Android Studio

Install Android Studio

ℹ️ Please notice that the following instructions are valid for Android Studio versions released on the *stable* channel, there is no support for the *beta* channel
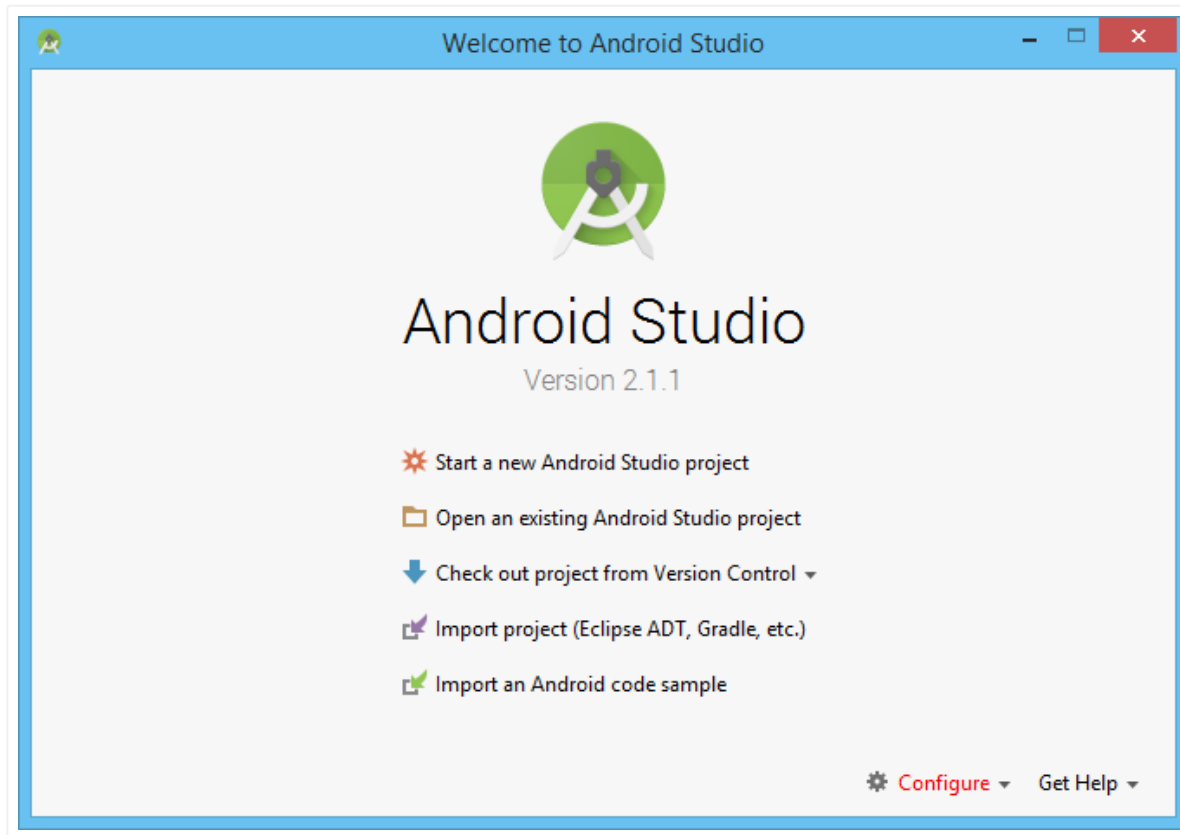
Download Android Studio from the official website and follow the installation instructions. After installing Android Studio, install the Android SDK through the Android SDK Manager or provide a correct path to one already installed. Since developers are encouraged to target the most recent and updated Android SDK release while developing an application, choose the most new API level released and download the associated platform.
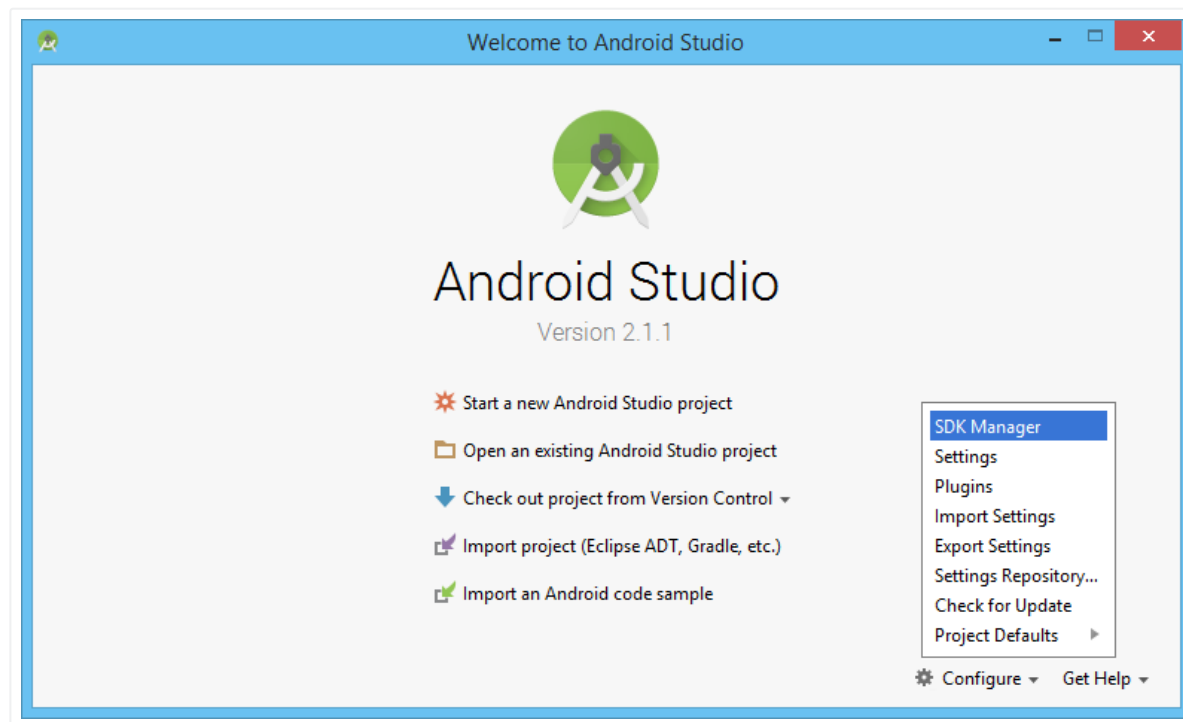
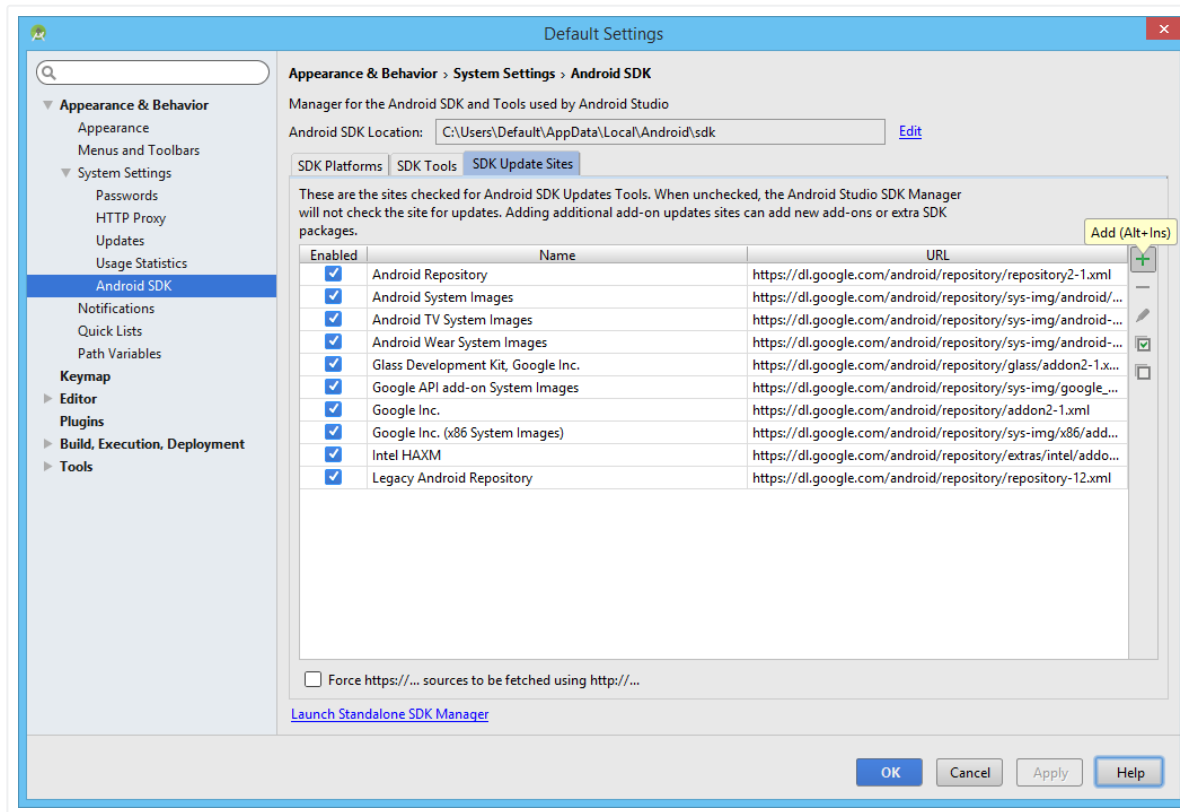## Install Datalogic SDK Add-on

