



FRISoL 2017

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Aplicaciones Híbridas





<https://nodejs.org/es/>

Nodejs

IONIC



<http://ionicframework.com/>



```
$ ionic start EjemploUno tabs --v2
```

Primer Aplicación



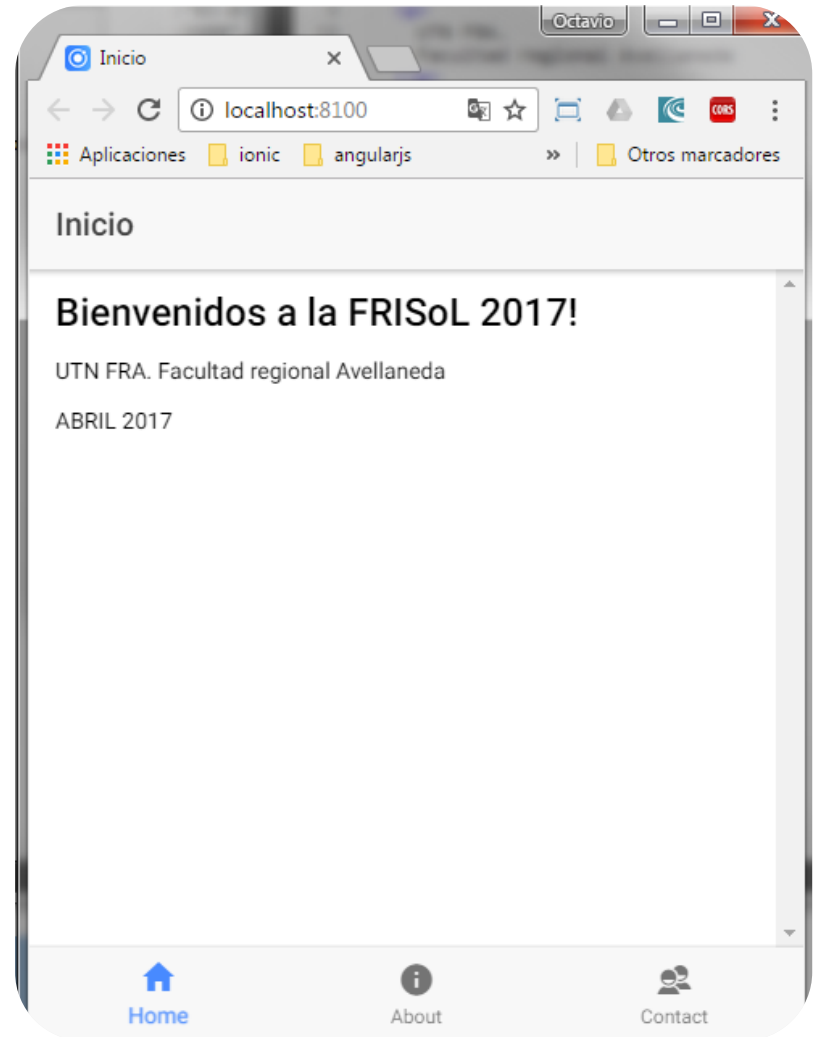
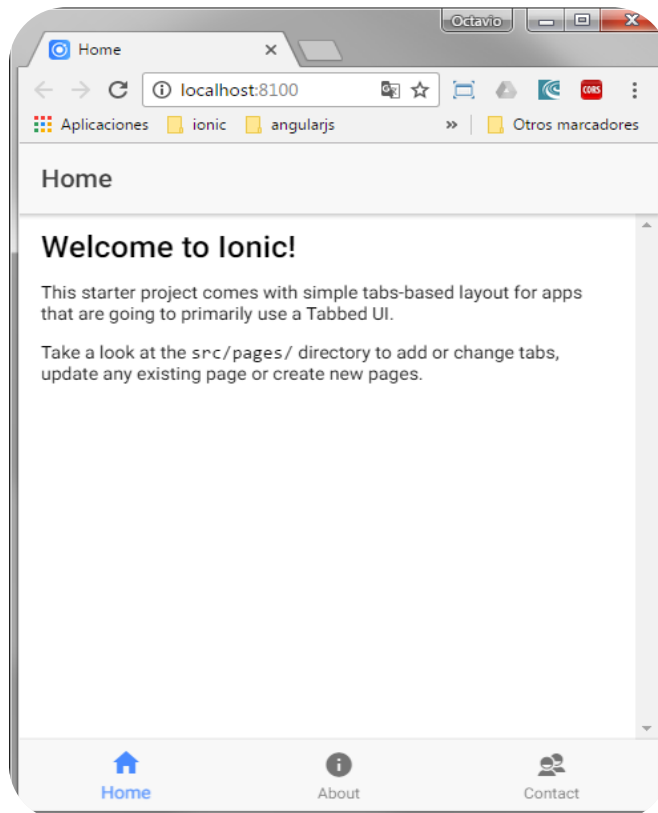
chrome

