

**WA2185 Platform Independent  
Mobile Development with jQuery  
Mobile and Apache Cordova**

**Classroom Setup Guide**

**Web Age Solutions Inc.**

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## Part 1 - Minimum Hardware Requirements

- CPU to meet the minimum requirements of the operating system being used
  - Although not required, an Intel® processor with support for Intel® VT-x, Intel® EM64T (Intel® 64), Execute Disable (XD) Bit functionality, and Hardware virtualization support enabled in the BIOS will provide better performance with the software for the class
- 4 GB RAM minimum
- 10 GB in the hard disk
- Sound card
- Speakers (or earphones/headset)
- Connectivity to the Internet
  - If an HTTP Proxy is required, students must have details of how to configure this proxy

## Part 2 - Minimum Software Requirements

- Windows 7 (Professional, Enterprise, or Ultimate) – 64 bits
- Latest version of Chrome
- Android Studio 3.3.2 for Windows 64-bit \*
- Apache 2.4.33 \*
- JDK 8u172 \*
- Node v10.3.0 – 64 bits\*
- Notepad++ \*

\* - indicates software provided as part of the courseware.

### **Part 3 - Software Provided**

List of ZIP files required for this course and used in next steps on this document:

**WA2185\_REL\_4\_0.ZIP**

Send an email to [support@webagesolutions.com](mailto:support@webagesolutions.com) in order to obtain a copy of the software for this course if you haven't receive it yet.

All other software listed under Minimum Software Requirements is either commercially licensed software that you must provide or software that is freely available off the Internet.

### **Part 4 - Instructions**

This course has to be installed directly on the computers that the students will use. Virtualization is not supported.

\_\_1. Make an administrative user for the students and install the software with this user.

\_\_2. Extract the **ZIP** file to **C:\**

\_\_3. Review that the following folders were created:

- **C:\Apache24**
- **C:\LabFiles**
- **C:\Software\**

\_\_4. Review that the following file was created:

- **C:\Software\Android\android-studio-ide-182.5314842-windows.exe**
- **C:\Software\jdk-8u171-windows-x64.exe**
- **C:\Software\node-v10.3.0-x64.msi**
- **C:\Software\npp.7.5.6.Installer.exe**

\_\_5. Make sure you installed latest Chrome browser.

## Part 5 - Installing JDK 8 Update 171 (64 bit)

\_\_1. Make sure there is no previous Java version already installed on the system. You can check this by using the Windows “Add/Remove Programs” utility. For the best compatibility with the labs it is suggested that all previous versions of Java be uninstalled before proceeding with these instructions. If this is an issue, please contact the setup support person for the course.

\_\_2. From the **C:\Software** directory run the following file:

**jdk-8u171-windows-x64.exe**

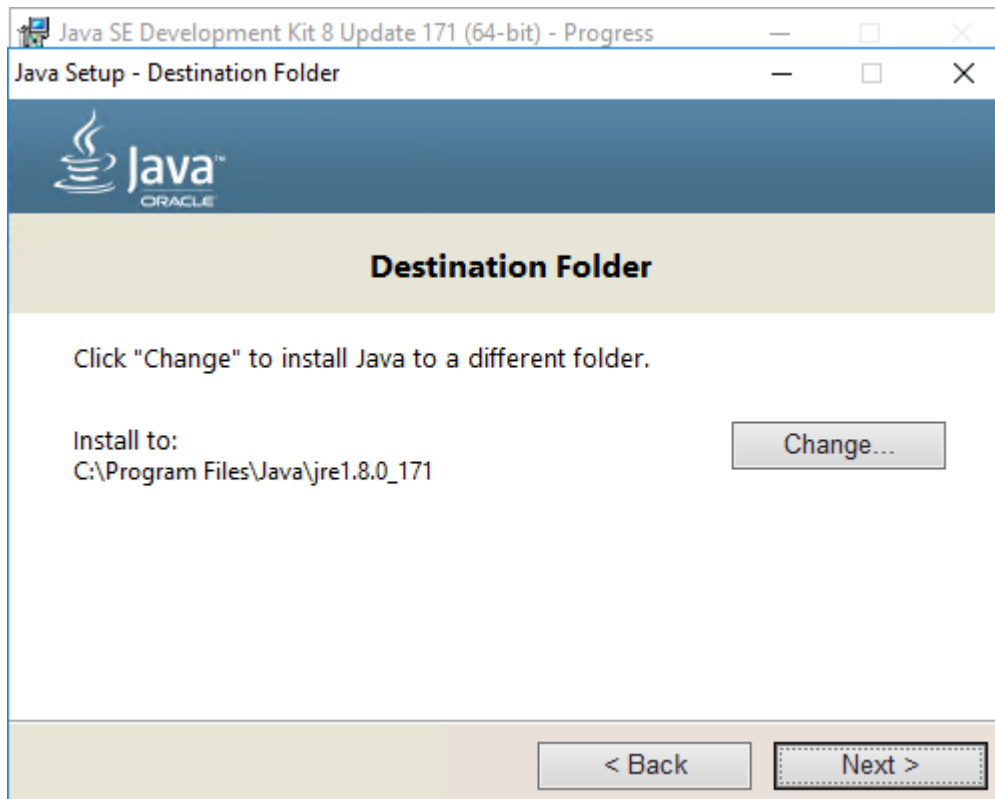
<b>Note:</b> If a security prompt open, allow the installation to continue.
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\_\_3. When the initial step of the setup appears, press the **Next** button.

\_\_4. Leave the defaults for installation location and options, and press the **Next** button.

The installation will begin installing files.