From Android Studio launch window, click on *Configure > SDK Manager* to open Android SDK Manager.

Welcome to Android Studio

Android Studio

Version 2.1.1

☀ Start a new Android Studio project

📁 Open an existing Android Studio project

⬇ Check out project from Version Control ▾

📥 Import project (Eclipse ADT, Gradle, etc.)

📥 Import an Android code sample
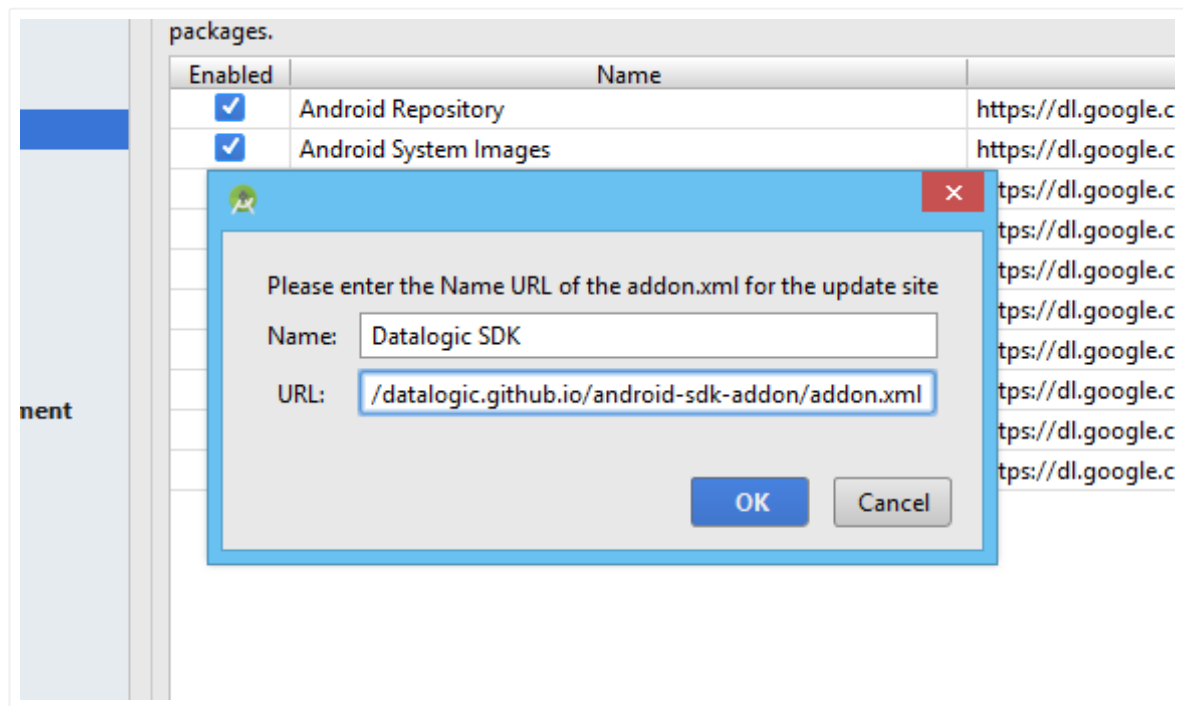
⚙ Configure ▾   Get Help ▾

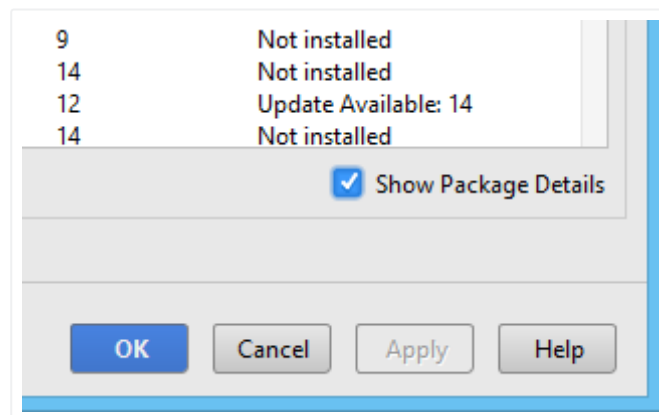Select the tab *SDK Update Sites* and click the **+** (plus) icon on the right-side toolbar.

