# APPMOB - The Ionic Framework

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COMEM Applications Mobiles

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# Which OS should I support?

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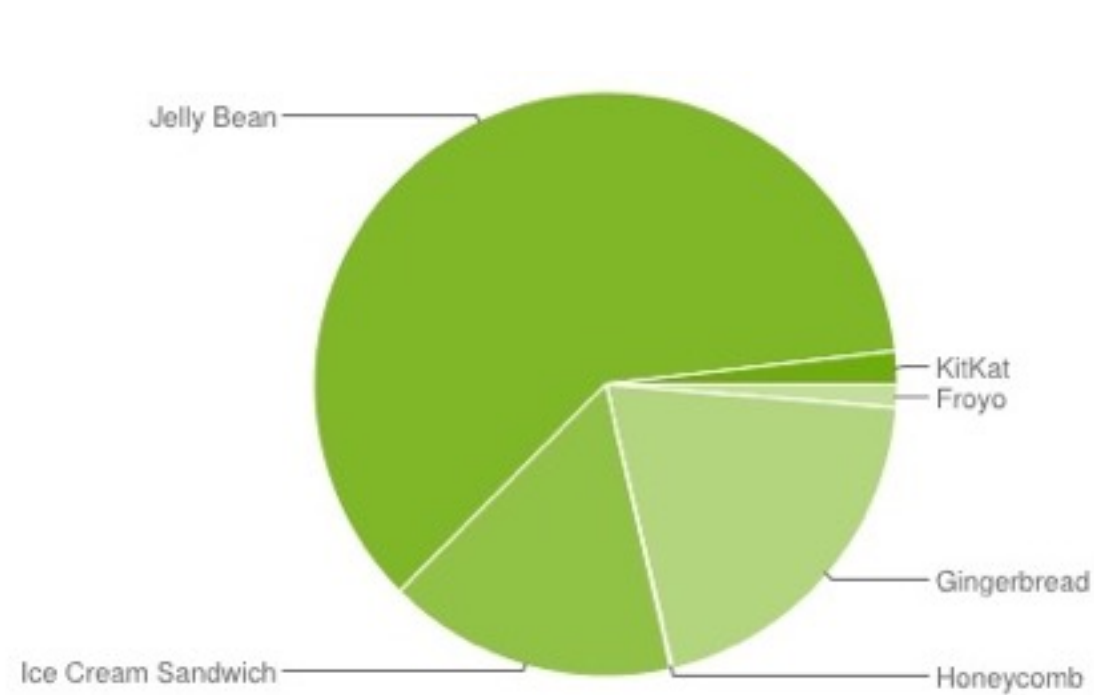Haute Ecole d'Ingénierie et de Gestion
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SDK for **Windows 8** Phone
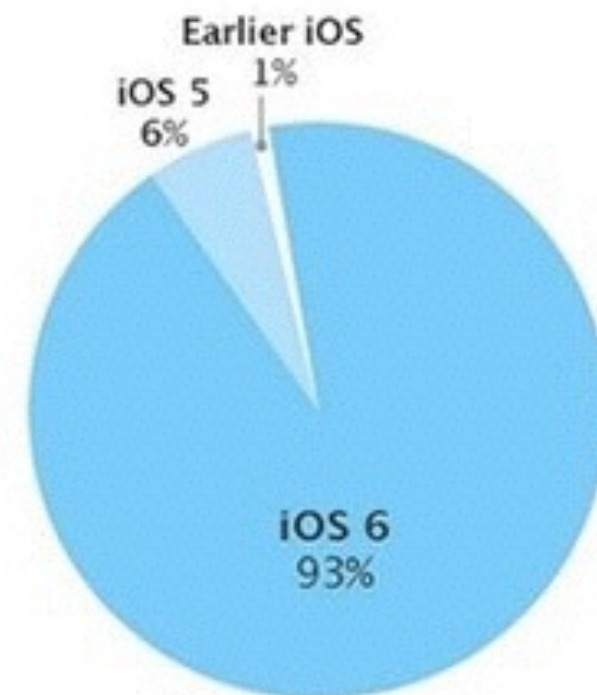
palm webOS™

