

 무료 전자 책

배우기

ionic2

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1: ionic2

Ionic 2 . , . JavaScript / Typescript, Angular 2, HTML CSS (SCSS / LESS) .
ionic2 >=android 4.4 , android 4.1 android 4.3 .

Examples

2 .

: 2 NodeJS . npm Ionic 2 .

1. 2

Ionic 1 Ionic CLI GUI . Ionic 1 !

2 npm .

```
$ npm install -g ionic
```

EACCES

2.

CLI .

```
$ ionic start MyIonic2Project
```

. :

```
$ ionic start MyIonic2Project tutorial  
$ cd MyIonic2Project  
$ npm install
```

.

ionic serve -lc .

```
$ ionic serve -lc
```

-l -c . package.json [ionic2-app-base](#) .

!

3.

. . .

Cordova .

```
$ npm install -g cordova
```

iOS [iOS](#) (: OSX iOS) Android [Genymotion](#) .

iOS :

iOS OSX .iOS . . . :

```
$ ionic cordova platform add ios
```

iOS [Xcode](#) .

.

```
$ ionic cordova run ios
```

Android :

Android . .

```
$ ionic cordova platform add android
```

Android [Android SDK](#) . Android SDK . [Genymotion](#) . . .

```
$ ionic cordova run android
```

! 2 !

. / .

iOS :

```
$ ionic cordova emulate ios -lcs
```

iOS 9.2.2 .livereload config.xml .

```
<allow-navigation href="*" />
```

```
<platform name="ios"> :
```

```
<config-file parent="NSAppTransportSecurity" platform="ios" target="*-Info.plist">
  <dict>
```

```
<key>NSAllowsArbitraryLoads</key>
<true/>
</dict>
</config-file>
```

Android :

```
$ ionic cordova run android -lcs
```

l , c s . / .

Windows

Windows Windows . ionic2 Windows .

```
$ionic cordova platform add windows
```

.

```
$ionic cordova run windows
```

```
$ionic serve
```

.()

```
chrome://inspect/#devices
```

ionic2 : <https://riptutorial.com/ko/ionic2/topic/3632/ionic2->

2: 'show-delete'

Examples

Angular 2 2 .

.
- 2 . ion-item-sliding ion-item .
. ion-item .
, 2 . .
:

.html :

```
<ion-header>
  <ion-navbar>
    <ion-buttons start (click)="manageSlide()">
      <button>
        <ion-icon name="ios-remove"></ion-icon>
      </button>
    </ion-buttons>
    <ion-title>PageName</ion-title>
  </ion-navbar>
</ion-header>
```

:

```
<ion-list #list1>
  <ion-item-sliding #slidingItem *ngFor="let contact of contacts | sortOrder">
    <button #item ion-item>
      <p>{{ item.details }}</p>
      <ion-icon id="listIcon" name="arrow-forward" item-right></ion-icon>
    </button>
    <ion-item-options side="left">
      <button danger (click)="doConfirm(contact, slidingItem)">
        <ion-icon name="ios-remove-circle-outline"></ion-icon>
        Remove
      </button>
    </ion-item-options>
  </ion-item-sliding>
</ion-list>
```

.ts .

```
import { ViewChild } from '@angular/core';
import { Item } from 'ionic-angular';
import { ItemSliding, List } from 'ionic-angular';
```

ViewChild html .

```
@ViewChild(List) list: List;
```

```
public manageSlide() {  
  
    //loop through the list by the number retrieved of the number of ion-item-sliding in the  
list  
    for (let i = 0; i < this.list.getElementRef().nativeElement.children.length; i++) {  
  
        // retrieve the current ion-item-sliding  
        let itemSlide = this.list.getElementRef().nativeElement.children[i].$ionComponent;  
  
        // retrieve the button to slide within the ion-item-sliding  
        let item = itemSlide.item;  
  
        // retrieve the icon  
        let ic = item._elementRef.nativeElement.children[0].children[1];  
  
        if (this.deleteOpened) {  
            this.closeSlide(itemSlide);  
        } else {  
            this.openSlide(itemSlide, item, ic);  
        }  
    }  
  
    if (this.deleteOpened) {  
        this.deleteOpened = false;  
    } else {  
        this.deleteOpened = true;  
    }  
}
```

```
private openSlide(itemSlide: ItemSliding, item: Item, inIcon) {  
    itemSlide.setCssClass("active-sliding", true);  
    itemSlide.setCssClass("active-slide", true);  
    itemSlide.setCssClass("active-options-left", true);  
    item.setCssStyle("transform", "translate3d(72px, 0px, 0px)")  
}
```

```
private closeSlide(itemSlide: ItemSliding) {  
    itemSlide.close();  
    itemSlide.setCssClass("active-sliding", false);  
    itemSlide.setCssClass("active-slide", false);  
    itemSlide.setCssClass("active-options-left", false);  
}
```

...