\$ ionic serve

```
ionic serve
> ionic-hello-world@ ionic:serve c:\xampp\htdocs\IONIC2 2017\frisolv1.2\EjemploD
osSideMenu
> ionic-app-scripts serve "--v2" "--address" "0.0.0.0" "--port" "8100" "--live
load-port" "35729"

[19:38:42] ionic-app-scripts 1.3.0
[19:38:42] watch started ...
[19:38:42] build dev started ...
[19:38:42] clean started ...
[19:38:42] clean finished in 16 ms
[19:38:42] copy started ...
[19:38:42] transpile started ...
[19:38:52] transpile finished in 9.80 s
[19:38:52] preprocess started ...
[19:38:52] deeplinks started ...
[19:38:52] deeplinks finished in 37 ms
[19:38:52] preprocess finished in 39 ms
[19:38:52] webpack started ...
[19:38:53] copy finished in 10.52 s
[19:39:33] webpack finished in 40.72 s
[19:39:33] sass started ...
[19:39:36] sass finished in 3.40 s
[19:39:36] postprocess started ...
[19:39:37] postprocess finished in 242 ms
[19:39:37] lint started ...
[19:39:37] build dev finished in 54.46 s
[19:39:38] watch ready in 55.37 s
[19:39:38] dev server running: http://localhost:8100/

[19:39:55] lint finished in 17.99 s
```

EjemploUno\src\pages\home\home.html



```
$ ionic platform add android  
$ ionic run --device
```

En el Dispositivo



<http://ionicframework.com/docs/v1/cli/icon-splashscreen.html>
<https://www.photopea.com/>
Subdirectorio :
\EjemploUno\resources

Icono y presentación personalizada



Twitter: @photopeacom



\$ ionic
resources

```
ionic resources
ionic icon and splash screen resources generator
uploading icon.png...
uploading splash.png...
icon.png (192x192) upload complete
splash.png (2732x2732) upload complete
generating splash android drawable-port-xxxhdpi-screen.png (1280x1920)...
generating splash android drawable-port-xxhdpi-screen.png (960x1600)...
generating splash android drawable-port-xhdpi-screen.png (720x1280)...
splash android drawable-port-xhdpi-screen.png (720x1280) generated
generating splash android drawable-port-hdpi-screen.png (480x800)...
splash android drawable-port-xxhdpi-screen.png (960x1600) generated
generating splash android drawable-port-mdpi-screen.png (320x480)...
splash android drawable-port-xxxhdpi-screen.png (1280x1920) generated
generating splash android drawable-port-ldpi-screen.png (240x320)...
splash android drawable-port-hdpi-screen.png (480x800) generated
generating splash android drawable-land-xxxhdpi-screen.png (1920x1280)...
splash android drawable-port-ldpi-screen.png (240x320) generated
generating splash android drawable-land-xxhdpi-screen.png (1600x960)...
splash android drawable-port-mdpi-screen.png (320x480) generated
generating splash android drawable-land-xhdpi-screen.png (1280x720)...
splash android drawable-land-xxxhdpi-screen.png (1920x1280) generated
generating splash android drawable-land-hdpi-screen.png (800x480)...
splash android drawable-land-xhdpi-screen.png (1280x720) generated
generating splash android drawable-land-mdpi-screen.png (480x320)...
splash android drawable-land-xxhdpi-screen.png (1600x960) generated
generating splash android drawable-land-ldpi-screen.png (320x240)...
splash android drawable-land-mdpi-screen.png (480x320) generated
generating icon android drawable-xxxhdpi-icon.png (192x192)...
splash android drawable-land-ldpi-screen.png (320x240) generated
generating icon android drawable-xxhdpi-icon.png (144x144)...
splash android drawable-land-hdpi-screen.png (800x480) generated
generating icon android drawable-xhdpi-icon.png (96x96)...
icon android drawable-xxxhdpi-icon.png (192x192) generated
generating icon android drawable-hdpi-icon.png (72x72)...
icon android drawable-xxhdpi-icon.png (144x144) generated
generating icon android drawable-mdpi-icon.png (48x48)...
icon android drawable-hdpi-icon.png (72x72) generated
generating icon android drawable-ldpi-icon.png (36x36)...
icon android drawable-xhdpi-icon.png (96x96) generated
icon android drawable-mdpi-icon.png (48x48) generated
icon android drawable-ldpi-icon.png (36x36) generated
```