bada

symbian

BlackBerry 10 Native SDK *lolwut?*

# How do I deal with OS fragmentation?

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Android
fragmentation

iOS
fragmentation

# A solution: Apache Cordova

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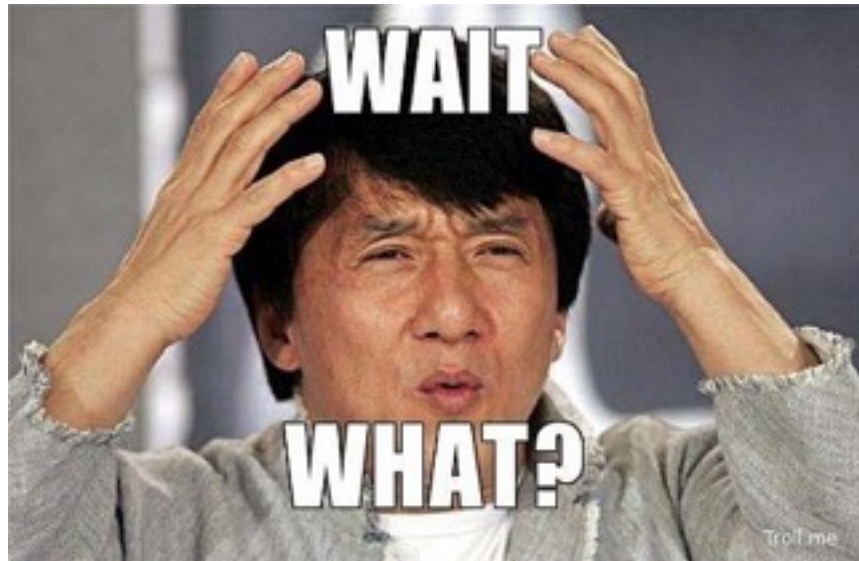Haute Ecole d'Ingénierie et de Gestion
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Apache Cordova is a set of device APIs that allow a mobile app developer to access native device function such as the camera or accelerometer from JavaScript. Combined with a UI framework such as jQuery Mobile or Dojo Mobile or Sencha Touch, this allows a smartphone app to be developed with just HTML, CSS, and JavaScript.

http://cordova.apache.org/

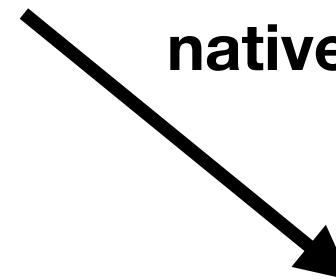# Apache Cordova: what is it?