'show-delete' : <https://riptutorial.com/ko/ionic2/topic/6620/-show-delete-----ion-list-->

3: AngularFire2 / Firebase

Examples

Angularfire2 / Firebase Facebook

app.ts

```
import {Component} from '@angular/core';
import {Platform, ionicBootstrap} from 'ionic-angular';
import {StatusBar} from 'ionic-native';
import {LoginPage} from './pages/login/login';
import {FIREBASE_PROVIDERS, defaultFirebase, AuthMethods, AuthProviders, firebaseAuthConfig}
from 'angularfire2';

@Component({
  template: '<ion-nav [root]="rootPage"></ion-nav>'
})

export class MyApp {

  private rootPage: any;

  constructor(private platform: Platform) {
    this.rootPage = LoginPage;

    platform.ready().then(() => {
      // Okay, so the platform is ready and our plugins are available.
      // Here you can do any higher level native things you might need.
      StatusBar.styleDefault();
    });
  }
}

ionicBootstrap(MyApp, [
  FIREBASE_PROVIDERS,
  defaultFirebase({
    apiKey: myAppKey,
    authDomain: 'myapp.firebaseio.com',
    databaseURL: 'https://myapp.firebaseio.com',
    storageBucket: 'myapp.appspot.com',
  }),
  firebaseAuthConfig({})
]);
```

login.html

```
<ion-header>
  <ion-navbar>
    <ion-title>Home</ion-title>
  </ion-navbar>
</ion-header>

<ion-content padding class="login">
  <button (click)="facebookLogin()">Login With Facebook</button>
```

```
</ion-content>
```

login.ts

```
import {Component} from '@angular/core';
import {Platform} from 'ionic-angular';
import {AngularFire, AuthMethods, AuthProviders} from 'angularfire2';
import {Facebook} from 'ionic-native';

declare let firebase: any; // There is currently an error with the Firebase files, this will
fix it.

@Component({
  templateUrl: 'build/pages/login/login.html'
})
export class LoginPage {

  constructor(private platform: Platform, public af: AngularFire) {

  }

  facebookLogin() {
    Facebook.login(['public_profile', 'email', 'user_friends'])
      .then(success => {
        console.log('Facebook success: ' + JSON.stringify(success));
        let creds =
firebase.auth.FacebookAuthProvider.credential(success.authResponse.accessToken);
        this.af.auth.login(creds, {
          provider: AuthProviders.Facebook,
          method: AuthMethods.OAuthToken,
          remember: 'default',
          scope: ['email']
        }).then(success => {
          console.log('Firebase success: ' + JSON.stringify(success));
        }).catch(error => {
          console.log('Firebase failure: ' + JSON.stringify(error));
        });
      }).catch(error => {
        console.log('Facebook failure: ' + JSON.stringify(error));
      });
  }
}
```

Angularfire2 / Firebase : <https://riptutorial.com/ko/ionic2/topic/5518/angularfire2---firebase--->

4: AngularFire2 with Ionic2

AngularFire2 Ionic App .

Examples

AngularFire

.

```
const firebaseConfig = {
  apiKey: 'XXXXXXXXXX',
  authDomain: 'XXXXXXXXXX',
  databaseURL: 'XXXXXXXXXX',
  storageBucket: 'XXXXXXXXXX',
  messagingSenderId: 'XXXXXXXXXX'
};
```

firebase .

```
imports: [
  AngularFireModule.initializeApp(firebaseConfig),
  AngularFireDatabaseModule,
  AngularFireAuthModule
],
```

AngularFire2

.

```
import { AngularFireDatabase } from 'angularfire2/database';
constructor (private _af: AngularFireDatabase) {}
```

Observable List . root / items / food .

```
this._af.list('root/items/food');
```

firebase . .

```
this._af.list('root/items/food').push(myItemData);
this._af.list('root/items/food').update(myItem.$key, myNewItemData);
```

.

```
this._af.list('root/items/food').remove(myItem.$key);
```

Angularfire2 with Ionic2 : <https://riptutorial.com/ko/ionic2/topic/10918/angularfire2-with-ionic2>

5: InAppBrowser

. InAppBrowser / InAppBrowser . InAppBrowser .

Examples

:

InAppBrowser . / webapp .

InAppBrowser

```
platform.ready().then(() => {
  // Okay, so the platform is ready and our plugins are available.
  // Here you can do any higher level native things you might need.
  var url= "https://blog.knoldus.com/";
  var browserRef = window.cordova.InAppBrowser.open(url, "_self", "location=no",
"toolbar=no");
  browserRef.addEventListener("exit", (event) => {
    return navigator["app"].exitApp();
  }
});
```

InAppBrowser : <https://riptutorial.com/ko/ionic2/topic/9801/inappbrowser>

6: Ionic2 CSS

Examples

Ionic Ionic CSS flexbox . , . .

-10	10 %
-20	20 %
-25	25 %
-33	33.3333 %
-50	50 %
- 67	66.6666 %
-75	75 %
-80	80 %
- 90	90 %

```
<ion-grid>
  <ion-row>
    <ion-col width-10>This column will take 10% of space</ion-col>
  </ion-row>
</ion-grid>
```

```
<ion-card>
  <ion-card-header>
    Header
  </ion-card-header>
  <ion-card-content>
    The British use the term "header", but the American term "head-shot" the English
    simply refuse to adopt.
  </ion-card-content>
</ion-card>
```

Ionic2 CSS : <https://riptutorial.com/ko/ionic2/topic/8011/ionic2-css-->

7: Visual Studio Ionic 2

Visual Studio Intellisense IDE. IDE (Ionic, C, C #, AngularJs, TypeScript, Android) .
VSCode Extensions . VSCode .