\$ ionic run --device

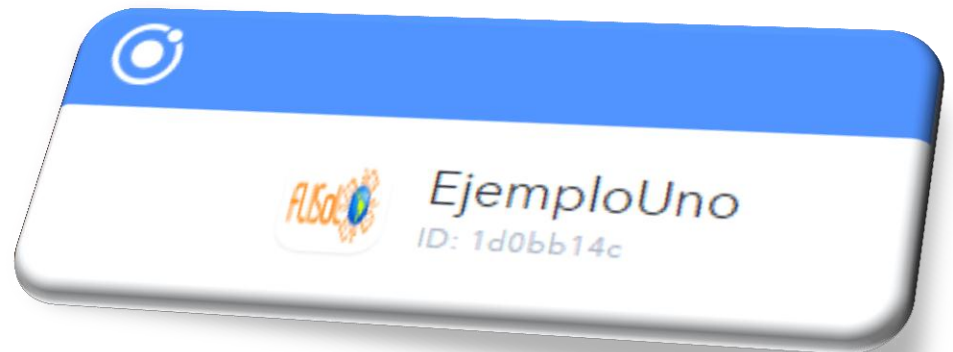


Directorio WWW



`https://apps.ionic.io/apps/`

`$ionic upload`



ID de la aplicación

```
$ ionic upload
No previous login existed. Attempting to log in now.

To continue, please login to your Ionic account.
Don't have one? Create one at: https://apps.ionic.io/signup

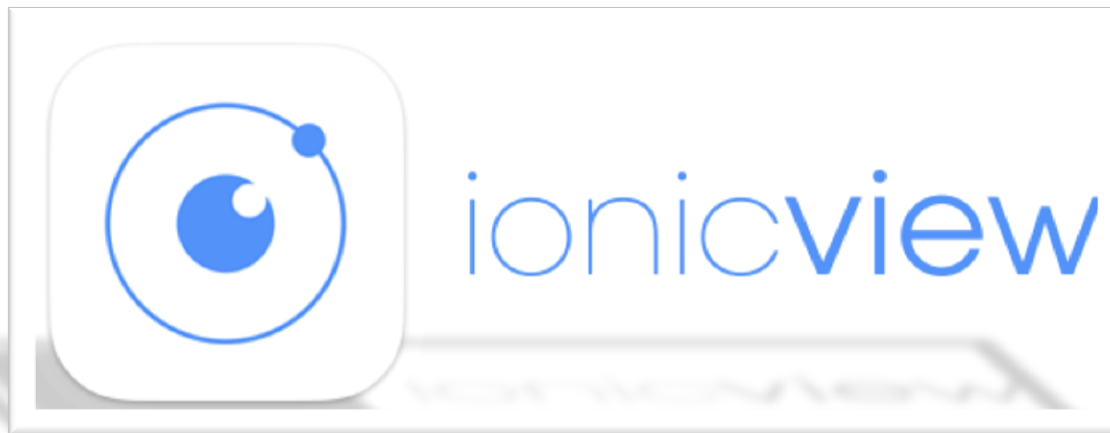
Email: octavio@octaviovillegas.com.ar
Password:
Logged in! :)
Uploading app...

Saved app_id, writing to ionic.io.bundle.min.js...
Successfully uploaded (1d0bb14c)

Manage your app and access powerful services through the Ionic dashboard: https://apps.ionic.io/
```

