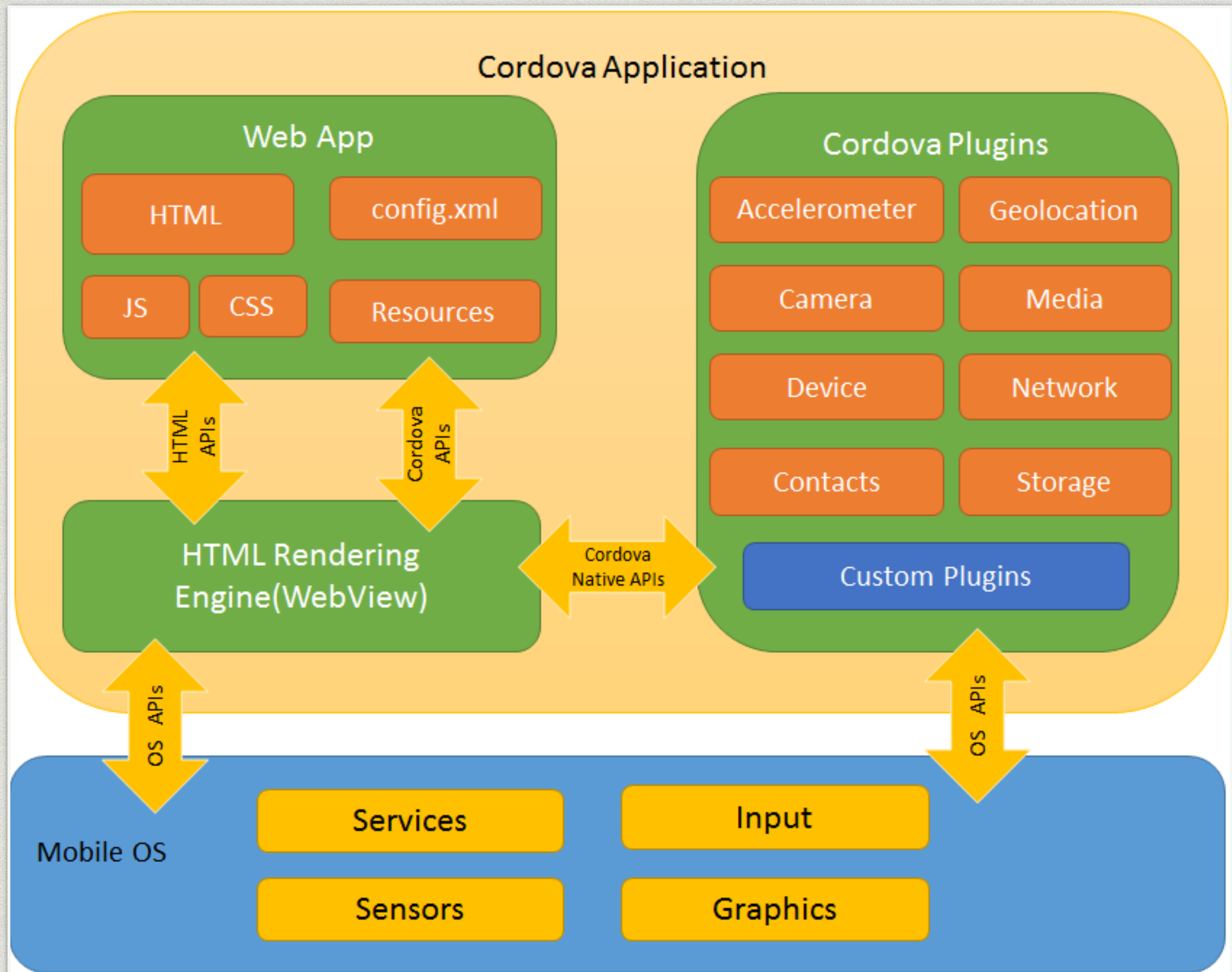


IONIC

Présentation

Ionic est un framework HTML5 qui permet de développer des applications hybrides pour les appareils mobiles.