Examples

VSCode

VSCode . VSCode . VSCode .

```
Introduction of Extensions in VSCode
```

VSCode Extension . **yourVSCode ionic2-vscode** Extension . VSCode Editor
Extension 5 . **(ctrl + shift + X)** .

```
Add Extension for Ionic2 in VsCode
```

ctrl + shift + X , **3** (ionic2-vscode),npm (ionic2-vscode),npm

VSCode

VsCode . **CLI cmd** . . .

```
$ ionic start appName blank
```

ionic . Ionic2,

, . VSCode . . .

1. VScode .

2. .

3. .

ctrl + O **Ctrl + K** .

> Chrome

ionic **cmd CLI** .

```
$ ionic serve
```

ionic Extension (**Chrome**) launch.json .

```
{
  "version": "0.2.0",
  "configurations": [
    {
      "name": "Launch in Chrome",
      "type": "chrome",
      "request": "launch",
      "url": "http://localhost:8100",
      "sourceMaps": true,
      "webRoot": "${workspaceRoot}/src"
    }
  ]
}
```

> **Android**

Android **Run** ionic cmd CLI Android .

```
$ ionic cordova platform add android
```

Android

```
$ ionic cordova build android
```

```
$ ionic cordova run android
```

Android .

Android **VSCoDe Cordova Android Extension** . launch.json .

```
{
  "version": "0.2.0",
  "configurations": [
    {
      "name": "Run Android on device",
      "type": "cordova",
      "request": "launch",
      "platform": "android",
      "target": "device",
      "port": 9222,
      "sourceMaps": true,
      "cwd": "${workspaceRoot}",
      "ionicLiveReload": false
    },
    {
      "name": "Run iOS on device",
      "type": "cordova",
      "request": "launch",
      "platform": "ios",
      "target": "device",
      "port": 9220,
      "sourceMaps": true,
      "cwd": "${workspaceRoot}",
      "ionicLiveReload": false
    }
  ],
}
```

```

{
  "name": "Attach to running android on device",
  "type": "cordova",
  "request": "attach",
  "platform": "android",
  "target": "device",
  "port": 9222,
  "sourceMaps": true,
  "cwd": "${workspaceRoot}"
},
{
  "name": "Attach to running iOS on device",
  "type": "cordova",
  "request": "attach",
  "platform": "ios",
  "target": "device",
  "port": 9220,
  "sourceMaps": true,
  "cwd": "${workspaceRoot}"
},
{
  "name": "Run Android on emulator",
  "type": "cordova",
  "request": "launch",
  "platform": "android",
  "target": "emulator",
  "port": 9222,
  "sourceMaps": true,
  "cwd": "${workspaceRoot}",
  "ionicLiveReload": false
},
{
  "name": "Run iOS on simulator",
  "type": "cordova",
  "request": "launch",
  "platform": "ios",
  "target": "emulator",
  "port": 9220,
  "sourceMaps": true,
  "cwd": "${workspaceRoot}",
  "ionicLiveReload": false
},
{
  "name": "Attach to running android on emulator",
  "type": "cordova",
  "request": "attach",
  "platform": "android",
  "target": "emulator",
  "port": 9222,
  "sourceMaps": true,
  "cwd": "${workspaceRoot}"
},
{
  "name": "Attach to running iOS on simulator",
  "type": "cordova",
  "request": "attach",
  "platform": "ios",
  "target": "emulator",
  "port": 9220,
  "sourceMaps": true,
  "cwd": "${workspaceRoot}"
}

```

```

    },
    {
      "name": "Serve to the browser (ionic serve)",
      "type": "cordova",
      "request": "launch",
      "platform": "serve",
      "cwd": "${workspaceRoot}",
      "devServerAddress": "localhost",
      "sourceMaps": true,
      "ionicLiveReload": true
    },
    {
      "name": "Simulate Android in browser",
      "type": "cordova",
      "request": "launch",
      "platform": "android",
      "target": "chrome",
      "simulatePort": 8000,
      "livereload": true,
      "sourceMaps": true,
      "cwd": "${workspaceRoot}"
    },
    {
      "name": "Simulate iOS in browser",
      "type": "cordova",
      "request": "launch",
      "platform": "ios",
      "target": "chrome",
      "simulatePort": 8000,
      "livereload": true,
      "sourceMaps": true,
      "cwd": "${workspaceRoot}"
    }
  ]
}

```

-
- 1..
- 2..

Short keys

- - F5
- StepOver - F10
- - F11
- - Shift + F5
- -ctrl + shift_F5

Visual Studio Ionic 2 : <https://riptutorial.com/ko/ionic2/topic/10559/visual-studio--ionic-2--->

8:

/ . " " . QA .

: <https://github.com/driftyco/ionic-unit-testing-example>

Examples

/

.