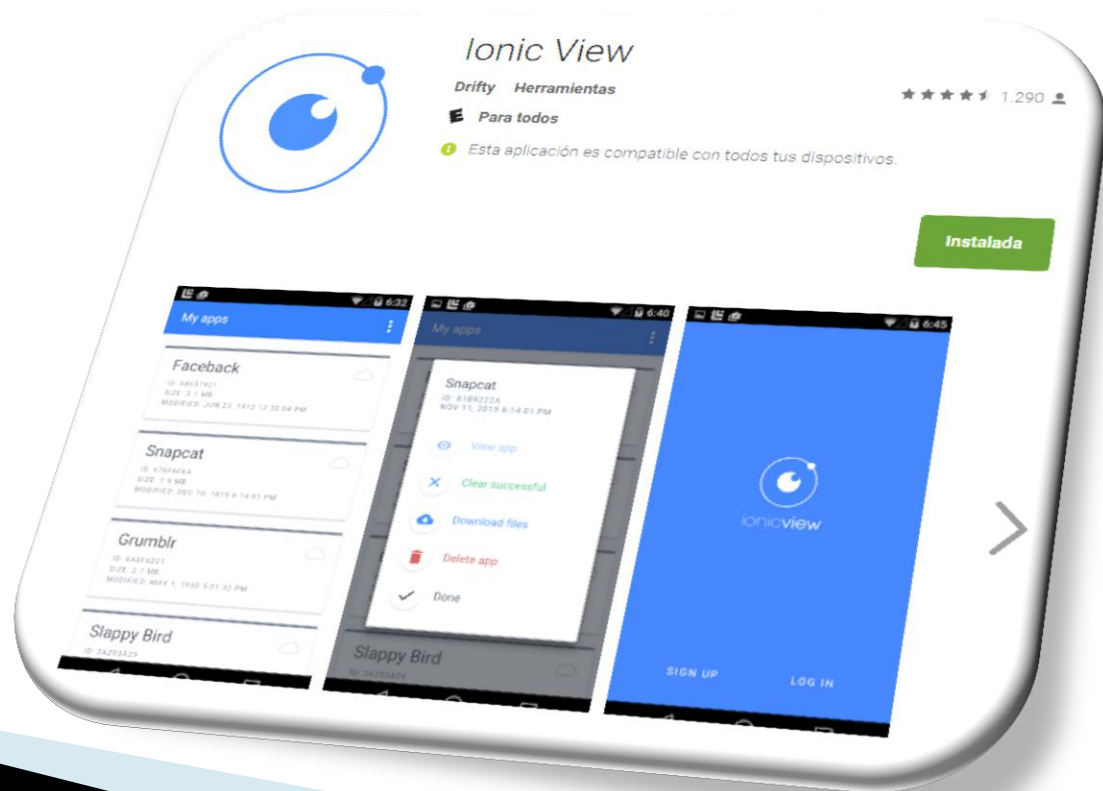


<http://view.ionic.io/>





<https://play.google.com/store/apps/details?id=com.ionic.viewapp>





Firebase

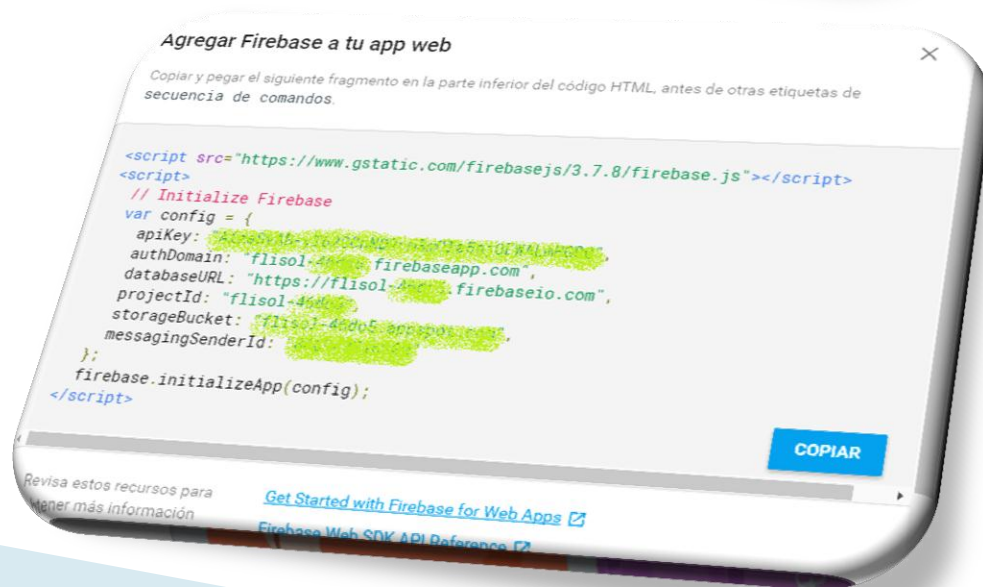
<https://firebase.google.com/>



Firebase

Auth == null







Firestore

Angularfire 2

<https://github.com/angular/angularfire2>

```
npm install firebase angularfire2 --save
```



Firebase

App.module.ts

```
app.module.ts X
import { NgModule, ErrorHandler } from '@angular/core';
import { BrowserModule } from '@angular/platform-browser';
import { IonicApp, IonicModule, IonicErrorHandler } from 'ionic-angular';
import { MyApp } from './app.component';

import { AboutPage } from '../pages/about/about';
import { ContactPage } from '../pages/contact/contact';
import { HomePage } from '../pages/home/home';
import { TabsPage } from '../pages/tabs/tabs';

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

// incluido para firebase
import { AngularFireModule } from 'angularfire2';
// incluido para firebase
export const firebaseConfig = {
  apiKey: "AIzaSyB8vCkVg1T43jSpCzuaV4n1JdC8b5M4p8",
  authDomain: "flisol-789.firebaseio.com",
  databaseURL: "https://flisol-789.firebaseio.com",
  projectId: "flisol-789",
  storageBucket: "flisol-789.appspot.com",
  messagingSenderId: "1018312111111"
};

@NgModule({
  declarations: [
    MyApp,
