

Formation Mobile

Hybride

Day 4

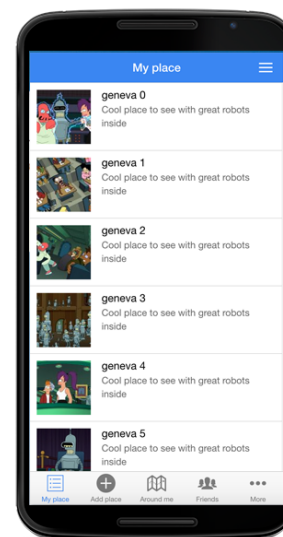
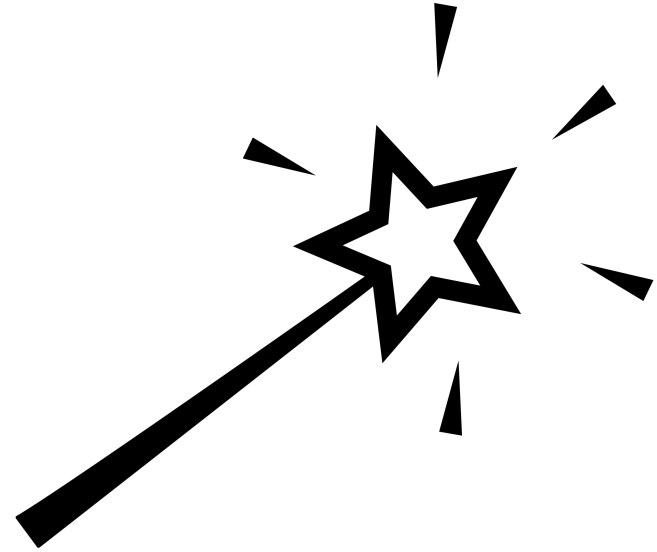
Cordova, Ionic

Agenda

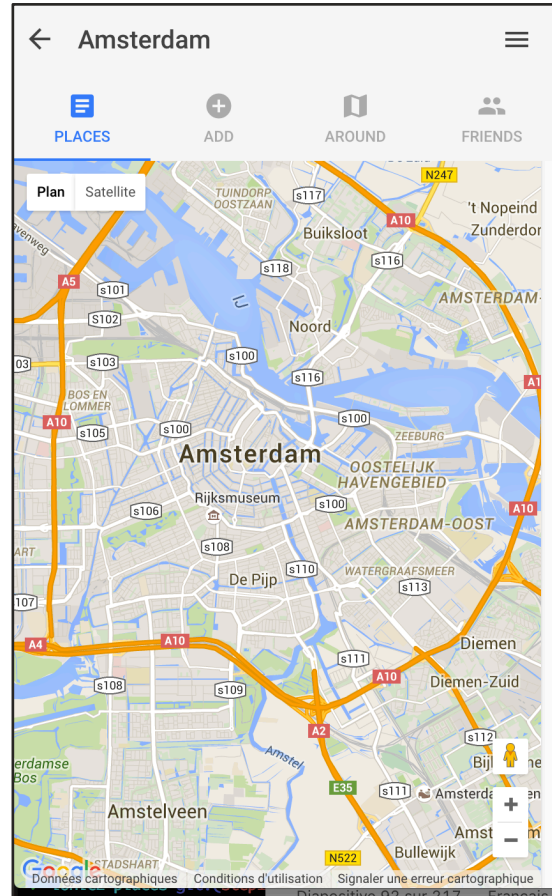
1. Correction travaux pratique
2. API native
3. Ionic native Camera
4. Ionic native Contacts
5. Pipe sort
6. Pipe Observable groupBy

