

Desenvolvimento para Dispositivos Móveis

Introdução

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Sumário

- Um pouco sobre Android
- Montando o ambiente de desenvolvimento
- Criando e executando um aplicativo
- Estrutura de um projeto Android

Um pouco sobre **Android**

Um pouco sobre Android

- Open Handset Alliance
- Sistema Operacional Linux
- Máquina Virtual ART (Android Runtime)
- Vendas de smartphones no mundo:
 - Android: 70%
 - iOS: 21%

Versões do Android

- Cada versão é identificada por uma letra: A, B, C, D, ...



Android 1.5



Android 1.6



Android 2.0/2.1



Android 2.2.x



Android 2.3.x



Android 3.x



Android 4.0.x



Android 4.1.x



Android 4.4.x



Android 5.0



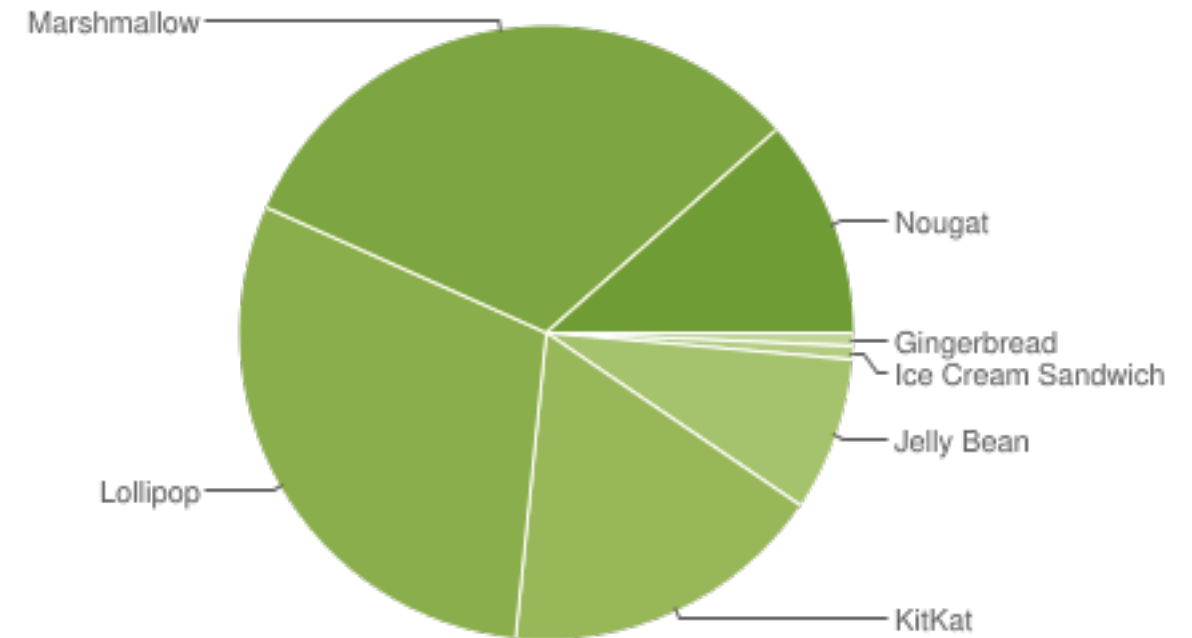
Android 6.0

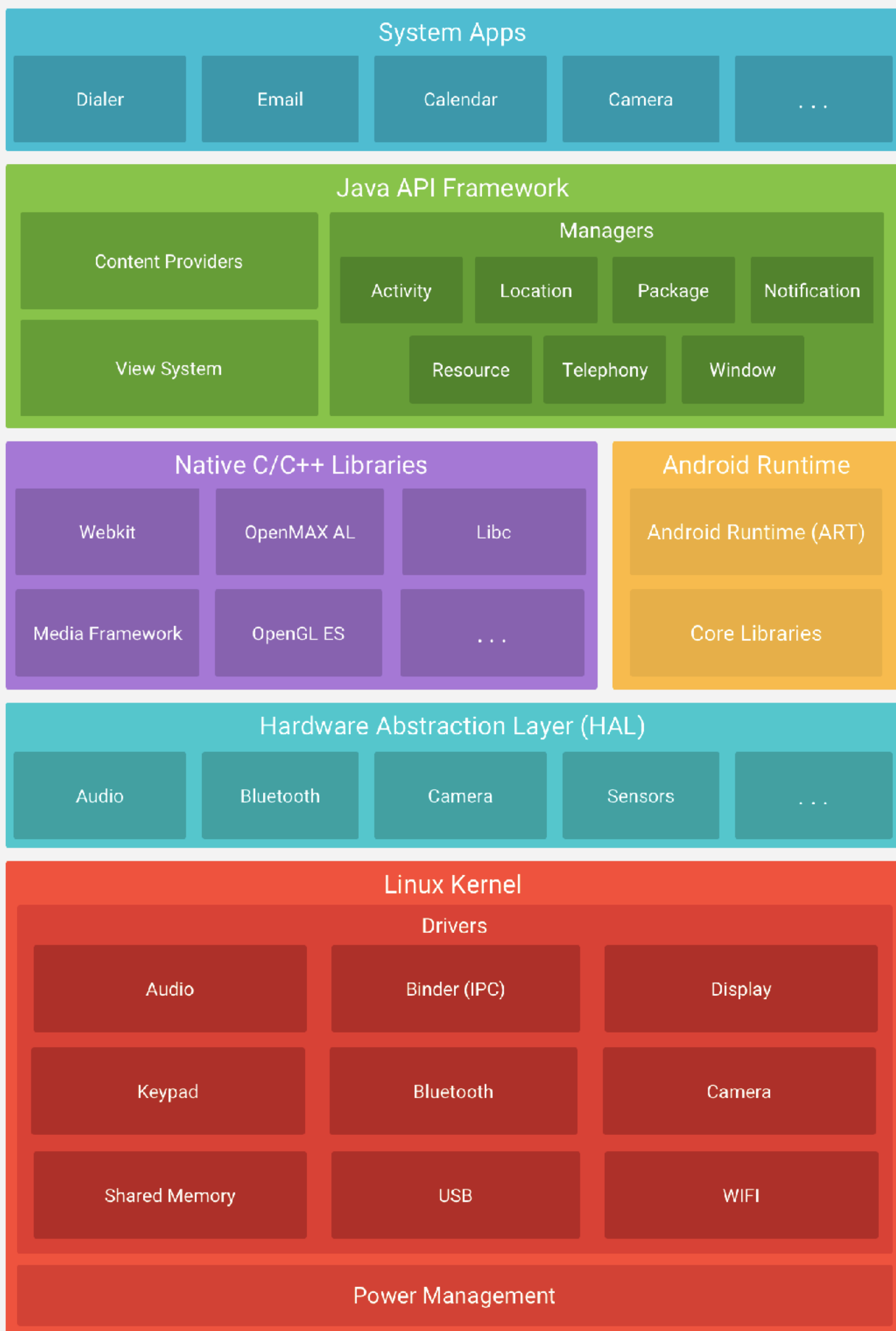


Android 7.0

Divisão do Mercado

Version	Codename	API	Distribution
2.3.3 - 2.3.7	Gingerbread	10	1%
4.0.3 - 4.0.4	Ice Cream Sandwich	15	1%
4.1.x	Jelly Bean	16	3%
4.2.x		17	4%
4.3		18	1%
4.4	KitKat	19	17%
5.0	Lollipop	21	8%
5.1		22	22%
6.0	Marshmallow	23	32%
7.0	Nougat	24	11%
7.1		25	1%





Arquitetura da Plataforma



Ambiente de Desenvolvimento

Java JDK Download

- <http://www.oracle.com/technetwork/pt/java/javase/downloads/index.html>

The screenshot shows the Oracle Java SE Downloads page. The top navigation bar includes the Oracle logo, links for login, help, country selection, community, user profile, and search. Below this is a secondary navigation bar with links for Products, Solutions, Downloads, Store, Support, Training, Partners, and About. The breadcrumb trail indicates the current location: Oracle Technology Network > Java > Java SE > Downloads.