    AboutPage,
    ContactPage,
    HomePage,
    TabsPage
  ],
  imports: [
    BrowserModule,
    IonicModule.forRoot(MyApp),
    // incluido para firebase
    AngularFireModule.initializeApp(firebaseConfig)
  ],
  bootstrap: [IonicApp],
  entryComponents: [
    MyApp,
    AboutPage,
    ContactPage,
    HomePage,
    TabsPage
  ],
  providers: [
    StatusBar,
    SplashScreen,
    {provide: ErrorHandler, useClass: IonicErrorHandler}
  ]
})
export class AppModule {}
```




Firestore

about.ts

```
about.ts  x  about.html
1  import { Component } from '@angular/core';
2  import { NavController } from 'ionic-angular';
3  //para firebase
4  import { AngularFire, FirebaseListObservable } from 'angularfire2';
5
6  @Component({
7    selector: 'page-about',
8    templateUrl: 'about.html'
9  })
10 export class AboutPage {
11
12   usuario:string
13   mensaje:string
14   //para firebase
15   listadosDeMensajes: FirebaseListObservable<any[]>;
16
17   constructor(public navCtrl: NavController, af: AngularFire) {
18     //para firebase
19     this.listadosDeMensajes = af.database.list('/mensajes');
20     this.usuario="anonimo";
21   }
22   EnviarMensaje(){
23
24     this.listadosDeMensajes.push({usuario:this.usuario, mensaje:this.mensaje});
25     this.mensaje="";
26   }
27
28 }
29
30 }
31
32 }
33
34 }
35
36 }
37
38 }
39
40 }
```