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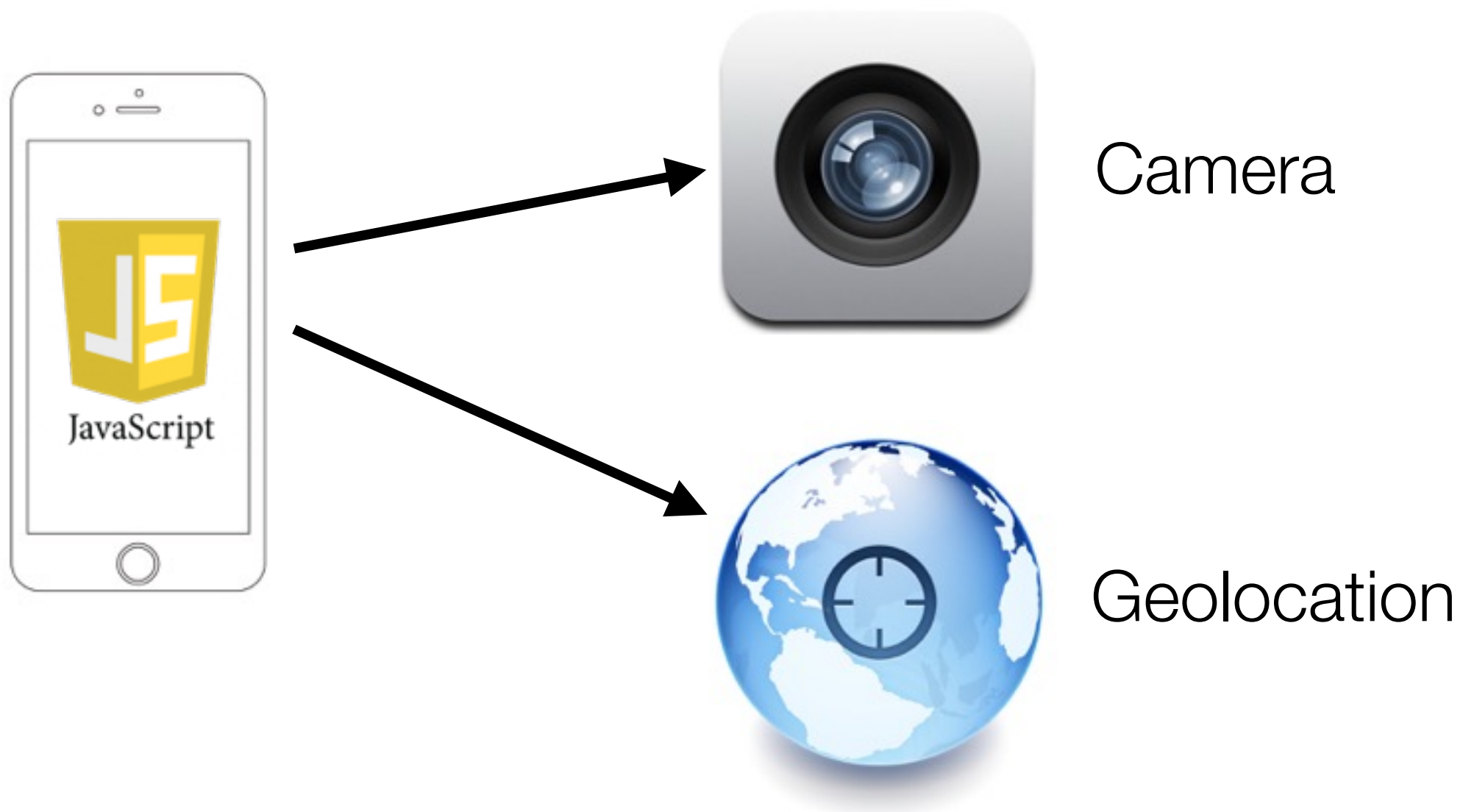Code your app with HTML, CSS and JS, **like a website**



Embed it as a **native mobile app**

# Apache Cordova: what is it?

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Access **native** device
functionality from Javascript.

Camera

Geolocation

# What else? The Ionic Framework

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**Create hybrid mobile apps with the web technologies you love.**

Free and open source, Ionic offers a library of mobile-optimized HTML, CSS and JS components, gestures, and tools for building highly interactive apps. Built with Sass and optimized for AngularJS.

http://ionicframework.com/

# Ionic: a combination

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# Ionic & AngularJS

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HTML enhanced for web apps!

A match made in heaven. Ionic utilizes **AngularJS** in order to create a framework most suited to develop rich and robust applications. Ionic not only looks nice, but its core architecture is for **serious app development**, and AngularJS ties in perfectly.

https://angularjs.org/

# Ionic: designed for mobile

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Build apps that **look like native apps** with HTML, CSS and JS.
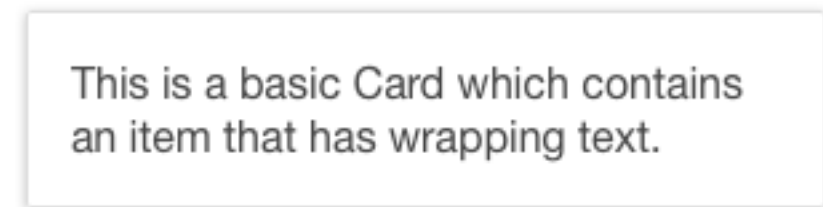
# Ionic: The Basics