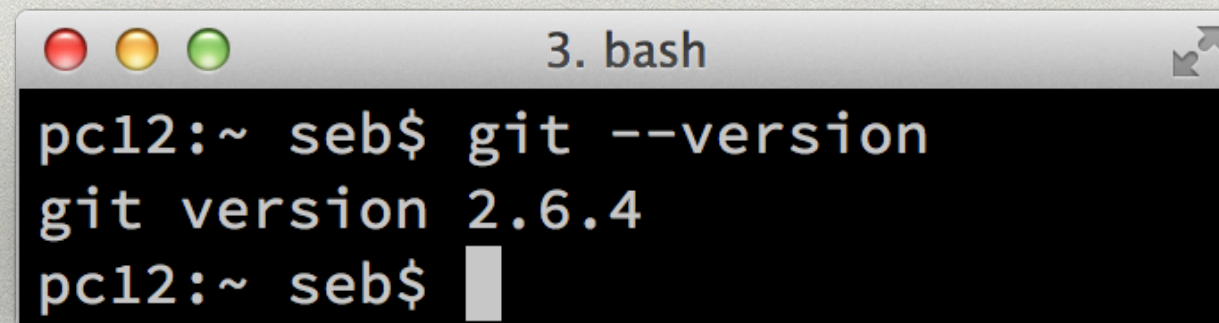
- ▶ Composants CSS et javascript pour simuler le comportement et l'apparence des applications natives
- ▶ Collection d'icônes
- ▶ Commandes CLI (reprise des commandes Cordova)