Firestore

about.html

{{mostrar}}
[(Doble bindeo)]
(evento)
*ngFor

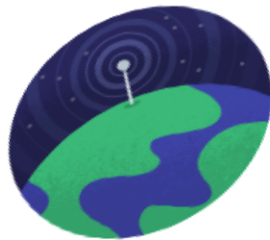
```
aboutts  about.html  x
1  <ion-header>
2    <ion-navbar>
3      <ion-title>
4        Chat de {{usuario}}
5      </ion-title>
6    </ion-navbar>
7  </ion-header>
8
9  <ion-content padding>
10   <ion-item>
11     <ion-label stacked>mensaje</ion-label>
12     <ion-input [(ngModel)]="mensaje" type="text" placeholder="Ingrese su mensaje">
13   </ion-input>
14 </ion-item>
15
16 <button block (click)="EnviarMensaje()"> enviar mensaje </button>
17
18 <ul>
19   <li class="text" *ngFor="let item of listadosDeMensajes | async">
20     <!--{{item.$value}}-->
21     <!-- {{ item | json }}-->
22     <h5>{{item.usuario}}</h5>
23     <h2>{{item.mensaje}}</h2>
24   </li>
25 </ul>
26 </ion-content>
27
28
```

```
38 </ion-content>
39 </ion-view>
40 </ion>
41
42 <div>{{item.usuario}}</div>
43 <div>{{item.mensaje}}</div>
```



Firebase

Firebase deploy



Implementa apps web y para dispositivos móviles en unos segundos con una red global de entrega de contenido

[!\[\]\(a03a7eb2f4046e1d3c76772003e549ea_img.jpg\) Más información](#)

COMENZAR



Comandos de consola



1-Crea un subdirectorio :
`$mkdir firebasePublic`

2-Ingresa:
`$cd firebasePublic`

3-Accede a Google:
`$ firebase login`

4-Inicia tu proyecto:
`$ firebase init`

5-Copia el contenido de
'WWW' dentro de 'public'

6-Implementa tu sitio web:
`$ firebase deploy`



Autenticación



Register a new OAuth application

Application name
FLISoL

Homepage URL
<https://flisol.firebaseio.com/>

Application description
Demo de una aplicación híbrida

Authorization callback URL
https://flisol.firebaseio.com/_/auth/handler

Register application Cancel

Authentication

Facebook Inhabilitado

Twitter Inhabilitado

GitHub

Client ID
[Redacted]

Client secret
[Redacted]

Habilitar ☒

Para completar la configuración, añade esta URL de devolución de llamada a la configuración de tu aplicación de GitHub. [Más información](#)

https://flisol.firebaseio.com/_/auth/handler

FLISoL

octaviolegas owns this application.

Users

Client ID
[Redacted]

Client Secret
[Redacted]

Revoke all user tokens Reset client secret

Application logo

Upload new logo

You can also drag and drop a picture from your computer.

Application name
FLISoL



Firebase

Autenticación



```
login.html
9 <ion-navbar>
10   <ion-title>ingreso</ion-title>
11 </ion-navbar>
12
13 </ion-header>
14 <ion-content padding>
15   <h2>Primer Chat Ionic 2 + Firebase!</h2>
16   <p>
17     conexión simple a firebase .
18   </p>
19   <p>
20     envío y lectura de datos en tiempo real <code>AngularFire</code>
21     la forma facil de tener un BackEnd en tiempo real.
22
```

```
login.ts
23 import { Component } from '@angular/core';
24 import { NavController, NavParams } from 'ionic-angular';
25 import { AboutPage } from '../about/about';
26
27 import { AuthProviders, AuthMethods, AngularFire } from 'angularfire2';
28 import { LoadingController } from 'ionic-angular';
29
30 @Component({
31   selector: 'page-login',
32   templateUrl: 'login.html',
33 })
34 export class LoginPage {
35
36   constructor(public objAngularFire: AngularFire, public loadingCtrl: LoadingController) {}
37
38   ionViewDidLoad() {
39     console.log('ionViewDidLoad Login');
40   }
41 }
```

```
login.ts
21
22 LoginGit(){
23   let loader = this.loadingCtrl.create({
24     content: "Espere...",
25     duration: 3000
26   });
27   loader.present();
28   this.objAngularFire.auth.login({
29     provider: AuthProviders.Github,
30     method: AuthMethods.Popup
31   }).then((response) => {
32     console.log('Login success with GitHub' + JSON.stringify(response));
33     let currentuser = {
34       email: response.auth.displayName,
35       picture: response.auth.photoURL
36     };
37     window.localStorage.setItem('currentuser', JSON.stringify(currentuser));
38     this.navCtrl.pop();
39     this.navCtrl.push(AboutPage);
40   }).catch((error) => {
41     console.log(error);
42   })
43 }
44
45 }
46
47
48 }
```