On the left, a sidebar menu lists various Java-related topics: Java SE, Support for Java SE, Java Embedded, Java EE, Java ME, Java FX, Java DB, Web Tier, and Community.


The main content area is titled "Java SE Downloads" and features two prominent download buttons: "Java Platform (JDK) 8u111 / 8u112" and "NetBeans com JDK 8". Below these, a section titled "Java Platform, Standard Edition" provides details about the "Java SE 8u111 / 8u112" release, including a note about important security fixes and a warning about a planned change for MD5-signed JARs starting in April 2017.

On the right, there are two additional sections: "Java SDKs and Tools" with links to Java SE, Java EE and Glassfish, Java ME, Java Card, NetBeans IDE, and Java Mission Control; and "Java Resources" with links to Java APIs, Technical Articles, Demos and Videos, Forums, Java Magazine, Java.net, Developer Training, Tutorials, and Java.com.

At the bottom right, there is a "JDK DOWNLOAD" button.

Android Studio Download

- <https://developer.android.com/studio/index.html>

 Android Studio

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FEATURES

USER GUIDE

PREVIEW

Android Studio

The Official IDE for Android

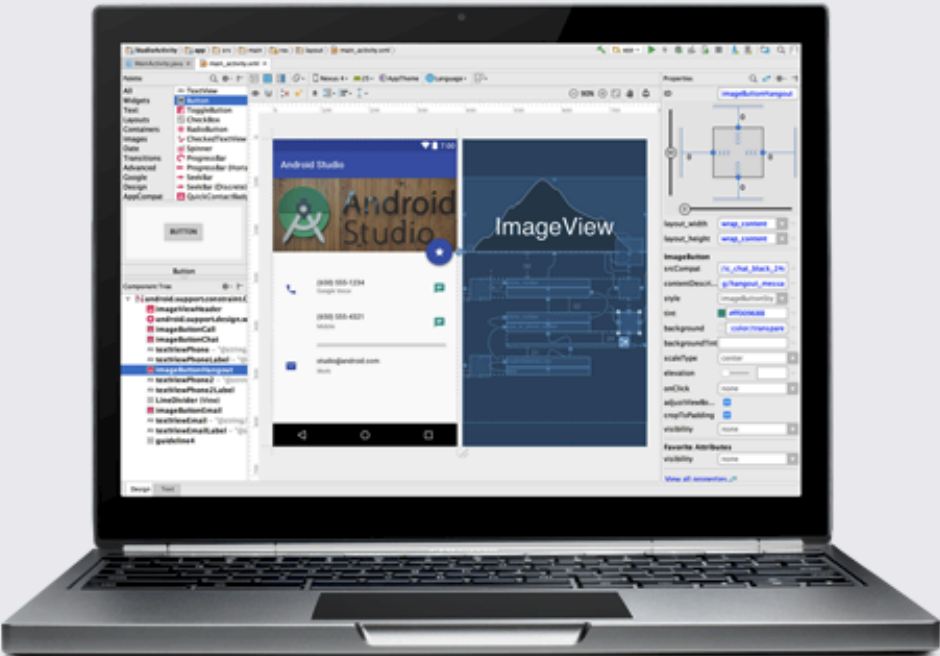
Android Studio provides the fastest tools for building apps on every type of Android device.

World-class code editing, debugging, performance tooling, a flexible build system, and an instant build/deploy system all allow you to focus on building unique and high quality apps.