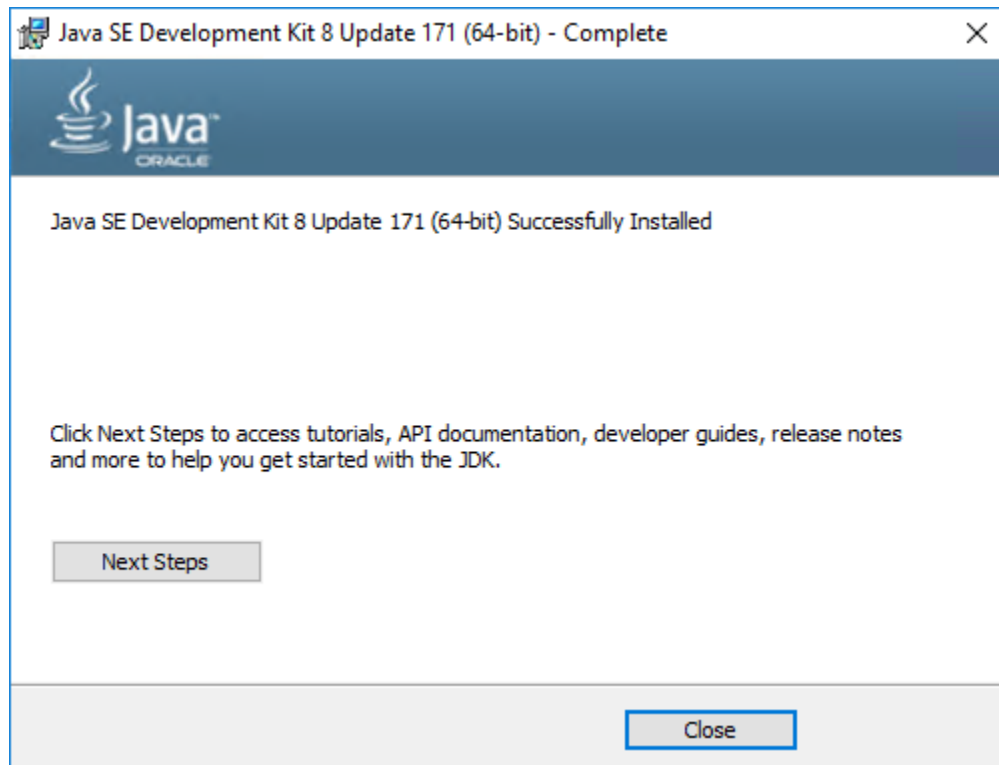
\_\_5. The **Destination Folder** will appear, leave the default folder and click **Next**.



**Note:** The installation directory may be slightly different.

Wait until the software is completely installed.

\_\_6. Click **Close**.



### ***Set the Environment variables***

\_\_1. Open a Command Prompt. You can do this with '**Start → Programs → Accessories → Command Prompt**'.

\_\_2. Use the 'cd' command to attempt to switch to the following directory. This will verify the presence of a directory used later so make sure you do not get any errors about not being able to “find the path specified”.

```
cd C:\Progra~1\Java\jdk1.8.0_171
```

**Note:** The installation directory may be slightly different depending your operating system. You may need to use the following directory instead of the one listed above:

```
C:\Progra~2\Java\jdk1.8.0_171
```

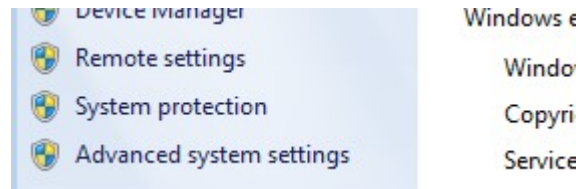
Some of the remaining steps will use the slightly different directory.

\_\_3. Make sure you can reach the java folder and remember the value entered because you will use this value in the following steps.

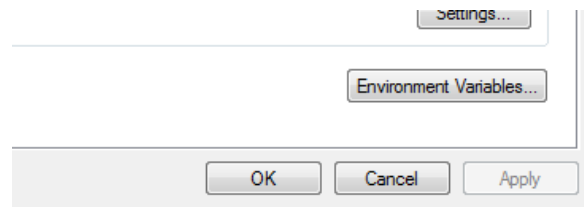
\_\_4. Close the command prompt window.

\_\_5. In the Windows Start Menu, right-click on the **Computer** link in the right-hand side of the Start panel, and then select **Properties**.

\_\_6. Click on **Advanced system settings**.



\_\_7. The system will display the **System Properties** dialog. Select the **Advanced** tab and click **Environment Variables**.



\_\_8. Under the **System Variables** list, click the **New** button.

\_\_9. Enter **JAVA\_HOME** as Variable name.

\_\_10. As Variable value enter the following. This should be the value you verified in the *Set the Environment variables section - step 2*.

**C:\Progra~1\Java\jdk1.8.0\_171**

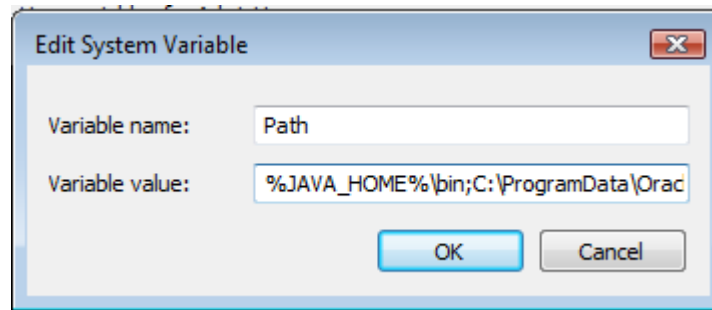
\_\_11. Click **OK** to create the variable.

\_\_12. From the *System Variables* list, select **Path** and click **Edit**.

\_\_13. At the beginning of the line enter the following. Make sure to include the semi-colon on the end:

**%JAVA\_HOME%\bin;**





\_\_14. Click **OK**.

\_\_15. Click **OK** to close the *Environment Variables* window.

\_\_16. Click **OK** to close the *System Properties* window.

## **Part 6 - Verification JDK 8\_0\_171**

\_\_1. Open a Windows command prompt. You can do this by selecting '**Start -> Run**', entering '**cmd**', and then pressing the **OK** button. Make sure it is a new command prompt and not one open previously.

\_\_2. Enter the following command:

```
echo %PATH%
```

Make sure you see the Java 'bin' directory listed at the beginning.

\_\_3. Enter the following command:

```
java -version
```

Make sure you see the response shown below.

```
java version "1.8.0_171"
```

Troubleshooting: If you get an error message means that your Environment variable was incorrectly entered, go back and fix the values.

\_\_4. Enter the following command:

**javac**

Verify that you get the options to run the Java compiler:

```
C:\Users\AdminUser>javac
Usage: javac <options> <source files>
where possible options include:
-g          Generate all debugging info
-g:none    Generate no debugging info
-g:<lines,vars,source> Generate only some debugging info
```

\_\_5. Enter the following command:

```
java -XshowSettings:all 2>&1 | findstr /c:"sun.arch.data.model"
```

Make sure you see the response shown below.

```
sun.arch.data.model = 64
```

Verify that it displays the correct value of 64. This indicates that it is 64-bit java that is installed.

\_\_6. Close the command prompt window and any extra windows that are open.

Java has been installed.

## Part 7 - Apache 2.4.33

\_\_1. Login as the administrative ID created for the class.