Cordova Plugins

<https://cordova.apache.org/>

<https://ionicframework.com/docs/native/>



Linterna



<https://ionicframework.com/docs/native/flashlight/>

```
$ ionic plugin add cordova-plugin-flashlight  
$ npm install --save @ionic-native/flashlight
```

Linterna



```
app.module.ts x
11 import { StatusBar } from '@ionic-native/status-bar';
12 import { SplashScreen } from '@ionic-native/splash-screen';
13
14 import { Flashlight } from '@ionic-native/flashlight';
15 import { Vibration } from '@ionic-native/vibration';
16
17 @NgModule({
18   declarations: [
19     MyApp,
20     AboutPage,
21     ContactPage,
22     HomePage,
23     TabsPage
24   ],
25   imports: [
26     BrowserModule,
27     IonicModule.forRoot(MyApp)
28   ],
29   bootstrap: [IonicApp],
30   entryComponents: [
31     MyApp,
32     AboutPage,
33     ContactPage,
34     HomePage,
35     TabsPage
36   ],
37   providers: [
38     StatusBar,
39     Vibration,
40     Flashlight,
41     SplashScreen,
42     {provide: ErrorHandler, useClass: IonicErrorHandler}
43   ]
44 })
45 export class AppModule {}
```

```
home.ts x
1 import { Component } from '@angular/core';
2 import { NavController } from 'ionic-angular';
3 import { Flashlight } from '@ionic-native/flashlight';
4
5 @Component({
6   selector: 'page-home',
7   templateUrl: 'home.html'
8 })
9 export class HomePage {
10
11   constructor(public navCtrl: NavController, private flashlight: Flashlight) {
12
13   }
14   encender(){
15     console.log("encender");
```

```
home.html x
1 <ion-header>
2   <ion-navbar>
3     <ion-title>Linterna</ion-title>
4   </ion-navbar>
5 </ion-header>
6
7 <ion-content padding>
8   <h2>Linterna</h2>
9   <p>
10     ejemplo de utilización de plugin para la linterna
11   </p>
12
13   <button ion-button round block icon-left (click)="encender()" color="primary">
14     <ion-icon name="flash"></ion-icon>
15   </button>
16
17   <button ion-button round block icon-left (click)="apagar()" color="secondary">
18     <ion-icon name="moon"></ion-icon>
19   </button>
20 </ion-content>
```



Vibration



<https://ionicframework.com/docs/native/vibration/>

```
$ ionic plugin add cordova-plugin-vibration  
$ npm install --save @ionic-native/vibration
```

Vibration



```
app.module.ts x
11 import { StatusBar } from '@ionic-native/status-bar';
12 import { SplashScreen } from '@ionic-native/splash-screen';
13
14 import { Flashlight } from '@ionic-native/flashlight';
15 import { Vibration } from '@ionic-native/vibration';
16
17 @NgModule({
18   declarations: [
19     MyApp,
20     AboutPage,
21     ContactPage,
22     HomePage,
23     TabsPage
24   ],
25   imports: [
26     BrowserModule,
27     IonicModule.forRoot(MyApp)
28   ],
29   bootstrap: [IonicApp],
30   entryComponents: [
31     MyApp,
32     AboutPage,
33     ContactPage,
34     HomePage,
35     TabsPage
36   ],
37   providers: [
38     StatusBar,
39     Vibration,
40     Flashlight,
41     SplashScreen,
42     {provide: ErrorHandler, useClass: IonicErrorHandler}
43   ]
44 })
45 export class AppModule {}
```

```
aboutts x
1 import { Component } from '@angular/core';
2 import { NavController } from 'ionic-angular';
3 import { Vibration } from '@ionic-native/vibration';
4 @Component({
5   selector: 'page-about',
6   templateUrl: 'about.html'
```

```
about.html x
1 <ion-header>
2 <ion-navbar>
3 <ion-title>
4   About
5 </ion-title>
6 </ion-navbar>
7 </ion-header>
8
9 <ion-content padding>
10 <h2>Vibración</h2>
11 <p>
12   ejemplo de utilización de plugin para la Vibración
13 </p>
14 <ion-item>
15 <!-- https://ionicframework.com/docs/api/components/input/Input/-->
16 <ion-input [(ngModel)]="tiempo" type="number" min="500" max="3000"
17   placeholder="Cantidad de milisegundos">
18 </ion-input>
19 </ion-item>
20
21 <button ion-button round block icon-left (click)="vibrar()" color="dark">
22   <ion-icon name="alarm"></ion-icon>
23 </button>
24
25 </ion-content>
```

```
tion: Vibration) {
```