In the new window insert the following URL, optionally a name and the press *OK*.

```
https://datalogic.github.io/android-sdk-addon/addon.xml
```
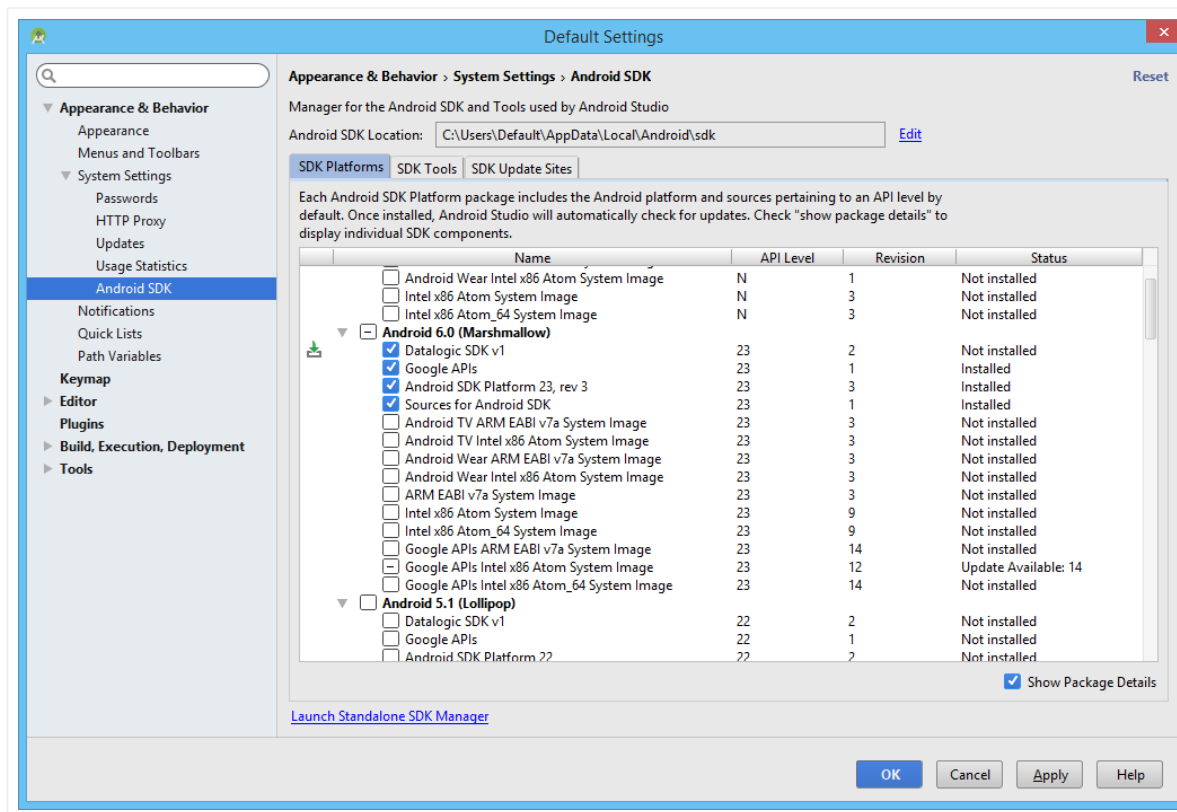
packages.

Enabled	Name	
✓	Android Repository	https://dl.google.c
✓	Android System Images	https://dl.google.c

Please enter the Name URL of the addon.xml for the update site

Name: Datalogic SDK

URL: /datalogic.github.io/android-sdk-addon/addon.xml

OK   Cancel

Now select the tab *SDK Platforms* in the Android SDK settings panel and check the checkbox on the bottom right *Show Package Details*.

9	Not installed
14	Not installed
12	Update Available: 14
14	Not installed

✓ Show Package Details
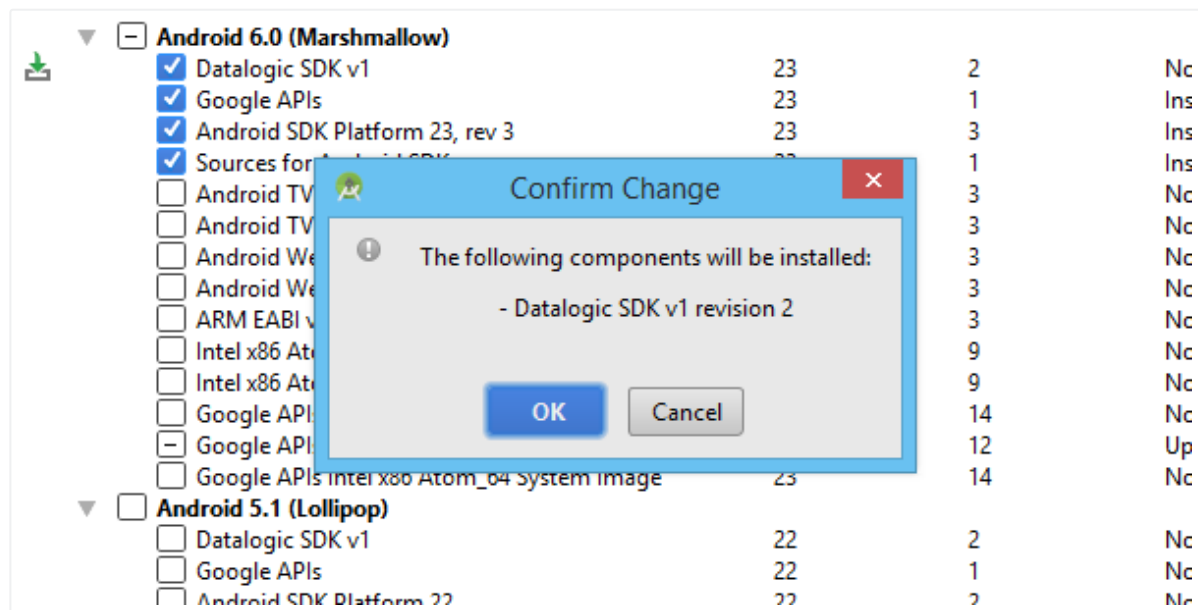
OK   Cancel   Apply   Help

