

IONIC Practical 1

Aim : Ionic 4-Create and build first project or application (Android and iOS).

Theory :

What is Hybrid Application?

A (hybrid app) is a software application that combines elements of both native apps and web applications. Hybrid apps are essentially web apps that have been put in a native app shell. Once they are downloaded from an app store and installed locally, the shell is able to connect to whatever capabilities the mobile platform provides through a browser that's embedded in the app. The browser and its plug-ins run on the back end and are invisible to the end user.

Hybrid apps are popular because they allow developers to write code for a mobile app once and still accommodate multiple platforms. Because hybrid apps add an extra layer between the source code and the target platform, they may perform slightly slower than native or web versions of the same app.

How to create an ionic web app.

The requirement for creating an Ionic web app is:

1. Node
2. Node Package Manager(npm)

Steps for creating Ionic Web app:

Open windows command prompt and type the foll. Commands.

1. 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> <template_type>`
4. Then, it will ask to choose a framework, if you want to make it in angular choose angular.
5. Change the folder and go your app_name created using : `cd your_app_name`
6. Then to start running the ionic web page in the server type `ionic serve` in the same folder.

```
C:\Users\user\abhay>cd hello_world

C:\Users\user\abhay\hello_world>ionic serve
> ng.cmd run app:serve --host=localhost --port=8100
[ng] chunk {} 0.js, 0.js.map {} 31.2 kB [rendered]
[ng] WARNING in C:\Users\user\abhay\hello_world\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\user\abhay\hello_world\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) 14.7 kB [rendered]
[ng] chunk {focus-visible-15ada7f7-js} focus-visible-15ada7f7-js.js, focus-visible-15ada7f7-js.js.map (focus-visible-15ada7f7-js) 2.11 kB [rendered]
[ng] chunk {home-home-module} home-home-module.js, home-home-module.js.map (home-home-module) 7.8 kB [rendered]
[ng] chunk {input-shims-4f0dbb39-js} input-shims-4f0dbb39-js.js, input-shims-4f0dbb39-js.js.map (input-shims-4f0dbb39-js) 16.3 kB [rendered]
