

# Ionic

## Prerequisites

### nodejs (latest)

```
sudo apt-get install build-essential
# curl -sL https://deb.nodesource.com/setup_6.x | sudo -E bash -
# sudo apt install nodejs
```

### nodeenv

```
sudo apt-get install python-pip
sudo pip install nodeenv
```

## Project

### Create library

```
LIB=<some-path>
nodeenv --node=0.10.33 $LIB
. $LIB/bin/activate
```

```
npm install -g ionic
# npm install -g bower
```

update

```
npm update -g ionic cordova
```

### Create project

- <https://devdactic.com/login-ionic-2/>
- <https://ionicacademy.com/ionic-3-lazy-loading/>
- <https://www.joshmorony.com/an-introduction-to-observables-for-ionic-2/>

Activate library

```
. $LIB/bin/activate
```

```
NAME=PeperStart
ionic start $NAME blank
```

```
cd $NAME
ionic browser add crosswalk #{this command enable also android platform}
```

## Update libs

```
. $LIB/bin/activate
npm install -g ionic

cd <project>
ionic lib update
```

## Android

It is important to install native gradle or use gradle shipped with android studio (see PATH below)

- ANDROID\_HOME=/opt/android-sdk
- PATH=/opt/android-sdk/platform-tools:/opt/android-studio/gradle/gradle-3.2/bin/

example

```
nodeenv lib
. lib/bin/activate
npm install -g ionic cordova
ionic start test1 blank
cd test1
ionic cordova plugin

cd ..
git clone https://github.com/Cloudoki/ImageDetectionCordovaPlugin.git
# create package.json in ImageDetectionCordovaPlugin
cd test1
cordova plugin add ../ImageDetectionCordovaPlugin
ionic cordova platform add android
ionic cordova build android
ionic cordova run android --device
```

example2 with cordova-plugin-camera-preview.git → GianoDroidIonic

```
ionic start MyCameraApp blank --id org.csgalileo.mycameraapp
git clone --depth=1
https://github.com/cordova-plugin-camera-preview/cordova-plugin-camera-preview.git
cd MyCameraApp
ionic cordova platform add android

ionic cordova plugin add ../cordova-plugin-camera-preview
npm install @ionic-native/camera-preview --save
```

```
ionic cordova plugin add cordova.plugins.diagnostic
npm install @ionic-native/diagnostic --save

ionic cordova build android
ionic cordova run android --device
```

example3 with custom plugin

```
ionic start GianoDroidHybrid blank --id org.csgalileo.gianodroidhybrid
cd GianoDroidHybrid
rm -fR .git
ionic cordova platform add android
ionic cordova plugin add ../cordova-plugin-giano
```

## Add Native C++ support

Add opencv support [http://wiki.csgalileo.org/projects:giano:android#simpler\\_mode](http://wiki.csgalileo.org/projects:giano:android#simpler_mode)

In android root project (<project root>/platforms/android) add: CMakeLists.txt

```
cmake_minimum_required(VERSION 3.4.1)
set(CMAKE_VERBOSE_MAKEFILE on)
find_library(log-lib log)

set(OpenCV_DIR "android-opencv/opencv/src/sdk/native/jni")
find_package(OpenCV REQUIRED)
message(STATUS "OpenCV libraries: ${OpenCV_LIBS}")
```

and add to existing build.gradle (android section)

```
android {
    // ...

    externalNativeBuild {
        cmake {
            path "CMakeLists.txt"
        }
    }
    packagingOptions {
        // edit also abiFilters and clean project before make apk
        //exclude 'lib/armeabi-v7a/libopencv_java3.so'
        exclude 'lib/mips/libopencv_java3.so'
        exclude 'lib/mips64/libopencv_java3.so'
        exclude 'lib/armeabi/libopencv_java3.so'
        exclude 'lib/x86/libopencv_java3.so'
        exclude 'lib/x86_64/libopencv_java3.so'
    }
}
```

## Android Studio

After project creation via cli (see up) import project (Eclipse, ADT, gradle) from folder <project-root>/platforms/android (choose to update gradle).

Now it is possible to develop JAVA code in Android Studio but HTML/TS has to be changed in <project-root>/src and synced with 'ionic build'

## Eclipse

\$P is \$NAME/platforms/android path

- Import → “Existing Android Code ...” → \$NAME/platforms/android and deselect all subprojects
- Project → Build Path → Configure Build Path
  - Source → Link source → \$P/Cordova/lib/src with name src-cordova/lib
  - Libraries → Add external JAR →  
\$P/Cordova/lib/xwalkcorelibrary/xwalkcorelibraryjavaapp.jar \* Libraries → Add external JAR → \$P/Cordova/lib/xwalkcorelibrary/xwalkcorelibraryjavaapp.jar

## Native lib integration

Create zip file named **gpio.jar** and put into platforms/android/libs

```
lib
├── armeabi
│   └── libgpio.so
```

build.gradle search inside libs for \*jar (see dependency section)

## Tips

### Video fullscreen autoplay

```
<video ng-controller="startVideo" controls="" style="width:100%;
height:auto" autoplay="false">
  <source src=""></source>
</video>
```

```
.controller('startVideo', function($scope) {
  angular.element('video').attr('src', 'http://...');
});
```

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