Under each displayed section, corresponding to the Android releases available, **Datalogic SDK v1** Add-on should appear. Choose and install the development kit in accordance with your Android platform of choice. To install it, check Datalogic SDK v1 checkbox and a small icon on the left should appear.
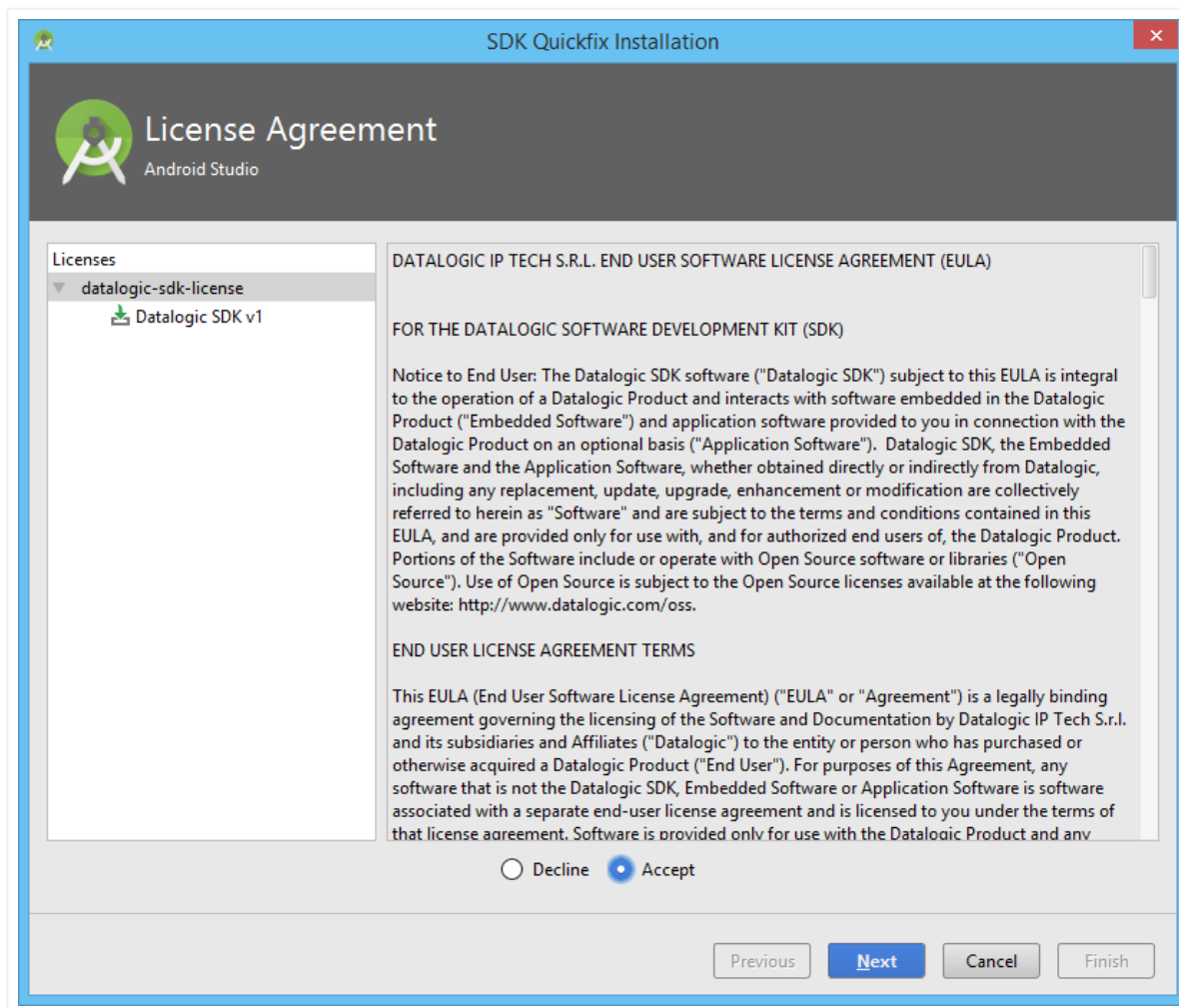
> ⚠️ Please notice that you must also install the Android API platform matching the Android version in use for development in your environment (i.e. API 23 is required to compile apps supported up to Android 6.0). See Platform version for further details
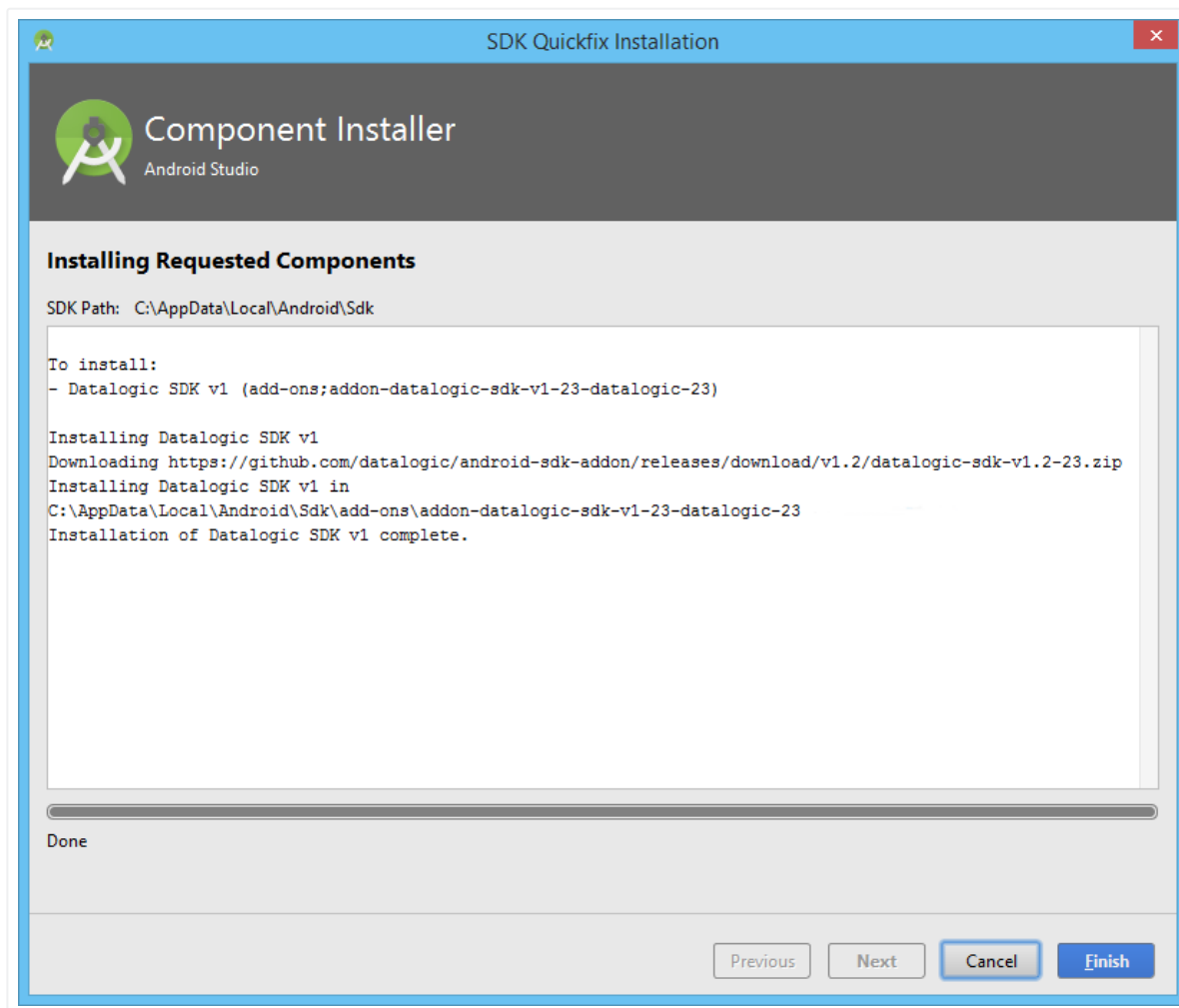