INSTALLATION

Installer Git

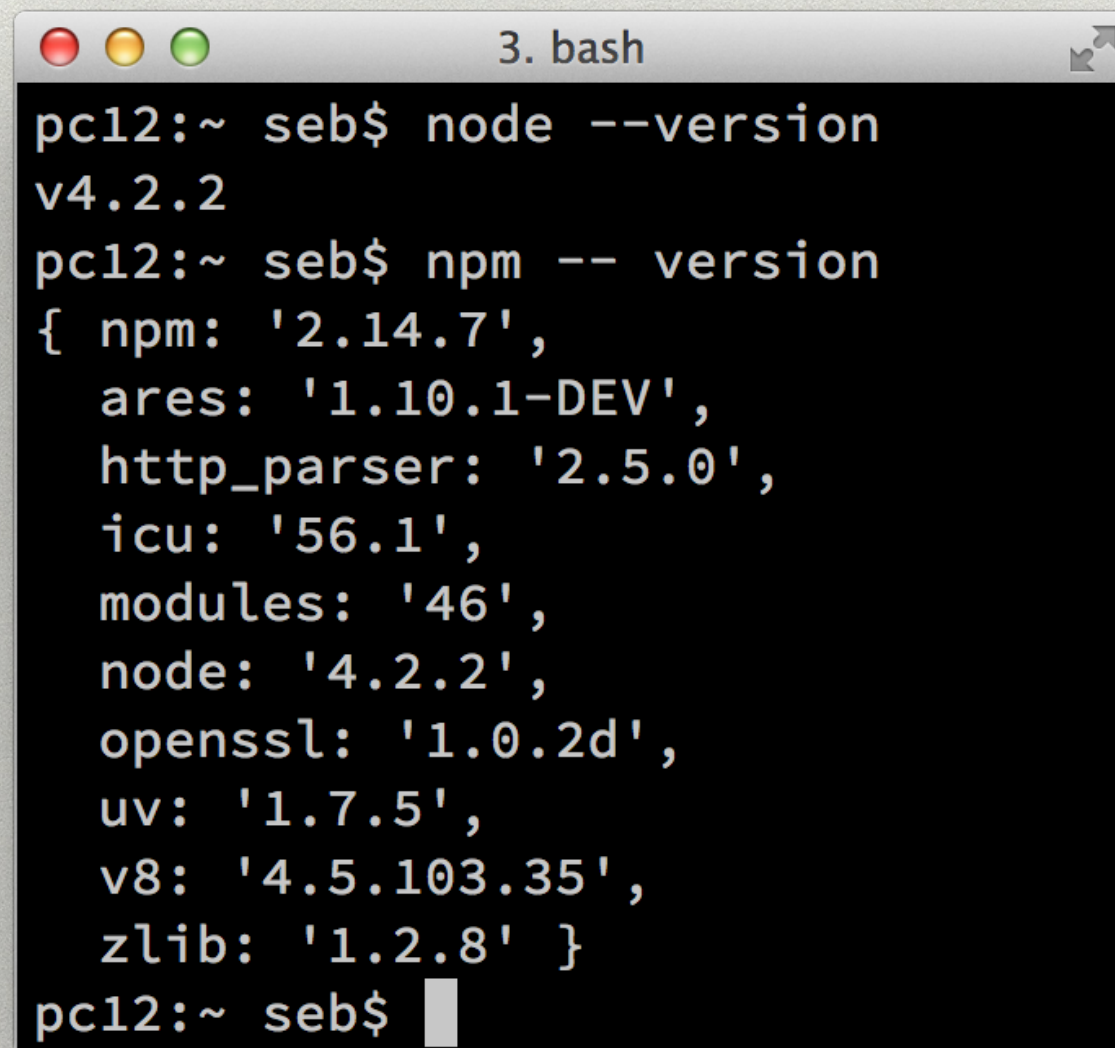
<https://git-scm.com/downloads>

A terminal window titled "3. bash" with standard macOS window controls (red, yellow, green buttons). The terminal shows the command "git --version" being executed, resulting in the output "git version 2.6.4". The prompt "pc12:~ seb\$" is visible at the start of each line.

```
pc12:~ seb$ git --version
git version 2.6.4
pc12:~ seb$
```


Installer Node-js

<https://nodejs.org/en/download/>

A terminal window titled "3. bash" with standard macOS window controls (red, yellow, green buttons). The terminal shows the output of two commands: 'node --version' and 'npm -- version'. The first command returns 'v4.2.2'. The second command returns a JSON object listing the versions of various Node.js dependencies.

```
pc12:~ seb$ node --version
v4.2.2
pc12:~ seb$ npm -- version
{ npm: '2.14.7',