.

-

Jasmine -

PhantomJS -

package.json dev . dev .

```
"@ionic/app-scripts": "1.1.4",
"@ionic/cli-build-ionic-angular": "0.0.3",
"@ionic/cli-plugin-cordova": "0.0.9",
"@types/jasmine": "^2.5.41",
"@types/node": "^7.0.8",
"angular2-template-loader": "^0.6.2",
"html-loader": "^0.4.5",
"jasmine": "^2.5.3",
"karma": "^1.5.0",
"karma-chrome-launcher": "^2.0.0",
"karma-jasmine": "^1.1.0",
"karma-jasmine-html-reporter": "^0.2.2",
"karma-sourcemap-loader": "^0.3.7",
"karma-webpack": "^2.0.3",
"null-loader": "^0.1.1",
"ts-loader": "^2.0.3",
"typescript": "2.0.9"
```

"angular2-template-loader": "^0.6.2", - will load and compile the angular2 html files.

"ts-loader": "^2.0.3", - will compile the actual typescript files

"null-loader": "^0.1.1", - will not load the assets that will be missing, such as fonts and images. We are testing, not image lurking.

package.json .

```
"test": "karma start ./test-config/karma.conf.js"
```

tsconfig spec.ts .

```
"exclude": [  
  "node_modules",  
  "src/**/*.spec.ts"  
],
```

, . test-config .(package.json) 3 .

webpack.test.js - webpack .

```
var webpack = require('webpack');  
var path = require('path');  
  
module.exports = {  
  devtool: 'inline-source-map',  
  
  resolve: {  
    extensions: ['.ts', '.js']  
  },  
  
  module: {  
    rules: [  
      {  
        test: /\.ts$/,  
        loaders: [  
          {  
            loader: 'ts-loader'  
          }, 'angular2-template-loader'  
        ]  
      },  
      {  
        test: /\.html$/,  
        loader: 'html-loader'  
      },  
      {  
        test: /\.(png|jpe?g|gif|svg|woff|woff2|ttf|eot|ico)$/,  
        loader: 'null-loader'  
      }  
    ]  
  },  
  
  plugins: [  
    new webpack.ContextReplacementPlugin(  
      // The (\\|\/) piece accounts for path separators in *nix and Windows  
      /angular(\\|\/)core(\\|\/)(esm(\\|\/)src|src)(\\|\/)linker/,  
      root('./src'), // location of your src  
      {} // a map of your routes  
    )  
  ]  
};  
  
function root(localPath) {  
  return path.resolve(__dirname, localPath);  
}
```

karma-test-shim.js - .

```

Error.stackTraceLimit = Infinity;

require('core-js/es6');
require('core-js/es7/reflect');

require('zone.js/dist/zone');
require('zone.js/dist/long-stack-trace-zone');
require('zone.js/dist/proxy');
require('zone.js/dist/sync-test');
require('zone.js/dist/jasmine-patch');
require('zone.js/dist/async-test');
require('zone.js/dist/fake-async-test');

var appContext = require.context('../src', true, /\.spec\.ts/);

appContext.keys().forEach(appContext);

var testing = require('@angular/core/testing');
var browser = require('@angular/platform-browser-dynamic/testing');

testing.TestBed.initTestEnvironment(browser.BrowserDynamicTestingModule,
browser.platformBrowserDynamicTesting());

```

karma.conf.js - . Chrome PhantomJS .

```

var webpackConfig = require('./webpack.test.js');

module.exports = function (config) {
  var _config = {
    basePath: '',

    frameworks: ['jasmine'],

    files: [
      {pattern: './karma-test-shim.js', watched: true}
    ],

    preprocessors: {
      './karma-test-shim.js': ['webpack', 'sourcemap']
    },

    webpack: webpackConfig,

    webpackMiddleware: {
      stats: 'errors-only'
    },

    webpackServer: {
      noInfo: true
    },

    browserConsoleLogOptions: {
      level: 'log',
      format: '%b %T: %m',
      terminal: true
    },

    reporters: ['kjhtml', 'dots'],
    port: 9876,
    colors: true,

```

```

    logLevel: config.LOG_INFO,
    autoWatch: true,
    browsers: ['Chrome'],
    singleRun: false
  };

  config.set(_config);
};

```

. app.component spec . <https://github.com/driftyco/ionic-unit-testing-example/blob/master/src/pages/page1/page1>

. app.component .

```

beforeEach(async(() => {
  TestBed.configureTestingModule({
    declarations: [MyApp],
    imports: [
      IonicModule.forRoot(MyApp)
    ],
    providers: [
      StatusBar,
      SplashScreen
    ]
  })
}));

```

. . .

. , app.component Platform , IonicModule .

