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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)

Reaccredited 'A' Grade by NAAC | ISO 9001:2015 Certified

CERTIFICATE

Name: Zeenat

Roll No: 391 Programme: BSc IT/CS Semester: III

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.

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

Date of Examination: (College Stamp)

Class: S.Y. B.Sc. IT Sem- III Roll No: 391__

Subject: Hybrid Application Development

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Practical 1

AngularJS Directives

Aim: Write a program to create AngularJs directives.

Theory:

AngularJS directives are extended HTML attributes with the prefix ng-.

The ng-app directive initializes an AngularJS application.

The ng-init directive initializes application data.

The ng-model directive binds the value of HTML controls (input, select, textarea) to application data.

Code:

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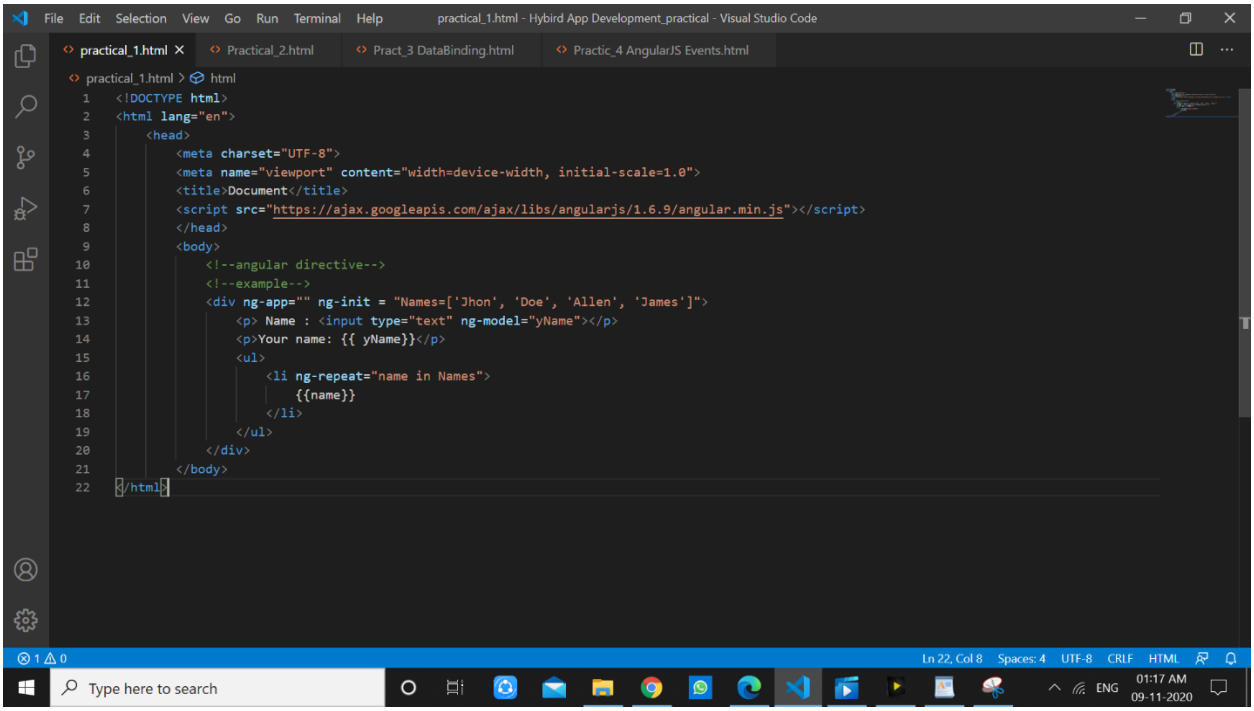
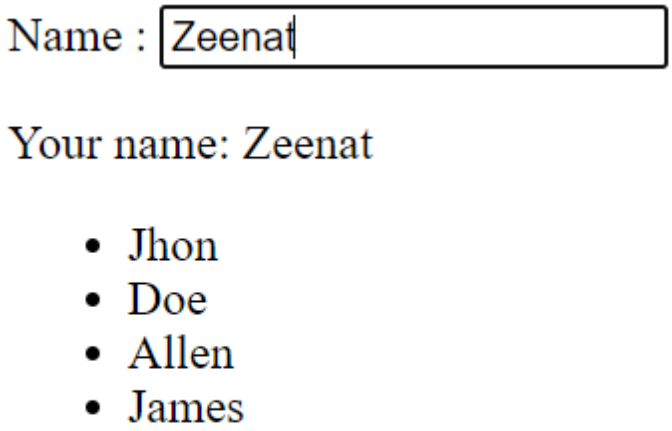