  ares: '1.10.1-DEV',
  http_parser: '2.5.0',
  icu: '56.1',
  modules: '46',
  node: '4.2.2',
  openssl: '1.0.2d',
  uv: '1.7.5',
  v8: '4.5.103.35',
  zlib: '1.2.8' }
pc12:~ seb$
```


Installer les packages

● Installer Cordova

● Installer ionic

● Installer bower

● Installer gulp

```
npm install -g cordova
```

```
npm install -g ionic
```

```
npm install -g bower
```

```
npm install -g gulp
```

```
npm install -g cordova ionic bower gulp
```


POUR ANDROID

Installer Java

● Installer le JDK

- ▶ <http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html>

● Définir la variable JAVA_HOME

● Installer Android SDK

- ▶ <http://developer.android.com/sdk/installing/index.html>

● Ajouter au PATH :

- ▶ C:\Development\android-sdk\platform-tools;
- ▶ C:\Development\android-sdk\tools au PATH

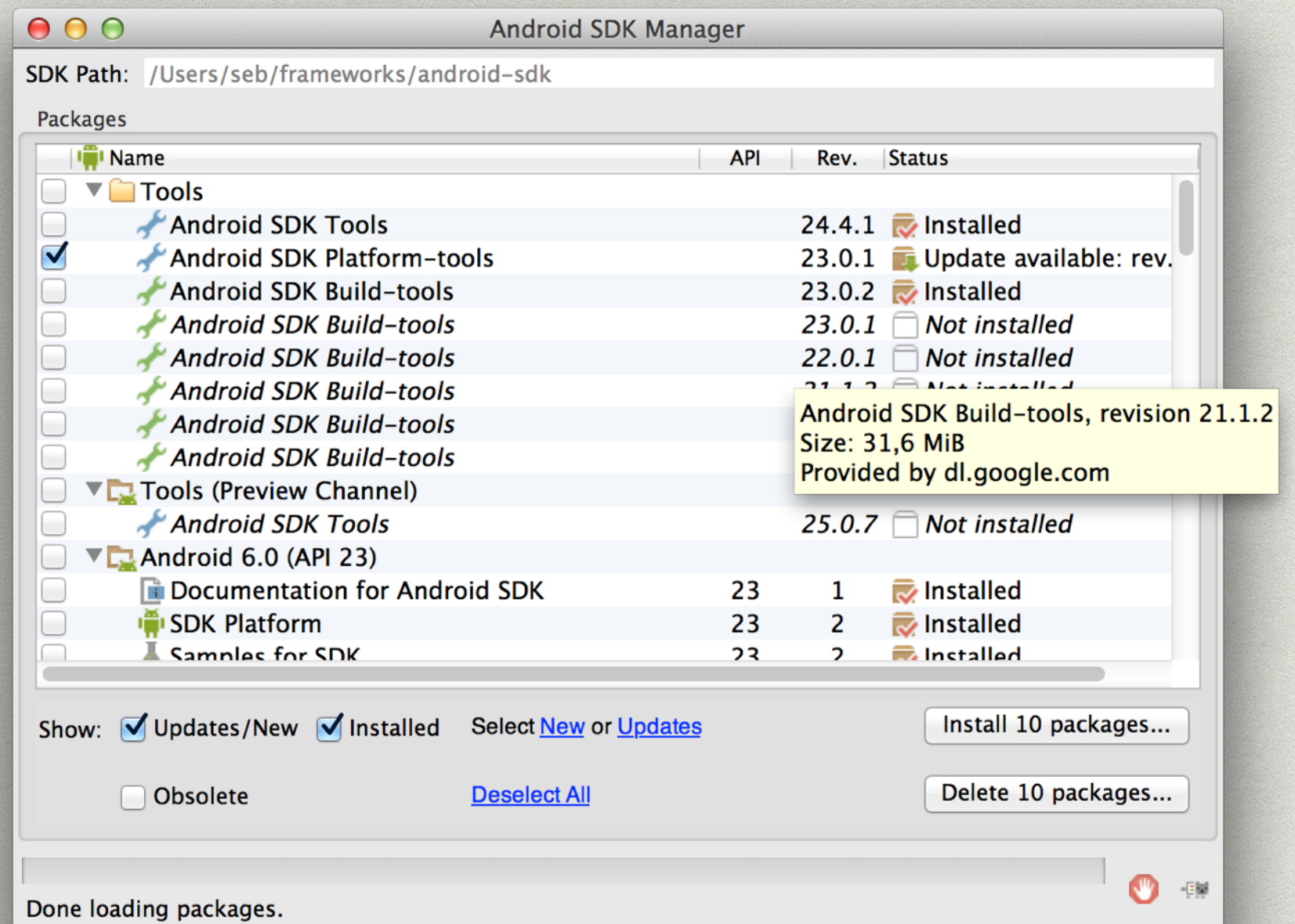
Installer Android

```
3. java
pc12:~ seb$ android
```