.

```

beforeEach(() => {
  fixture = TestBed.createComponent(MyApp);
  component = fixture.componentInstance;
});

```

.

```

it('should be created', () => {
  expect(component instanceof MyApp).toBe(true);
});

it('should have two pages', () => {
  expect(component.pages.length).toBe(2);
});

```

:

```

import { async, TestBed } from '@angular/core/testing';
import { IonicModule } from 'ionic-angular';

import { StatusBar } from '@ionic-native/status-bar';
import { SplashScreen } from '@ionic-native/splash-screen';

```



```

import { MyApp } from './app.component';

describe('MyApp Component', () => {
  let fixture;
  let component;

  beforeEach(async(() => {
    TestBed.configureTestingModule({
      declarations: [MyApp],
      imports: [
        IonicModule.forRoot(MyApp)
      ],
      providers: [
        StatusBar,
        SplashScreen
      ]
    })
  }));

  beforeEach(() => {
    fixture = TestBed.createComponent(MyApp);
    component = fixture.componentInstance;
  });

  it('should be created', () => {
    expect(component instanceof MyApp).toBe(true);
  });

  it('should have two pages', () => {
    expect(component.pages.length).toBe(2);
  });
});

```

```

npm run test

```

• **TestBed**

• <https://riptutorial.com/ko/ionic2/topic/9561/>

9:

Examples

UI. , .

```
import { ModalController } from 'ionic-angular';
import { ModalPage } from './modal-page';

export class MyPage {
  constructor(public modalCtrl: ModalController) {
  }

  presentModal() {
    let modal = this.modalCtrl.create(ModalPage);
    modal.present();
  }
}
```

: .

```
Modal.create() . NavParams . "" NavParams .
```

:

```
import { ModalController, NavParams } from 'ionic-angular';

export class HomePage {

  constructor(public modalCtrl: ModalController) {

  }

  presentProfileModal() {
    let profileModal = this.modalCtrl.create(Profile, { userId: 8675309 });
    profileModal.present();
  }

}
```

:

```
import { NavParams } from 'ionic-angular';
export class Profile {

  constructor(params: NavParams) {
    console.log('UserId', params.get('userId'));
  }

}
```

: <https://riptutorial.com/ko/ionic2/topic/6415/>

10:

Examples

UI. , , .

. . . .

Message.html

```
<ion-header>
  <ion-toolbar>
    <ion-title>
      Modal
    </ion-title>
    <ion-buttons start>
      <button (click)="dismiss()">
        <span primary showWhen="ios">Cancel</span>
        <ion-icon name="md-close" showWhen="android, windows"></ion-icon>
      </button>
    </ion-buttons>
  </ion-toolbar>
</ion-header>
<ion-content padding>
  <h1>Modal Without Params is created successfully.</h1>
  <button full (click)="dismiss()"> Exit </button>
</ion-content>
```

Message.ts

```
import { Component } from '@angular/core';
import { ViewController } from 'ionic-angular';
@Component({
  templateUrl: 'build/pages/message/message.html',
})
export class MessagePage {
  viewCtrl;
  constructor(viewCtrl: ViewController) {
    this.viewCtrl = viewCtrl;
  }
  dismiss(){
    this.viewCtrl.dismiss();
  }
}
```

. "" .

Home.html

```
<ion-header>
  <ion-navbar>
    <ion-title>
      Modal Example
```

```

    </ion-title>
  </ion-navbar>
</ion-header>
<ion-content padding>
  <button full (click)="openModal()">ModalWithoutParams-Message</button>
</ion-content>

```

```

import { Component } from '@angular/core';
import { ModalController } from 'ionic-angular';
import { MessagePage } from '../message/message';
@Component({
  templateUrl: 'build/pages/home/home.html'
})
export class HomePage {
  modalCtrl;
  data;
  constructor(modalCtrl: ModalController) {
    this.modalCtrl = modalCtrl;
    this.data = [{name: "aaa", email: "aaa.a@som.com", mobile: "1234567890", nickname: "zzz"},
      {name: "bbb", email: "bbb.a@som.com", mobile: "1234567890", nickname: "yyy"},
      {name: "ccc", email: "ccc.a@som.com", mobile: "1234567890", nickname: "xxx"}]
  }
  openModal() {
    let myModal = this.modalCtrl.create(MessagePage);
    myModal.present();
  }
}

```

ModalController MessagePage . ModalController create myModal MessagePage .

:

. ? .

Register.html

```

<ion-header>
  <ion-toolbar>
    <ion-title>
      Login
    </ion-title>
    <ion-buttons start>
      <button (click)="dismiss()">
        <span primary showWhen="ios">Cancel</span>
        <ion-icon name="md-close" showWhen="android, windows"></ion-icon>
      </button>
    </ion-buttons>
  </ion-toolbar>
</ion-header>
<ion-content padding>
  <ion-list>
    <ion-item>
      <ion-label>Name</ion-label>
      <ion-input type="text" [(ngModel)]="name"></ion-input>

```

```

</ion-item>
<ion-item>
  <ion-label>Email</ion-label>
  <ion-input type="text" [(ngModel)]="email"></ion-input>
</ion-item>
<ion-item>
  <ion-label>Mobile</ion-label>
  <ion-input type="number" [(ngModel)]="mobile"></ion-input>
</ion-item>
<ion-item>
  <ion-label>Nickname</ion-label>
  <ion-input type="text" [(ngModel)]="nickname"></ion-input>
</ion-item>
</ion-list>
<button full (click)="add()">Add</button>
</ion-content>