[ng] chunk {keyboard-dd970efc-js} keyboard-dd970efc-js.js, keyboard-dd970efc-js.js.map (keyboard-dd970efc-js) 6.16 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) 10.5 kB [rendered]
[ng] chunk {polyfills-dom} polyfills-dom.js, polyfills-dom.js.map (polyfills-dom) 38.5 kB [rendered]
[ng] chunk {runtime} runtime.js, runtime.js.map (runtime) 9.53 kB [entry] [rendered]
[ng] chunk {shadow-css-c63963b5-js} shadow-css-c63963b5-js.js, shadow-css-c63963b5-js.js.map (shadow-css-c63963b5-js) 15.9 kB [rendered]
[ng] chunk {status-tap-0b3e89c4-js} status-tap-0b3e89c4-js.js, status-tap-0b3e89c4-js.js.map (status-tap-0b3e89c4-js) 1.6 kB [rendered]
[ng] chunk {styles} styles.js, styles.js.map (styles) 93 kB [initial] [rendered]
[ng] chunk {swipe-back-0a6a44c8-js} swipe-back-0a6a44c8-js.js, swipe-back-0a6a44c8-js.js.map (swipe-back-0a6a44c8-js) 3.05 kB [rendered]
[ng] chunk {swiper-bundle-95afeea2-js} swiper-bundle-95afeea2-js.js, swiper-bundle-95afeea2-js.js.map (swiper-bundle-95afeea2-js) 200 kB [rendered]
[ng] chunk {tap-click-252af35a-js} tap-click-252af35a-js.js, tap-click-252af35a-js.js.map (tap-click-252af35a-js) 6.22 kB [rendered]
[ng] chunk {vendor} vendor.js, vendor.js.map (vendor) 4.79 MB [initial] [rendered]
[ng] Date: 2020-09-16T14:22:10.982Z - Hash: 1913f2b5807aef1999b0 - Time: 43358ms
[INFO] ... and 42 additional chunks
[ng] : Compiled successfully.

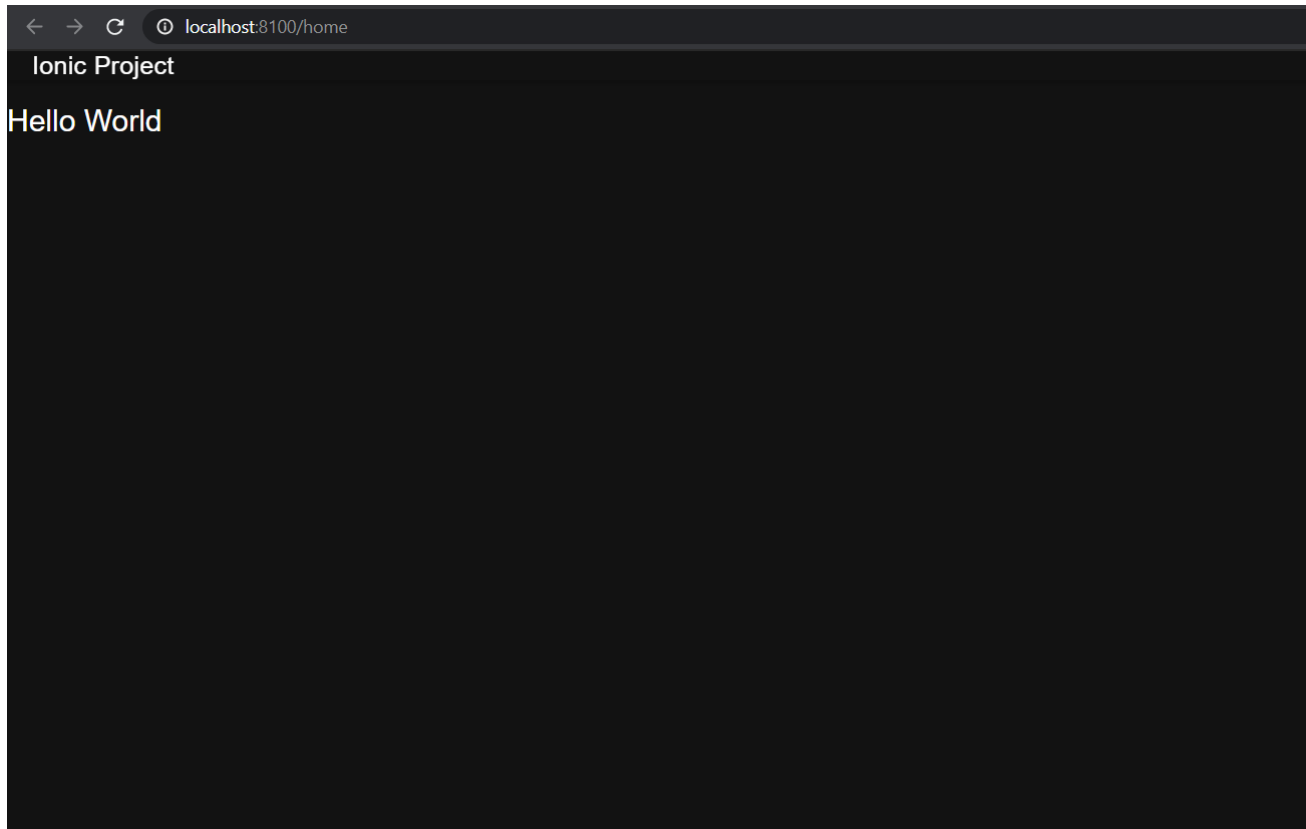
[INFO] Development server running!

      Local: http://localhost:8100

      Use Ctrl+C to quit this process

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

7. To access the web page go to <http://localhost:8100> in your preferred browser
8. Final Output :



How to create an ionic Android app :

The requirement for creating an Ionic Android App is:

1. Android studio
2. Gradle
3. Android Device

Steps for creating Ionic Android app :

1. After you have built the web app, next command you should type : `ionic cordova platform add android` .

This will add 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.

4. If you are using Android phone, then install the app-debug.apk application in your phone. It will be available in this path :

`C:\Users\user\yourname\hello_world\platforms\android\app\build\outputs\apk\debug\app-debug.apk`