\_\_2. Using Notepad, open **C:\Apache24\htdocs\index.html**

\_\_3. Replace all the content with this text:

```
<html><body><h1>It works!</h1></body></html>
```

\_\_4. Save and close the file.

\_\_5. Open a command prompt window and enter change to the Apache folder.

```
cd C:\Apache24\bin
```

\_\_6. Execute the following command:

```
httpd.exe
```

\_\_7. Minimize the shell.

\_\_8. From a web browser, enter the URL:

```
http://localhost
```

\_\_9. Make sure that you see:

**It works!**

\_\_10. Close all.

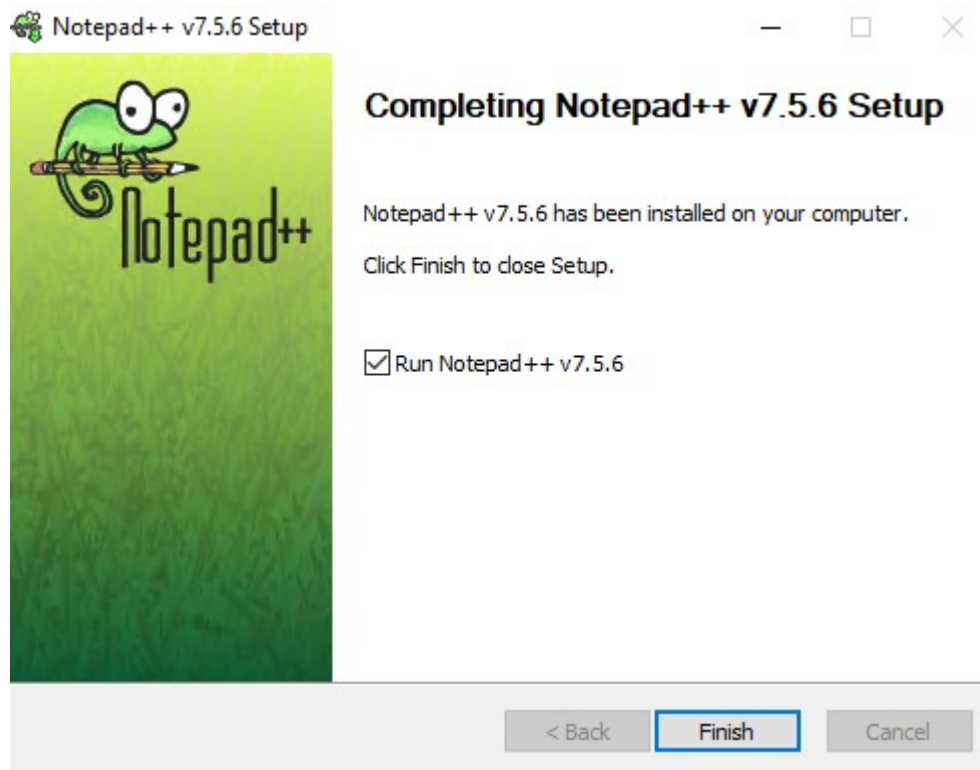
## Part 8 - Installing Notepad Plus 7.5.6

\_\_1. Open C:\Software\ and execute:

**npp.7.5.6.Installer.exe**

\_\_2. Click Yes to allow to install it and follow default steps.

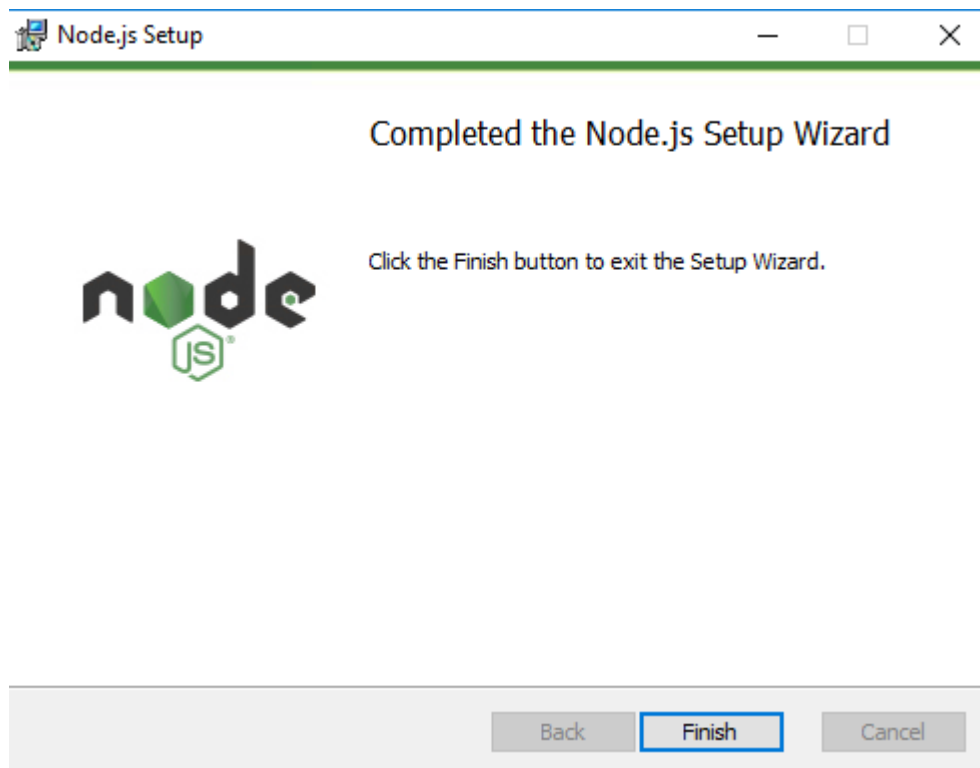
\_\_3. Click **Finish** when the installation is completed.



\_\_4. Close all.

## Part 9 - Installing Node.js 10.3.0

- \_\_1. Open C:\Software\
- \_\_2. Double click **node-v10.3.0-x64.msi** to begin installation.
- \_\_3. In the Welcome page, click **Next**.
- \_\_4. Check **I accept the terms...** and click **Next**.
- \_\_5. Accept default destination folder and click **Next**.
- \_\_6. Accept default Custom Setup selection and click **Next**.
- \_\_7. Click **Install**.
- \_\_8. A popup window may open asking to install the software. Click Yes to continue.
- \_\_9. Click **Finish**.



## Verification of Node.js

\_\_1. Open a command prompt window.

\_\_2. Enter the command:

```
node --version
```

\_\_3. Make sure that you see 10.3.0 as the output.

