

Prerequisites For Mobile Programming of SYIT Practical

Hardware Requirement:-

1. **RAM:** 4GB & Above.
2. **HDD:** 300GB & Above.
3. **INTERNET** Connection.

Software Requirement:-

1. node-v6.10.3.
2. jdk-8u131-windows.
3. intelhaxm-android.
4. gradle-4.0-all zip file.
5. Git-2.13.0.
6. Android sdk.

	Android	7/4/2017 12:35 PM	WinRAR ZIP archive	3,207,883 KB
	Git-2.13.0-64-bit	5/29/2017 2:59 PM	Application	36,286 KB
	gradle-4.0-all	6/28/2017 12:31 AM	WinRAR ZIP archive	87,893 KB
	intelhaxm-android	6/21/2017 12:09 AM	Application	2,850 KB
	jdk-8u131-windows-x64	5/31/2017 3:40 PM	Application	202,784 KB
	node-v6.10.3-x64	6/6/2017 1:16 PM	Windows Installer ...	12,456 KB

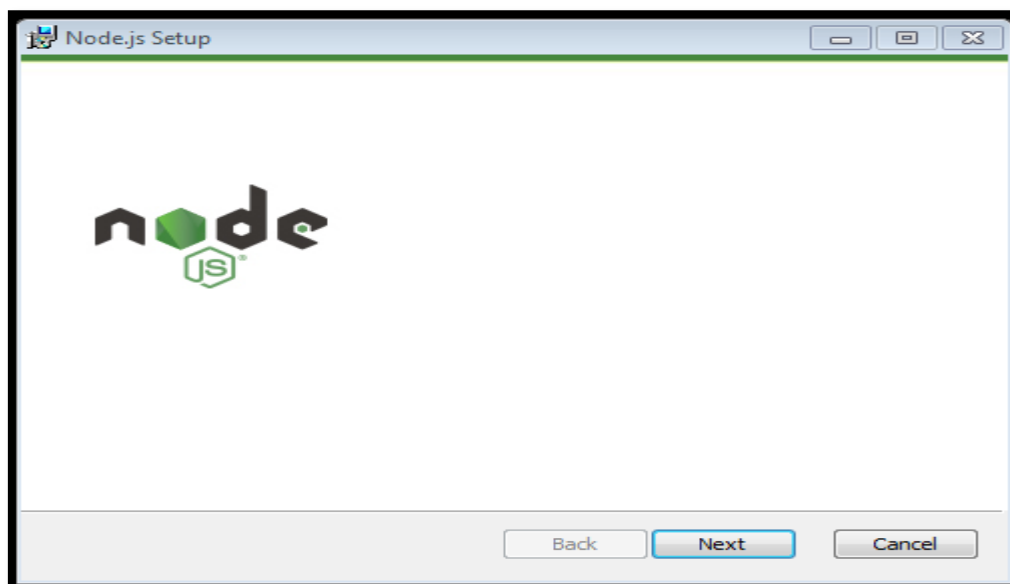
Installation Step of CORDOVA:-

1. First Install Java jdk-8u131-windows and then install following software.
2. Step for Installation of node-v6.10.3

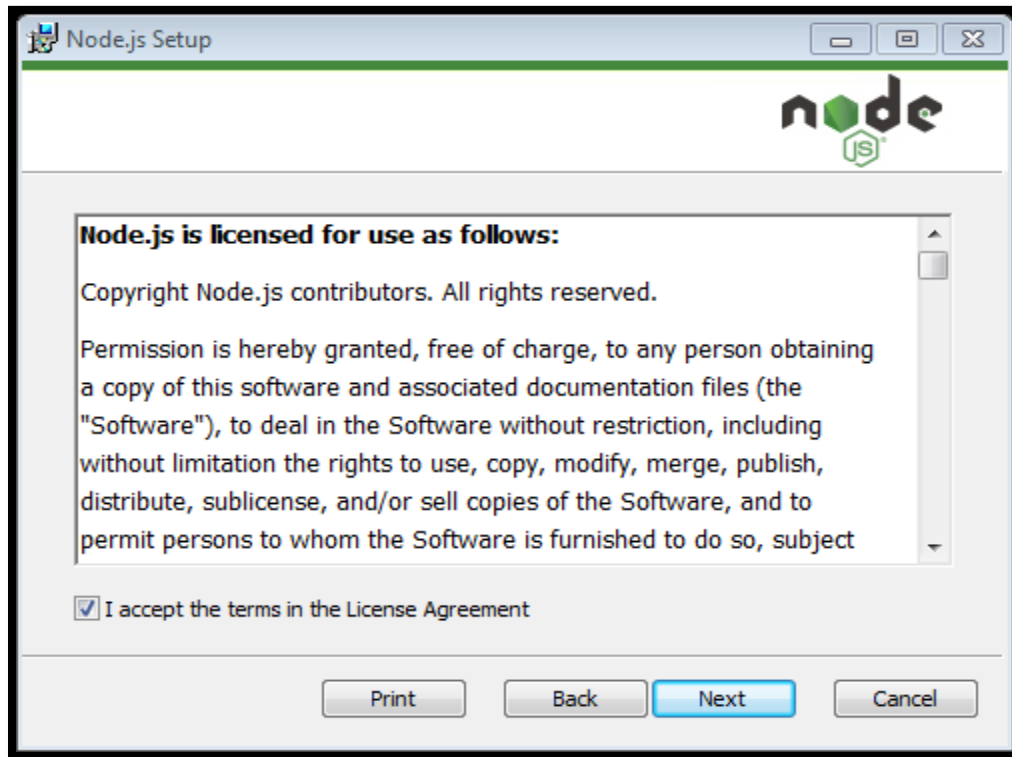
Double Click on the following node-v6.10.3 Windows Installer.

	node-v6.10.3-x64	6/6/2017 1:16 PM	Windows Installer ...	12,456 KB
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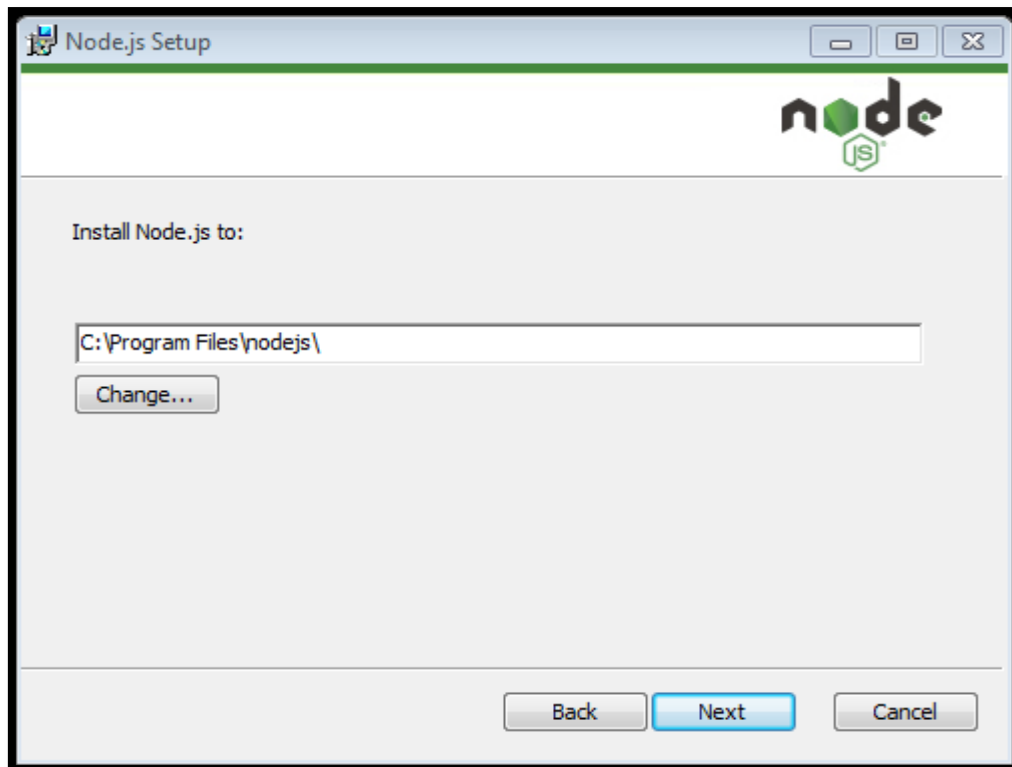
Click on Next...



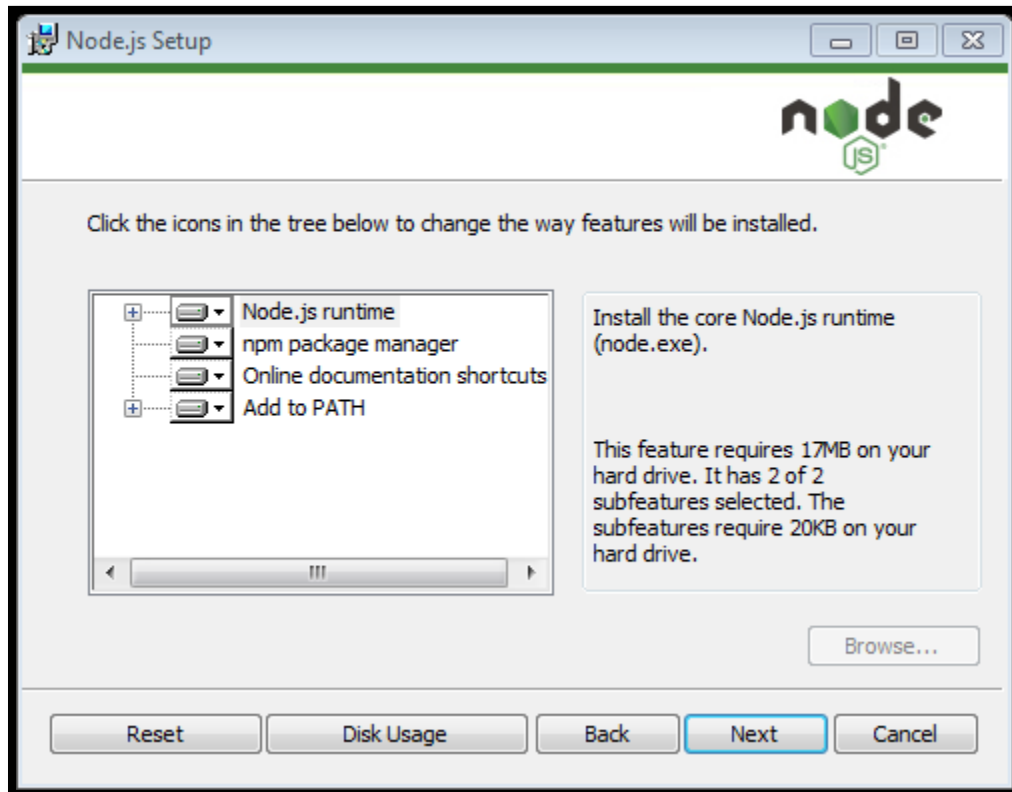
Select the checkbox and then click next...



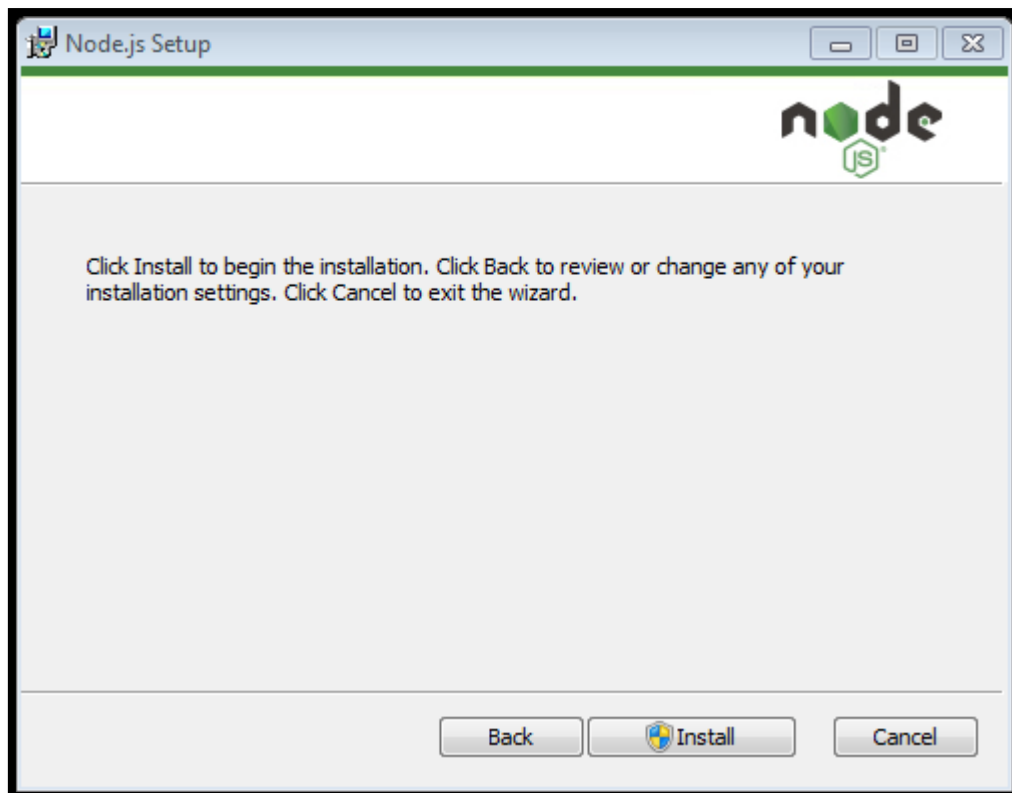
Click on Next...

