**The No of S/W required for installation:**

1. Node.js
2. Cordova
3. Ionic
4. Ant - **1.9.4**
5. Android SDK tool – **3.1.3**
6. Xcode - **8**

**Follow these steps to install Cordova:**

1. **Install Node.js.** Cordova runs on the Node.js platform.
2. Go ahead and run the downloaded installation file. It is recommended to use the default settings. Node.js needs to be added to the PATH environment variable.
3. **Install Cordova.** Cordova is installed using the Node Package Manager (npm). Type the following in the command window to install: **npm install -g cordova.**
4. **Install Ionic**: **Ionic** is installed using the Node Package Manager (npm). Type the following in the command window to install: **npm install -g ionic**

**Install Ant**

[**Apache Ant**](http://ant.apache.org/) is a build system for Java, which is used by Cordova and the Android SDK. To install Ant, follow these steps:

1. Download Ant from here: [**ant.apache.org/bindownload.cgi**](http://ant.apache.org/bindownload.cgi). Get the zip download available at the page. Click the zip-file link for the most recent release, e.g. **apache-ant-1.9.4-bin.zip**, and save the file to your machine.
2. Unpack the zip file to the directory on your machine where you want Ant to be installed. You can pick any directory for the install. In this guide we use this as an example:

C:\Users\miki\ant

Note that the files in the ant package should go directly into this directory. Make a note of the directory as you will need to add it to the PATH.

1. To add Ant to the PATH, open the **Control Panel**, click **System and Security**, click **System**, click **Change settings**, click the **advanced** tab, then click the **Environment Variables** button.
2. In the list **User variables** select **PATH** and click the **Edit** button.
3. At the end of the field **Variable value**, add a semicolon followed by the path to the bin directory of the Ant install. Here is an example:

;C:\Users\miki\ant\bin

Click the **OK** button.

1. Next add the **ANT\_HOME** variable. Click the **New** button. In the field **Variable name** type:

ANT\_HOME

In the field **Variable value** enter the path to the directory where Ant is installed, without the semicolon and the /bin subdirectory, for example:

C:\Users\miki\ant

Click the **OK** button.

1. Click the **OK** button again to close the Environment Variables window.
2. Now test the install. Close any open command windows, and open a new command window and type:

**ant -version**

If you see a version number you have installed Ant successfully!

**Install the Android SDK Tools**

The SDK Tools for Android are used by Cordova to build Android apps. Follow these steps to install the SDK Tools:

1. Go to the page [**developer.android.com/sdk**](http://developer.android.com/sdk) scroll down the page and click "VIEW ALL DOWNLOADS AND SIZES". Under "SDK Tools Only", click the windows installer exe file and download it (this file is named e.g. **installer\_r23.0.2-windows.exe**).
2. When downloaded, run the installer. You should do fine to use the default settings used by the installer, but make a note of the directory in which the SDK is installed, as you will have to add this to the PATH in the next step.
3. To add the SDK Tools to the PATH, open the **Control Panel**, click **System and Security**, click **System**, click **Change settings**, click the **advanced** tab, then click the **Environment Variables** button.
4. In the list **User variables** select **PATH** and click the **Edit** button.
5. At the end of the field **Variable value**, add a semicolon followed by the path to the **tools** and **platform-tools** directories of the Android SDK install. Here is an example of what to add (note that there are two paths in one line, separated by a semicolon):

;C:\Users\miki\AppData\Local\Android\android-sdk\tools;C:\Users\miki\AppData\Local\Android\android-sdk\platform-tools

You can prepare the path in a text editor, copy it and paste at the end of the input field. Click the **OK** button when done.

1. Click the **OK** button again to close the Environment Variables window.
2. Now test the install. Close any open command windows, open a new command window and type:

adb version

This should display the version of the Android Debug Bridge.

1. As the final step, you need to get the specific Android SDK version used by Cordova. This is done by running the **Android SDK Manager** by typing the command:

android

This launches a window where you can select to install specific Android SDKs.