● Android 5 API 22

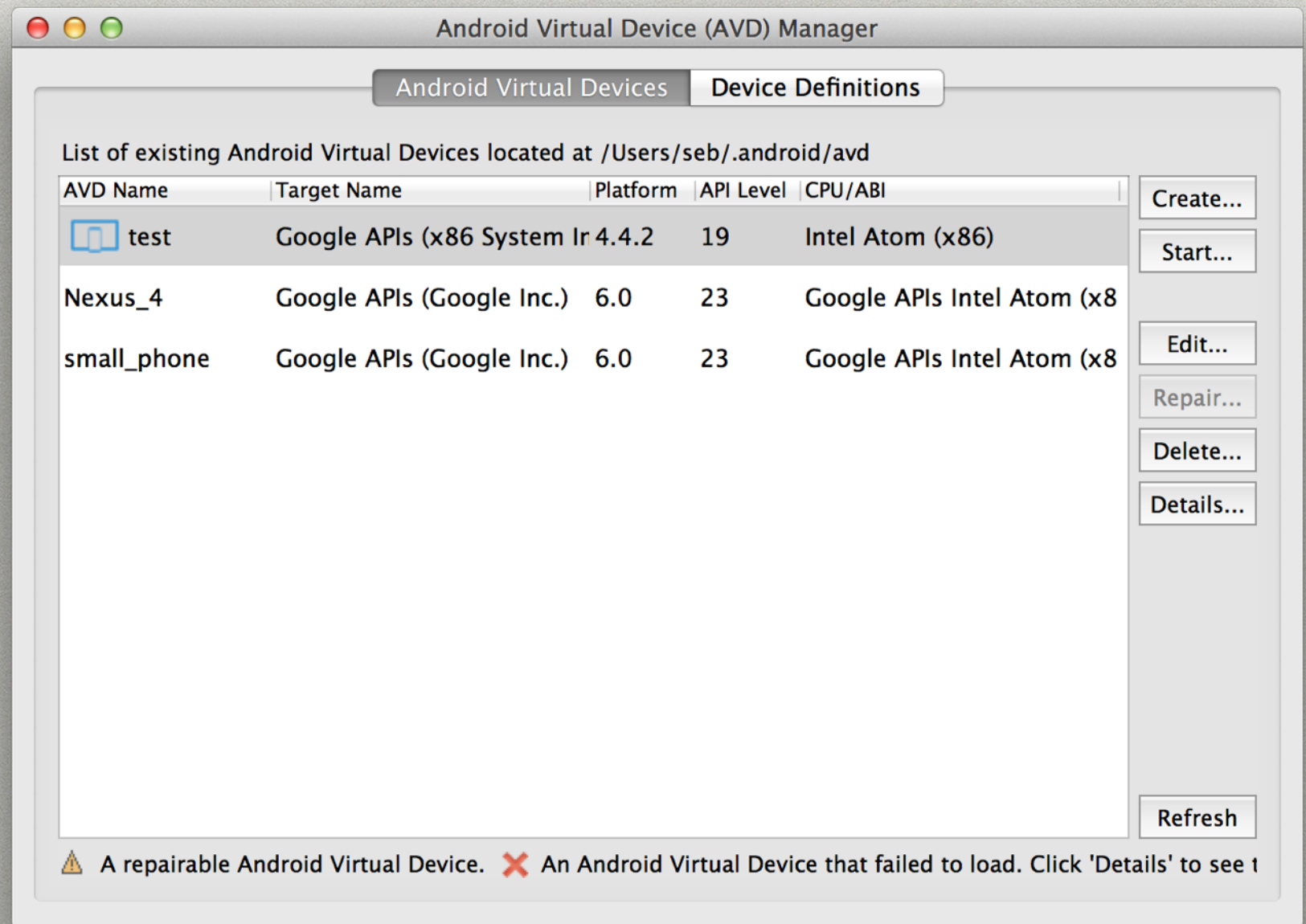
● SDK Build-tools

● Android Support Repository



Définir un avd (android virtual device)

```
3. java
pc12:~ seb$ android avd
```



POUR IOS

SUR UN MAC UNIQUEMENT

Installer Xcode

- Installer Xcode depuis l'App Store
- Installer Xcode Command Line Tools depuis Xcode

LIGNE DE COMMANDE

Créer un projet

```
ionic start chemin-du-projet template
```

modèles intégrés

```
blank  
sidemenu  
tabs
```


Ajouter une plateforme

```
ionic platform add nom-plateforme
```


Ajouter un plugin Cordova

```
ionic plugin add nom-du-plugin
```


Tester un projet dans un navigateur

ionic serve

- c : affiche les logs de l'application dans la console
- s : affiche les logs du serveur dans la console
- p : détermine le port (8100 par défaut)
- w : détermine le navigateur à lancer (firefox, chrome, safari)
- l : simule la taille d'un smartphone
- b : désactive le lancement automatique du navigateur

Tester un projet dans un émulateur

```
ionic emulate [ios|android]
```

```
-c : affiche les logs de l'application dans la console  
-s : affiche les logs du serveur dans la console  
-p : détermine le port (8100 par défaut)  
-l : active le rafraîchissement automatique (live reload)
```


Tester un projet avec un appareil connecté en usb

```
ionic run [ios|android]
```

```
-c : affiche les logs de l'application dans la console  
-s : affiche les logs du serveur dans la console  
-p : détermine le port (8100 par défaut)  
-l : active le rafraîchissement automatique (live reload)
```


Compiler un projet

```
ionic build nom-plateforme
```


ANGULAR JS

Application

www/js/app.js

```
var app = angular.module('starter', ['ionic']);
```

dépendances

www/index.html

```
<body ng-app="starter">
```



Contrôleur

www/js/app.js

```
app.controller('mainController', function($scope) {  
    // code du contrôleur  
});
```

imports

fonction
anonyme

www/index.html

```
<div ng-controller="mainController">
```


binding

```
app.controller('monController', function($scope) {  
  $scope.titre = 'Bienvenue';  
  $scope.personne = {  
    prenom: 'Laure',  
    nom: 'ADLER'  
  };  
});
```

www/js/app.js

```
<div ng-controller="monController" class="padding">  
  <h1 ng-bind="titre"></h1>  
  <p>vous êtes :  
    {{personne.prenom}}  
    {{personne.nom}}  
  </p>  
</div>
```

www/index.html

ng-model

```
app.controller('monController', function($scope) {  
  $scope.titre = 'Bienvenue';  
  $scope.personne = {  
    prenom: 'Laure',  
    nom: 'ADLER'  
  };  
});
```

www/js/app.js

```
<div ng-controller="monController" class="padding">  
  <h1>{{titre}} {{personne.prenom}}</h1>  
  <label class="item item-input">  
    <span class="input-label">Votre nom</span>  
    <input type="text" ng-model="personne.prenom">  
  </label>  
</div>
```

www/index.html

Evènements

● ng-click

● ng-dblclick

● ng-change

● ng-focus

● ng-blur

● ng-submit

...

```
app.controller('monController', function($scope) {  
    $scope.nbClick = 0;  
    $scope.myClick = function(){  
        $scope.nbClick++;  
    };  
});
```

www/js/app.js

```
<div ng-controller="monController" class="padding">  
    <button ng-click="myClick()"></button>  
    <p>nombre de clics : {{nbClick}}</p>  
</div>
```