DOWNLOAD ANDROID STUDIO
2.3.3 FOR MAC (463 MB)

➤ Read the docs

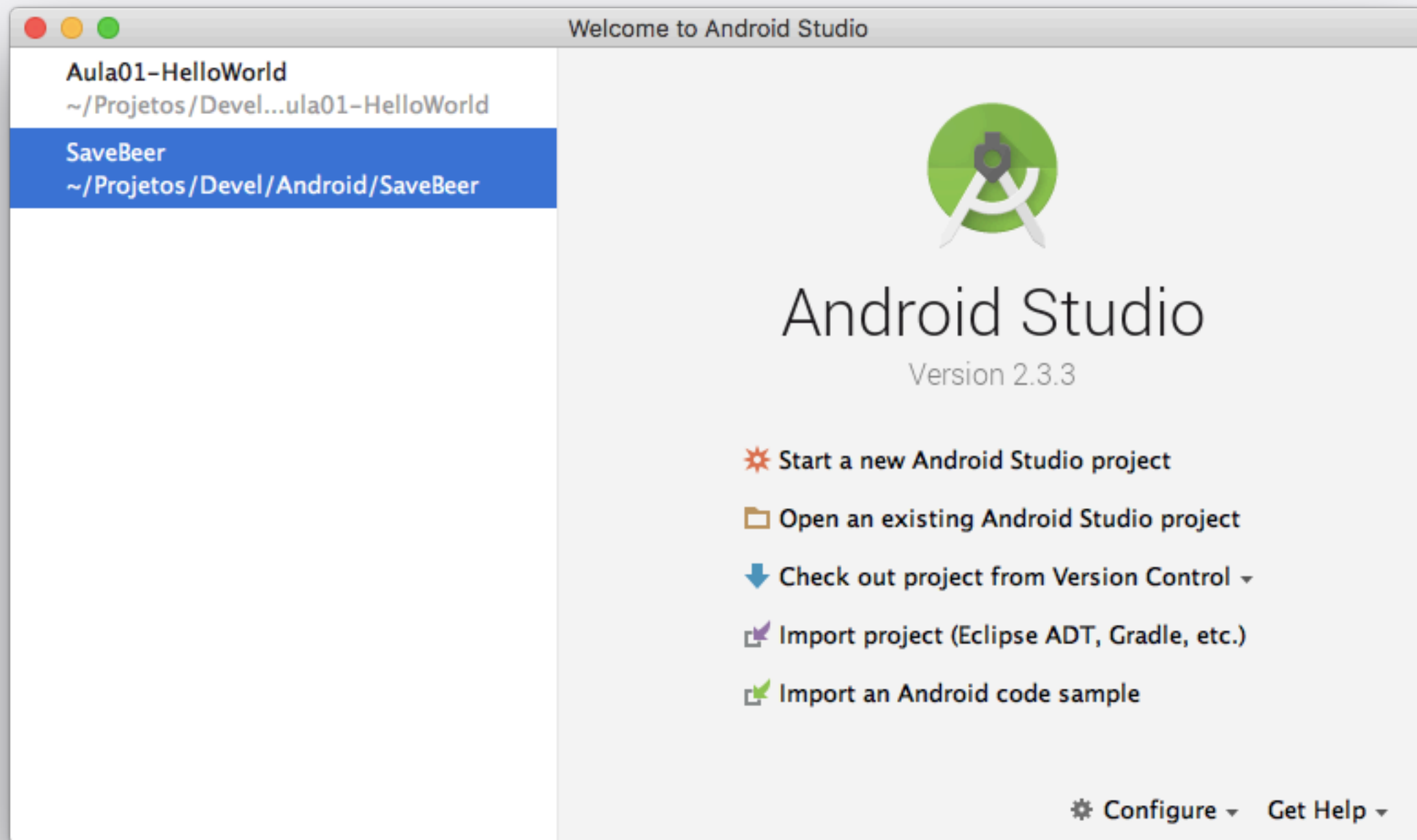
➤ See the release notes



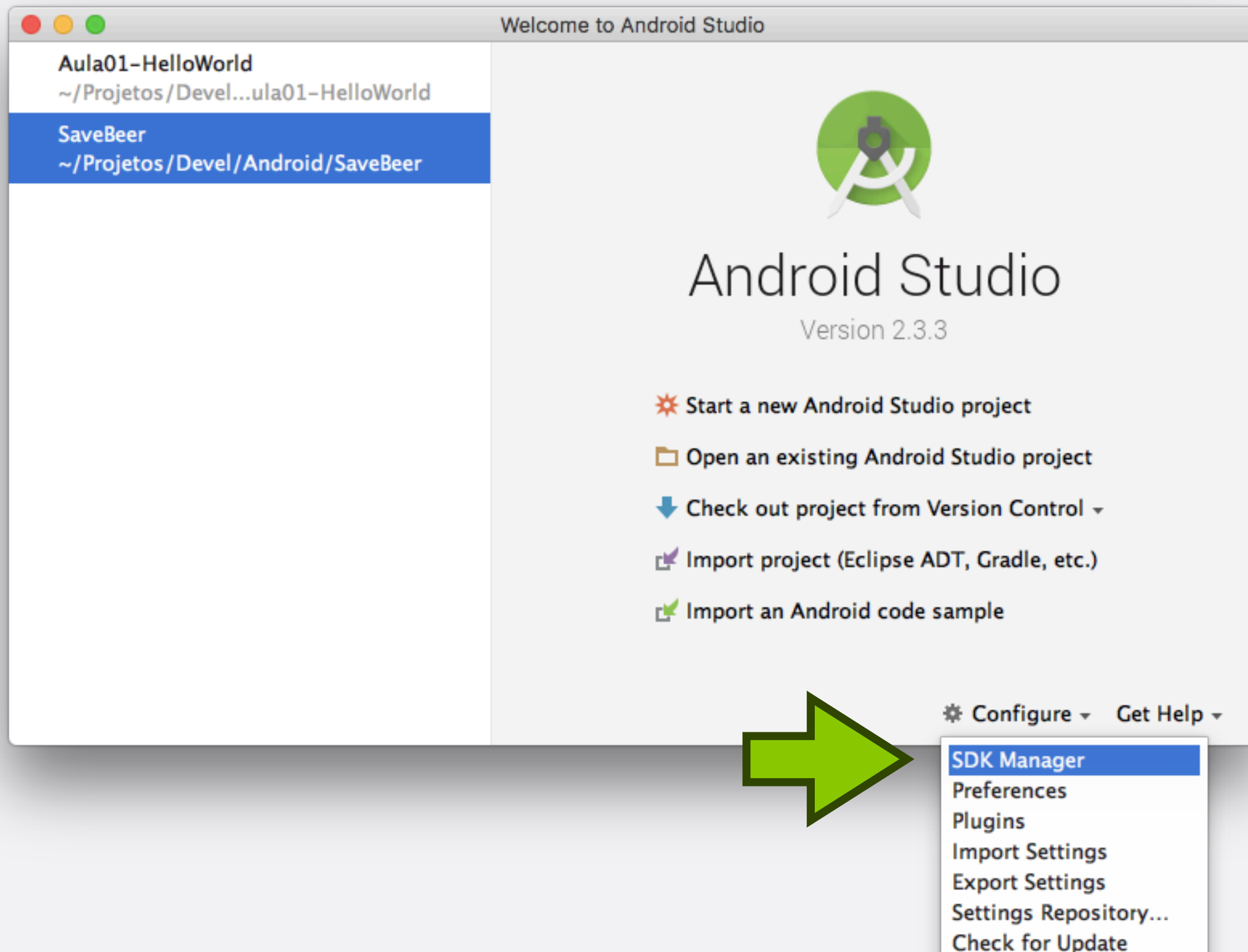
Ambiente de Desenvolvimento

- Android Studio ®
 - Versão especial do IntelliJ Idea
 - Ferramenta oficial para o desenvolvimento
- Gradle
 - Ferramenta de construção
 - Semelhante ao ANT
 - Utiliza Groovy como linguagem de Script