\_\_4. Close all.

## Part 10 - Installing Cordova

\_\_1. Open a command prompt window.

\_\_2. Run this command to install Cordova:

```
npm install -g cordova
```

\_\_3. Wait until for the process to be completed.

```
C:\Users\wasadmin>npm install -g cordova
C:\Users\wasadmin\AppData\Roaming\npm\cordova -> C:\Users\wasadmin\AppData\Roaming\npm\node_modules\cordova\bin\cordova
+ cordova@8.0.0
added 416 packages from 394 contributors in 37.404s
C:\Users\wasadmin>_
```

\_\_4. Close all.

## Part 11 - Installing Android Studio 3.3.2 (ide-182.5314842)

**Android Studio MUST be installed as the same user that will perform the labs. If required, create a local administrative account to perform installation and have the student login as that account to do the class labs.**

\_\_ 1. Open **C:\Software\Android**.

\_\_ 2. Execute:

**android-studio-ide-182.5314842-windows.exe**

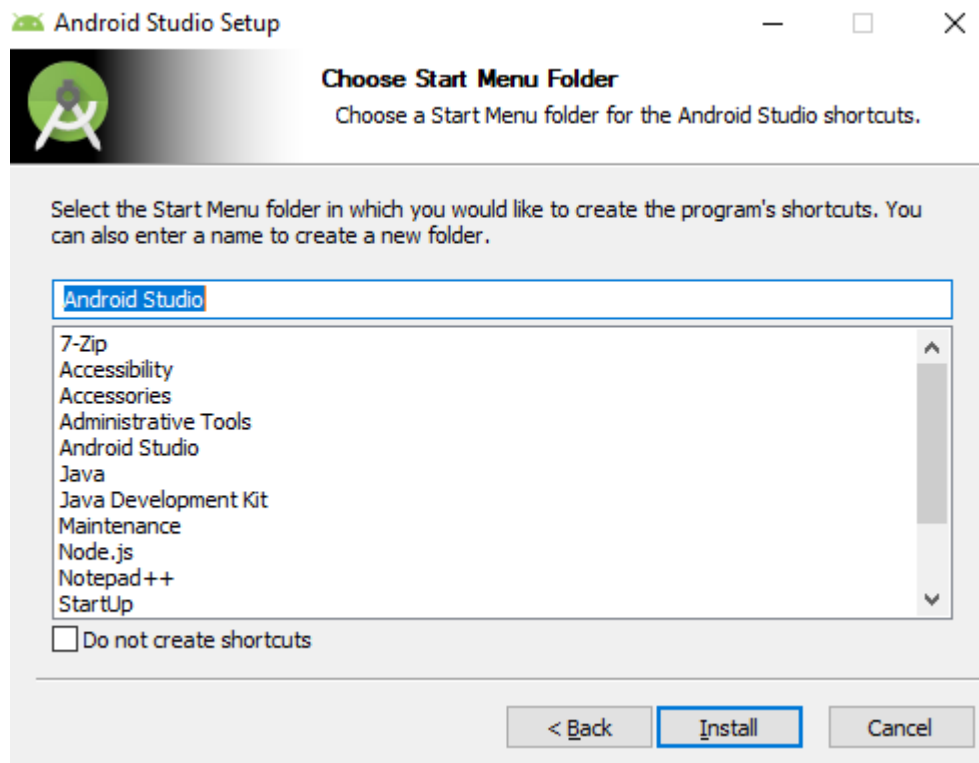
\_\_ 3. Click **Yes** to continue if a security window open.

\_\_ 4. In the Welcome page, click **Next**.

\_\_ 5. In the Choose Components page, click **Next**.

\_\_ 6. Leave defaults location and click **Next**.

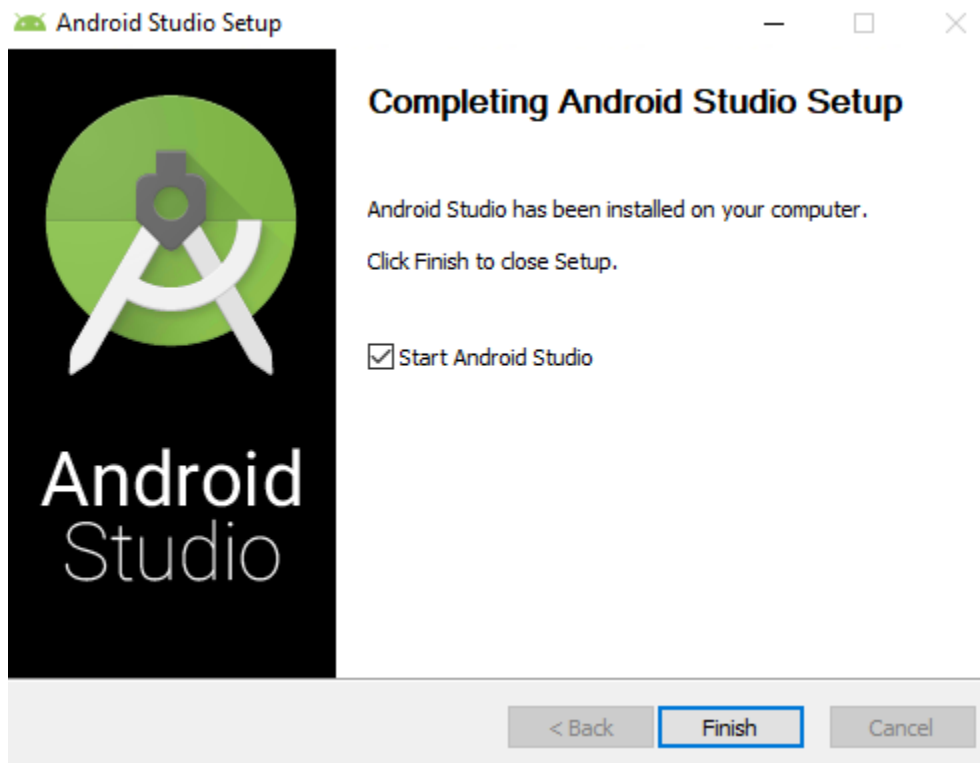
\_\_ 7. In the Choose Start Menu Folder page, click **Install**.



\_\_8. Click **Next** when installation Complete.