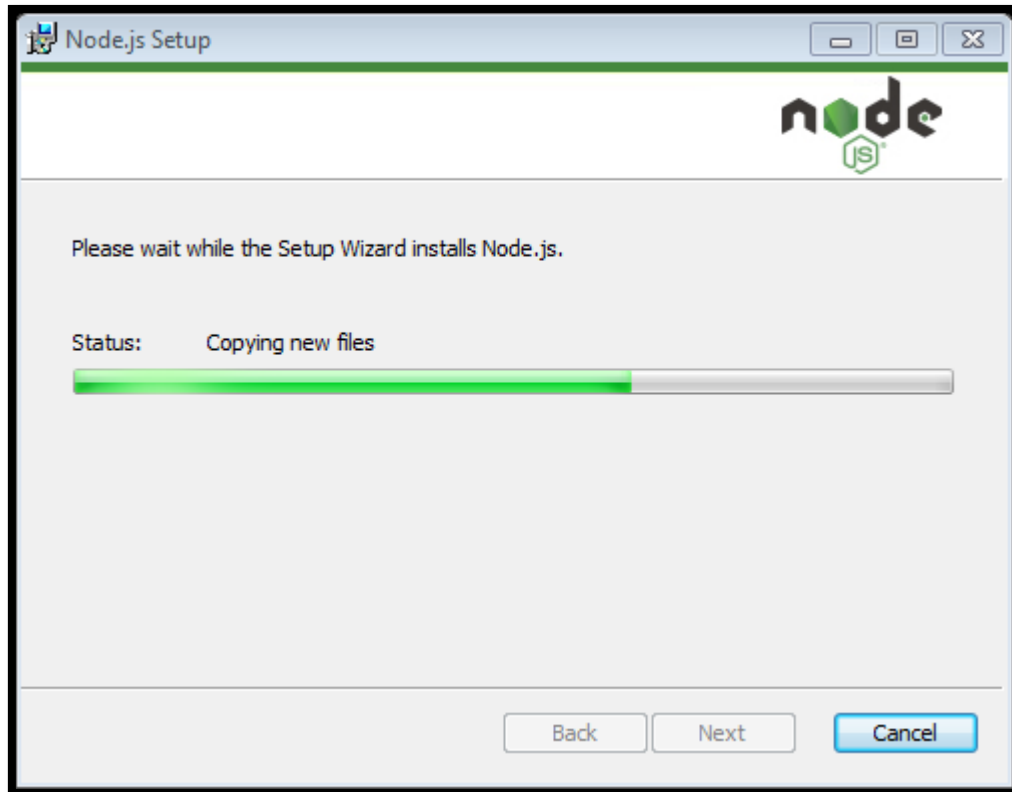


Click on Next...

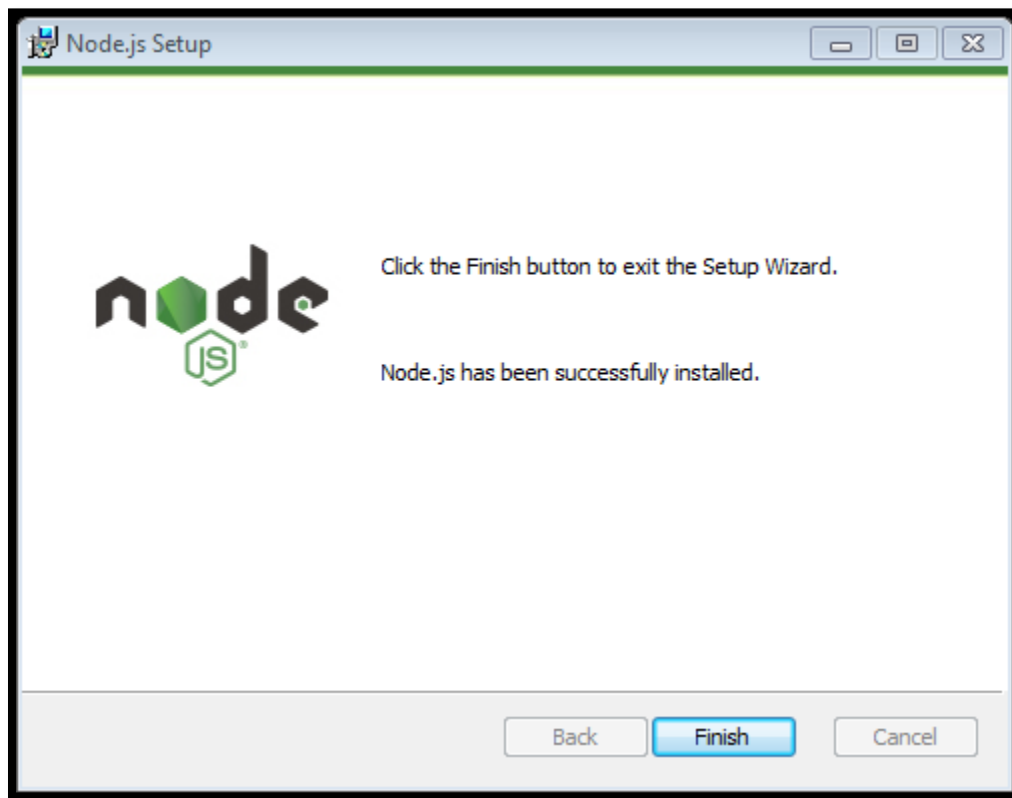


Click on Install...





Click on Finish...



3. Step of Installation for intelhaxm-android

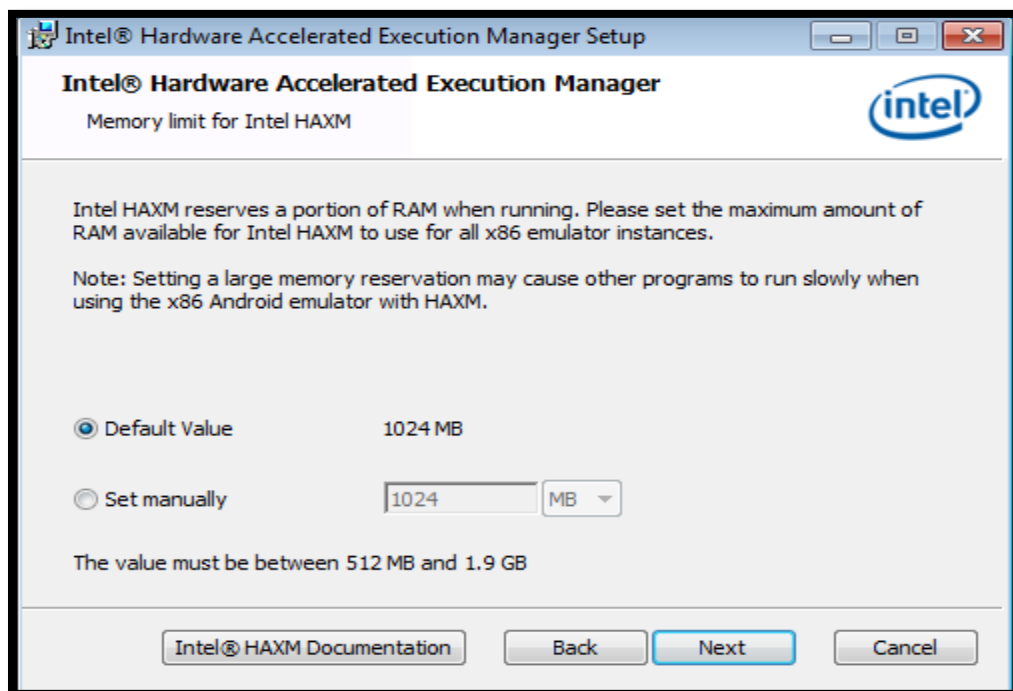
Double Click on the following intelhaxm-android Application file.



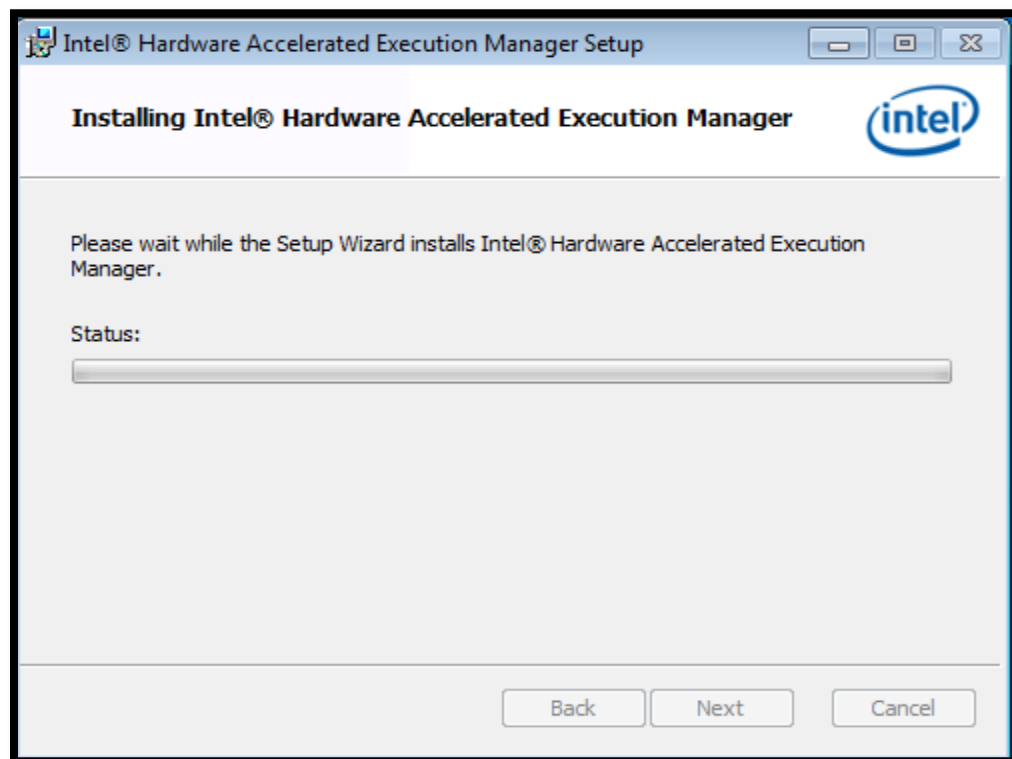
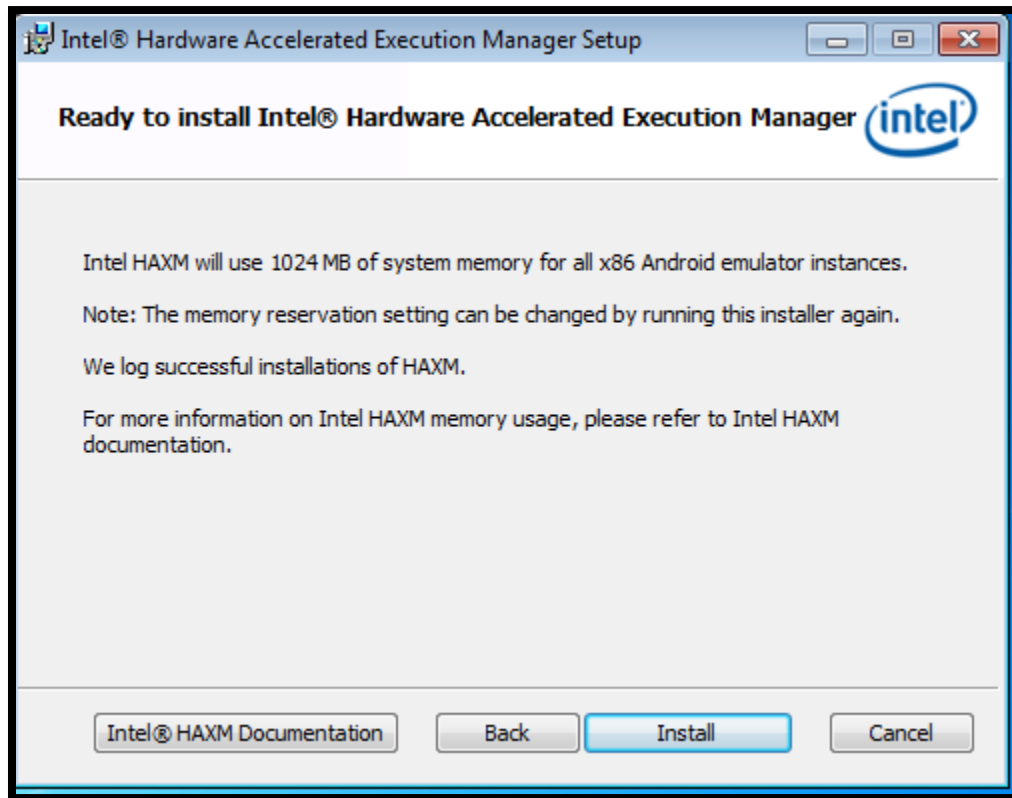
Click on Next...



Click on Next...



Click on Install...