Device-motion



<https://ionicframework.com/docs/native/device-motion/>

```
$ ionic plugin add cordova-plugin-device-motion  
$ npm install --save @ionic-native/device-motion
```




Device-motion



contact.html x

```
1 <ion-header>
2   <ion-navbar>
3     <ion-title>
4       Contact
5     </ion-title>
6   </ion-navbar>
7 </ion-header>
8
9 <ion-content>
10
11   <p> x:{{x}} </p>
12   <p> y:{{y}} </p>
13   <p> z:{{z}} </p>
14   <p> pantallaAlto:{{pantallaA
15   <p> pantallaAncho:{{pantalla
16   <p> izq= {{izquierda}} <
17   <p> arr={{arriba}} </p>
18
19   <!--img style="width:80px;
20     src="../assets/img/robot_n
21
22   <img [ngStyle]="{'width.px
23     style="position:absolute;
24
25 </ion-content>
```

contacts x

```
1 import { Component, OnInit, OnDestroy } from '@angular/core';
2 import { NavController } from 'ionic-angular';
3 import { DeviceMotion, DeviceMotionAccelerationData } from '@ionic-native/device-motion';
4
5 @Component({
6   selector: 'page-contact',
7   templateUrl: 'contact.html'
8 })
9 export class ContactPage implements OnInit, OnDestroy {
10
11   subscription:any;
12   options:any;
13   x:Number;
14   y:number;
15   z:number;
16   pantallaAncho:number;
17   pantallaAlto :number;
18   arriba:number;
19   izquierda:number;
20   rutaDeFoto:any;
21   anchoDeFoto:any;
22   aceleracion:any;
23   constructor(public navCtrl: NavController, private deviceMotion: DeviceMotion) {
24     this.options={ frequency: 50 };
25     this.pantallaAncho = window.screen.width;
26     this.pantallaAlto = window.screen.height;
27     this.rutaDeFoto="assets/img/robot_normal.png";
28     this.anchoDeFoto=80;
29   }
30   ngOnInit() {
31     this.arriba=0;
32     this.izquierda=0;
33     try {
34       this.subscription = this.deviceMotion.watchAcceleration(this.options).subscribe((aceleracion: DeviceMotionAccelerationData) => {
35         this.x= aceleracion.x;
36         this.y= aceleracion.y;
37         this.z= aceleracion.z;
38       });
39     }catch(error) {
40       console.log(error);
41     }
42   }
43   ngOnDestroy() {
44     this.subscription.unsubscribe();
45   }
46 }
```

Práctica

Hacer ejercicios mejorando las aplicaciones

- ✓ 1–poder enviar el mensaje «hola» en morse con la linterna.
- ✓ 2–DeviceMotion, hacer vibrar el celular al tocar el personaje las paredes.
- ✓ 3–DeviceMotion, hacer que al poner en vertical el celular la imagen aumente su tamaño.
- ✓ 4– FireBase, ordenar el listado de chat por fecha.
- ✓ 5– FireBase, enviar mensaje al presionar Enter.
- ✓ 6– FireBase Login, hacer el botón salir(deslogear).
- ✓ 7– FireBase, Mostrar la foto de perfil de github del usuario.

Vamos por mas

- ✓ Modificar los templates con SASS.
<https://ionicframework.com/docs/theming/>
- ✓ Agregar mas Plugin
<https://ionicframework.com/docs/native/>
- ✓ Registro y login por redes sociales por IONIC
<https://docs.ionic.io/services/auth/>
- ✓ Ver otros componentes de IONIC
<http://ionicframework.com/docs/components/>
- ✓ Investigar otros recursos
<https://ionicframework.com/docs/resources/>

Gracias por su atención.