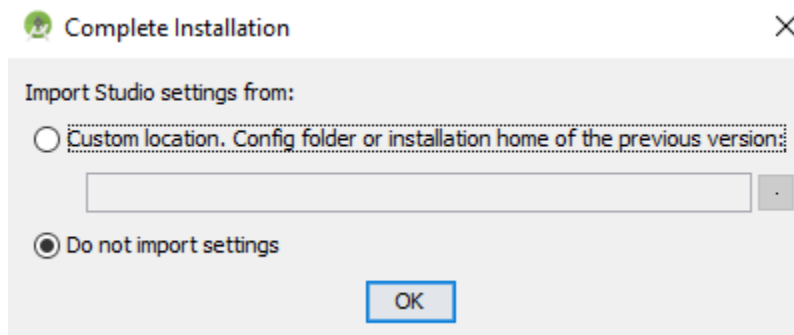
\_\_9. Click **Finish**.





Android will start.

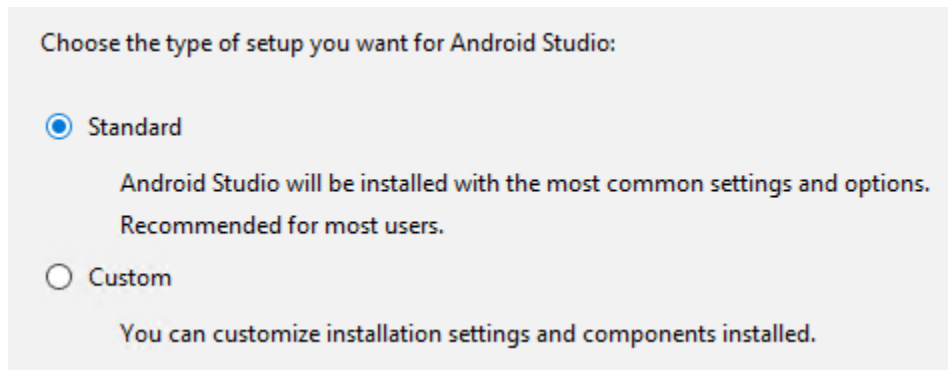
\_\_10. Leave selected **Do not import settings** and click **OK**.



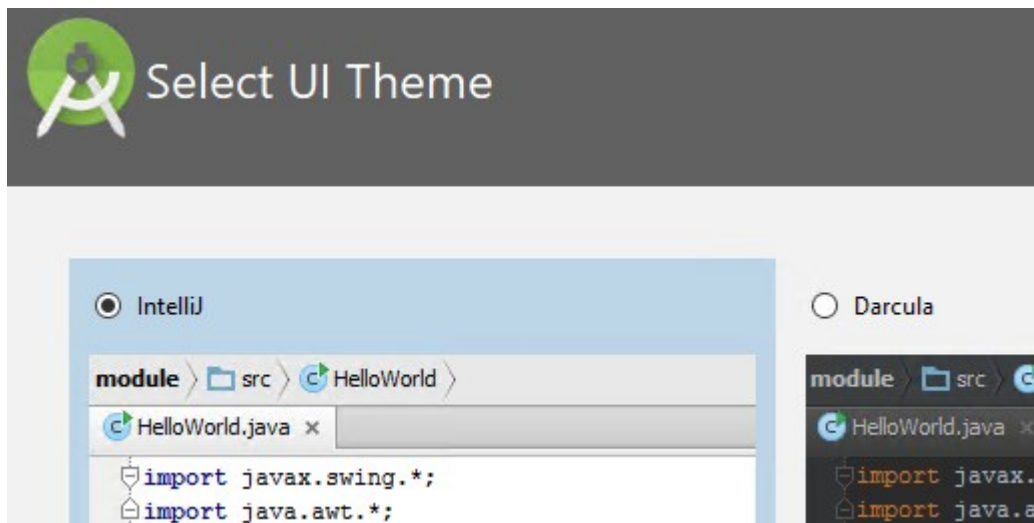
\_\_11. If a Data Sharing dialog open, click **Don't send**.

\_\_12. In the Welcome page, click **Next**.

\_\_13. Leave **Standard** setup selected and click **Next**.



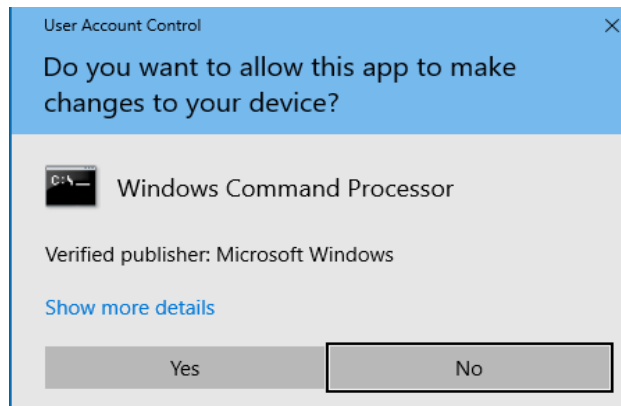
\_\_14. Leave selected **IntelliJ** Theme and click **Next**.



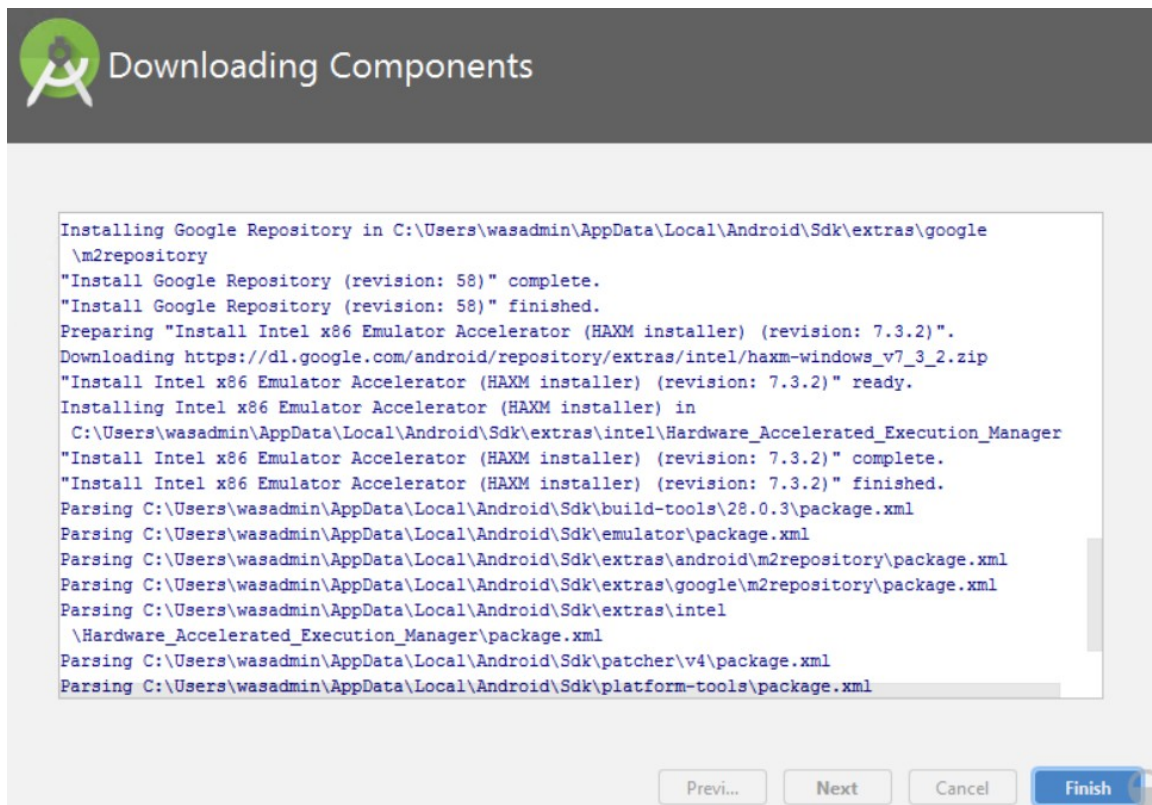
\_\_15. Click **Finish**.