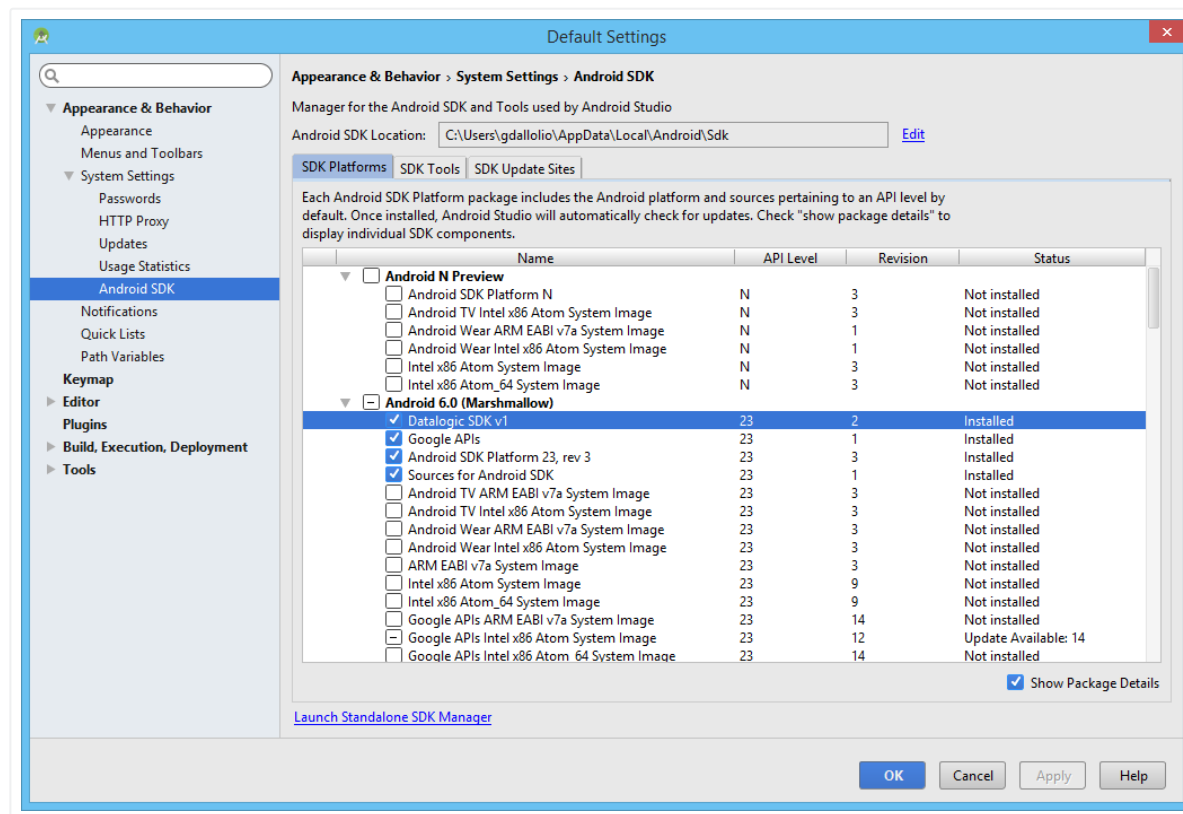Click on the button *Apply* to install the selected packages and confirm the choice in the next dialog.

Now, read and understand the corresponding End-User License Agreement (EULA) available in the next window. Accept it, in order to install Datalogic Android SDK.

SDK Quickfix Installation

License Agreement
Android Studio

Licenses
- datalogic-sdk-license
  - Datalogic SDK v1

DATALOGIC IP TECH S.R.L. END USER SOFTWARE LICENSE AGREEMENT (EULA)

FOR THE DATALOGIC SOFTWARE DEVELOPMENT KIT (SDK)

Notice to End User: The Datalogic SDK software ("Datalogic SDK") subject to this EULA is integral to the operation of a Datalogic Product and interacts with software embedded in the Datalogic Product ("Embedded Software") and application software provided to you in connection with the Datalogic Product on an optional basis ("Application Software"). Datalogic SDK, the Embedded Software and the Application Software, whether obtained directly or indirectly from Datalogic, including any replacement, update, upgrade, enhancement or modification are collectively referred to herein as "Software" and are subject to the terms and conditions contained in this EULA, and are provided only for use with, and for authorized end users of, the Datalogic Product. Portions of the Software include or operate with Open Source software or libraries ("Open Source"). Use of Open Source is subject to the Open Source licenses available at the following website: http://www.datalogic.com/oss.