Output:



Practical 2

AngularJS Controllers

Aim: Write a program to create AngularJS Controllers

Theory:

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AngularJS controllers control the data of AngularJS applications.

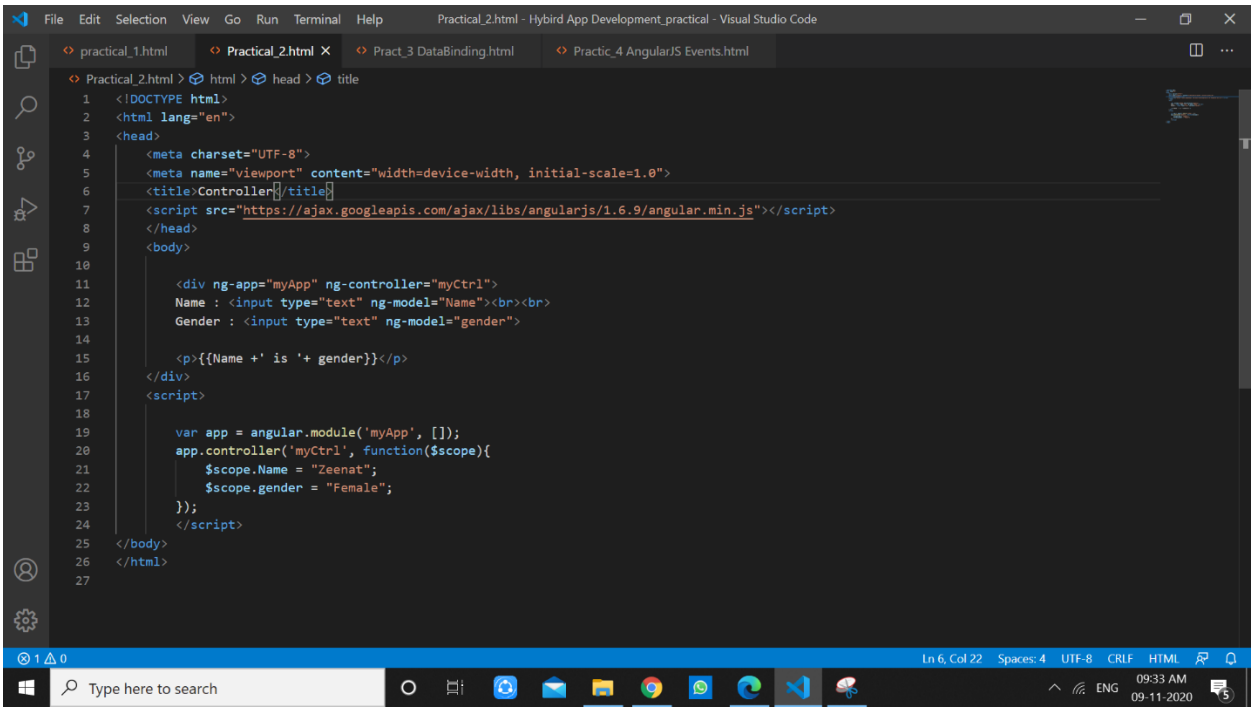
AngularJS controllers are regular JavaScript Objects.

AngularJS applications are controlled by controllers.