Wait for installation to complete.

\_\_16. During the setup you may required to click **Yes** in this screen.



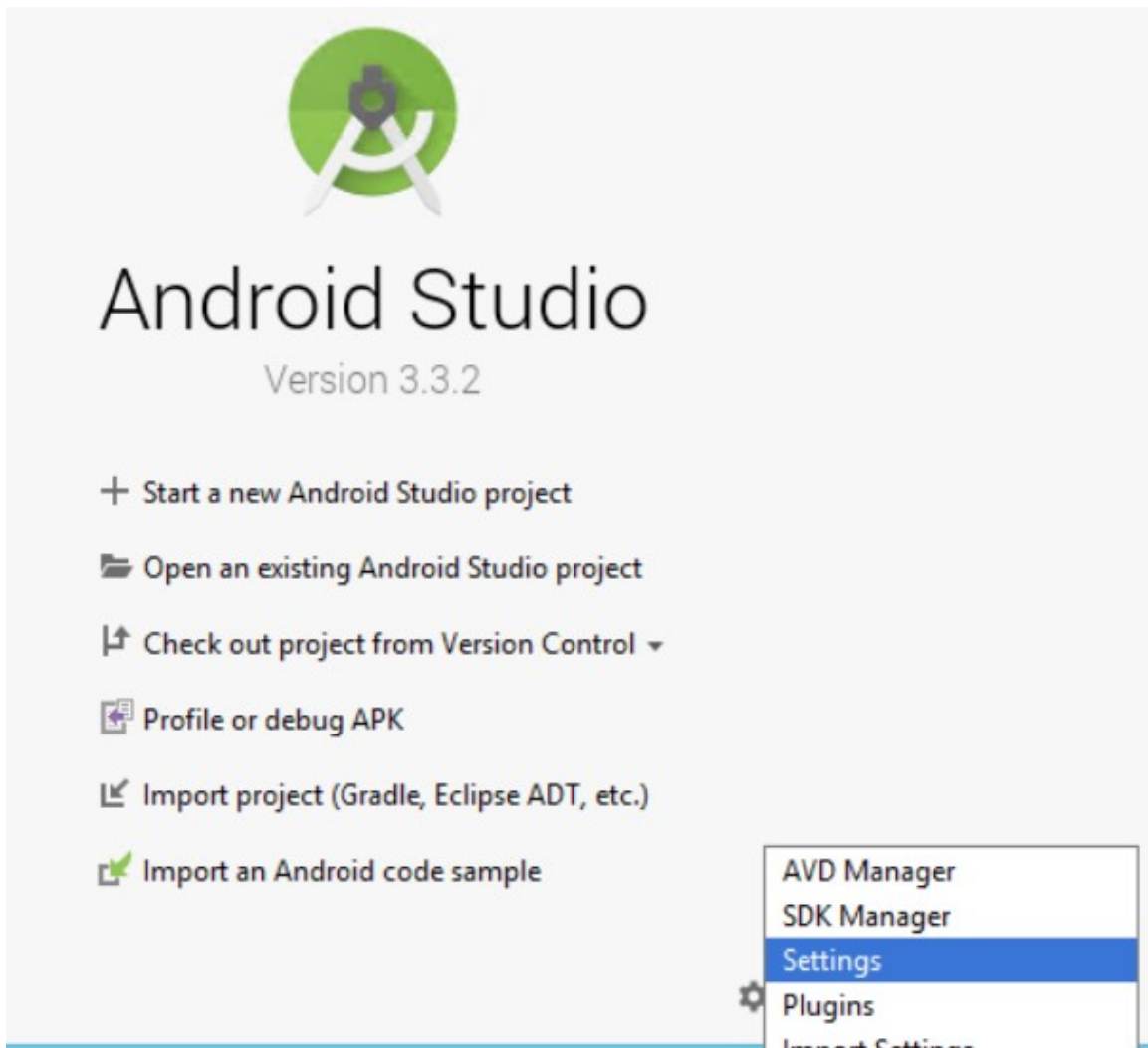
\_\_17. After a while setup will be completed. Click **Finish**.



Android Studio will open.