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○ Decline ● Accept

Previous | **Next** | Cancel | Finish

Once the installation is complete, the *Status* of the Datalogic SDK v1 Add-on changes from *Not installed* to *Installed*. You are now ready to start developing applications compatible with Datalogic devices.
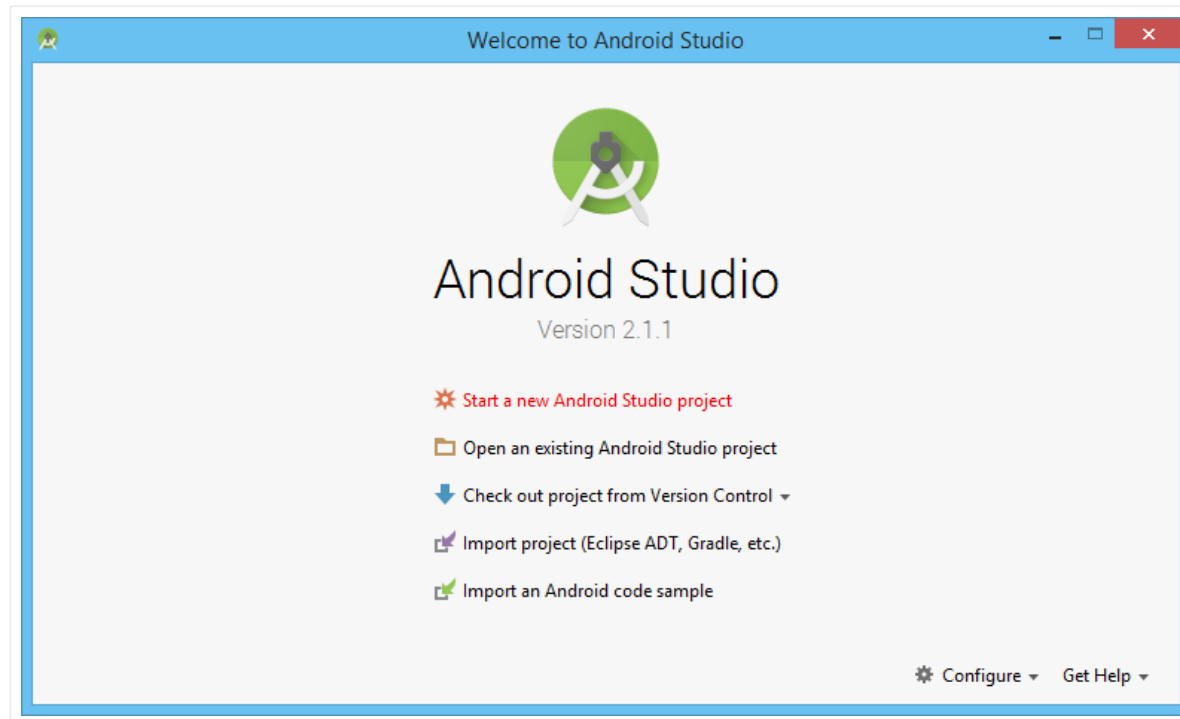
Use Datalogic SDK

When it comes to develop new applications and take advantage of Datalogic devices, simply follow these guided steps.

Create new applications

When creating a new project choose *Start a new Android Studio project* from the Android Studio Welcome screen.

⚠️ Please notice that you must select the *Minimum SDK* level in accordance with the installed Android firmware version on your Datalogic device. For example, a device running Android Jelly Bean, can support applications built with Minimum SDK level selected up to 16. Greater values will produce an incompatible Android app

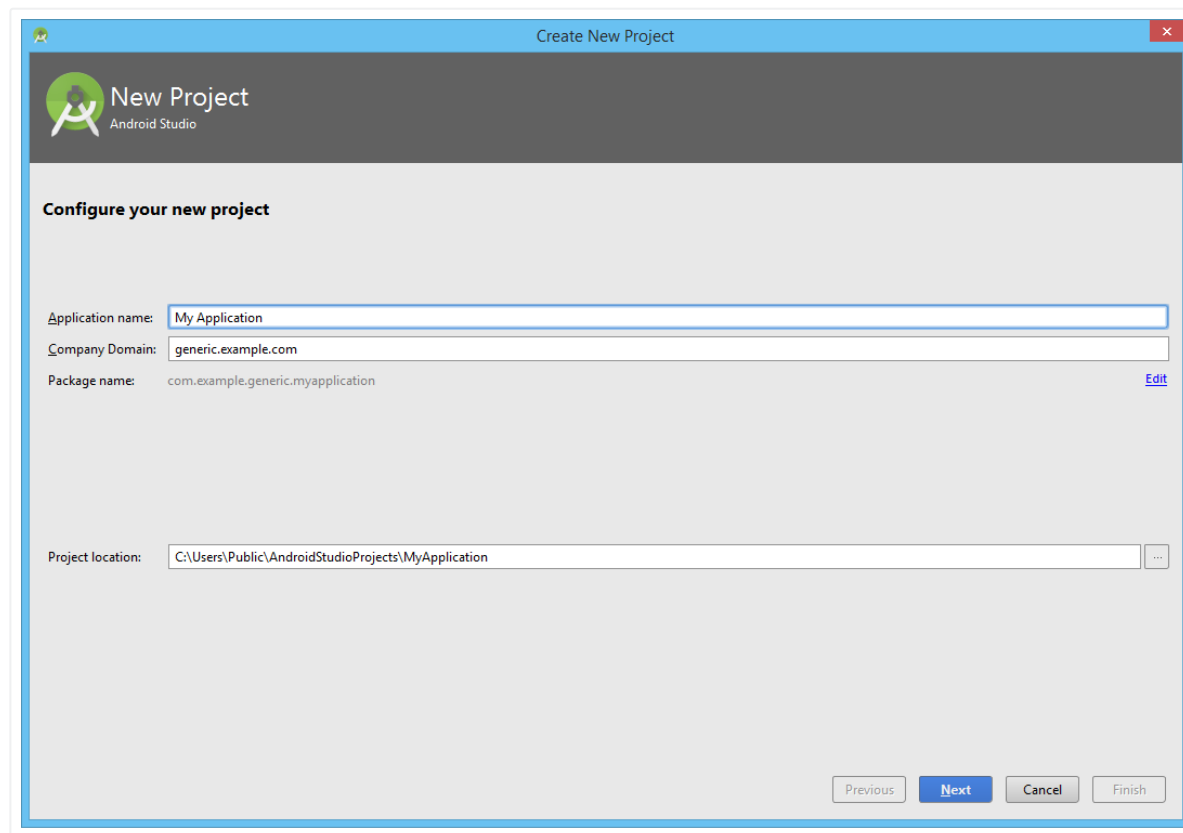When creating a new project choose the most correct Minimum SDK API level and press *Next*.
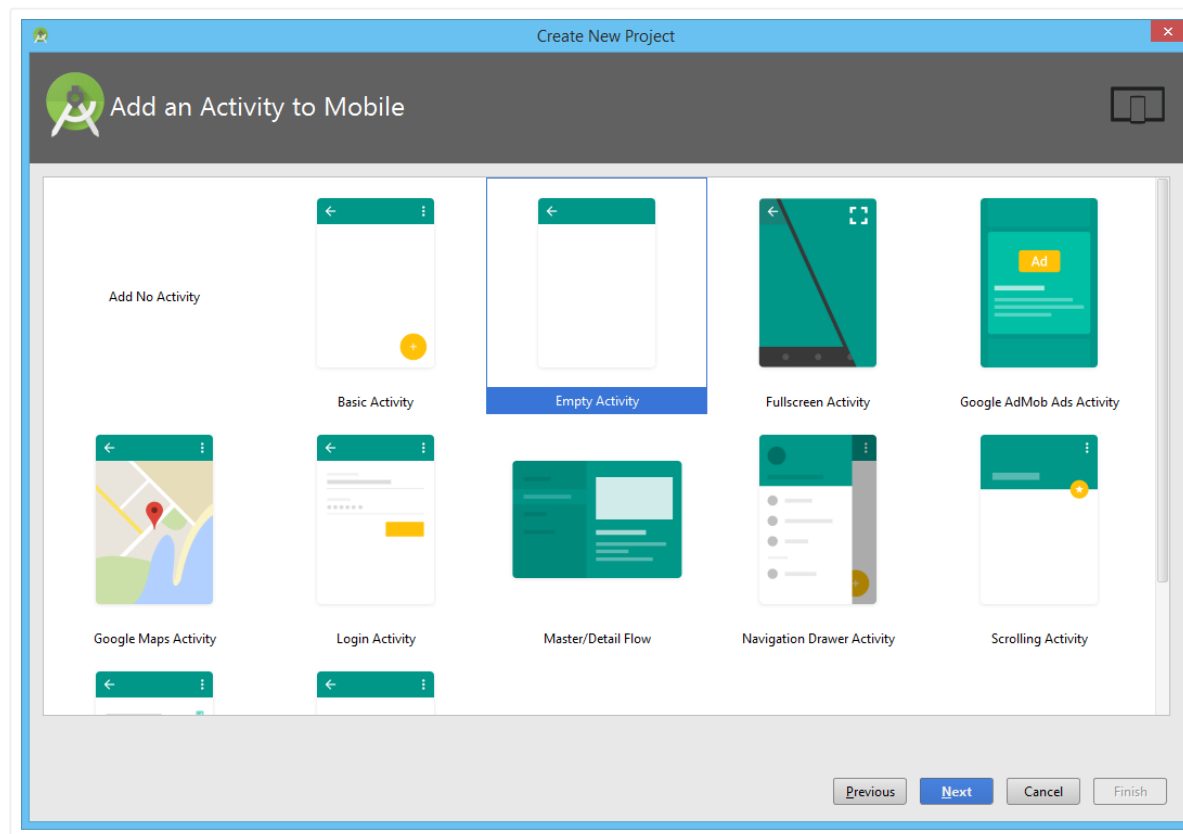
The wizard will guide through the creation of a new application.