Correction

Customiser l'application avec Sass



Au clique sur une place, afficher la map au bon endroit.



```
export class PlacePage {

  @ViewChild(Maps)
  private map: Maps;

  selectedPlace:any;

  constructor(private nav: NavController, private params: NavParams, private route) {
    const selectedId = params.data.id;
    this.selectedPlace = places.getPlaceById(selectedId)
  }

  ionViewDidEnter(){
    const pos = this.selectedPlace.position
    this.map.init(pos.lat, pos.long)
  }

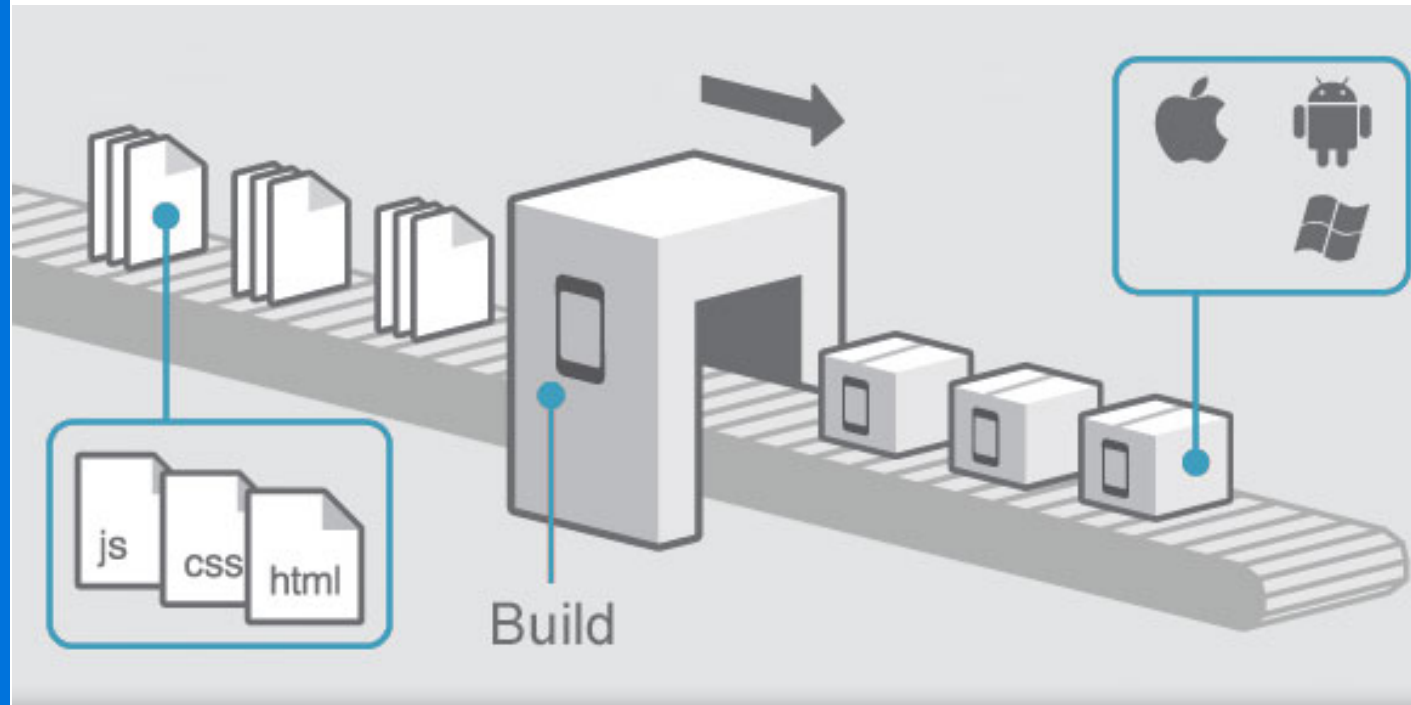
  onClickBack(){
    this.nav.setRoot(this.routes.getPage(this.routes.TABS))
  }
}
```

```
selectItem(id){
  this.nav.insert(0,this.routes.getPage(this.routes.PLACE),{id:id})
}
```

```
{
  "id":0,
  "name":"Amsterdam",
  "description":"Cool place to see with great robots inside",
  "image":"http://lorempicsum.com/futurama/100/100/1",
  "position":{
    "lat":"52.3702157",
    "long":"4.895167899999933"
  }
}
```