```

Register.ts

```

import { Component } from '@angular/core';
import { ViewController } from 'ionic-angular';
@Component({
  templateUrl: 'build/pages/register/register.html',
})
export class RegisterPage {
  viewCtrl;
  name;
  email;
  mobile;
  nickname;
  constructor(viewCtrl: ViewController) {
    this.viewCtrl = viewCtrl;
    this.name = "";
    this.email = "";
    this.mobile = "";
    this.nickname = "";
  }
  dismiss(){
    this.viewCtrl.dismiss();
  }
  add(){
    let data = {"name": this.name, "email": this.email, "mobile": this.mobile, "nickname":
this.nickname};
    this.viewCtrl.dismiss(data);
  }
}

```

viewControllers dismiss . . .

? . . .

Home.html

```

<ion-list>
  <ion-item *ngFor="let datum of data">
    <h1>{{datum.name}}</h1>
  </ion-item>
</ion-list>

```

```
<button full secondary (click)="openModalParams()">ModalWithParams-Register</button>
```

```
import {ResisterPage} from '../register/register';

openModalParams() {
  let modalWithParams = this.modalCtrl.create(ResisterPage);
  modalWithParams.present();

  modalWithParams.onDidDismiss((result) =>{
    if(result){
      this.data.unshift(result);
    }
  });
}
```

ViewController **onDidDismiss** . onDidDismiss . . null.

:

NavController . **create** home.html .

Home.html

```
<ion-list>
  <ion-item *ngFor="let datum of data" (click)="openModalwithNavParams(datum)">
    <h1>{{datum.name}}</h1>
  </ion-item>
</ion-list>
```

```
import {EditProfilePage} from '../edit-profile/edit-profile';

openModalwithNavParams(data) {
  let modalWithNavParams = this.modalCtrl.create(EditProfilePage, {Data: data});
  modalWithNavParams.present();
}
```

NavParams .

Edit-Profile.html

```
<ion-header>
  <ion-toolbar>
    <ion-title>
      Login
    </ion-title>
    <ion-buttons start>
      <button (click)="dismiss()">
        <span primary showWhen="ios">Cancel</span>
        <ion-icon name="md-close" showWhen="android, windows"></ion-icon>
      </button>
    </ion-buttons>
  </ion-toolbar>
</ion-header>
```

```

    </ion-buttons>
  </ion-toolbar>
</ion-header>
<ion-content padding>
  <h2>Welcome {{name}}</h2>
  <ion-list>
    <ion-item>
      <ion-label>Email</ion-label>
      <ion-input type="text" value={{email}}></ion-input>
    </ion-item>
    <ion-item>
      <ion-label>Mobile</ion-label>
      <ion-input type="number" value={{mobile}}></ion-input>
    </ion-item>
    <ion-item>
      <ion-label>Nickname</ion-label>
      <ion-input type="text" value={{nickname}}></ion-input>
    </ion-item>
  </ion-list>
  <button full (click)="dismiss()">Close</button>
</ion-content>

```

Edit-Profile.ts

```

import { Component } from '@angular/core';
import { ViewController, NavParams } from 'ionic-angular';
@Component({
  templateUrl: 'build/pages/edit-profile/edit-profile.html',
})
export class EditProfilePage {
  viewCtrl;
  navParams;
  data;
  name;
  email;
  mobile;
  nickname;
  constructor(viewCtrl: ViewController, navParams: NavParams) {
    this.viewCtrl = viewCtrl;
    this.navParams = navParams;
    this.data = this.navParams.get('Data');
    this.name = this.data.name;
    this.email = this.data.email;
    this.mobile = this.data.mobile;
    this.nickname = this.data.nickname;
  }
  dismiss(){
    this.viewCtrl.dismiss();
  }
}

```

: <https://riptutorial.com/ko/ionic2/topic/6612/>

11: OnInit

ionic2 constructor: , . , () json () . http.get json . ? http .

Examples

Http

```
import {Http} from '@angular/http';
@Injectable()
export class StudentService{
  constructor(public http: Http){}
  getAllStudents(): Observable<Students[]>{
    return this.http.get('assets/students.json')
      .map(res => res.json().data)
  }
}
```

./ / .

```
import {StudentService} from './student.service';
import { SocialSharing } from '@ionic-native/social-sharing';
export class HomePage implements OnInit {

  constructor(public _studentService: StudentService, public socialSharing: SocialSharing) {
  }
}
```

. StudentService . socialSharing .

ngOnInit

OnInit : ionic2 . AngularJs2 . ngOnInit . . / . . . OnInit ngOnInit . :

ngOnInit /

```
export class HomePage implements OnInit {
  ...
  ....
  constructor(....){}

  ngOnInit() {
    this._studentService.getAllStudents().subscribe(
      (students: Students[]) => this.students = students,
    )
  }
}
```

OnInit : <https://riptutorial.com/ko/ionic2/topic/9907/--oninit>

12:

providers .

?, Component providers MyService . :

```
@Component ({
  templateUrl: "page1.html",
  providers: [MyService]
})
```

```
@Component ({
  templateUrl: "page2.html",
  providers: [MyService]
})
```

. .