With a choice of basic layout and Activity styles.

Complete the guided wizard and let the IDE settle down. A generic Android application, runnable on all Android devices, is now ready for development.

Compile projects

With the previous steps, you have simply prepared a basic environment for a generic Android application. Through the next steps, instead, your basic application will leverage on custom Datalogic SDK functionalities and will be compiled to be compatible with a Datalogic device.

In order to gain access to the SDK functionalities, applications need to be compiled with the right Datalogic SDK environment. To do so, right click on *app* folder under the Android project module, then select *Open Module Settings*.
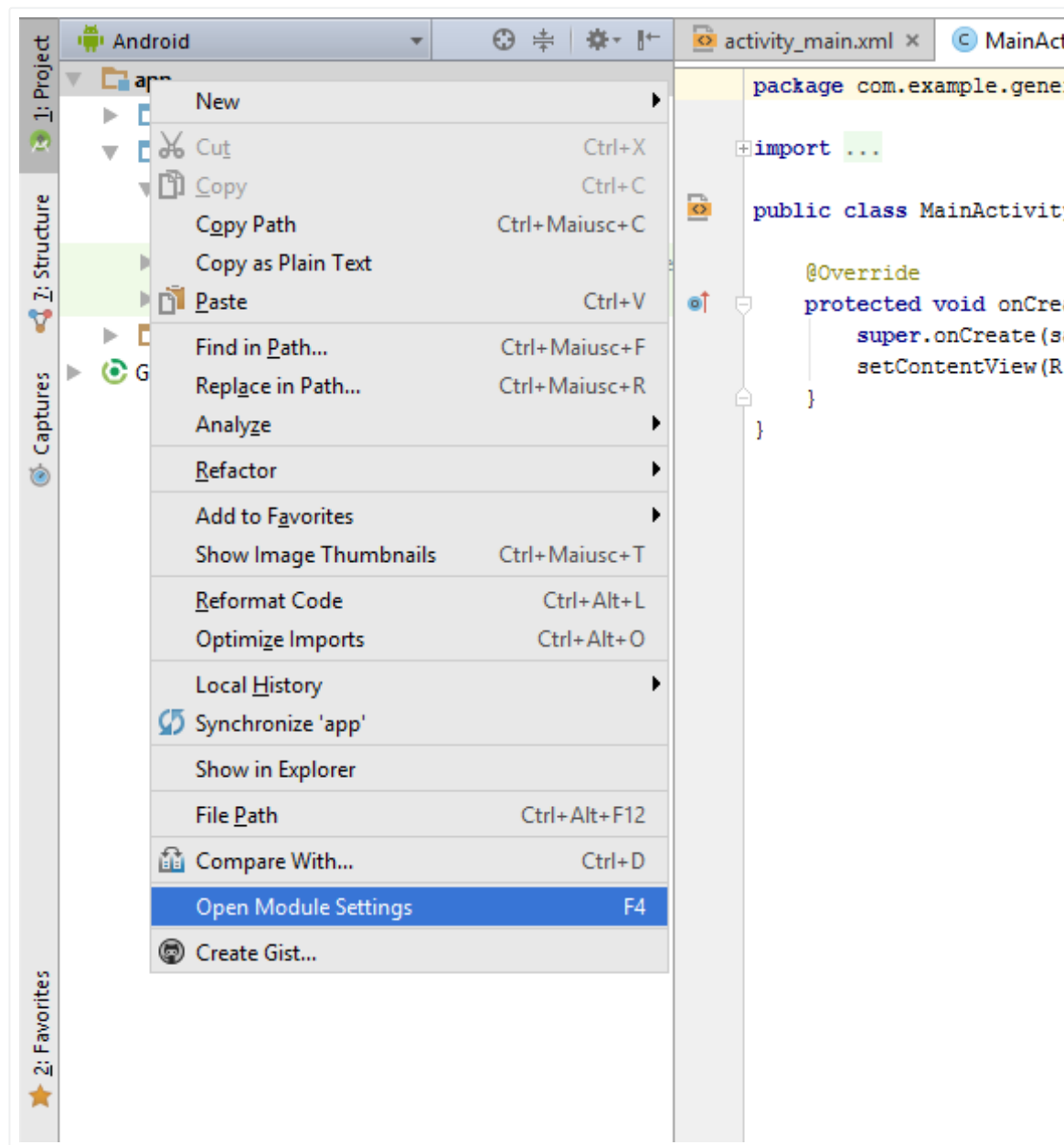
In the following window point to *Project Structure > Modules app* tab *Properties* and change the ***Compile Sdk Version*** accordingly, matching the right Datalogic SDK with the API level in use. In the showed example we are compiling apps with the latest Android 6.0 API level, meaning we need to select a corresponding Datalogic SDK matching the same level (rember to download and install the matching Datalogic Add-on). Confirm the choice by pressing ***OK***.

