [entry] [rendered]
[ng] chunk {shadow-css-58508bb5-js} shadow-css-58508bb5-js.js, shadow-css-58508bb5-js.js.map (shadow-css-58508bb5-js) 15.9 kB  [rendered]
[ng] chunk {status-tap-b46a1b02-js} status-tap-b46a1b02-js.js, status-tap-b46a1b02-js.js.map (status-tap-b46a1b02-js) 1.51 kB  [rendered]
```

```
[ng] chunk {shadow-css-58508bb5-js} shadow-css-58508bb5-js.js, shadow-css-58508bb5-js.js.map (shadow-css-58508bb5-js) 15.9 kB  [rendered]
[ng] chunk {status-tap-b46a1b02-js} status-tap-b46a1b02-js.js, status-tap-b46a1b02-js.js.map (status-tap-b46a1b02-js) 1.51 kB  [rendered]
[ng] chunk {styles} styles.js, styles.js.map (styles) 93 kB [initial] [rendered]
[ng] chunk {swipe-back-53c5a7dd-js} swipe-back-53c5a7dd-js.js, swipe-back-53c5a7dd-js.js.map (swipe-back-53c5a7dd-js) 2.9 kB  [rendered]
[ng] chunk {mswiper-bundle-95afeea2-js} swiper-bundle-95afeea2-js.js, swiper-bundle-95afeea2-js.js.map (swiper-bundle-95afeea2-js) 200 kB  [rendered]
[ng] chunk {tab1-tab1-module} tab1-tab1-module.js, tab1-tab1-module.js.map (tab1-tab1-module) 7.28 kB  [rendered]
[ng] chunk {tab2-tab2-module} tab2-tab2-module.js, tab2-tab2-module.js.map (tab2-tab2-module) 7.28 kB  [rendered]
[ng] chunk {tab3-tab3-module} tab3-tab3-module.js, tab3-tab3-module.js.map (tab3-tab3-module) 7.62 kB  [rendered]
[ng] chunk {tabs-tabs-module} tabs-tabs-module.js, tabs-tabs-module.js.map (tabs-tabs-module) 8.28 kB  [rendered]
[ng] chunk {tap-click-9f8fd111-js} tap-click-9f8fd111-js.js, tap-click-9f8fd111-js.js.map (tap-click-9f8fd111-js) 5.64 kB  [rendered]
[ng] chunk {vendor} vendor.js, vendor.js.map (vendor) 4.77 MB [initial] [rendered]
[ng] Date: 2020-11-09T16:49:12.484Z - Hash: f368554a62fe4cbd368a - Time: 12108ms
[INFO] ... and 42 additional chunks
[ng] : Compiled successfully.

[INFO] Development server running!

       Local: http://localhost:8100

       Use Ctrl+C to quit this process

[INFO] Browser window opened to http://localhost:8100!

[ng] Date: 2020-11-09T16:49:14.968Z - Hash: 98da53df27a0e9737d19
[ng] 64 unchanged chunks
[ng] Time: 1600ms
[ng] : Compiled successfully.
```

Output :


Ionic App
localhost:8100/tabs/tab1
Tab 1
Tab 1 page
Explore UI Components
Tab 1
Tab 2
Tab 3
Type here to search
22:21
09-11-2020