() App Component .

```
@Component ({
  template: '<ion-nav [root]="rootPage"></ion-nav>',
  providers: [MyService]
})
```

ionicBootstrap(MyApp, [MyService]); MyService ionicBootstrap(MyApp, [MyService]); [Angular2](#)

Angular 2 .

? Angular 2 .

? .

? .

? . .

. . **Angular** .

... App Component .

Examples

.

(:). . .

MyService . saveMessage() getMessage() . .

```
import {Injectable} from '@angular/core';

@Injectable()
export class MyService {

  private message: string;

  constructor() { }

  public saveMessage(theMessage: string): void {
    this.message = theMessage;
  }

  public getMessage(): string {
    return this.message;
  }
}
```

```
saveMessage(theMessageWeWantToSave); saveMessage(theMessageWeWantToSave); MyService ( service )
```

```
import { Component } from "@angular/core";
import { MyService } from 'service.ts';

@Component({
  templateUrl:"page1.html"
})
export class Page1 {

  message: string;

  // ...

  public saveSecretMessage(): void {
    this.service.saveMessage(this.message);
  }
}
```

```
, getMessage() :
```

```
import { Component } from "@angular/core";
import { MyService } from 'service.ts';

@Component({
  templateUrl:"page2.html"
})
export class Page2 {

  enteredMessage: string;

  constructor(private service: MyService) {
    this.enteredMessage = this.service.getMessage();
  }

  // ...
}
```

MyService *Remarks* .

: [https://riptutorial.com/ko/ionic2/topic/4407/-](https://riptutorial.com/ko/ionic2/topic/4407/)

13:

.apk . ID .

: <https://view.ionic.io/>

Examples

app.ionic.io .

1. .

2. ' ' .

```
I named my app as 'MyIonicApp'
```

3. ID .

```
MyIonicApp ID is 4c5051c1
```

Node.js .

1. .

```
$ ionic login
```

2. .

3. ionic ID . .

```
$ ionic link [your-app-id]
```

MyIoincApp .

```
$ ionic link 4c5051c1
```

MyIonicApp app id .

4. .

```
$ ionic upload
```

.

' ' ID ionic .

: <https://riptutorial.com/ko/ionic2/topic/10542/---->

14:

Examples

package.json .

```
{
  ...
  "dependencies": {
    ...
    "ionic-native": "^1.3.10",
    ...
  },
  ...
}
```

:

```
// custom-component.ts

import {Geolocation} from 'ionic-native';
import template from './custom-component.html';

@Component({
  selector: 'custom-component',
  template: template
})
export class CustomComponent {

  constructor() {

    // get the geolocation through a promise
    Geolocation.getCurrentPosition().then((position:Geoposition)=> {
      console.log(
        position.coords.latitude,
        position.coords.longitude);
    });
  }
}
```

Geolocation watchPosition . getCurrentPosition watchPosition Observable .

```
import {Geolocation} from 'ionic-native';
import template from './custom-component.html';

@Component({
  selector: 'custom-component',
  template: template
})
export class CustomComponent {
  constructor() {

    // get the geolocation through an observable
    Geolocation.watchPosition(<GeolocationOptions>{
```

```
        maximumAge: 5000, // a maximum age of cache is 5 seconds
        timeout: 10000, // time out after 10 seconds
        enableHighAccuracy: true // high accuracy
    }).subscribe((position) => {
        console.log('Time:' + position.timestamp);
        console.log(
            'Position:' + position.coords.latitude + ',' +
            position.coords.longitude);
        console.log('Direction:' + position.coords.heading);
        console.log('Speed:' + position.coords.speed);

    });
}
```

: [https://riptutorial.com/ko/ionic2/topic/5840/-](https://riptutorial.com/ko/ionic2/topic/5840/)

15: - Android

Google Play .

Examples

Android `ionic start --appname|-a --id|-i` . Google Play .

cli .

```
$ ionic start --v2 -a "App Example" -i "com.example.app" -t "tabs"
```

1.

`config.xml` . `config.xml` .

`widget id, name, description author /` .

:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<widget id="com.example.app" version="1.0.0" xmlns="http://www.w3.org/ns/widgets"
xmlns:cdv="http://cordova.apache.org/ns/1.0">
  <name>Example App</name>
  <description>Example app for stackoverflow users</description>
  <author email="admin@example.com" href="http://example.com/">Your name or team</author>
  ...
</widget>
```

2.

`png, psd ai icon splash` . `192x192` . `2208x2208` .

`ionic resources --icon .- . ionic resources --splash`

3.

.

`--release & --prod`

`ionic build android --release --prod`

@ [ionic / app-scripts](#) .

4.

APK (`android-release-unsigned.apk`) `android-release-unsigned.apk` . .

APK `android-release-unsigned.apk` `dir /platforms/android/build/outputs/apk/` `keytools apk`

keytools . .

```
$ keytool -genkey -v -keystore my-release-key.keystore -alias androidKey -keyalg RSA -keysize 2048 -validity 10000
```

my-release-key.keystore .

JDK keytool . .

. my-release-key.keystore .

: . !

5. APK

APK JDK jarsigner .