www/index.html

Watch

```
app.controller("ctrl", function($scope) {  
    var taux = 123.56  
    $scope.$watch("euro", function (newValue, oldValue) {  
        $scope.yen = newValue * taux;  
    });  
  
    $scope.euro = 1;  
});
```

www/js/app.js

```
<div ng-controller="ctrl">  
    <input type="text" ng-model="euro" />  
    {{yen|currency: "¥" : 2 }}  
</div>
```

www/index.html

ng-class

```
app.controller("ctrl", function ($scope) {  
    $scope.value = 1;  
    $scope.isBold = function () { return $scope.value % 2 === 0; };  
    $scope.isItalic = function () { return $scope.value % 3 === 0; };  
    $scope.isUnderlined = function () { return $scope.value % 5 === 0; };  
});
```

www/js/app.js

```
<div ng-controller="ctrl">  
    <input type="text" ng-model="value" />  
    <span ng-class="  
        {bold: isBold(),  
        italic: isItalic(),  
        underline: isUnderlined()}">  
        Example Text  
    </span>  
</div>
```

www/index.html

ng-repeat

```
app.controller("ctrl", function ($scope) {  
    $scope.liste = ['un frigidaire', 'un évier en fer',  
        'un écrase patate', 'un pistolet à gaufre'];  
});
```

www/js/app.js

```
<div ng-controller="ctrl" class="padding">  
    <div class="liste">  
        <div class="item"  
            ng-class="{impair:$odd}"  
            ng-repeat="element in liste">  
  
            {{$index}} : {{element}}  
        </div>  
    </div>  
</div>
```

www/index.html

Filtres

<https://docs.angularjs.org/api/ng/filter>

```
<ion-content ng-controller="ctrl" class="padding">
  <div class="list">
    <label class="item item-input">
      <span class="input-label">cherche</span>
      <input type="text" ng-model="cherche.$">
    </label>
  </div>

  <div class="liste">
    <div class="item"
      ng-repeat="personne in amis | filter:cherche
      | orderBy:'+date_naiss'">
      {{$index}} : {{personne.nom | uppercase}}
      {{personne.date_naiss | date:'dd/MM/yyyy'}}
      {{personne.ville | uppercase}}
    </div>
  </div>
</ion-content>
```

[www/index.html](#)

Services

```
app.service('AmisService', function(){  
    this.getAmis = function(){  
        return [  
            {nom:'jean', date_naiss:'1967-12-09', ville:'Orléans'},  
            {nom:'lola', date_naiss:'1975-09-12', ville:'Avignon'},  
            {nom:'joseph', date_naiss:'1950-01-07', ville:'Orléans'},  
            {nom:'Lily', date_naiss:'1978-12-09', ville:'Paris'},  
        ];  
    }  
});  
  
app.controller('ctrl', function($scope, AmisService) {  
    $scope.amis = AmisService.getAmis();  
});
```


Factory

```
app.factory('AmisFactory', function(){

    function getData(){
        return [
            {nom:'jean', date_naiss:'1967-12-09', ville:'Orléans'},
            {nom:'lola', date_naiss:'1975-09-12', ville:'Avignon'},
            {nom:'joseph', date_naiss:'1950-01-07', ville:'Orléans'},
            {nom:'Lily', date_naiss:'1978-12-09', ville:'Paris'},
        ];
    }

    return {
        getAmis: getData
    }
});

app.controller('ctrl', function($scope, AmisFactory) {
    $scope.amis = AmisFactory.getAmis();
});
```


Module

```
angular.module('app.services', [])  
  .service('Service1', function(){  
    return {  
      getName: function(){  
        return "Service 1";  
      }  
    }  
  });  
  
angular.module('app.controllers', [])  
  .controller('ctrl', function($scope, Service1) {  
    $scope.msg = Service1.getName();  
  });  
  
var app = angular.module('starter', ['ionic',  
  'app.services',  
  'app.controllers']);
```


PLUGINS

NgCordova

Intégration des plugins
Cordova avec angular js

Installation

```
bower install ngCordova
```

index.html

```
<script src="lib/ngCordova/dist/ng-cordova.js"></script>  
<script src="cordova.js"></script>
```

app.js

```
angular.module('myApp', ['ngCordova'])
```


Utilisation

Chaque appel à un plugin doit être encadré par un test de disponibilité de la plate-forme

```
$ionicPlatform.ready(function() {  
  $cordovaPlugin.someFunction().then(success, error);  
});
```


