# ARCHITECTURE

Cordova:

**What?**

Cordova is an open-source mobile development framework. It allows you to use standard web technologies such as HTML5, CSS3, and JavaScript for cross-platform development, avoiding each mobile platforms' native development language.

**Why?**

Applications execute within wrappers targeted to each platform, and rely on standards-compliant API bindings to access each device's sensors, data, and network status.

**Component:**

* Config.xml:

Cordova applications rely on a common config.xml file that provides information about the app and specifies parameters affecting how it works, such as whether it responds to orientation shifts. This file adheres to the W3C's [Packaged Web App](http://www.w3.org/TR/widgets/), or *widget*, specification.

* Index.html:

The application itself is implemented as a web page, named index.html by default, that references whatever CSS, JavaScript, images, media files, or other resources are necessary for it to run.

The app executes as a *WebView* within the native application wrapper, which you distribute to app stores.

* Cordova.js:

For the web app to interact with various device features the way native apps do, it must also reference a cordova.js file, which provides API bindings.

* Plugins:

The Cordova-enabled WebView may provide the application with its entire user interface. It can also be a component within a larger, hybrid application that mixes the WebView with native application components. Cordova provides a plugin interface for these components to communicate with each other.

**Development**

The easiest way to set up an application is to run the cordova command-line utility, also known as the command-line interface (CLI). Depending on the set of platforms you wish to target, you can rely on the CLI for progressively greater shares of the development cycle:

* In the most basic scenario, you can use the CLI simply to create a new project that is populated with default configuration for you to modify.
* For many mobile platforms, you can also use the CLI to set up additional project files required to compile within each SDK. For this to work, you must install each targeted platform's SDK. (See the [Platform Guides](https://cordova.apache.org/docs/en/3.1.0/guide/platforms/index.html) for instructions.) As indicated in the Platform Support table below, you may need to run the CLI on different operating systems depending on the targeted platform.
* For supporting platforms, the CLI can compile executible applications and run them in an SDK-based device emulator.

For comprehensive testing, you can also generate application files and install them directly on a device.

At any point in the development cycle, you can also rely on platform-specific SDK tools, which may provide a richer set of options. (See the [Platform Guides](https://cordova.apache.org/docs/en/3.1.0/guide/platforms/index.html) for details about each platform's SDK tool set.) An SDK environment is more appropriate if you want implement a hybrid app that mixes web-based and native application components.

You may use the command-line utility to initially generate the app, or iteratively thereafter to feed updated code to SDK tools. You may also build the app's configuration file yourself.

Phonegap:

Difference between Phonegap and cordova?

There 2 different things, but they do go hand in hands. Phonegap is own by adobe, give the ability to test your app on mobile devices through the Phonegap developer app but also Phonegap consists of enterprise and cloud-bases services like PhoneGap build. This is Phonegap.

Cordova is an open project maintained by the apache foundation, this foundation will ensure that no matter what adobe does, this project will remain free and open to all developpers through the apache foundation. Cordova is ultimately what the app is, it’s not a service, it’s not support, it’s the app itself. For example, if you want to build your app locally instead of using “Phonegap build”, then you will use cordova to do that. Even the phonegap build service is using cordova, it’s just taking away some of the hassle when it comes to building your apps.

So phonegap app is a cordova app

Node.js:

Node.js® is a JavaScript runtime built on [Chrome's V8 JavaScript engine](https://developers.google.com/v8/). Node.js uses an event-driven, non-blocking I/O model that makes it lightweight and efficient. Node.js' package ecosystem, [npm](https://www.npmjs.com/), is the largest ecosystem of open source libraries in the world.

Npm(Node package manager):

npm is the package manager for JavaScript and the world’s largest software registry. Discover packages of reusable code — and assemble them in powerful new ways.

**How ?**

Npm install “name of the package”

**What?**

If you've been working with JavaScript for a while, you might have heard of npm: npm makes it easy for JavaScript developers to share the code that they've created to solve particular problems, and for other developers to reuse that code in their own applications.

Once you're depending on this code from other developers, npm makes it really easy to check to see if they've made any updates to it, and to download those updates when they're made.

These bits of reusable code are called packages, or sometimes modules. A package is just a directory with one or more files in it, that also has a file called "package.json" with some metadata about this package.

So that's what npm is. It's a way to reuse code from other developers, and also a way to share your code with them, and it makes it easy to manage the different versions of code.

Android sdk:

A [software](http://www.webopedia.com/TERM/S/software.html) development kit that enables developers to create [applications](http://www.webopedia.com/TERM/A/application.html) for the [Android platform](http://www.webopedia.com/TERM/A/Android_platform.html).

* Required libraries
* Debugger
* An emulator
* Relevant documentation for the Android application program interfaces (APIs)
* Sample source code
* Tutorials for the Android OS

Every time Google releases a new version of Android, a corresponding SDK is also released. To be able to write programs with the latest features, developers must download and install each version’s SDK for the particular phone. 