# Ionic: CSS

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```html
<button class="button button-positive">
  button-positive
</button>
```



```html
<div class="card">
  <div class="item item-text-wrap">
    This is a basic Card which contains an item that has wrapping text.
  </div>
</div>
```



```html
<div class="list">
  <label class="item item-input">
    <input type="text" placeholder="First Name">
  </label>
  <label class="item item-input">
    <input type="text" placeholder="Last Name">
  </label>
  <label class="item item-input">
    <textarea placeholder="Comments"></textarea>
  </label>
</div>
<button class="button button-block button-positive">
  Submit
</button>
```
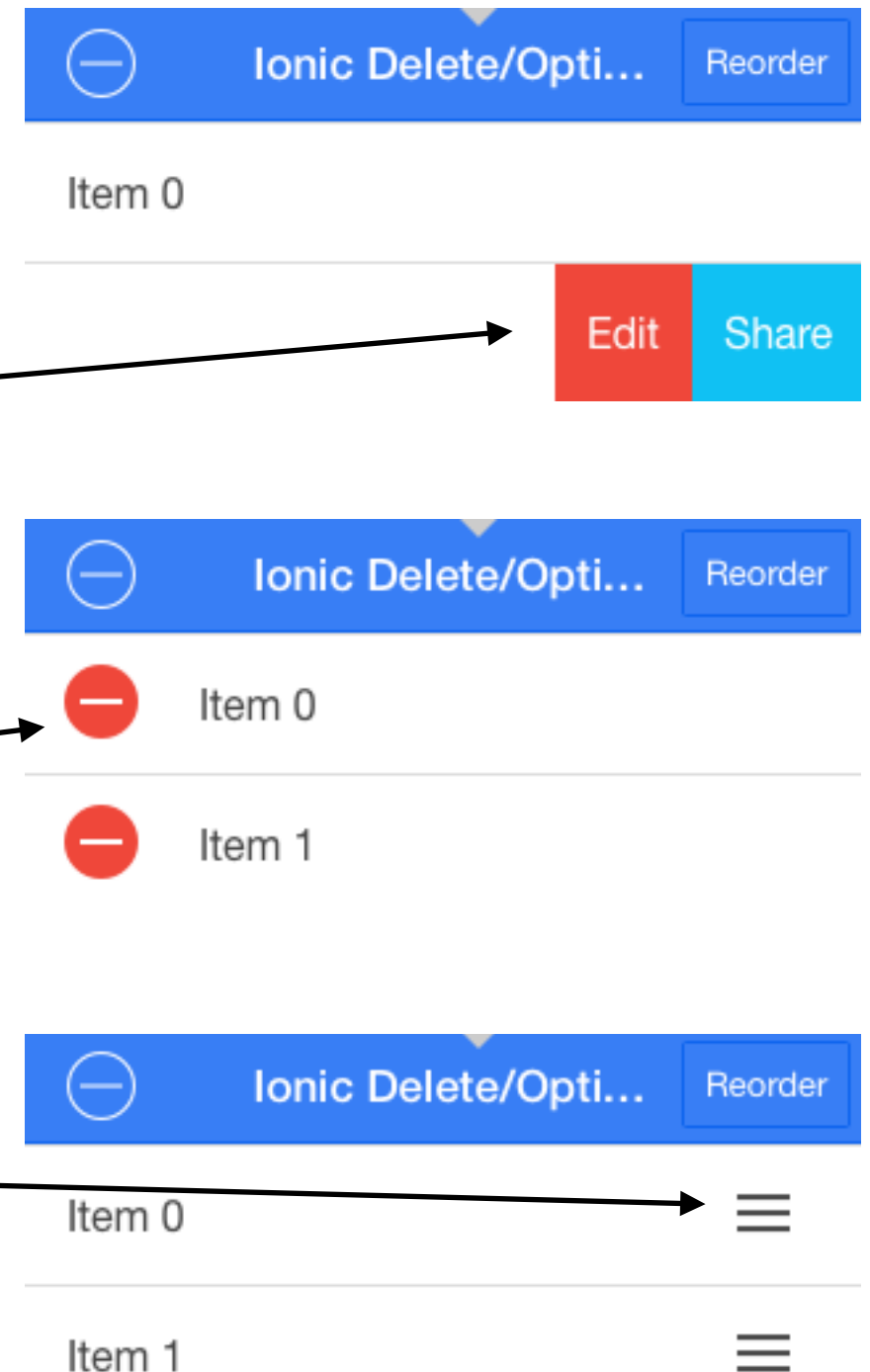
# Ionic: AngularJS extensions

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```
<ion-list ng-controller="MyCtrl"
          show-delete="true"
          show-reorder="true"
          can-swipe="true">

  <ion-item ng-repeat="item in items" class="item-thumbnail-left">
    <p>Item 0</p>
    <ion-option-button class="button-positive"
                       ng-click="share(item)">
      Share
    </ion-option-button>
    <ion-option-button class="button-info"
                       ng-click="edit(item)">
      Edit
    </ion-option-button>
    <ion-delete-button class="ion-minus-circled"
                       ng-click="items.splice($index, 1)">
    </ion-delete-button>
    <ion-reorder-button class="ion-navicon"
                on-reorder="reorderItem(item, $fromIndex, $toIndex)">
    </ion-reorder-button>

  </ion-item>
</ion-list>
```