## Install Cordova Plugin

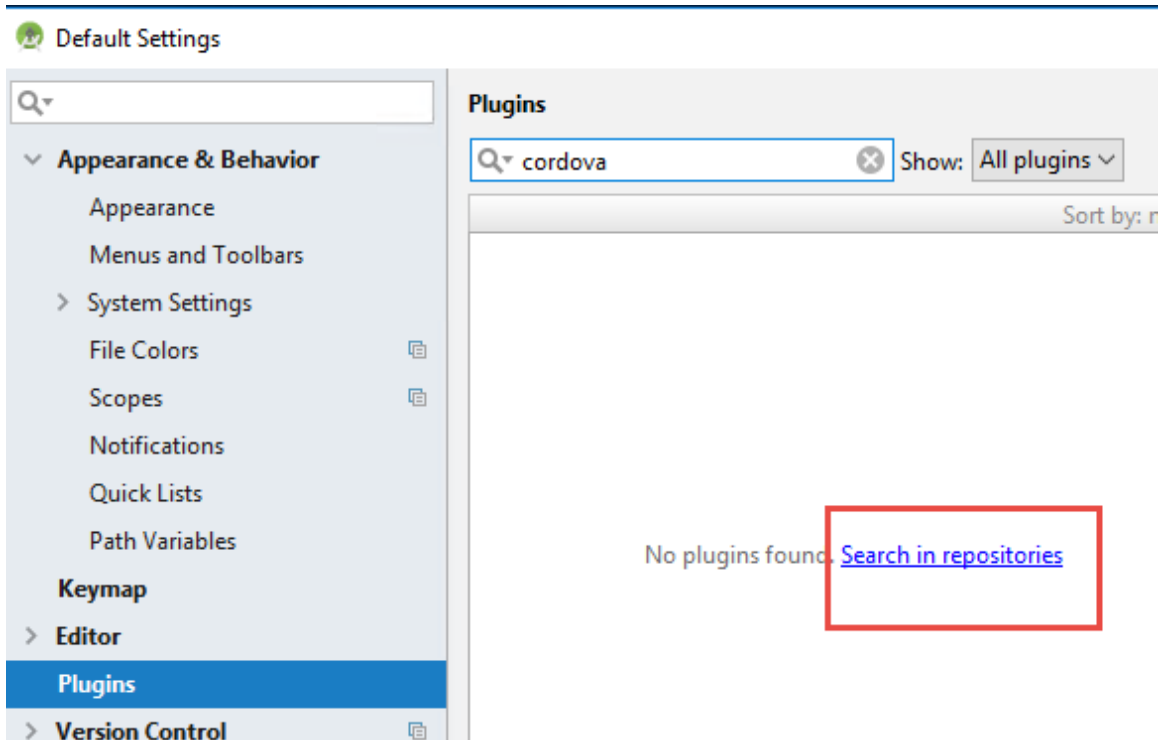
\_\_18. Click **Configure** and select **Settings**.



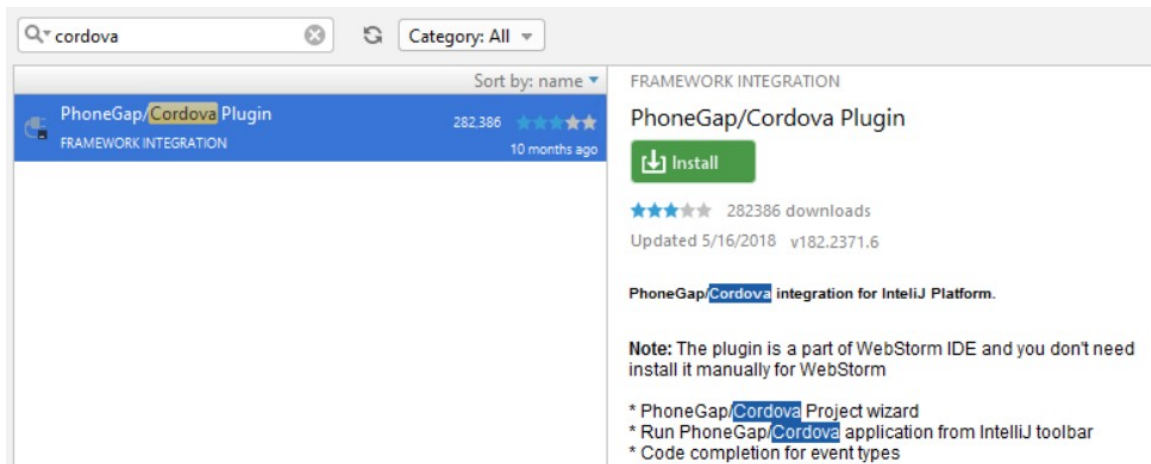
\_\_19. Click **Plugins** in the left menu.

\_\_20. Type **cordova** in the search text field at the top of the window.

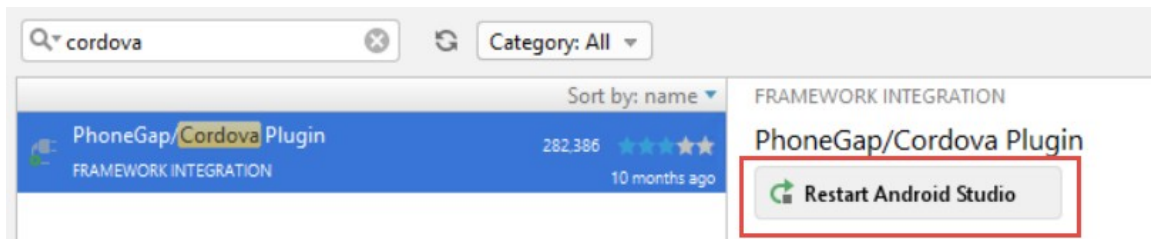
\_\_21. Click the **Search in repositories** link.



22. A new window will open, select the **Cordova plugin** as shown below and click **Install**.

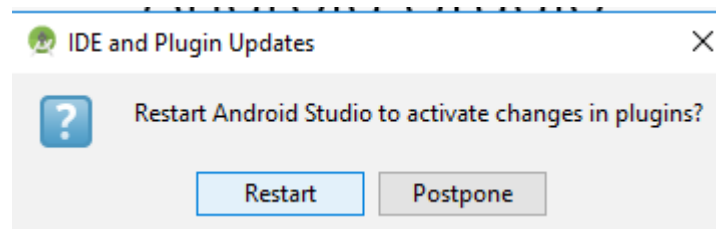


23. Click **Restart Android Studio**.



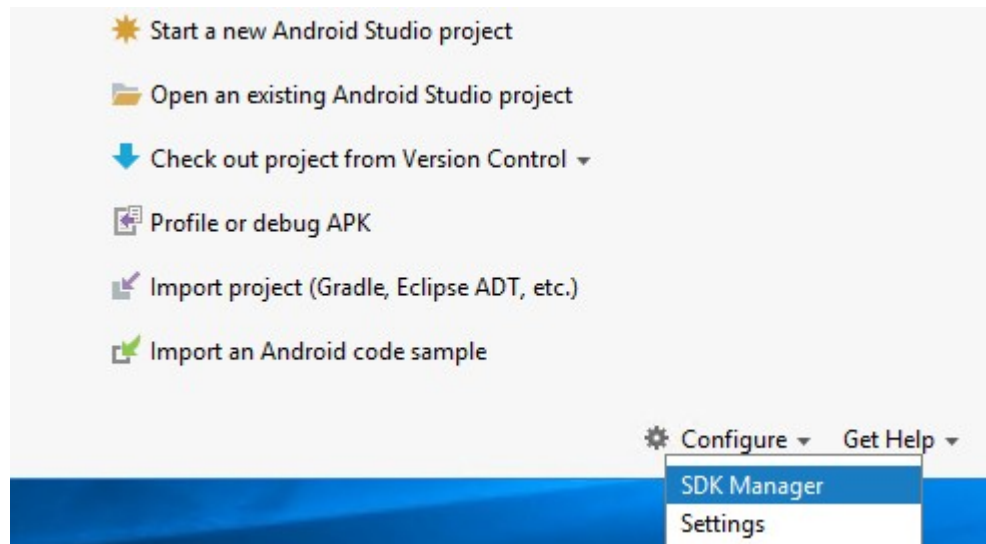
\_\_24. Click OK.