Geolocation

```
cordova plugin add cordova-plugin-geolocation
```

```
app.controller('Ctrl', function($cordovaGeolocation, $ionicPlatform) {  
    $ionicPlatform.ready(function() {  
        var posOptions = {timeout: 10000, enableHighAccuracy: false};  
        $cordovaGeolocation  
            .getCurrentPosition(posOptions)  
            .then(function (position) {  
                var lat  = position.coords.latitude  
                var long = position.coords.longitude  
            }, function(err) {  
                // error  
            });  
    })  
})
```


IONIC

IONIC BOUTONS

Bouton delete

```
<ion-list show-delete="true">  
  <ion-item>  
    <ion-delete-button ng-click="delete()">  
      <i class="ion-trash-a"></i>  
    </ion-delete-button>  
  </ion-item>  
</ion-list>
```


Bouton reorder

```
<ion-list show-reorder="true">
  <ion-item ng-repeat="playlist in playlists">
    {{playlist.title}}

    <ion-reorder-button on-reorder="move(playlist, $fromIndex, $toIndex)">
      <i class="ion-drag"></i>
    </ion-reorder-button>

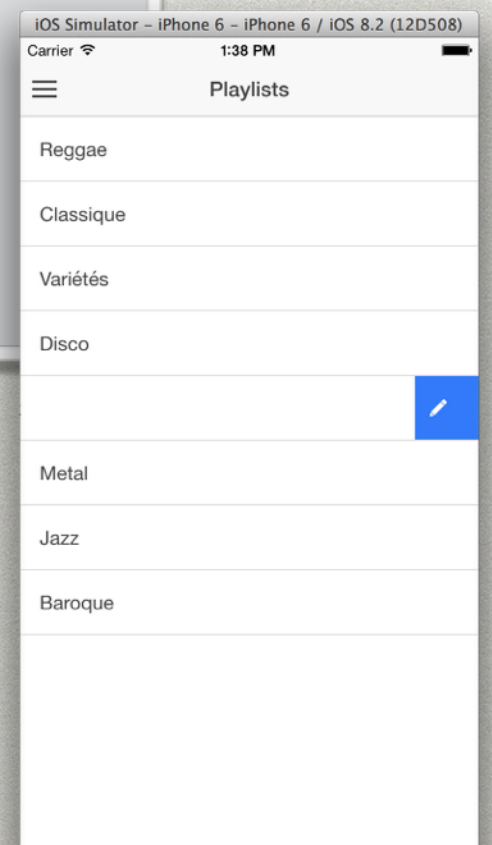
  </ion-item>
</ion-list>
```

```
$scope.move = function(item, fromIndex, toIndex) {
  $scope.playlists.splice(fromIndex, 1);
  $scope.playlists.splice(toIndex, 0, item);
};
```


Bouton options

```
<ion-list>
  <ion-item ng-repeat="playlist in playlists">
    {{playlist.title}}

    <ion-option-button
      class="button-positive"
      ng-click="editItem(item)">
      <i class="ion-edit"></i>
    </ion-option-button>
  </ion-item>
</ion-list>
```



HTTP

Service http

```
app.service('BooksService', function($http){
  var self = {
    bookList: [],
    loadBooks: function(callback){
      $http.get('https://www.googleapis.com/books/v1/volumes?q=
%C3%A9conomie&langRestrict=french&projection=lite')
        .success(function(data){

          self.bookList = data;
          callback(data);
        })
        .error(function(errMsg){
          console.log(errMsg);
        })
    }
  };
  return self;
});
```


Service http (contrôleur)

```
app.controller('ctrl', function($scope, BooksService) {  
    $scope.bookList = [];  
  
    BooksService.loadBooks(function(data){  
        console.log(data);  
        $scope.bookList = data;  
    });  
});
```


Promesses

```
app.service('BooksService', function($http, $q){
  var self = {
    bookList: [],
    loadBooks: function(){
      var defer = $q.defer();
      $http.get('https://www.googleapis.com/books/v1/volumes?q=
%C3%A9conomie&langRestrict=french&projection=lite')
        .success(function(data){
          self.bookList = data;
          defer.resolve('OK');
        })
        .error(function(errorMsg){
          defer.reject(errorMsg)
        });
      return defer.promise;
    }
  };
  return self;
});
```


Promesses (contrôleur)

```
app.controller('ctrl', function($scope, BooksService) {  
    $scope.bookList = [];  
  
    BooksService.loadBooks().then(  
        function success (successMsg){  
            console.log(successMsg);  
            $scope.bookList = BooksService.bookList;  
        },  
        function error (errorMsg){  
            console.log(errorMsg);  
        }  
    );  
});
```