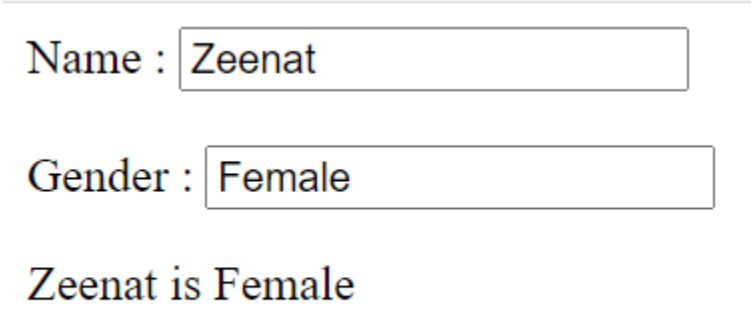
The ng-controller directive defines the application controller.

A controller is a JavaScript Object, created by a standard JavaScript **object** constructor.

Code:



Output:



Practical 3

Old rollno:3042 Name: Zeenat new rollno:391

AngularJS Data-Binding

Aim: Write a program to create AngularJS Data-Binding

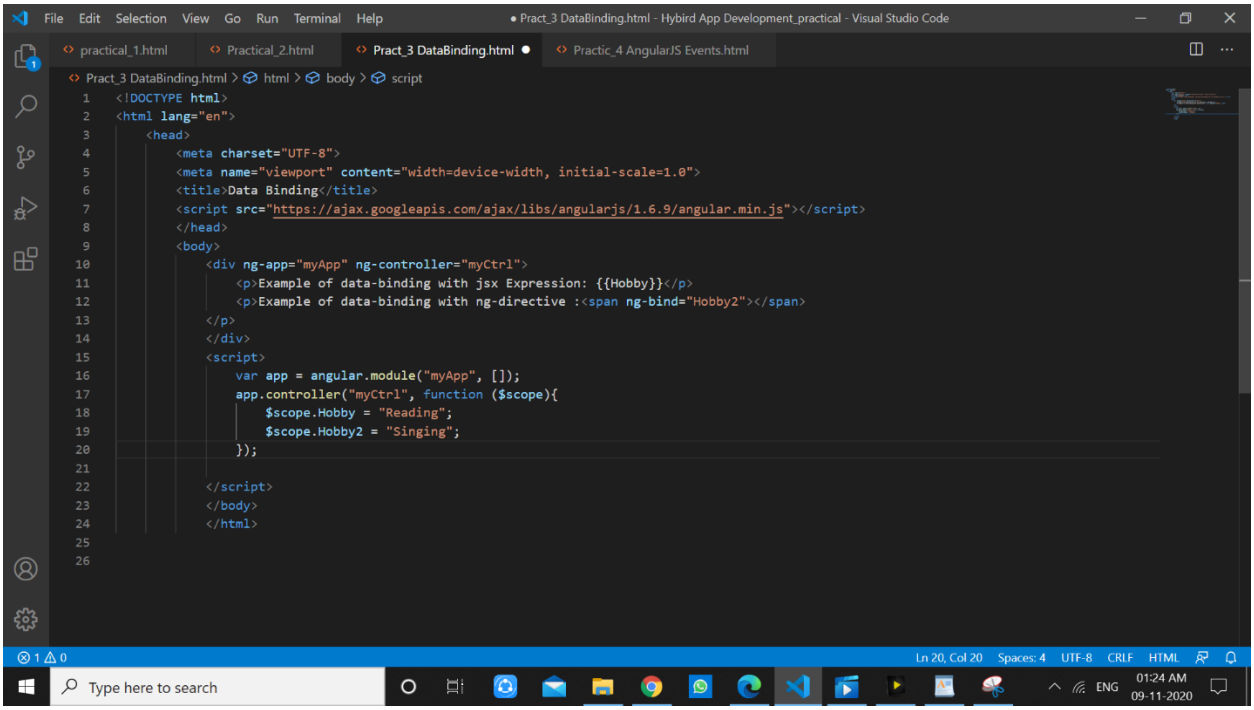
Theory:

Data binding in AngularJS is the synchronization between the model and the view. The way that AngularJS implements data-binding lets you treat the model as the single-source-of-truth in your application.