API native

Outil de build multi-plateforme



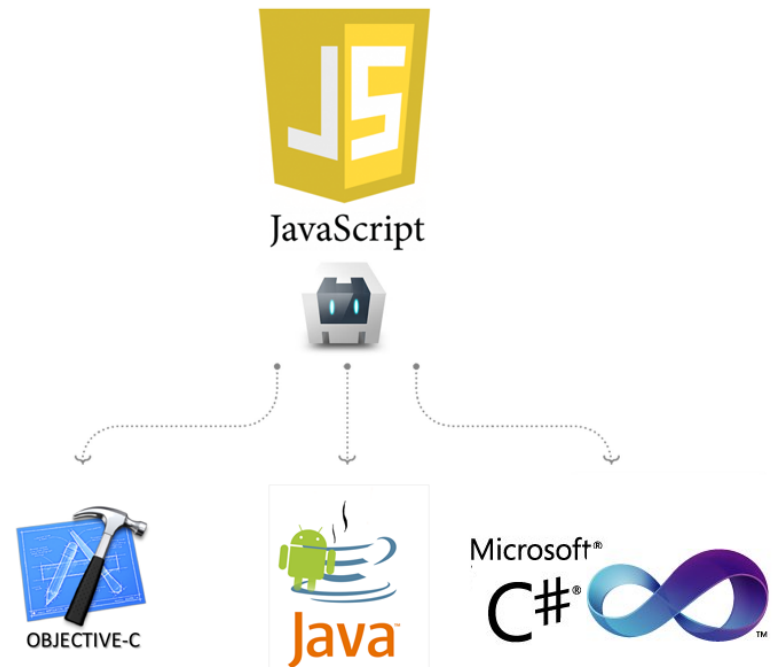
APACHE
CORDOVA™

Possibilité de créer son plugin cordova

Plugman



Développement spécifique natif pour chaque plateforme
au sein d'un plugin appelé depuis JavaScript



Java Android



```
demo-plugin.java  * demo-plugin.m  * demo-plugin.js  *
1  package org.super.cool;
2
3  import org.apache.cordova.CordovaPlugin;
4  import org.apache.cordova.CallbackContext;
5
6  import org.json.JSONArray;
7  import org.json.JSONException;
8  import org.json.JSONObject;
9
10 /**
11  * This class echoes a string called from JavaScript.
12  */
13 public class demo-plugin extends CordovaPlugin {
14
15     @Override
16     public boolean execute(String action, JSONArray args, CallbackContext callbackContext) throws JSONException {
17         if (action.equals("coolMethod")) {
18             String message = args.getString(0);
19             this.coolMethod(message, callbackContext);
20             return true;
21         }
22         return false;
23     }
24
25     private void coolMethod(String message, CallbackContext callbackContext) {
26         if (message != null && message.length() > 0) {
27             callbackContext.success(message);
28         } else {
29             callbackContext.error("Expected one non-empty string argument.");
30         }
31     }
32 }
33
```


Objective-C



```
demo-plugin.java * demo-plugin.m * demo-plugin.js *
1  /******* demo-plugin.m Cordova Plugin Implementation *****/
2
3  #import <Cordova/CDV.h>
4
5  @interface demo-plugin : CDVPlugin {
6      // Member variables go here.
7  }
8
9  - (void)'':(CDVInvokedUrlCommand*)command;
10 @end
11
12 @implementation demo-plugin
13
14 - (void)coolMethod:(CDVInvokedUrlCommand*)command
15 {
16     CDVPluginResult* pluginResult = nil;
17     NSString* echo = [command.arguments objectAtIndex:0];
18
19     if (echo != nil && [echo length] > 0) {
20         pluginResult = [CDVPluginResult resultWithStatus:CDVCommandStatus_OK messageAsString:echo];
21     } else {
22         pluginResult = [CDVPluginResult resultWithStatus:CDVCommandStatus_ERROR];
23     }
24
25     [self.commandDelegate sendPluginResult:pluginResult callbackId:command.callbackId];
26 }
27
28 @end
29
```



```
demo-plugin.java  × demo-plugin.m  × demo-plugin.js  × demo-plugin.cs  ×
1  using System;
2
3  namespace WPCordovaClassLib.Cordova.Commands
4  {
5      public class demo-plugin : BaseCommand
6      {
7          public void coolMethod(string message)
8          {
9              PluginResult result;
10             if (message != "")
11             {
12                 result = new PluginResult(PluginResult.Status.OK, message);
13             } else
14             {
15                 result = new PluginResult(PluginResult.Status.ERROR, message);
16             }
17
18             DispatchCommandResult(result);
19         }
20     }
21 }
```


JavaScript




```
demo-plugin.java  * demo-plugin.m  * demo-plugin.js  *
1  var exec = require('cordova/exec');
2
3  exports.coolMethod = function(arg0, success, error) {
4      exec(success, error, "demo-plugin", "coolMethod", [arg0]);
5  };
6
```


D'autres plugins ?