\_\_25. Click **Restart**.

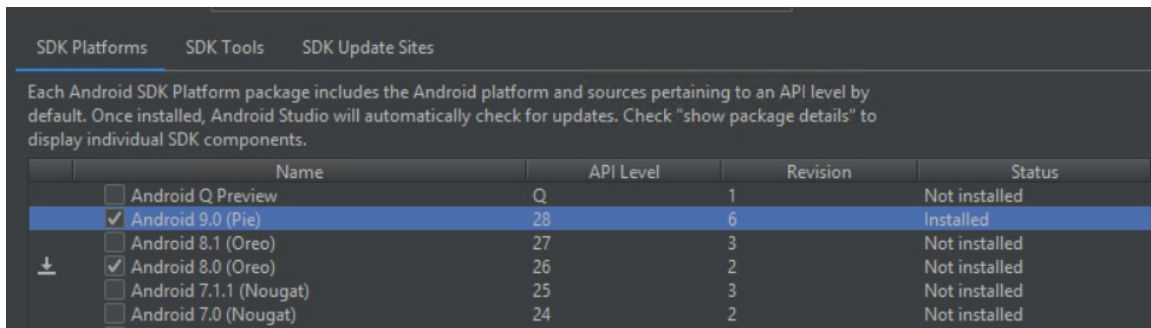


Next you will use the SDK Manager to download and install Android 8.0 (Oreo) API level 26.

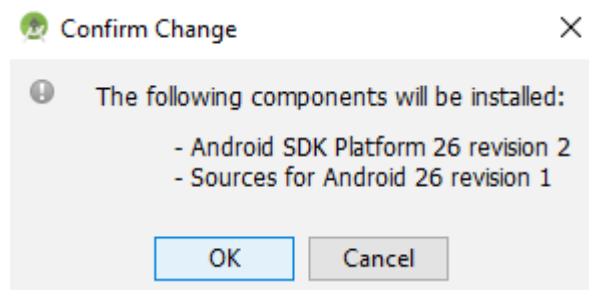
\_\_26. Click **Configure** and select **SDK Manager**.



\_\_27. Select **Android 8.0 (Oreo) API Level 26** and click **OK**.



\_\_28. Click **OK** to confirm installation.



\_\_29. In the License Agreement window, select **Accept** and click **Next**.

Wait for installation to complete.

\_\_30. Click **Finish** when is done.



## Component Installer

Android Studio

### Installing Requested Components

SDK Path: C:\Users\wasadmin\AppData\Local\Android\Sdk

```
To install:
- Sources for Android 26 (sources;android-26)
- Android SDK Platform 26 (platforms;android-26)
Preparing "Install Sources for Android 26 (revision: 1)".
Downloading https://dl.google.com/android/repository/sources-26_r01.zip
"Install Sources for Android 26 (revision: 1)" ready.
Preparing "Install Android SDK Platform 26 (revision: 2)".
Downloading https://dl.google.com/android/repository/platform-26_r02.zip
"Install Android SDK Platform 26 (revision: 2)" ready.
Installing Sources for Android 26 in C:\Users\wasadmin\AppData\Local\Android\Sdk\sources\android-26
"Install Sources for Android 26 (revision: 1)" complete.
"Install Sources for Android 26 (revision: 1)" finished.
Installing Android SDK Platform 26 in C:\Users\wasadmin\AppData\Local\Android\Sdk\platforms\android-26
"Install Android SDK Platform 26 (revision: 2)" complete.
"Install Android SDK Platform 26 (revision: 2)" finished.
```

Done

Background

Previous

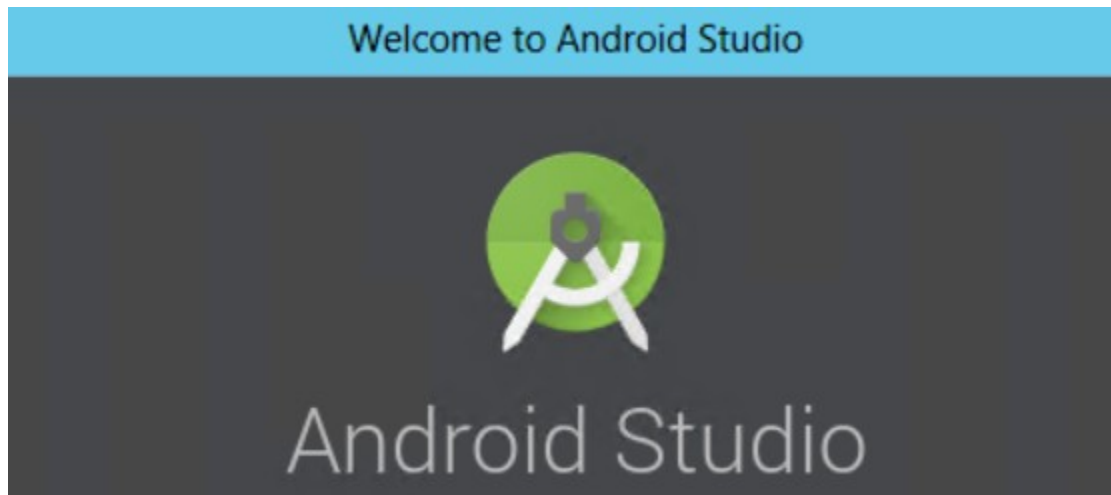
Next

Cancel

Finish

Android Studio will open again.





\_\_31. Close all.

## **Part 12 - Summary**

**You have successfully installed the software for this course!**

If you have any question please contact us by email at [support@webagesolutions.com](mailto:support@webagesolutions.com)

From US and Canada call: 1-877-812-8887 ext. 26

International call: 416-406-3994 ext. 26