AngularJS applications usually have a data model. The data model is a collection of data available for the application.

Use the ng-bind directive, which will bind the inner HTML of the element to the specified model property:

Code:



Output:

Example of data-binding with jsx Expression: Reading

Example of data-binding with ng-directive :Singing

Practical 4

AngularJS Events

Aim: Write a program to create AngularJS Events.

Theory:

AngularJS has its own HTML events directives.

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.
Add AngularJS event listeners to your HTML elements by using one or more of these directives:

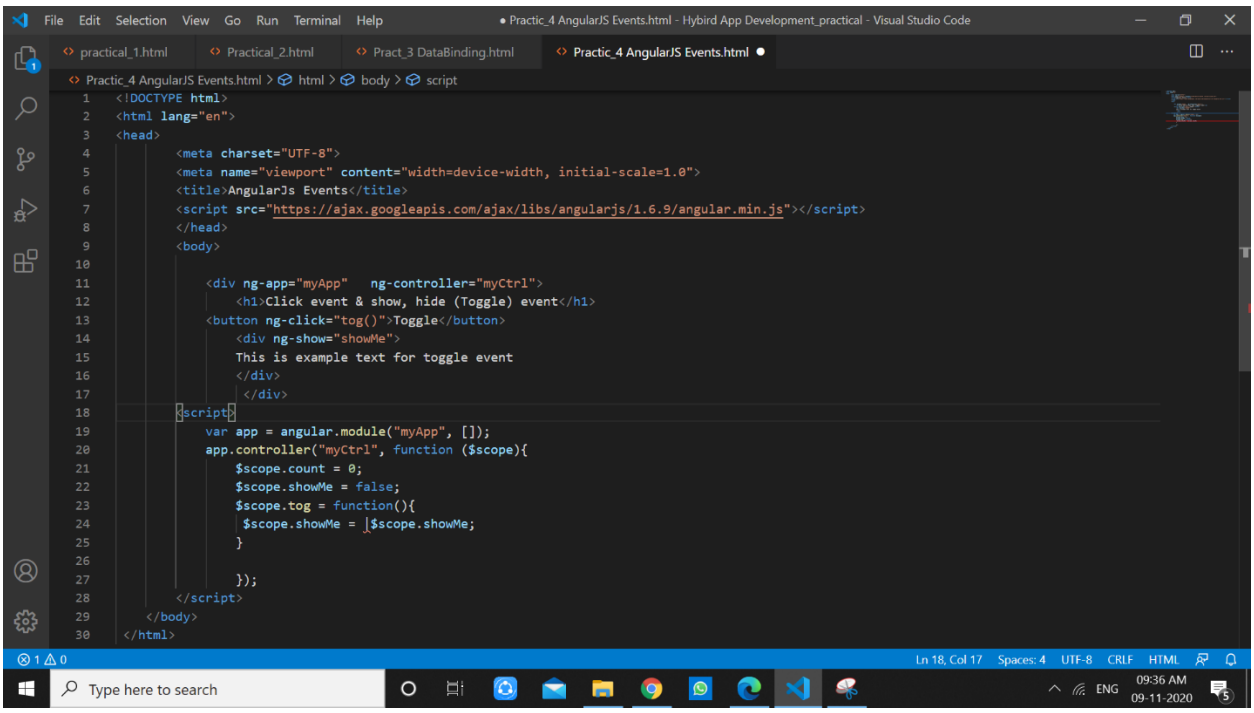
- ng-blur
- ng-change
- ng-click
- ng-copy
- ng-cut
- ng-dblclick
- ng-focus
- ng-keydown
- ng-keypress

- ng-keyup
- ng-mousedown
- ng-mouseenter
- ng-mouseleave
- ng-mousemove
- ng-mouseover
- ng-mouseup
- ng-paste

Toggle, True/False:

Show a section of HTML code when a button is clicked, and hide when the button is clicked again

Code:



Output:

Click event & show, hide (Toggle) event

Toggle

This is example text for toggle event

Ionic practical 5

Aim: Ionic Create and Build First Project

Theory:

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.