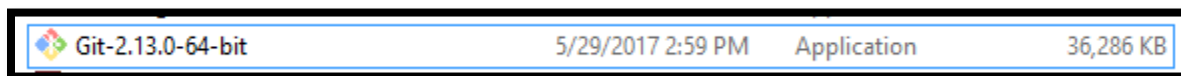


Click On Finish...



3. Step of Installation for Git

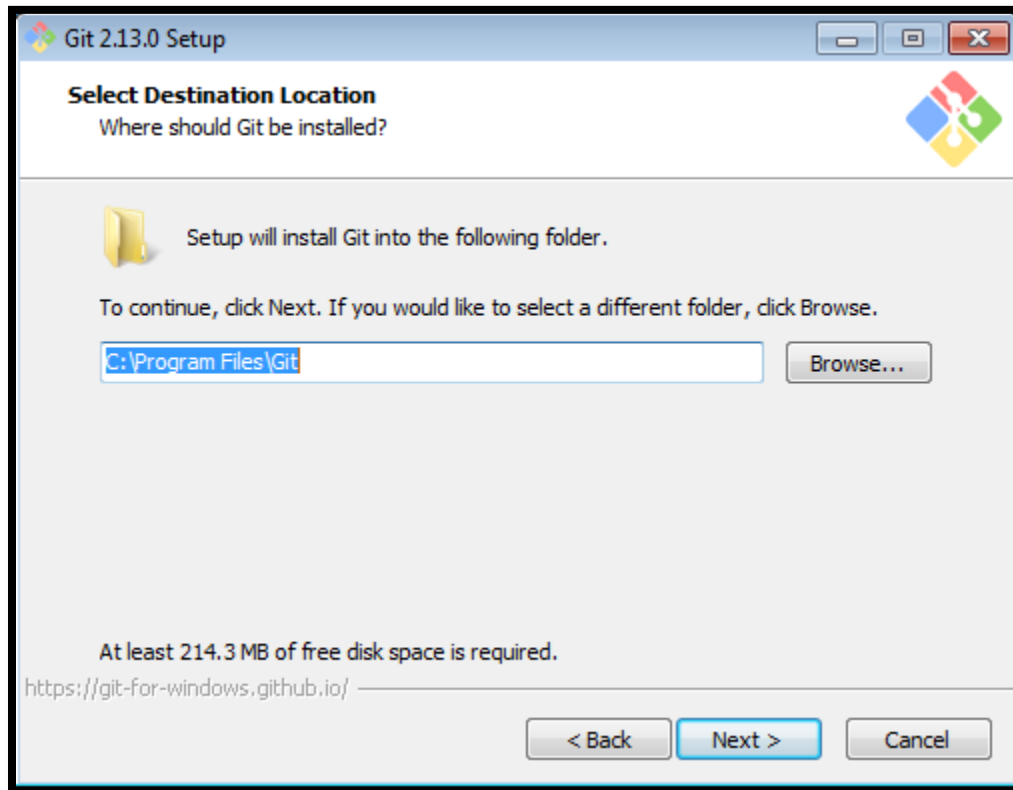
Double Click on Git-2.13.0-64-bit Application File



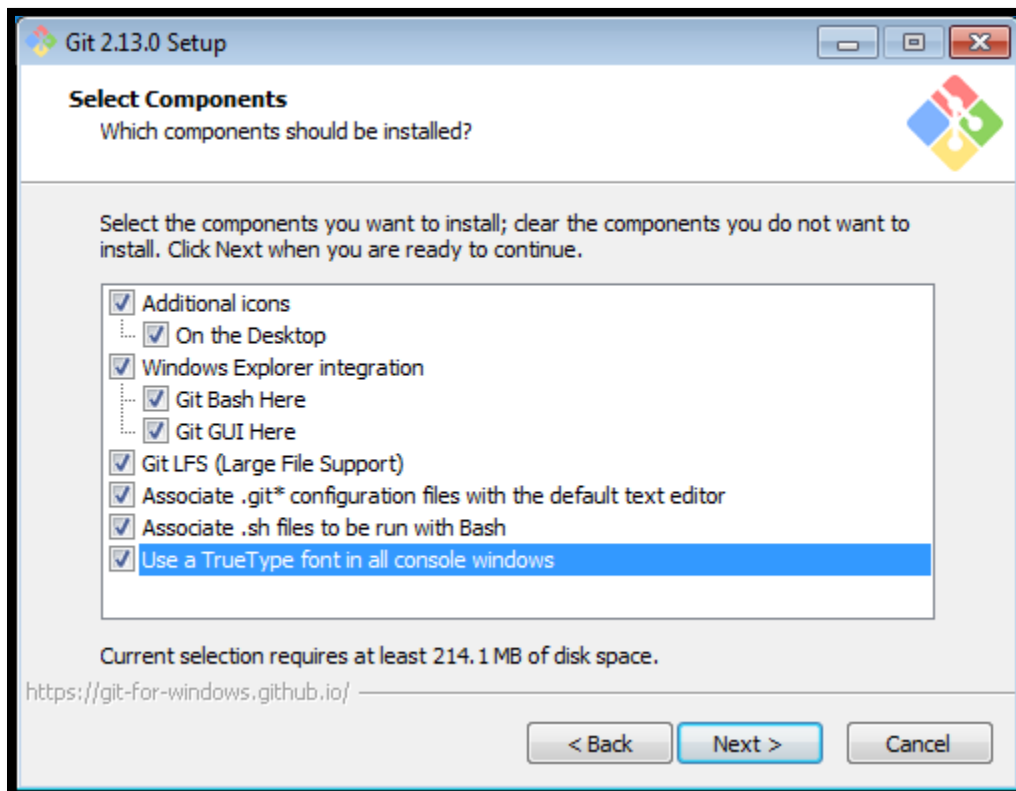
Click On Next...



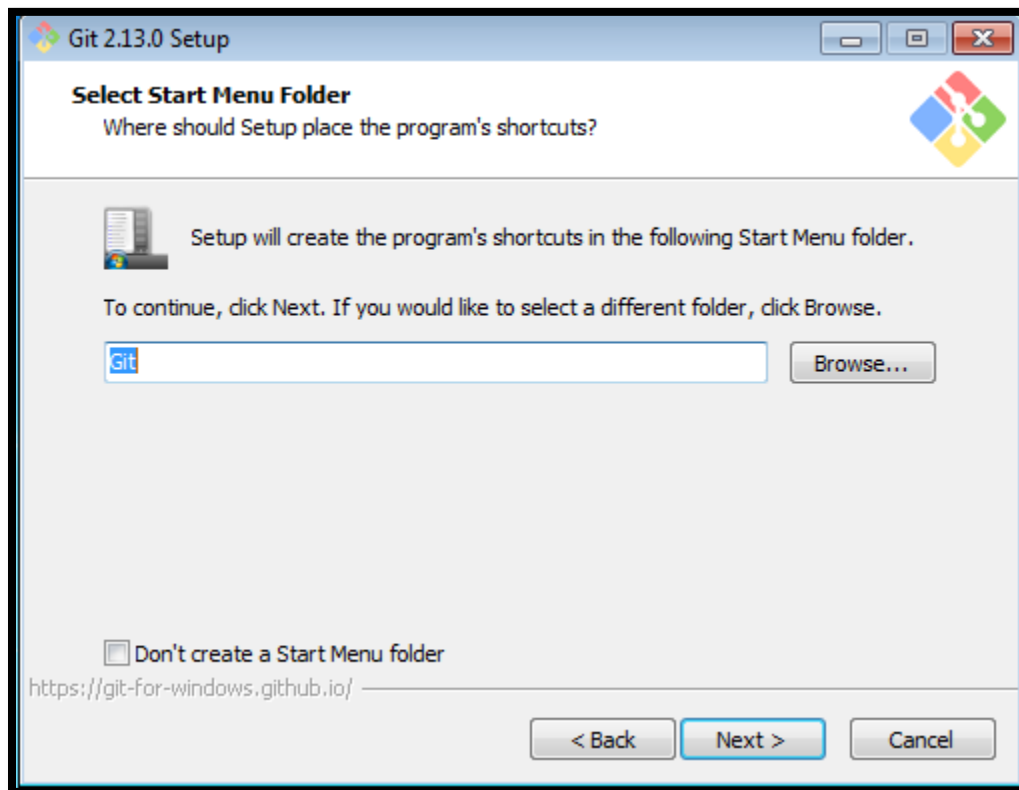
Click on Next...



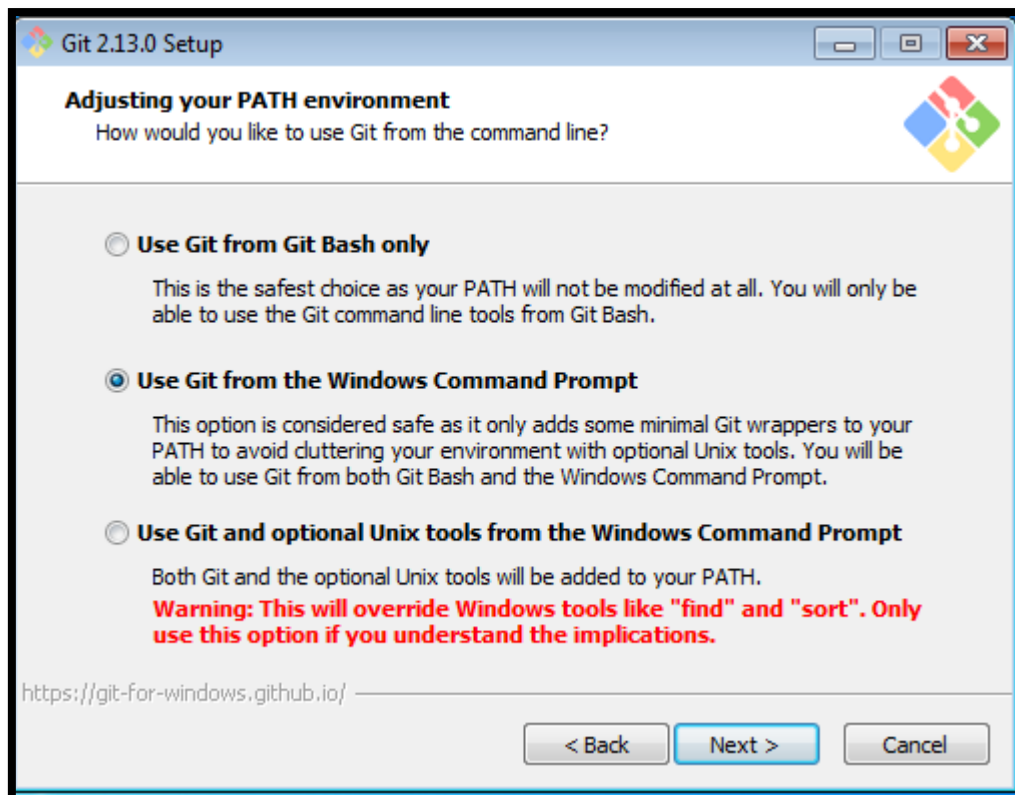
Click on Next...



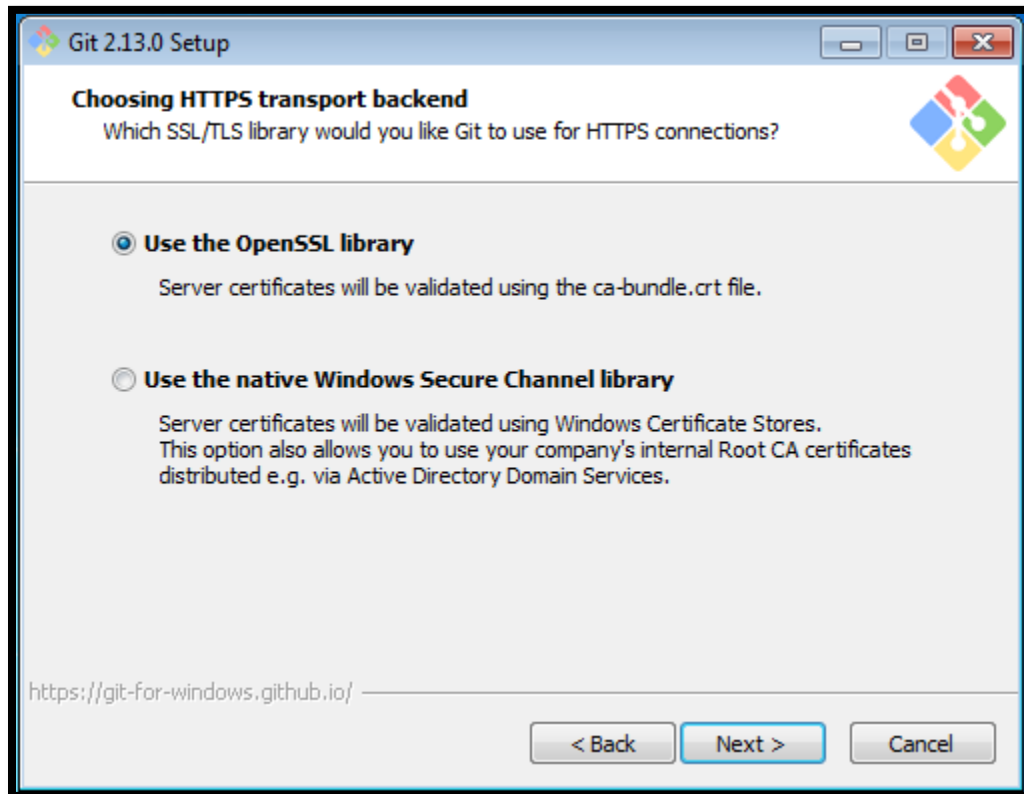
Click on Next...