# Ionic: Installation

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https://nodejs.org/

# Ionic: Installation

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```
$> npm install -g cordova ionic
```

You might need to use **sudo** for the correct access rights:

```
$> sudo npm install -g cordova ionic
```

# Ionic: Starter App

Let's see what an app looks like…

```
$> cd /where/you/want/your/projects
$> ionic start myApp tabs
```

# Ionic: Serving Apps Locally

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With Ionic, you can run your mobile app in your browser. This is very useful for quick development and testing.

```
$> cd myApp
$> ionic serve
```

Check out http://localhost:8100/ in your browser.

# Ionic: iOS

Install Xcode from the App Store.

Then:

```
$> sudo npm install -g ios-sim
$> cd myApp
$> ionic platform add ios
$> ionic build ios
```

Simply:

```
$> cd myApp
$> ionic emulate ios
```

# Ionic: iOS device

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To run an app on an iOS device, it must be signed with a valid developer certificate. You must join the **iOS Developer Program** for $99/year.

```
$> ionic run ios
```

# Ionic: iOS View App

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For a free alternative, install the <u>Ionic View App</u> from the App Store, and register an Ionic Apps account:

<u>https://apps.ionic.io/</u>

You can then upload your app to your Ionic account:

```
$> ionic upload
```

You should then see your app in the Ionic View App and be able to run it.

# Ionic: Android

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If you don't have the Android SDK already, install Android Studio:

http://developer.android.com/sdk/index.html

Open it and in the Welcome window, click Configure > Project Defaults > Project Structure. Copy the Android SDK location.

Add the SDK location to your PATH as described in the **Requirements and Support** section of the following article:

http://cordova.apache.org/docs/en/latest/guide/platforms/android/index.html

On OS X, if Android Studio cannot find your Java SDK, run the following command:

```
$> launchctl setenv STUDIO_JDK /path/to/sdk
```

# Ionic: Android

Check that your terminal can find the commands of the Android SDK tools and Apache Ant:

```
$> which android
/path/to/android/sdk/tools/android
```

If `which` doesn't show you the path to the command, your PATH is not set up correctly. (Don't forget to restart your terminal.)

# Ionic: Android

Open the SDK:

```
$> android
```

Check and install the following:
- Latest Android SDK Tools
- Latest Android SDK Platform Tools
- Latest Android SDK Build Tools
- Android 4.4.2 (API 19) or more recent

# Ionic: Android

Finally, add the Android platform to your app:

```
$> cd myApp
$> ionic platform add android
$> ionic build android
```

Run your app in the emulator:

```
$> ionic emulate android
```

Deploy your app to a connected device:

```
$> ionic run android
```