How to create and ionic web app:

The requirement for creating an Ionic web app is:

Node Js

NPM

Run the below commands in the command prompt or terminal

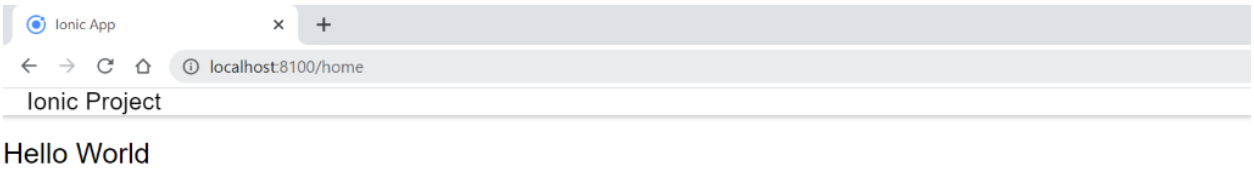
Steps for creating Ionic Web app:

Install ionic using npm install -g ionic

2. Get ionic info using ionic info

3. To create an ionic app type ionic start <app name>
4. Then it will ask to choose a framework if you want to make it in angular choose angular
5. Then to start running the ionic web page in the server type ionic serve.
6. To access the web page go on http://localhost:8100

Output:



Practical 6

Aim: 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.

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Requirements:

Java 8 in path and JAVA_HOME set

Android SDK with ANDROID_SDK_ROOT set

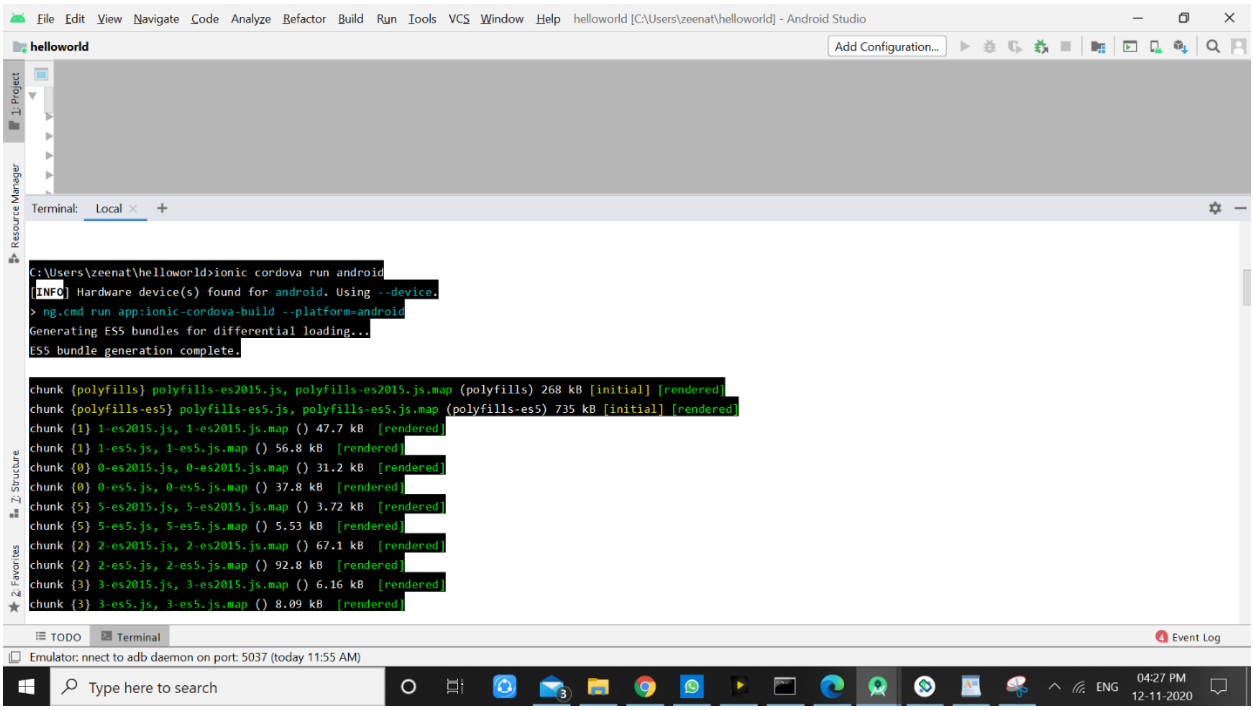
Gradle in path

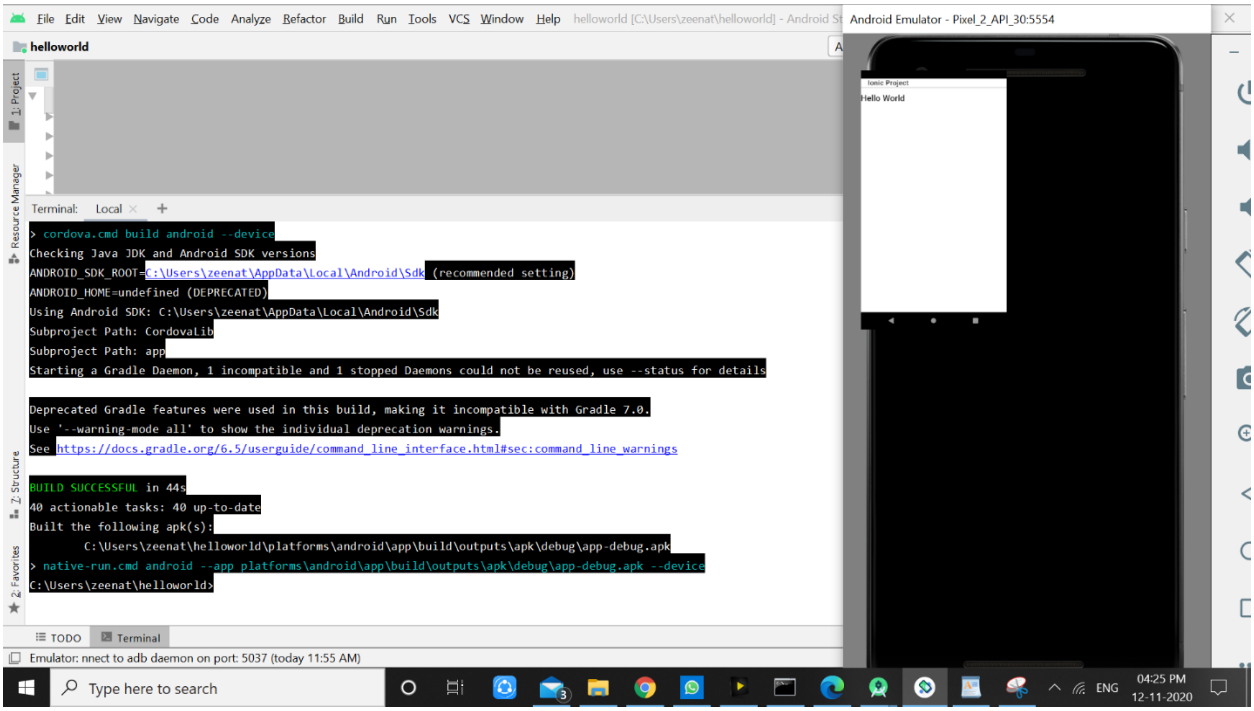
Steps to create an ionic android app:

Now in cmd type ionic cordova platform add android .This will add and android platform to your web app directory.