Beaucoup de plugins disponibles ... avec un niveau de qualité très variable


 APACHE CORDOVA
PLUGINS REGISTRY


Discover plugins for your Apache Cordova project.



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Most Downloaded

1786164
1310918
926346

[org.apache.cordova.device](#)
[org.apache.cordova.console](#)
[org.apache.cordova.file](#)

Last Updated

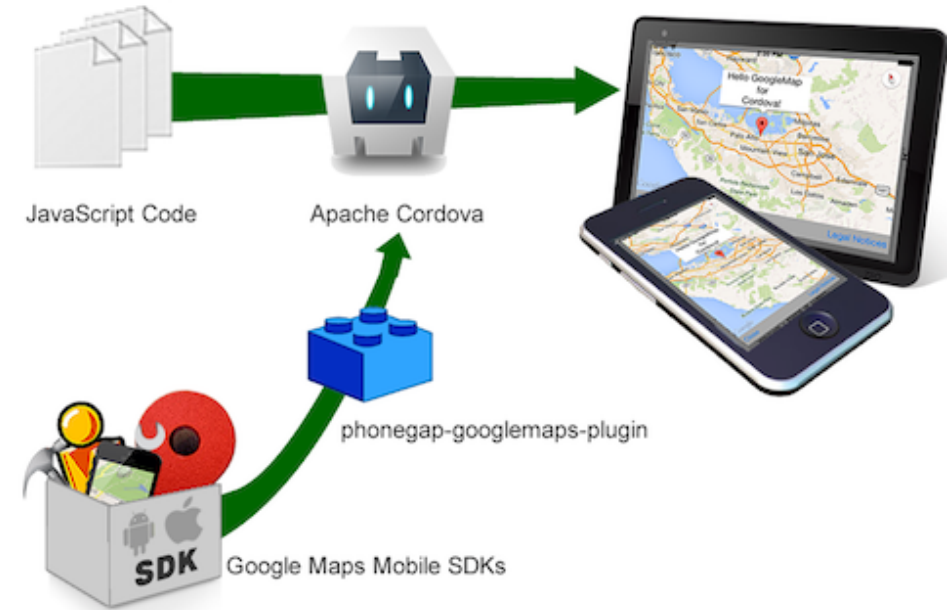
4 hours ago
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[com.heyztz.jipwrapper](#)
[com.heyztz.mscwrapper](#)
[com.cranberrygame.cordova.plugin.ad.admob](#)

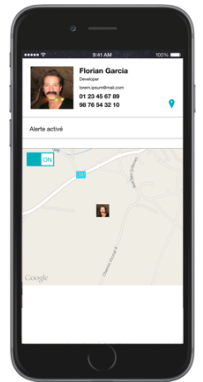
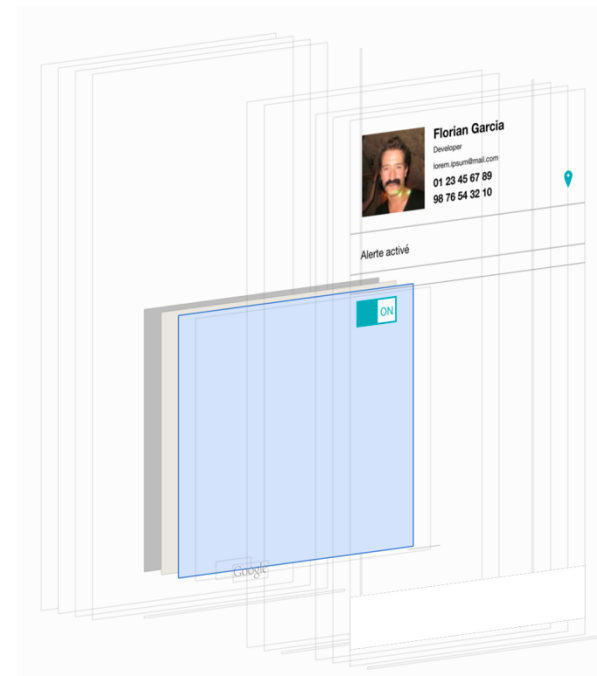
<http://plugins.cordova.io>