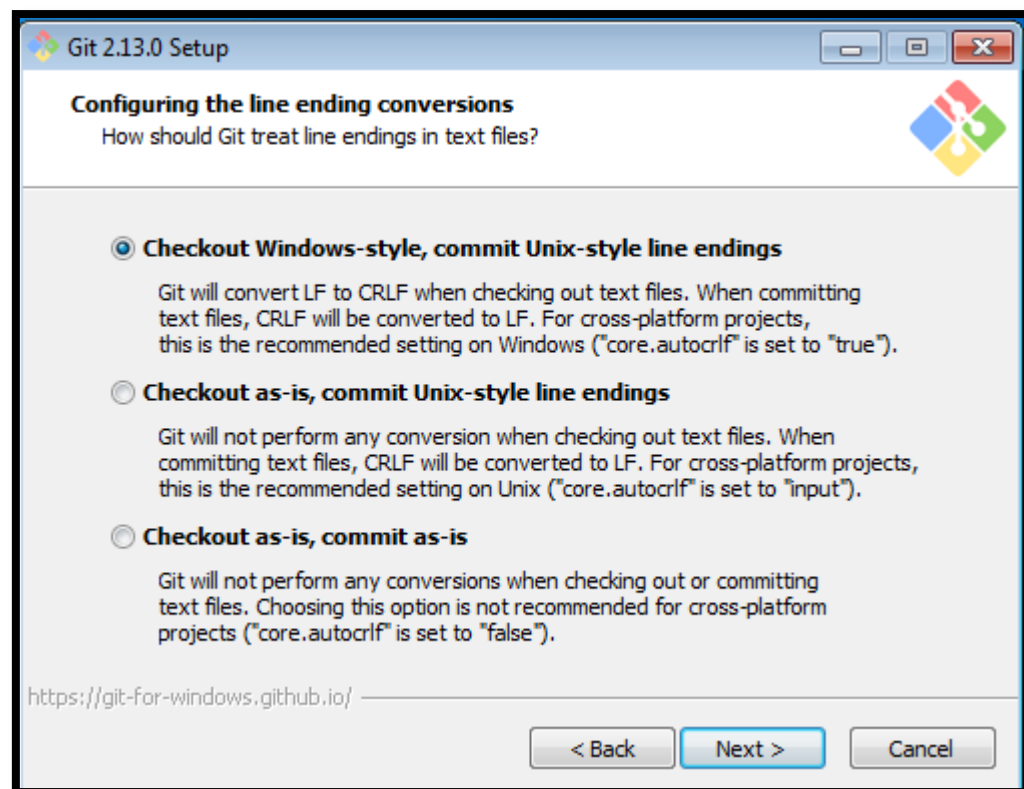
Click on Next...



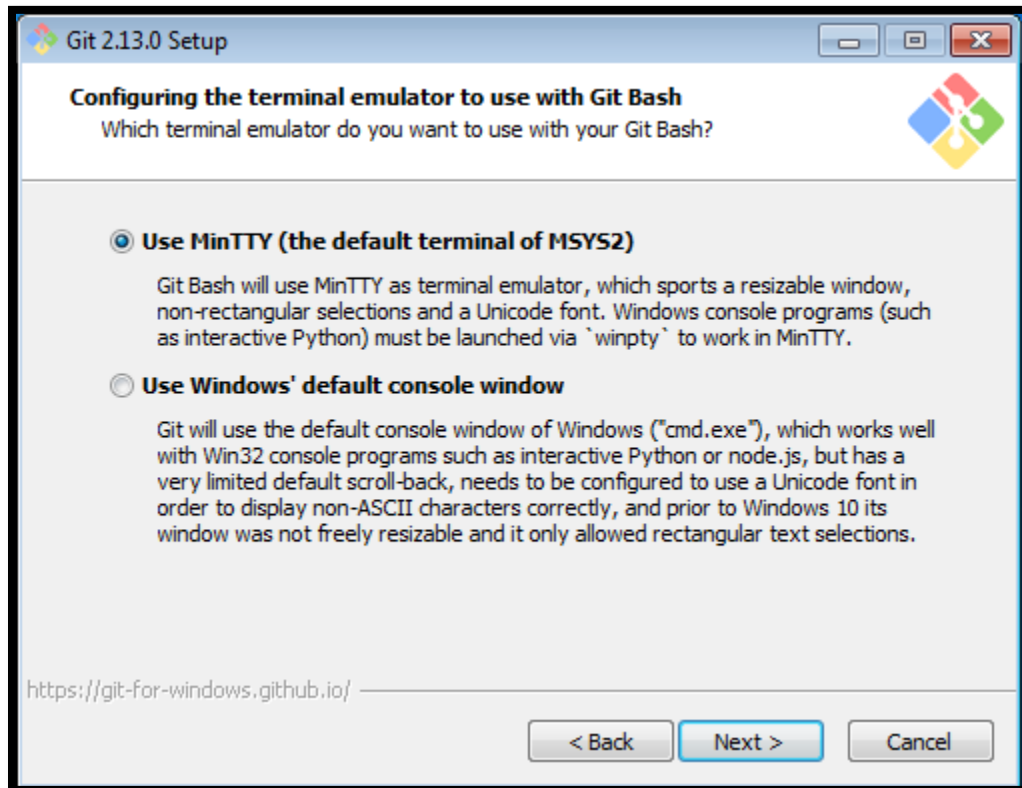
Click on Next...



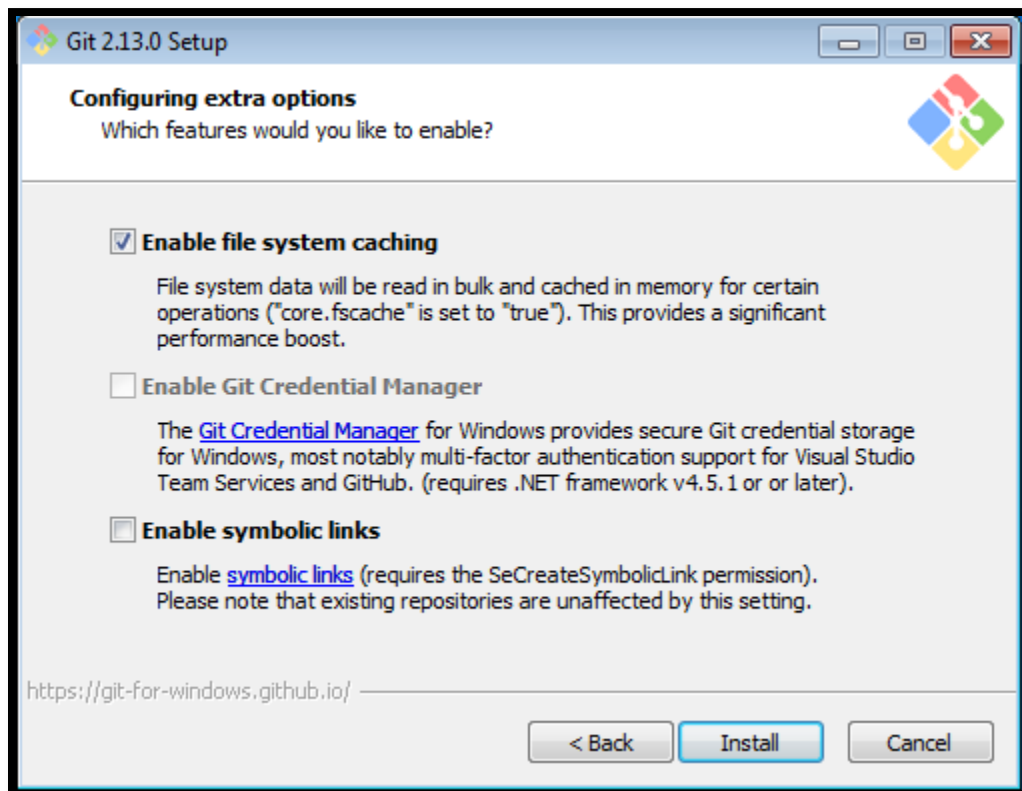
Click on Next...

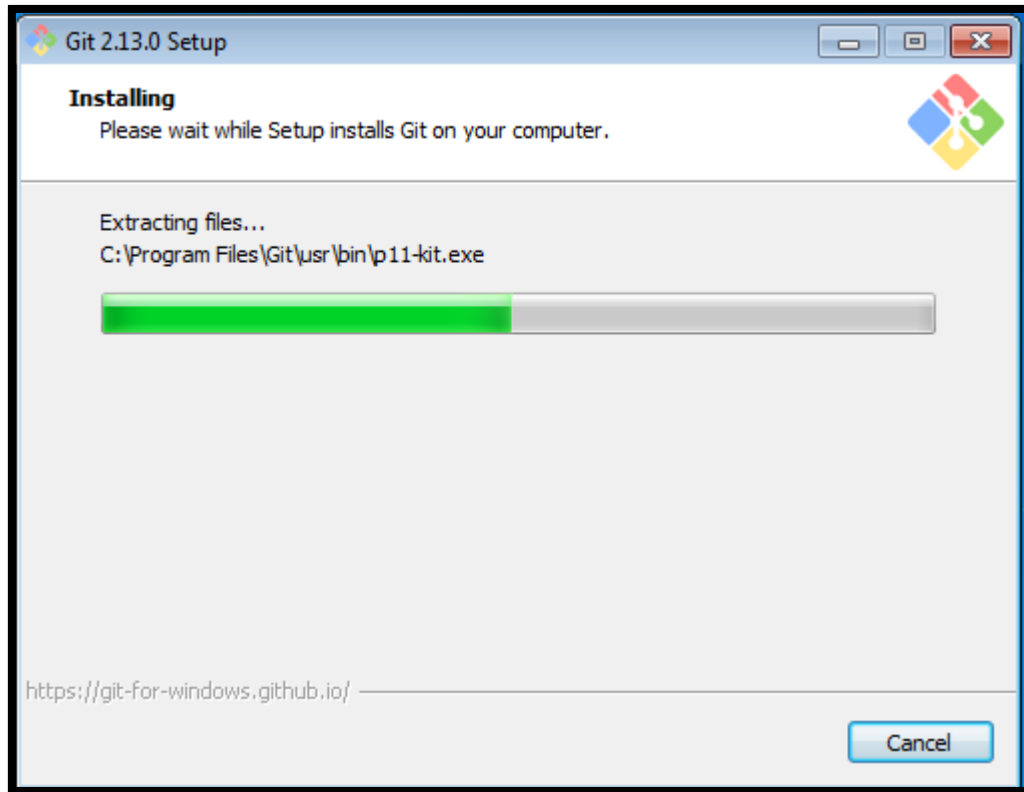


Click on Next...

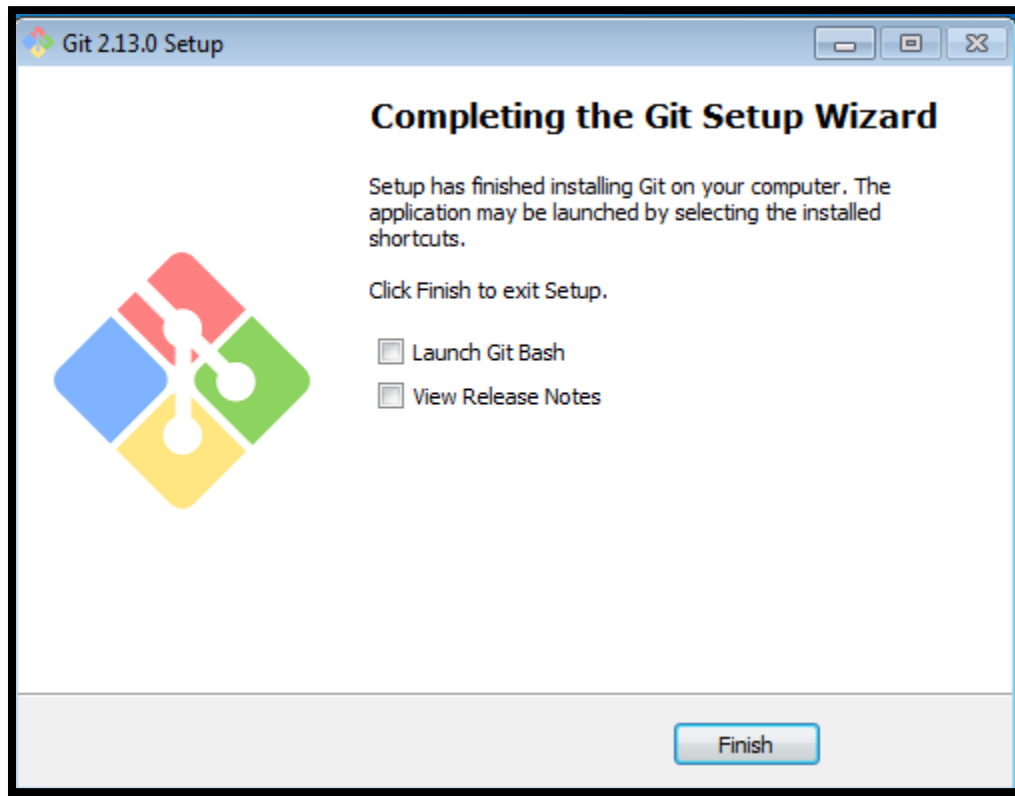


Click on Install...