2. Now type ionic cordova build android to start building your android app.

3. Now type ionic cordova run android , If you have connect your machine to a phone and turned on USB debugging the app will export to your pc and if you are running an emulator the out will be like this.





Practical 7

Aim: Ionic Create, Generate and Add Pages

Theory:

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 ionic generate or ionic g command uses the Angular CLI to generate features such as pages, components, directives, services, etc.

Steps:

Open command prompt as administrator

Create a folder for your ionic project by running md

Navigate to the folder by running cd

To create an ionic app run ionic start blank

Then it will ask to choose a framework so choose `AngularJS`

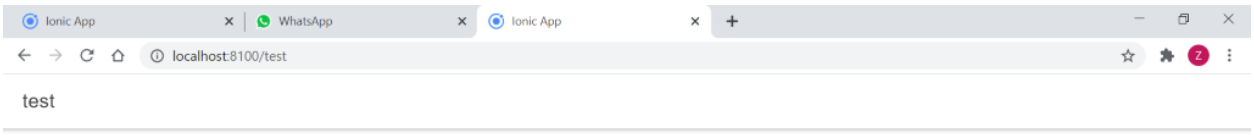
Navigate to the folder by running cd

To generate and add a page run ionic g page

This will create a folder with all the components of your page in {project_root}\src\app\{page_name}

Then to start running the ionic web page on the server type ionic serve 10. To access the web page go on http://localhost:8100/{page_name}

```
C:\Users\zeenat\ionic_proj1>ionic g page test
> ng.cmd generate page test
CREATE src/app/test/test-routing.module.ts (339 bytes)
CREATE src/app/test/test.module.ts (458 bytes)
CREATE src/app/test/test.page.html (123 bytes)
CREATE src/app/test/test.page.spec.ts (633 bytes)
CREATE src/app/test/test.page.ts (248 bytes)
CREATE src/app/test/test.page.scss (0 bytes)
UPDATE src/app/app-routing.module.ts (639 bytes)
[OK] Generated page!
```



Practical 8

Aim: 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 templates available:

- 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

Steps:

- Open command prompt as administrator
- Create a folder for your ionic project by running

Navigate to the folder by running

To create an ionic app run

Then it will ask to choose a framework so choose

Navigate to the folder by running

Then to start running the ionic web page on the servertype

To access the web page, go on http://localhost:8100

```
C:\Users\zeenat\ionic_proj1>ionic start myApp tabs

Pick a framework!

Please select the JavaScript framework to use for your new app. To bypass this prompt next time, supply a value
--type option.

? Framework: Angular
? You are already in an Ionic project directory. Do you really want to start another project here? Yes
[INFO] Existing git project found (C:/Users/zeenat/ionic_proj1). Git operations are disabled.
√ Preparing directory .\myApp - done!
√ Downloading and extracting tabs starter - done!

Installing dependencies may take several minutes.

  ---------------------------------------------------------

     Ionic Studio, a powerful, local editor made with love by Ionic

                 Lightning fast app creation
          Quickest & easiest way to get started with Ionic

         Learn more: https://ion.link/studio

  ---------------------------------------------------------


> npm.cmd i
npm WARN deprecated request@2.88.2: request has been deprecated, see https://github.com/request/request/issues/3
npm WARN deprecated chokidar@2.1.8: Chokidar 2 will break on node v14+. Upgrade to chokidar 3 with 15x less depe
npm WARN deprecated har-validator@5.1.5: this library is no longer supported
npm WARN deprecated fsevents@1.2.13: fsevents 1 will break on node v14+ and could be using insecure binaries. Up
npm WARN deprecated urix@0.1.0: Please see https://github.com/lydell/urix#deprecated
npm WARN deprecated resolve-url@0.2.1: https://github.com/lydell/resolve-url#deprecated

> core-js@3.6.4 postinstall C:\Users\zeenat\ionic_proj1\myApp\node_modules\core-js
```

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