Exemple de plugin: Google Maps

- **plugin.google.maps**



- **Le layer natif se trouve en dessous de la WebView**



plugin.google.maps



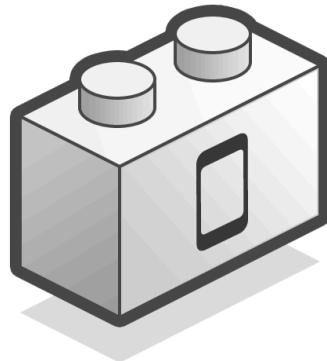
Points forts

- Performance Native (IOS/Android)
- Une seule instance garder en cache
- Ajout de marqueurs
- Animation et déplacement caméra à l'intérieur de la map
- Customisation des marqueurs via une image



Points faibles

- Animation : léger décalage entre la vue HTML et la map
- Superposition HTML + interactivité à configurer
- Customisation des marqueurs avancée
- Pas de possibilité de grouper les marqueurs.
(Seulement en beta sur android)



Du temps de test nécessaire sur chaque plugin.

Des limitations et des divergences entre les plateformes peuvent exister. Il faut donc bien connaître le périmètre des différents plugins pour ne pas se trouver piégé.

Ionic-native

63+ extensions intégrées à AngularJs



Built with ❤️ by [Ionic](#)

Avantages

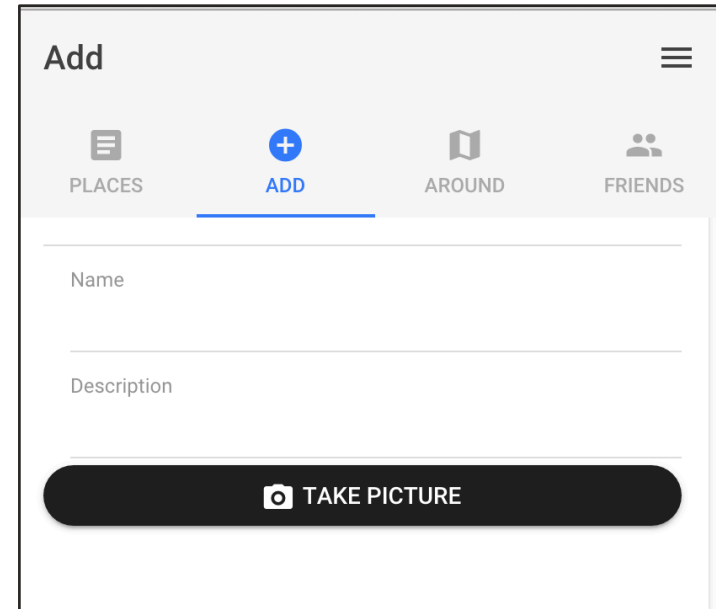
- Facilement intégré avec Angular
- Une documentation unifié
- Des plugins testés et validés

CORDOVA WITH THE POWER OF ANGULARJS



Ionic native Camera

Objectifs



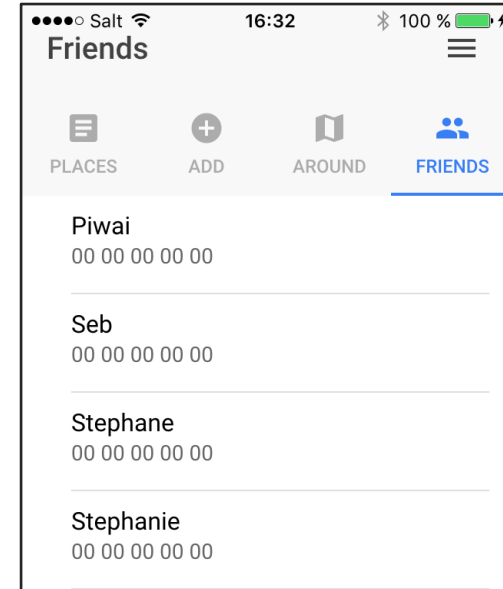
```
$ ionic plugin add cordova-plugin-camera
```

```
import {Camera} from 'ionic-native';
```

```
getPicture(){  
  
  Camera.getPicture({  
    destinationType: Camera.DestinationType.DATA_URL,  
    targetWidth: 200,  
    targetHeight: 200  
  }).then((imageData) => {  
    this.base64Image = "data:image/jpeg;base64," + imageData;  
  }, (error) => {  
    console.log("error ",error)  
  });  
  
}
```