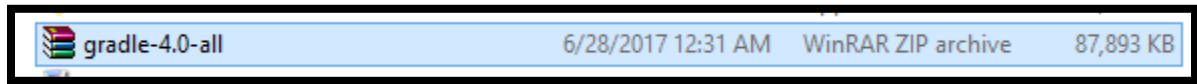




Click on Finish...



4. After Installation of Git we will copy the gradle-4.0-all file in C drive and extract the rar file and Rename it from gradle-4.0-all to Gradle.



5. Extract the Android rar file and copy the Android Folder in following directory i.e.:

C:\Users\Nitesh\AppData\Local

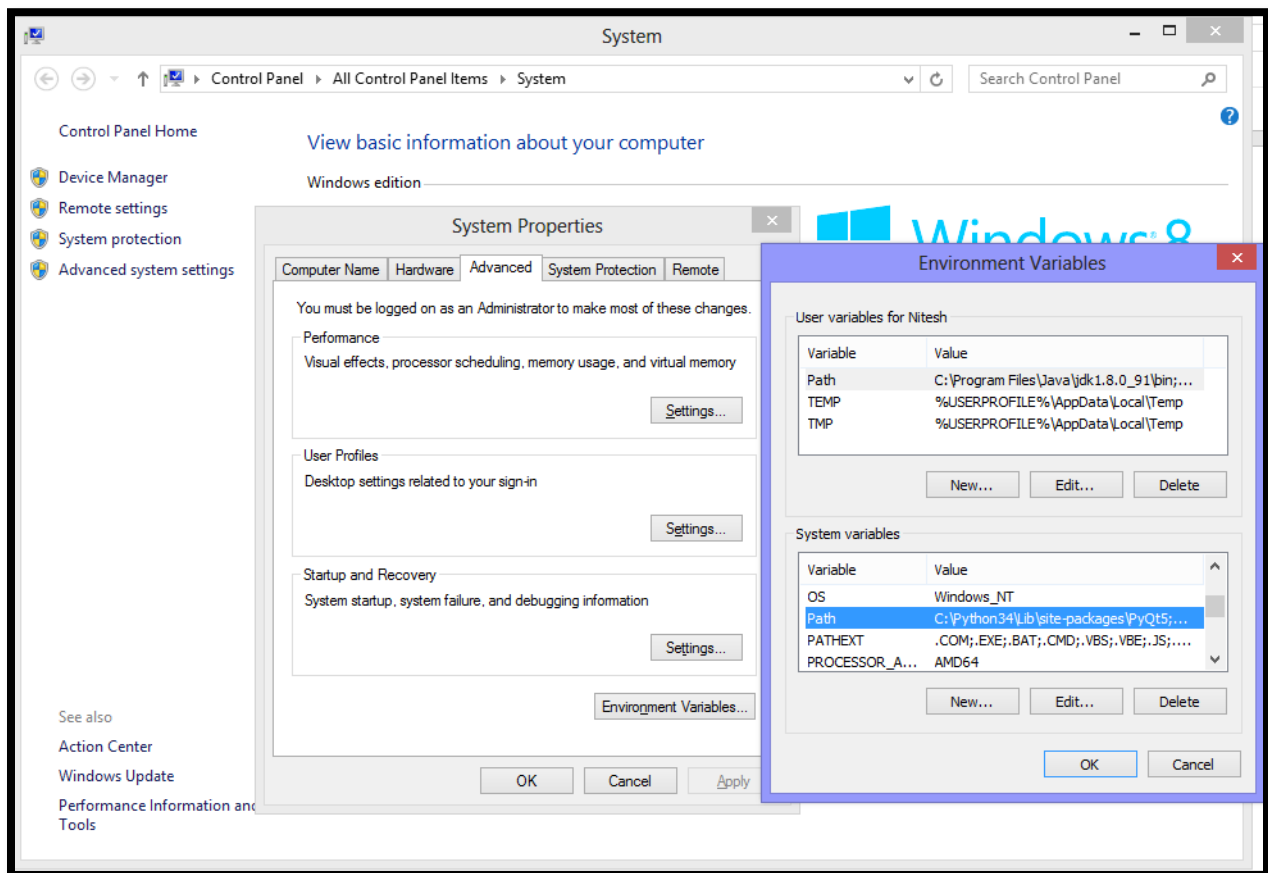


6. After All the Installation complete now we have to set the path of Android, Jdk, Git, and Node in System Path Environment Variable.

Step of Path Step-up of Environment Variable path in System:

Follow the step to open the Environment Variable Path of System

My Computer/This Pc→Properties→Advance System Setting→Environment Variables...



Then Set the Following Path:-

1. Set the JAVA_Home Path:

✓ **C:\Program Files\Java\jdk1.8.0_111**

2. Set the GRADLE_HOME Path:

✓ **C:\Gradle**

3. Set the Path of ANDROID_HOME Path:

✓ **C:\Users\vikas\AppData\Local\Android\sdk**

4. Set the Other Required Path Also i.e.:

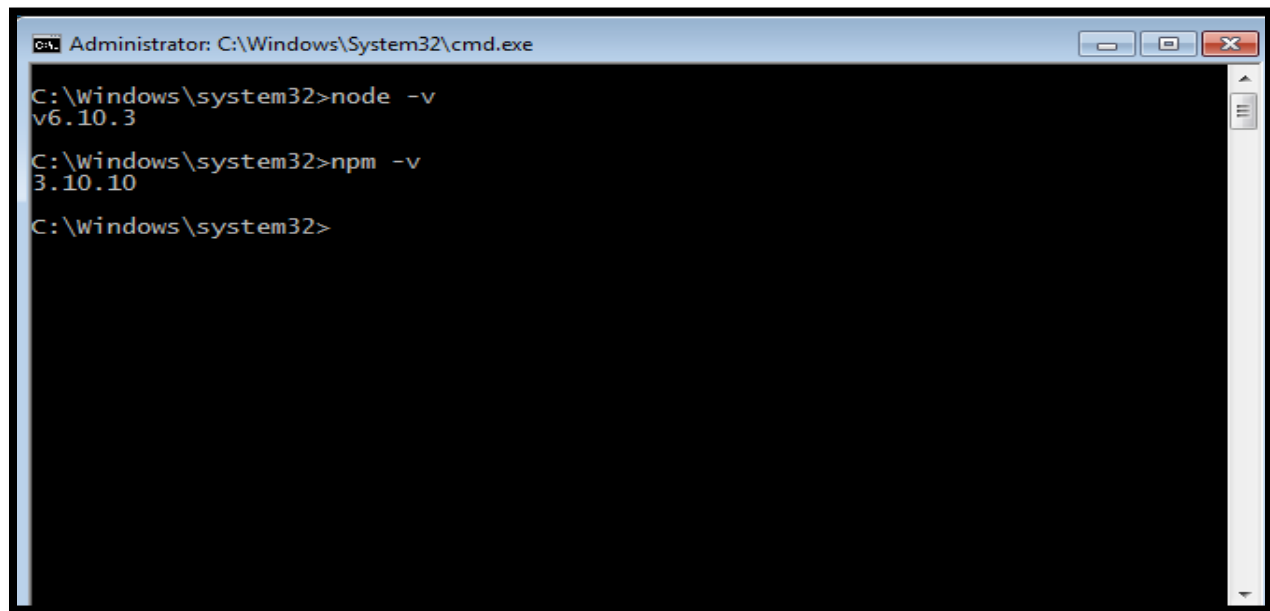
✓ **C:\Program Files\Git\bin**
✓ **C:\Program Files\Git\cmd**
✓ **C:\Program Files\nodejs**
✓ **C:\Program Files\nodejs\node_modules\npm\bin**
✓ **C:\Program Files\Java\jdk1.8.0_111**
✓ **C:\Users\vikas\AppData\Roaming\npm**
✓ **C:\Gradle\bin**

After Setup of all Path Variable Open CMD and Type the Following to Check Weather the Software installed successfully or not.

1. Open Cmd and type the Following Command:

Check the version number of node and npm by using following command:

✓ **node -v**
✓ **npm -v**



```
Administrator: C:\Windows\System32\cmd.exe
C:\windows\system32>node -v
v6.10.3
C:\windows\system32>npm -v
3.10.10
C:\windows\system32>
```

Step of Installation for Cordova

Note:

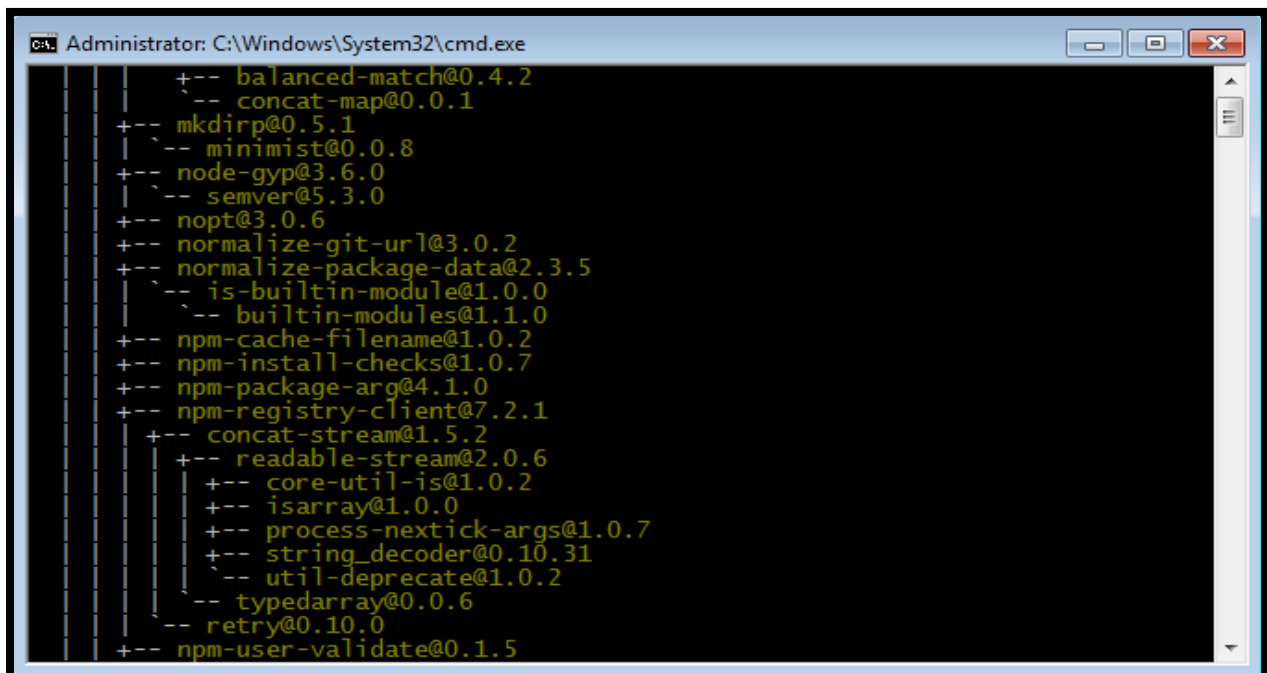
After all the Above Setup and Configuration Now we start with installation of Cordova Application by using the following command.

- Open Cmd and type the following command and wait a while to successful installation:

✓ `npm install -g cordova`



```
cmd: npm
C:\Windows\system32>npm install -g cordova
[.....] | fetchMetadata: 511 | mapToRegistry uri https://registry.n
```