IONIC COMPOSANTS

Infinite scroll

```
<ion-content class="content">
  <ion-list>
    ...
  </ion-list>

  <ion-infinite-scroll on-infinite="loadMore()"
                      distance="1%">
  </ion-infinite-scroll>
</ion-content>
```

```
$scope.loadMore = function () {
  var params = {};
  var nbItems = $scope.items.length;
  //Récupération de dernier élément de la liste
  if(nbItems >0){
    params['after'] = $scope.items[nbItems -1].name;
  }

  loadItems(params, function(olderItems){
    $scope.items = $scope.items.concat(olderItems);
    $scope.$broadcast('scroll.infiniteScrollComplete');
  });
};
```


Pull to refresh

```
<ion-content class="content">
  <ion-refresher pulling-text="rafraîchir"
                 on-refresh="doRefresh()">
  </ion-refresher>

  <ion-list>
    ...
  </ion-list>
</ion-content>
```

```
$scope.doRefresh = function (){
  var params = {'before' : $scope.items[0].name};
  loadItems(params, function(newerItems){
    $scope.items = newerItems.concat($scope.items);
    $scope.$broadcast('scroll.refreshComplete');
  });
};
```


Ionic Loading

```
app.controller('LoadingCtrl', function($scope, $ionicLoading, $timeout) {

    $scope.showLoading = function() {
        $ionicLoading.show({
            template: 'Chargement en cours...'
        });
    };

    $scope.hideLoading = function(){
        $ionicLoading.hide();
    };

    $timeout(function(){
        $scope.showLoading();
    }, 3000);

    $scope.hideLoading();

});
```


Modal

```
<ion-view view-title="Modal">
  <ion-content>
    <h1>Modal</h1>

    <button class="button" ng-click="openModal()">Ouvrir</button>
  </ion-content>
</ion-view>
```

```
<script id="contact-modal.html" type="text/ng-template">
  <div class="modal">
    <ion-header-bar>
      <h1 class="title">Formulaire</h1>
    </ion-header-bar>
    <ion-content>
      ...
      <button class="button button-full" ng-click="closeModal()">
        Fermer
      </button>
    </ion-content>
  </div>
</script>
```


Modal script

```
$ionicModal.fromTemplateUrl('contact-modal.html', {  
  scope: $scope,  
  animation: 'slide-in-up'  
}).then(function(modal) {  
  $scope.modal = modal  
});  
  
$scope.openModal = function() {  
  $scope.modal.show()  
};  
  
$scope.closeModal = function() {  
  $scope.modal.hide();  
};  
  
$scope.$on('$destroy', function() {  
  $scope.modal.remove();  
});
```


MULTI VUES

Routage

```
app.config(function ($stateProvider, $urlRouterProvider) {  
    $stateProvider.state('list', {  
        url: '/list',  
        templateUrl: 'templates/list.html',  
        controller: 'listController'  
    });  
  
    $stateProvider.state('edit', {  
        url: '/edit/:id',  
        templateUrl: 'templates/edit.html',  
        controller: 'editController'  
    });  
  
    $stateProvider.state('add', {  
        url: '/add',  
        templateUrl: 'templates/edit.html',  
        controller: 'addController'  
    });  
    //Route par défaut  
    $urlRouterProvider.otherwise('/list');  
});
```


index et templates

```
<body ng-app="myApp">  
  
  <ion-pane>  
    <ion-nav-bar class="bar-stable">  
      <ion-nav-back-button>back</ion-nav-back-button>  
    </ion-nav-bar>  
    <ion-nav-view></ion-nav-view>  
  </ion-pane>  
</body>
```

index.html

```
<ion-view view-title="Edit">  
  <ion-content>  
    ...  
  </ion-content>  
</ion-view>
```

templates/edit.html

Contraintes sur les paramètres

```
app.config(function ($stateProvider, $urlRouterProvider) {  
  
    $stateProvider.state('edit', {  
        url: '/edit/{id:^(0-9){1,5}$}',  
        templateUrl: 'templates/edit.html',  
        controller: 'editController'  
    });  
  
    ...  
  
    $urlRouterProvider.otherwise('/list');  
});
```


Navigation

avec html

```
<a href="#/edit/{{id}}>
```

avec javascript

```
$state.go('edit-route',  
  {id: 5}  
)
```

récupération du paramètre

```
$scope.id = $state.params.id;
```

```
$stateProvider.state('edit', {  
  url: '/edit-route/:id',  
  templateUrl: 'tpl/edit.html',  
  controller: 'editController'  
});
```


Navigation avancée

Voir les templates sidemenu et tabs