Ionic native Contacts

Objectifs

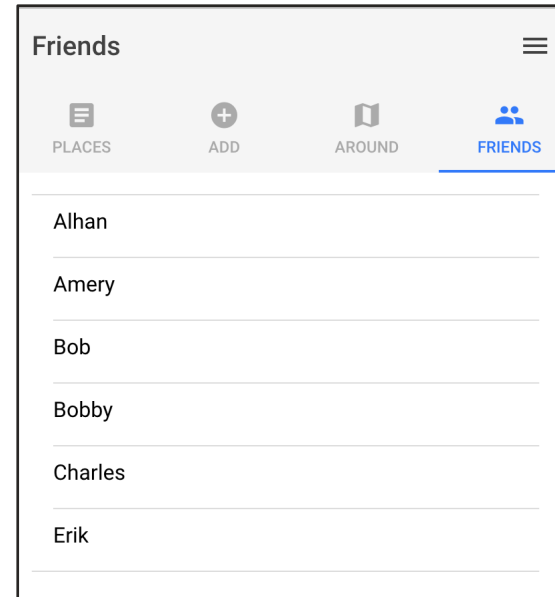


```
$ ionic plugin add cordova-plugin-contacts
```

```
import {Contacts} from 'ionic-native';
```

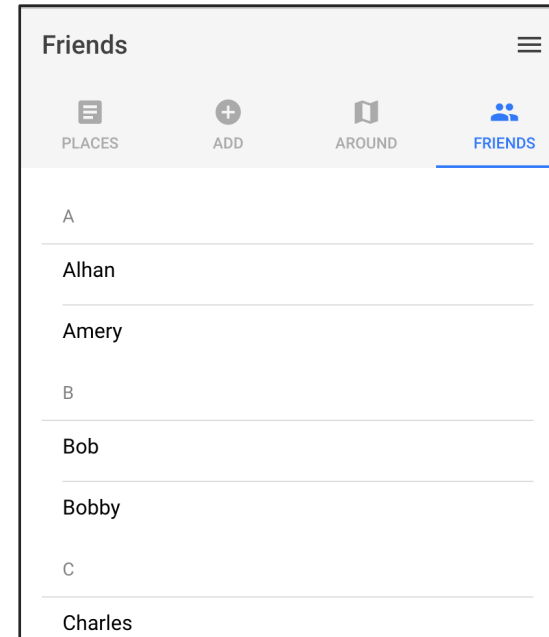
```
Contacts.find(['*']).then((contacts) => {
  contacts.forEach( (c)=> {
    if (c.name.givenName && c.phoneNumbers) {
      // grab only the properties you need avoiding birthday (ios bug on date formatting)
      //http://stackoverflow.com/questions/36798316/ionic-cordova-contacts-plugin-returns-invalid-date-
      this.contactsfound.push({name: c.name.givenName, phone: c.phoneNumbers[0].value});
    }
  });
},(error)=>{
  alert("error "+error)
}).catch((error)=>{
  alert("catch"+error)
})
}
```

Order friends By Name



```
@Pipe({
  name: 'sortAsc',
  pure: false,
})
@Injectable()
export class SortAsc {
  /*
   * Takes an array and sort in alphabetically order
   */
  transform(value: Array<any>, property:string="name") {
    return value.sort((a, b)=>{
      if(a[property] < b[property]) return -1;
      if(a[property] > b[property]) return 1;
      return 0;
    })
  }
}
```

GroupBy First Letter



```
@Pipe({
  name: 'groupBy',
  pure: false,
})
@Injectable()
export class GroupBy {
  /*
   * Takes a value and makes it lowercase.
   */
  transform(value: Array<any>, property: string="name") {

    let results = []
    Observable.from(value).groupBy(
      (item:any)=> { return item[property].substring(0,1); },
      (item:any)=> { return item }
    ).flatMap(group => group.toArray())
      .subscribe((data)=>{
        results.push({value:data[0][property].substring(0,1),list:data});
      })
    return results;
  }
}
```