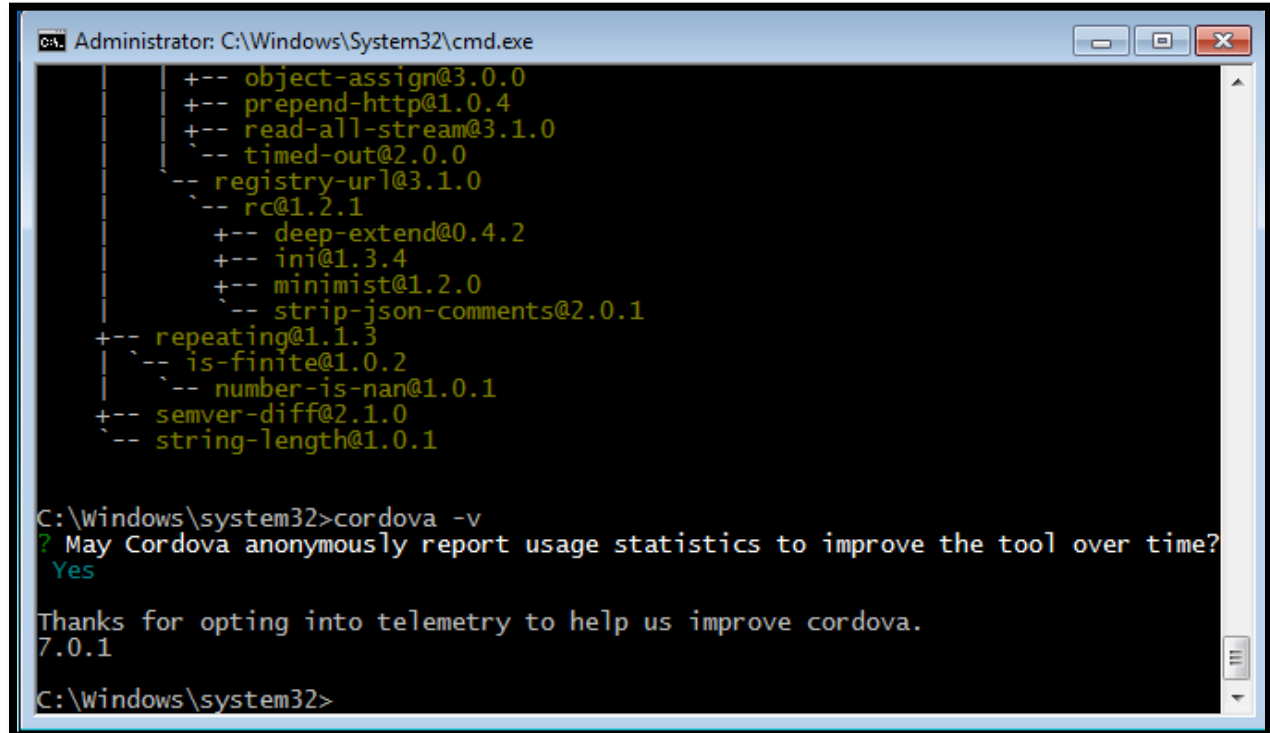


```
Administrator: C:\Windows\System32\cmd.exe
+-- balanced-match@0.4.2
+-- concat-map@0.0.1
+-- mkdirp@0.5.1
+-- minimist@0.0.8
+-- node-gyp@3.6.0
+-- semver@5.3.0
+-- nopt@3.0.6
+-- normalize-git-url@3.0.2
+-- normalize-package-data@2.3.5
+-- is-builtin-module@1.0.0
+-- builtin-modules@1.1.0
+-- npm-cache-filename@1.0.2
+-- npm-install-checks@1.0.7
+-- npm-package-arg@4.1.0
+-- npm-registry-client@7.2.1
+-- concat-stream@1.5.2
+-- readable-stream@2.0.6
+-- core-util-is@1.0.2
+-- isarray@1.0.0
+-- process-nextick-args@1.0.7
+-- string_decoder@0.10.31
+-- util-deprecate@1.0.2
+-- typedarray@0.0.6
+-- retry@0.10.0
+-- npm-user-validate@0.1.5
```

- After Successful Installation Check the Version of Cordova by using following command:

✓ `cordova -v`

Write yes and see the version of Cordova



```
Administrator: C:\Windows\System32\cmd.exe

+-- object-assign@3.0.0
+-- prepend-http@1.0.4
+-- read-all-stream@3.1.0
-- timed-out@2.0.0
-- registry-url@3.1.0
-- rc@1.2.1
+-- deep-extend@0.4.2
+-- ini@1.3.4
+-- minimist@1.2.0
-- strip-json-comments@2.0.1
+-- repeating@1.1.3
+-- is-finite@1.0.2
+-- number-is-nan@1.0.1
+-- semver-diff@2.1.0
+-- string-length@1.0.1

C:\Windows\system32>cordova -v
? May Cordova anonymously report usage statistics to improve the tool over time?
Yes

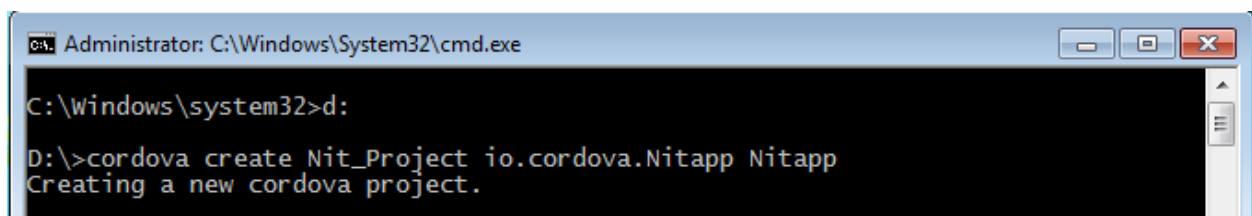
Thanks for opting into telemetry to help us improve cordova.
7.0.1

C:\Windows\system32>
```

Now Create the Cordova Project by Using the following Command and step:

- First Change the Drive Where you want to create the Project
- After changing the directory type the following command on Present Directory:

✓ `cordova create Nit_Project io.cordova.Nitapp Nitapp`



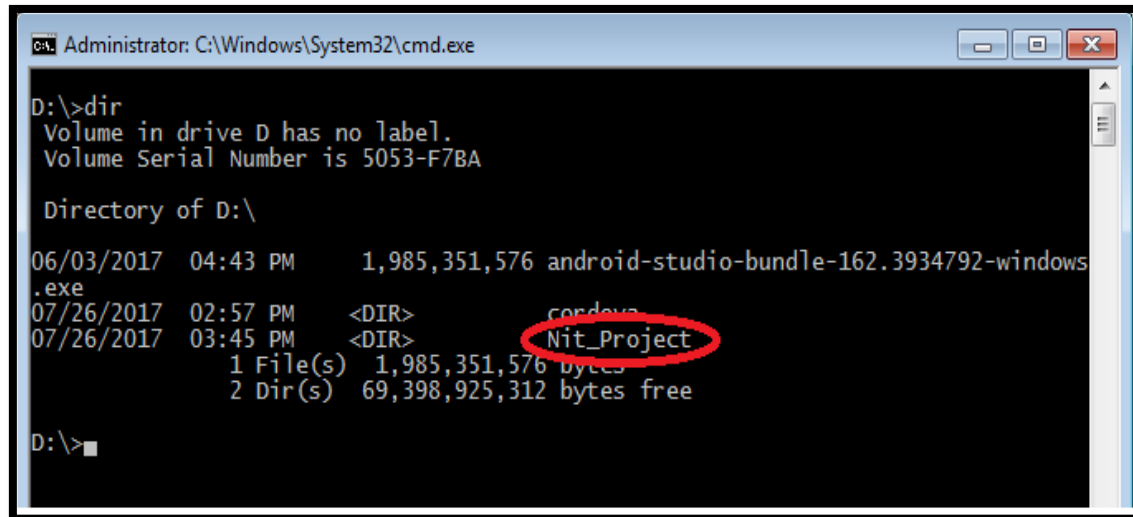
```
Administrator: C:\Windows\System32\cmd.exe

C:\Windows\system32>d:

D:\>cordova create Nit_Project io.cordova.Nitapp Nitapp
Creating a new cordova project.
```

- Check the directory weather project is created or not

✓ `dir`



```
C:\Administrator: C:\Windows\System32\cmd.exe

D:\>dir
Volume in drive D has no label.
Volume Serial Number is 5053-F7BA

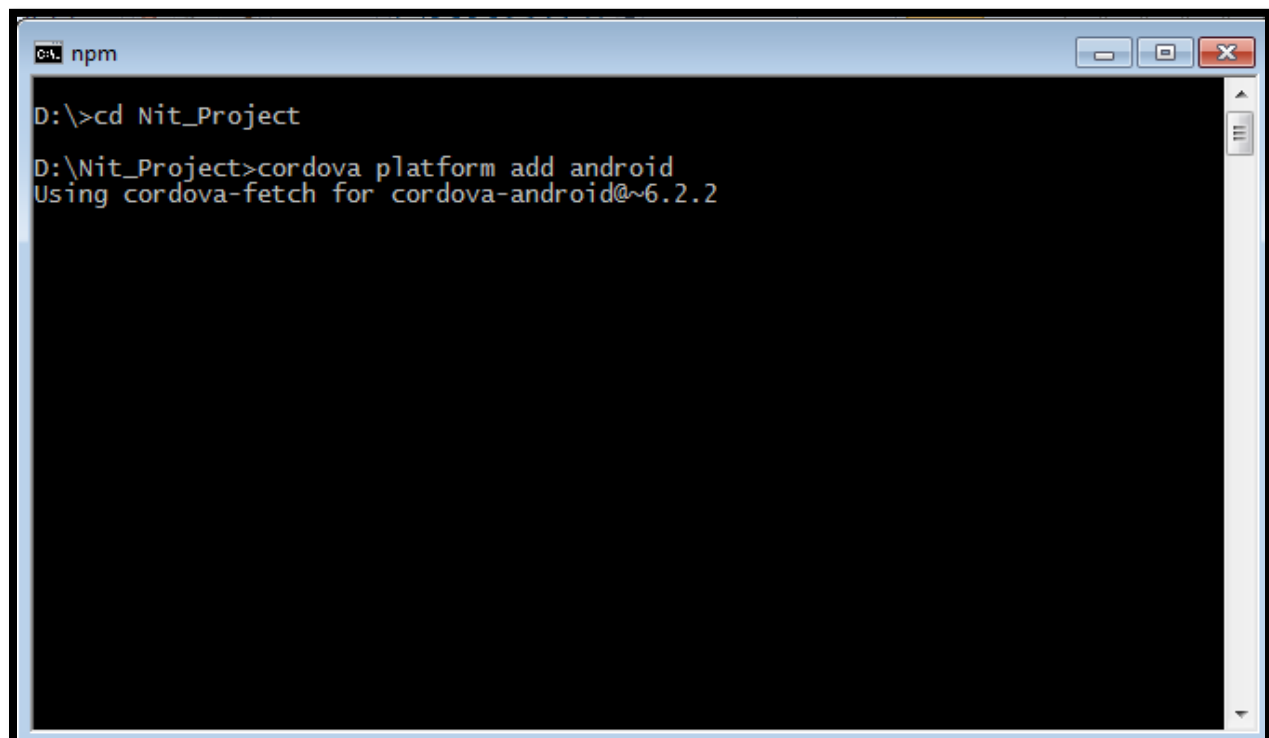
Directory of D:\

06/03/2017  04:43 PM      1,985,351,576 android-studio-bundle-162.3934792-windows
.exe
07/26/2017  02:57 PM    <DIR>          cordova
07/26/2017  03:45 PM    <DIR>          Nit_Project
                1 File(s)  1,985,351,576 bytes
                2 Dir(s)  69,398,925,312 bytes free

D:\>
```

- Move into the Project Directory & Add Android Platform through the Following command wait a while till platform added:

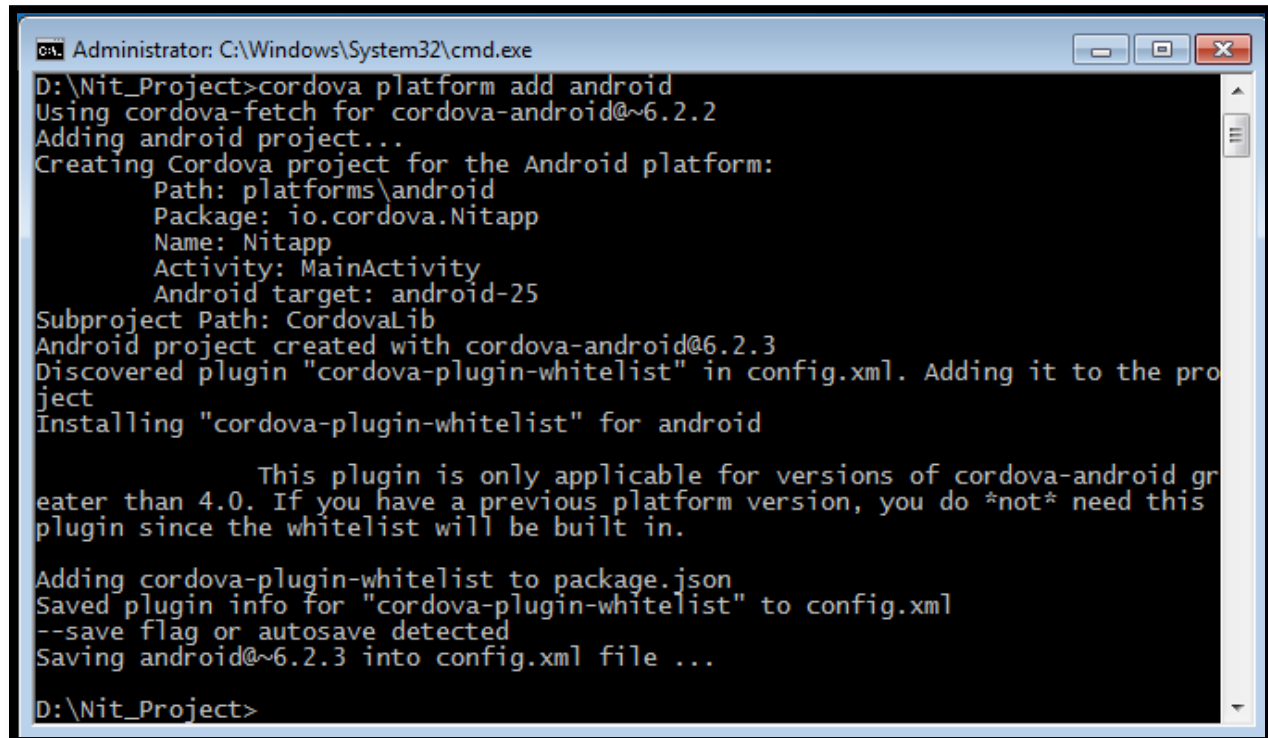
✓ cordova platform add android



```
C:\npm

D:\>cd Nit_Project

D:\Nit_Project>cordova platform add android
Using cordova-fetch for cordova-android@~6.2.2
```