```
$ jarsigner -verbose -sigalg SHA1withRSA -digestalg SHA1 -keystore my-release-key.keystore HelloWorld-release-unsigned.apk alias_name
```

apk . zip APK . zipalign / path / to / Android / sdk / build-tools / VERSION / zipalign .

```
$ zipalign -v 4 HelloWorld-release-unsigned.apk HelloWorld.apk
```

HelloWorld.apk Google Play .

Google Play . Google Play APK Play APK . Google Play . 1 25 .

"Google Play Android " .

- Android : <https://riptutorial.com/ko/ionic2/topic/9659/-----android>

16:

Ionic 2 Tab .

Examples

.
() () .

TabService

```
import {Injectable} from '@angular/core';
import {Platform} from 'ionic-angular/index';
import {Observable} from 'rxjs/Observable';

@Injectable()
export class TabService {

  private tabChangeObserver: any;
  public tabChange: any;

  constructor(private platform: Platform){
    this.tabChangeObserver = null;
    this.tabChange = Observable.create(observer => {
      this.tabChangeObserver = observer;
    });
  }

  public changeTabInContainerPage(index: number) {
    this.tabChangeObserver.next(index);
  }
}
```

TabService Observable changeTabInContainerPage() .

() click .

Page1.html

```
<ion-content class="has-header">
  <h1>Page 1</h1>
  <button secondary (click)="changeTab()">Select next tab</button>
</ion-content>
```

Page1.ts

```
import { Component } from '@angular/core';
import { Observable } from 'rxjs/Observable';
import { TabService } from 'tabService.ts';

@Component({
  templateUrl: "page1.html"
```

```

})
export class Page1 {

  constructor(private tabService: TabService) { }

  public changeTab() {
    this.tabService.changeTabInContainerPage(1);
  }
}

```

```
TabsPage this.tabRef.select(index); this.tabRef.select(index); this.tabRef.select(index);
```

```

import { Component, ViewChild } from "@angular/core";
import { Page1 } from './page1.ts';
import { Page2 } from './page2.ts';
import { TabService } from 'tabService.ts';

@Component({
  templateUrl: 'tabs.html'
})
export class TabsPage {
  @ViewChild('myTabs') tabRef: Tabs;

  tab1Root: any = Page1;
  tab2Root: any = Page2;

  constructor(private tabService: TabService){
    this.tabService.tabChange.subscribe((index) => {
      this.tabRef.select(index);
    });
  }
}

```

```

ion-tabs #myTabs Tab #myTabs , @ViewChild('myTabs') tabRef: Tabs; @ViewChild('myTabs')
tabRef: Tabs;

```

```

<ion-tabs #myTabs>
  <ion-tab [root]="tab1Root" tabTitle="Tab 1"></ion-tab>
  <ion-tab [root]="tab2Root" tabTitle="Tab 2"></ion-tab>
</ion-tabs>

```

selectedIndex

DOM ion-tabs selectedIndex

HTML :

```

<ion-tabs [selectedIndex]="tabIndex" class="tabs-icon-text" primary >
  <ion-tab tabIcon="list-box" [root]="tabOne"></ion-tab>
  <ion-tab tabIcon="contacts" [root]="tabTwo"></ion-tab>
  <ion-tab tabIcon="chatboxes" [tabBadge]="messagesReceived" [root]="tabFive"></ion-tab>
</ion-tabs>

```

TS :

```
import { Events } from "ionic-angular";

export class tabs {
  public tabIndex: number;
  constructor(e: Events) {
    tabs.mySelectedIndex = navParams.data.tabIndex || 0;
    e.subscribe("tab:change", (newIndex) => this.tabIndex = newIndex);
  }
}
```

```
e.publish("tab:change", 2);
```

: <https://riptutorial.com/ko/ionic2/topic/5569/>-

17:

SenderId Google gcm ID. .

```
ionic plugin add phonegap-plugin-push --variable SENDER_ID="XXXXXXXX"
```

. <https://github.com/phonegap/phonegap-plugin-push/blob/master/docs/TYPESCRIPT.md>

Examples

ID .

```
let push = Push.init({
  android: {
    senderID: "-----",
  },
  ios: {
    alert: "true",
    badge: true,
    sound: "false",
  },
  windows: {},
});
```

ID .

```
import { Push, RegistrationEventResponse } from "ionic-native";

//the push element is created in the initialization example
push.on("registration", async (response: RegistrationEventResponse) => {
  //The registration returns an id of the registration on your device
  RegisterWithWebApi(response.registrationId);
});
```

. . .

```
import { Push, NotificationEventResponse } from "ionic-native";

//the push element is created in the initialization example
push.on("notification", (response: NotificationEventResponse) => {
  let chatMessage: ChatMessage = <ChatMessage>{
    title: response.title,
    message: response.message,
    receiver: response.additionalData.replyTo,
    image: response.image
  };
  DoStuff(chatMessage);
});
```

: <https://riptutorial.com/ko/ionic2/topic/5874/---->

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