> ℹ️ The following step is mandatory in order to prepare the enviroment correctly
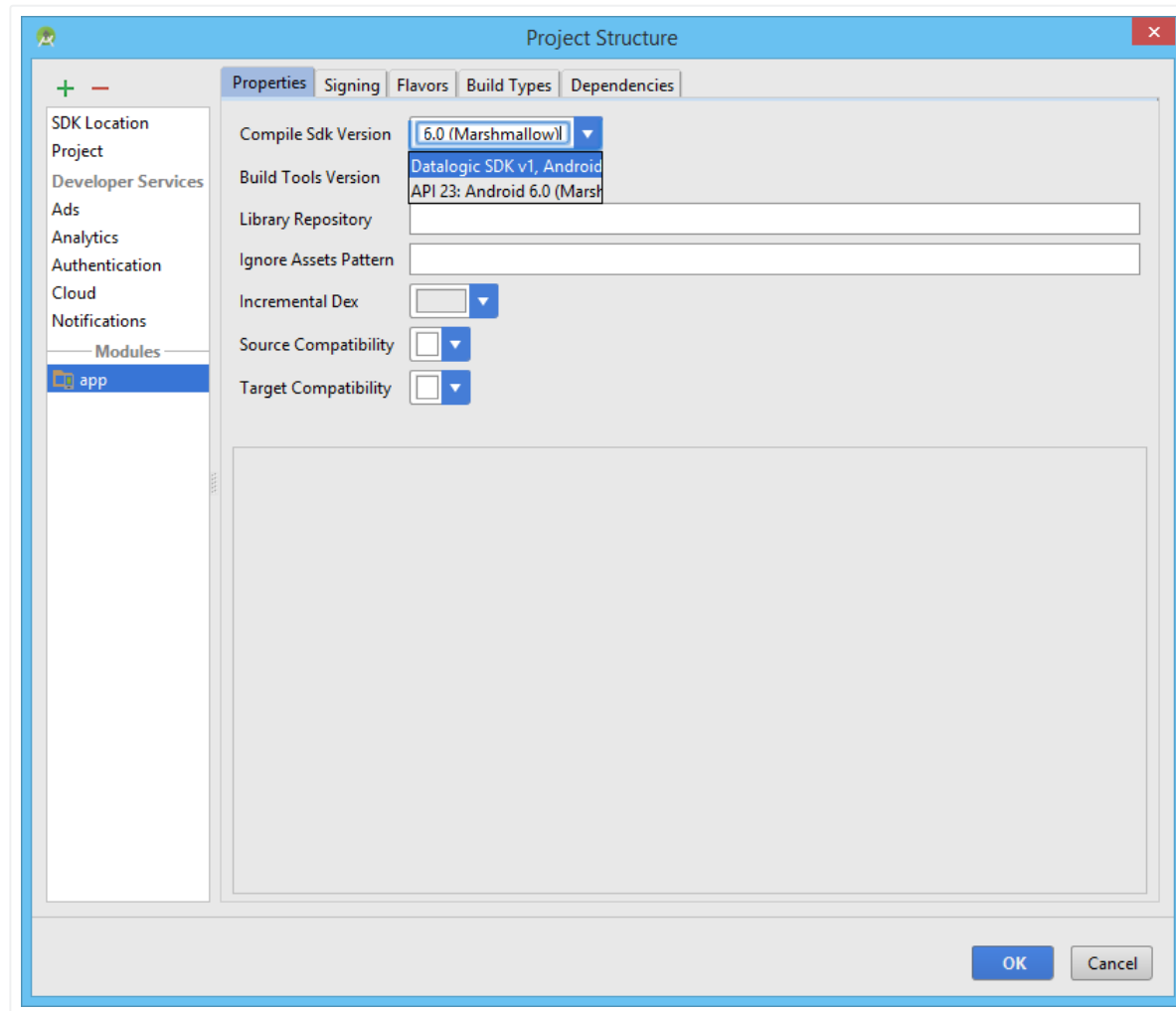
Android Studio will now switch to the Datalogic SDK v1, allowing you to develop and extend your app to the Datalogic Android APIs. Take a look at the API reference and available examples.

Gradle scripts

Compiling an application with the Datalogic SDK it is a matter of matching and using the most correct configuration of the *build.gradle* file associated to the application.

In the following example we are matching the *targetSdkVersion* with a corresponding level of Datalogic SDK Add-on (the trailing number is exactly *23*):

```
apply plugin: 'com.android.application'

android {
    compileSdkVersion 'Datalogic:Datalogic SDK v1:23'
    buildToolsVersion "23.0.3"

    defaultConfig {
        applicationId "com.example.generic.myapplication"
        minSdkVersion 16
        targetSdkVersion 23
    }
}
```

If you are pointing to a different target version, install the matching Datalogic SDK v1 Add-on through the Android SDK Manager.

Android application manifest

Android applications must have generally an *App Manifest* (AndroidManifest.xml), where all information about the application itself are exposed. Datalogic device compatible apps, relying on Datalogic SDK, require a mandatory change to the Android application manifest in order to work. It is strictly necessary the right usage of *<uses-library>* tag, to protect the developed applications against misuse and installation on

incompatible devices. In addition the *<uses-library>* links your application against the Datalogic SDK or possible Datalogic SDK Extension whenever is launched.

> ⚠️ Please notice that this step is *mandatory* to make your application fully compatible with the Datalogic SDK installed on the device. Don not forget to include all the libraries that you rely on or use, inside the AndroidManifest.xml.

The inclusion of the following tag (within the *<application>* element) in **all** Android applications built with the Datalogic SDK is necessary:

```xml
<application
        android:allowBackup="true"
        android:icon="@drawable/ic_launcher"
        android:label="@string/app_name"
        android:theme="@android:style/Theme.DeviceDefault" >

    <uses-library
        android:name="com.datalogic.device"
        android:required="true" />

</application>
```

While, in case of use of a further Datalogic SDK Extension, the following change is mandatory (e.g. Selfshopping Extension):

```xml
    <uses-library
        android:name="com.datalogic.extension.selfshopping"
        android:required="true" />
```

Pay attention while changing the required libraries inside your application's AndroidManifest. If you strictly rely on certain extension, do not forget to emphasize it with *android:required* tag. Thanks to it, you will protect your application from installation on incompatible devices.

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