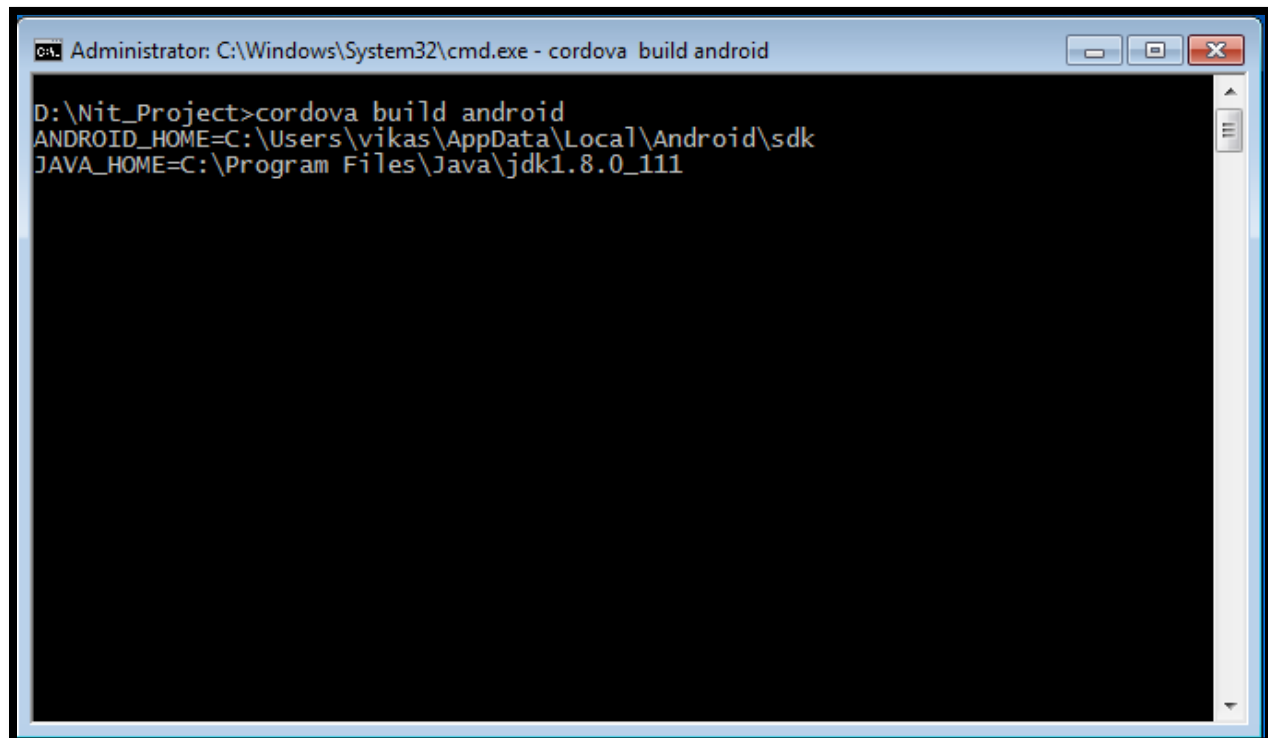
```
Administrator: C:\Windows\System32\cmd.exe
D:\Nit_Project>cordova platform add android
Using cordova-fetch for cordova-android@~6.2.2
Adding android project...
Creating Cordova project for the Android platform:
  Path: platforms\android
  Package: io.cordova.Nitapp
  Name: Nitapp
  Activity: MainActivity
  Android target: android-25
Subproject Path: CordovaLib
Android project created with cordova-android@6.2.3
Discovered plugin "cordova-plugin-whitelist" in config.xml. Adding it to the project
Installing "cordova-plugin-whitelist" for android

    This plugin is only applicable for versions of cordova-android greater than 4.0. If you have a previous platform version, you do *not* need this plugin since the whitelist will be built in.

Adding cordova-plugin-whitelist to package.json
Saved plugin info for "cordova-plugin-whitelist" to config.xml
--save flag or autosave detected
Saving android@~6.2.3 into config.xml file ...
D:\Nit_Project>
```

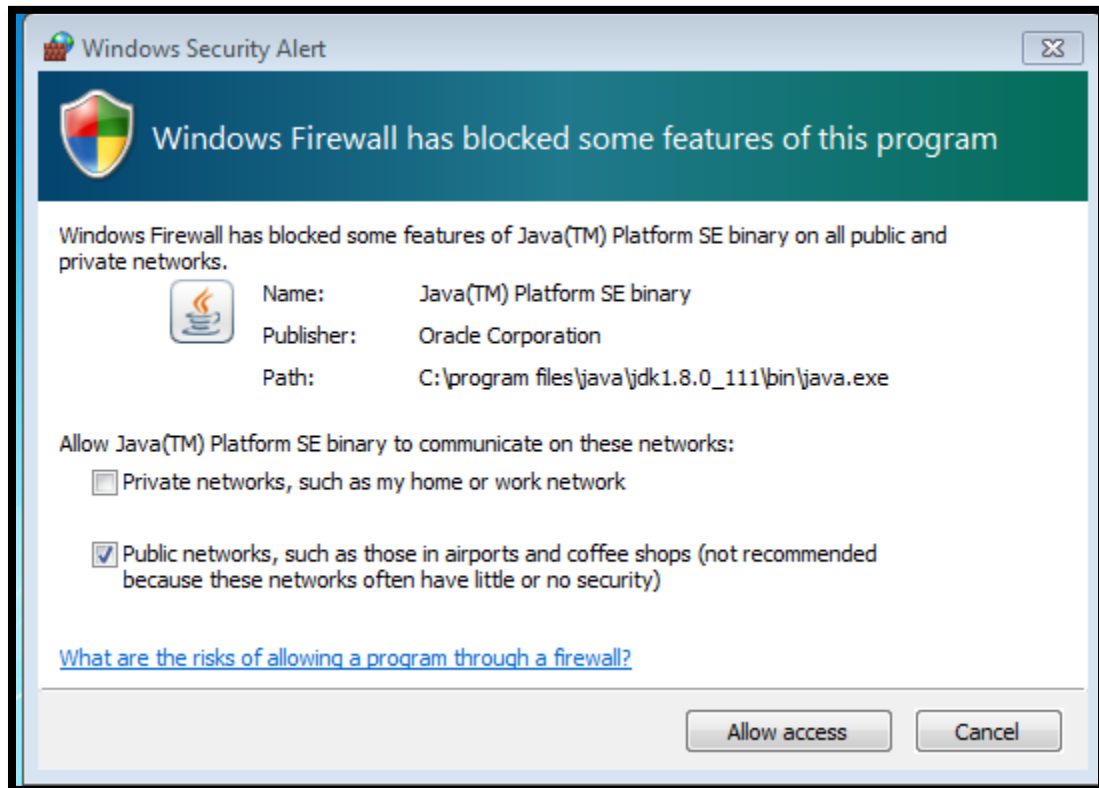
- Build the Android Platform in same Project directory by using following command and wait for a second:

✓ Cordova build android



```
Administrator: C:\Windows\System32\cmd.exe - cordova build android
D:\Nit_Project>cordova build android
ANDROID_HOME=C:\Users\vikas\AppData\Local\Android\sdk
JAVA_HOME=C:\Program Files\Java\jdk1.8.0_111
```

Click on Allow Access...



```
Administrator: C:\Windows\System32\cmd.exe
:compileDebugJavaWithJavac - is not incremental (e.g. outputs have changed, no previous execution, etc.).
:compileDebugNdk UP-TO-DATE
:compileDebugSources
:mergeDebugShaders
:compileDebugShaders
:generateDebugAssets
:mergeDebugAssets
:transformClassesWithDexForDebug
:mergeDebugJniLibFolders
:transformNative_libsWithMergeJniLibsForDebug
:processDebugJavaRes UP-TO-DATE
:transformResourcesWithMergeJavaResForDebug
:validateSigningDebug
:packageDebug
:assembleDebug
:cdvBuildDebug

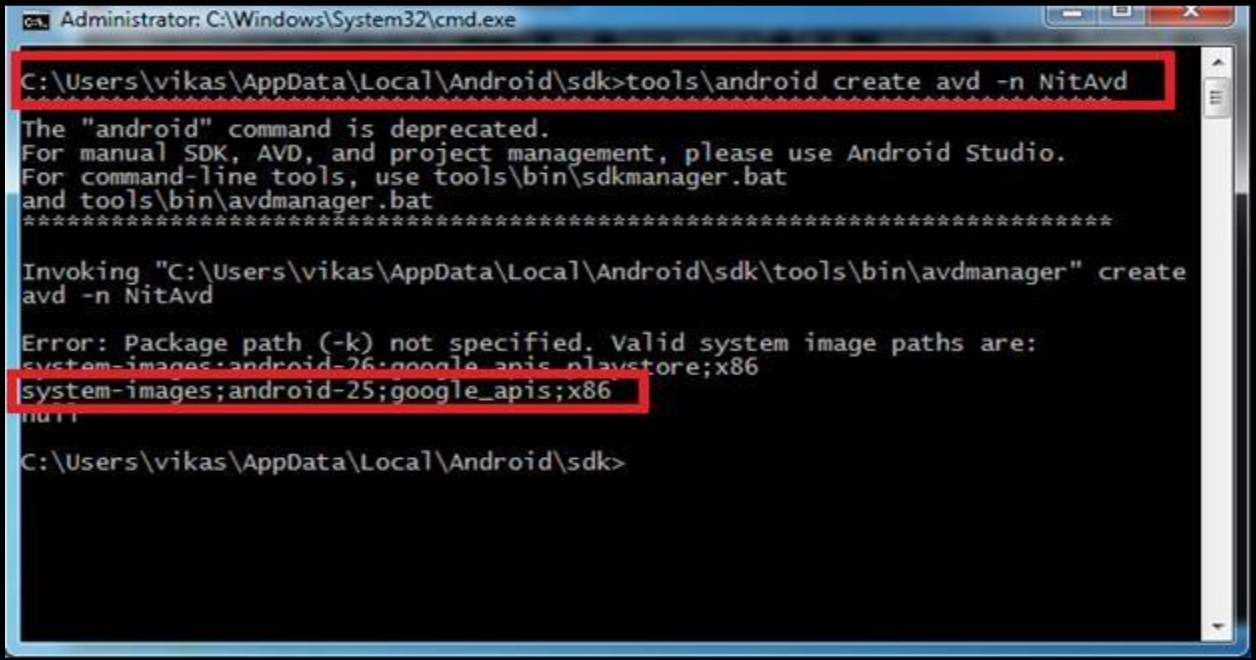
BUILD SUCCESSFUL

Total time: 36 mins 14.667 secs
Built the following apk(s):
    D:\Nit_Project\platforms\android\build\outputs\apk\android-debug.apk

D:\Nit_Project>
```

- Now Open Second cmd window and go Android Sdk directory create a AVD by Using following command:

✓ **Tools\android create avd -n NitAvd**



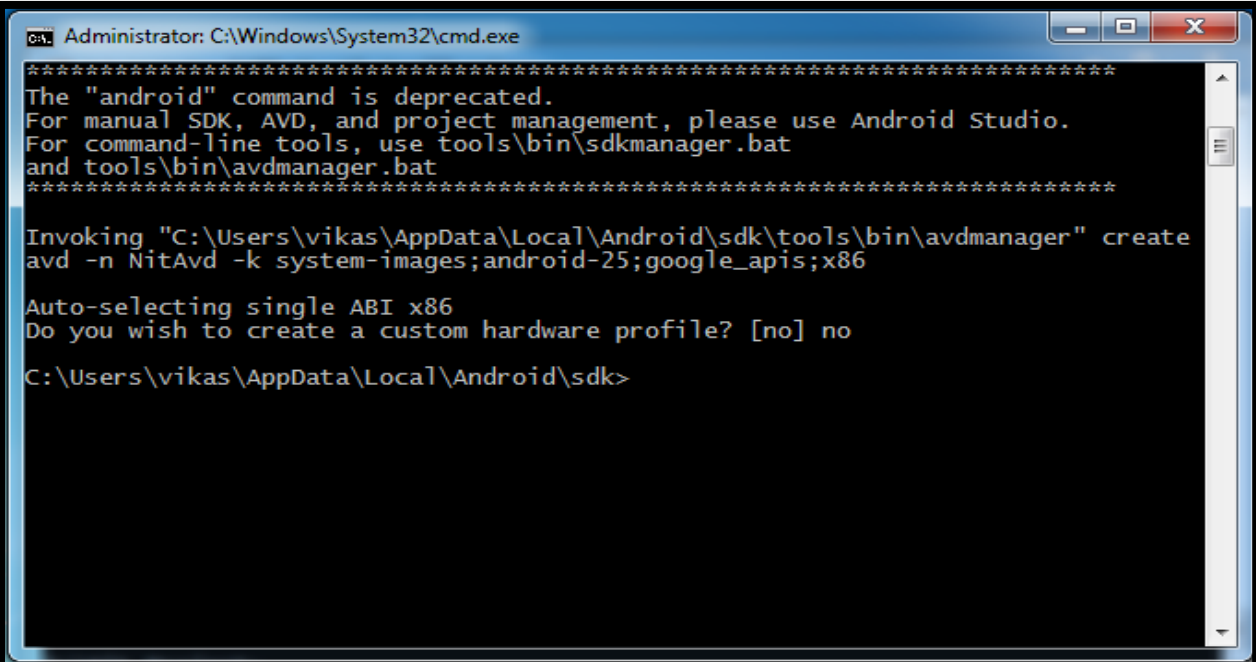
```
Administrator: C:\Windows\System32\cmd.exe
C:\Users\vikas\AppData\Local\Android\sdk>tools\android create avd -n NitAvd

The "android" command is deprecated.
For manual SDK, AVD, and project management, please use Android Studio.
For command-line tools, use tools\bin\sdkmanager.bat
and tools\bin\avdmanager.bat
*****

Invoking "C:\Users\vikas\AppData\Local\Android\sdk\tools\bin\avdmanager" create
avd -n NitAvd

Error: Package path (-k) not specified. Valid system image paths are:
system-images;android-26;google_apis;playstore;x86
system-images;android-25;google_apis;x86
null
C:\Users\vikas\AppData\Local\Android\sdk>
```

✓ **tool\android create avd -n NitAvd -k system-images;android-25;google_apis;x86**



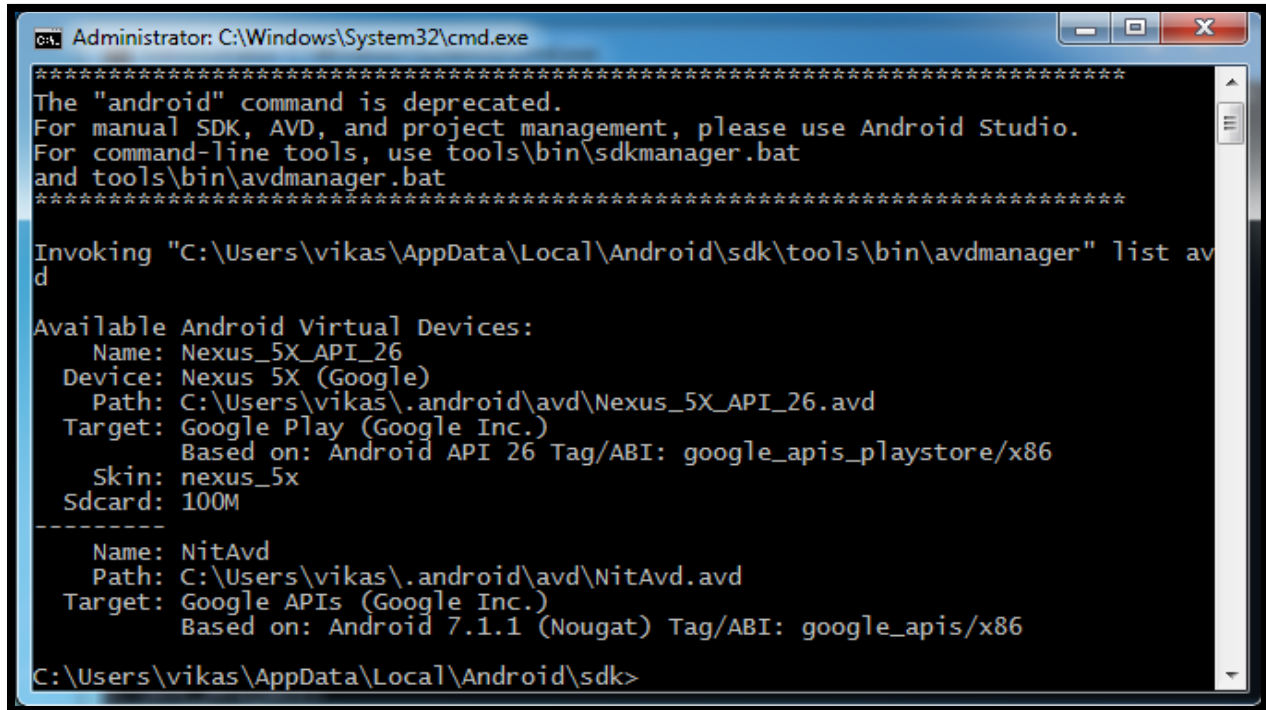
```
Administrator: C:\Windows\System32\cmd.exe
*****
The "android" command is deprecated.
For manual SDK, AVD, and project management, please use Android Studio.
For command-line tools, use tools\bin\sdkmanager.bat
and tools\bin\avdmanager.bat
*****

Invoking "C:\Users\vikas\AppData\Local\Android\sdk\tools\bin\avdmanager" create
avd -n NitAvd -k system-images;android-25;google_apis;x86

Auto-selecting single ABI x86
Do you wish to create a custom hardware profile? [no] no
C:\Users\vikas\AppData\Local\Android\sdk>
```

- Check the AVD list and its version

✓ tools\android list avd



```
Administrator: C:\Windows\System32\cmd.exe

*****
The "android" command is deprecated.
For manual SDK, AVD, and project management, please use Android Studio.
For command-line tools, use tools\bin\sdkmanager.bat
and tools\bin\avdmanager.bat
*****

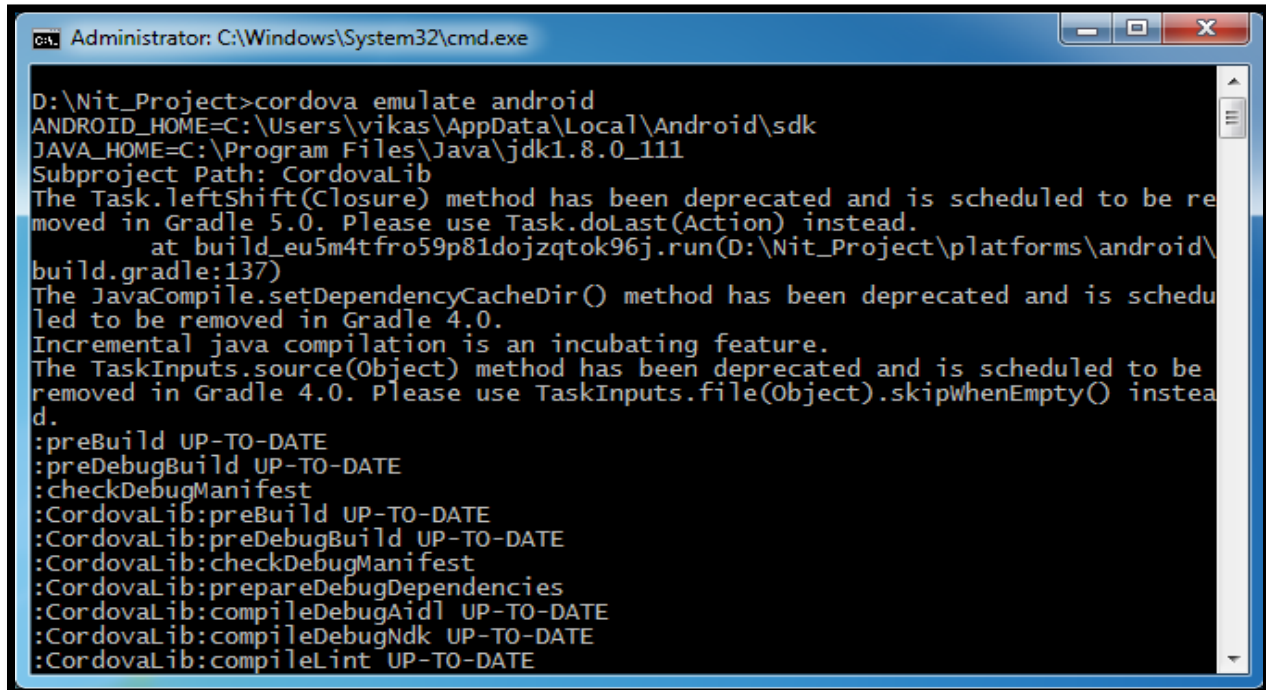
Invoking "C:\Users\vikas\AppData\Local\Android\sdk\tools\bin\avdmanager" list avd

Available Android Virtual Devices:
  Name: Nexus_5X_API_26
  Device: Nexus 5X (Google)
  Path: C:\Users\vikas\.android\avd\Nexus_5X_API_26.avd
  Target: Google Play (Google Inc.)
        Based on: Android API 26 Tag/ABI: google_apis_playstore/x86
  Skin: nexus_5x
  Sdcard: 100M
-----
  Name: NitAvd
  Path: C:\Users\vikas\.android\avd\NitAvd.avd
  Target: Google APIs (Google Inc.)
        Based on: Android 7.1.1 (Nougat) Tag/ABI: google_apis/x86

C:\Users\vikas\AppData\Local\Android\sdk>
```

- Now Move on Project Command Window and type the following command to Open the Android Emulator wait a while to open an Android Emulator:

✓ cordova emulate android



```
Administrator: C:\Windows\System32\cmd.exe

D:\Nit_Project>cordova emulate android
ANDROID_HOME=C:\Users\vikas\AppData\Local\Android\sdk
JAVA_HOME=C:\Program Files\Java\jdk1.8.0_111
Subproject Path: CordovaLib
The Task.leftShift(Closure) method has been deprecated and is scheduled to be removed in Gradle 5.0. Please use Task.doLast(Action) instead.
    at build_eu5m4tfro59p81dojqztk96j.run(D:\Nit_Project\platforms\android\build.gradle:137)
The JavaCompile.setDependencyCacheDir() method has been deprecated and is scheduled to be removed in Gradle 4.0.
Incremental java compilation is an incubating feature.
The TaskInputs.source(Object) method has been deprecated and is scheduled to be removed in Gradle 4.0. Please use TaskInputs.file(Object).skipWhenEmpty() instead.
:preBuild UP-TO-DATE
:preDebugBuild UP-TO-DATE
:checkDebugManifest
:CordovaLib:preBuild UP-TO-DATE
:CordovaLib:preDebugBuild UP-TO-DATE
:CordovaLib:checkDebugManifest
:CordovaLib:prepareDebugDependencies
:CordovaLib:compileDebugAidl UP-TO-DATE
:CordovaLib:compileDebugNdk UP-TO-DATE
:CordovaLib:compileLint UP-TO-DATE
```

```
Administrator: C:\Windows\System32\cmd.exe - cordova emulate android
:generateDebugSources UP-TO-DATE
:incrementalDebugJavaCompilationSafeguard UP-TO-DATE
:compileDebugJavaWithJavac UP-TO-DATE
:compileDebugNdk UP-TO-DATE
:compileDebugSources UP-TO-DATE
:mergeDebugShaders UP-TO-DATE
:compileDebugShaders UP-TO-DATE
:generateDebugAssets UP-TO-DATE
:mergeDebugAssets UP-TO-DATE
:transformClassesWithDexForDebug UP-TO-DATE
:mergeDebugJniLibFolders UP-TO-DATE
:transformNative_libsWithMergeJniLibsForDebug UP-TO-DATE
:processDebugJavaRes UP-TO-DATE
:transformResourcesWithMergeJavaResForDebug UP-TO-DATE
:validateSigningDebug
:packageDebug UP-TO-DATE
:assembleDebug UP-TO-DATE
:cdvBuildDebug UP-TO-DATE

BUILD SUCCESSFUL
Total time: 6.366 secs
Built the following apk(s):
    D:\Nit_Project\platforms\android\build\outputs\apk\android-debug.apk
```

```
Command Prompt
D:\Nit_Project>cordova emulate android
ANDROID_HOME=C:\Users\Nitesh\AppData\Local\Android\sdk
JAVA_HOME=C:\Program Files\Java\jdk1.8.0_91
Subproject Path: CordovaLib
The Task.leftShift(Closure) method has been deprecated and is scheduled to be removed in Gradle 5.0. Please use Task.doLast(Action) instead.
    at build_eu5m4tfro59p81dojzqtok96j.run(D:\Nit_Project\platforms\android\build.gradle:137)
The JavaCompile.setDependencyCacheDir() method has been deprecated and is scheduled to be removed in Gradle 4.0.
Incremental java compilation is an incubating feature.
The TaskInputs.source(Object) method has been deprecated and is scheduled to be removed in Gradle 4.0. Please use TaskInputs.file(Object).skipWhenEmpty() instead.
:preBuild UP-TO-DATE
:preDebugBuild UP-TO-DATE
:checkDebugManifest
:CordovaLib:preBuild UP-TO-DATE
:CordovaLib:preDebugBuild UP-TO-DATE
:CordovaLib:checkDebugManifest
:CordovaLib:prepareDebugDependencies
:CordovaLib:compileDebugAidl UP-TO-DATE
:CordovaLib:compileDebugNdk UP-TO-DATE
:CordovaLib:compileLint UP-TO-DATE
```

```
Command Prompt
:assembleDebug UP-TO-DATE
:cdvBuildDebug UP-TO-DATE

BUILD SUCCESSFUL
Total time: 2.531 secs
Built the following apk(s):
    D:\Nit_Project\platforms\android\build\outputs\apk\android-debug.apk
ANDROID_HOME=C:\Users\Nitesh\AppData\Local\Android\sdk
JAVA_HOME=C:\Program Files\Java\jdk1.8.0_91
No emulator specified, defaulting to Nit
Waiting for emulator to start...
Waiting for emulator to boot (this may take a while)....BOOT COMPLETE
Skipping build...
Built the following apk(s):
    D:\Nit_Project\platforms\android\build\outputs\apk\android-debug.apk
Using apk: D:\Nit_Project\platforms\android\build\outputs\apk\android-debug.apk
Package name: io.cordova.Nitapp
INSTALL SUCCESS
LAUNCH SUCCESS

D:\Nit_Project>
```

- **After Install, Build and Launch Successful we will get the Emulator ...**