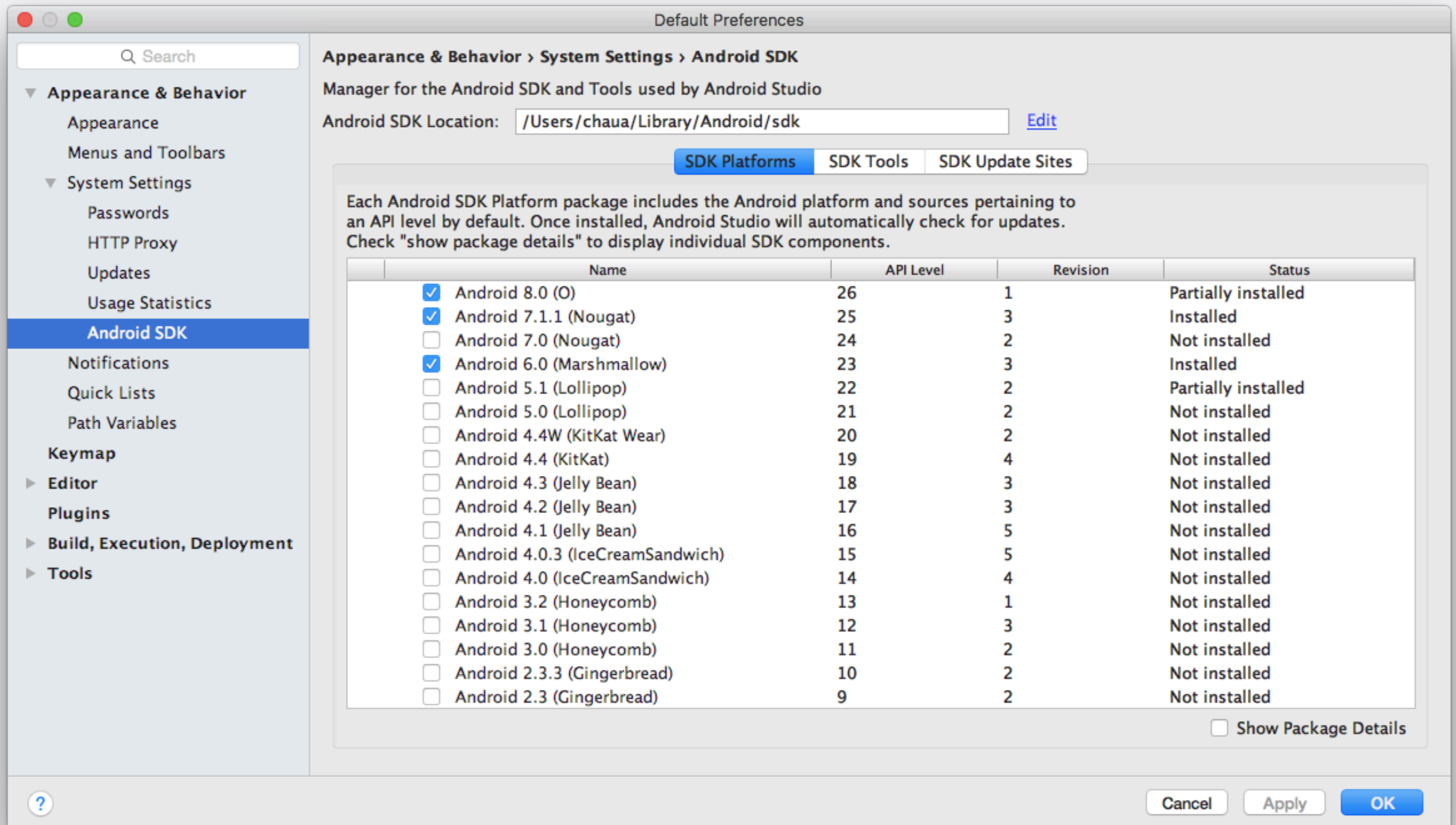
Ambiente de Desenvolvimento



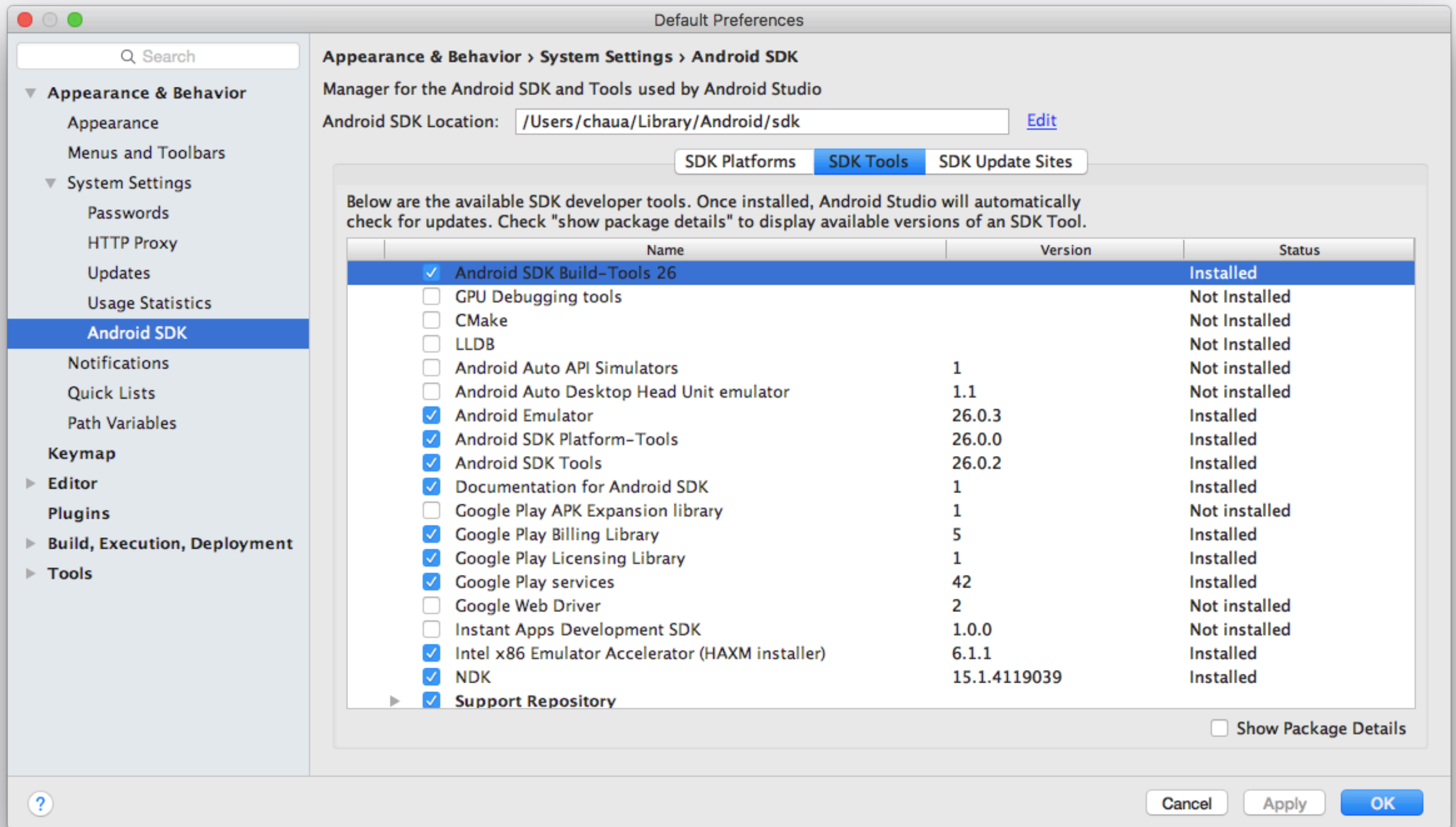
Ambiente de Desenvolvimento



Android SDK



Android SDK



Criando um novo **Aplicativo**

Sobre Aplicativos

- **Android** é um sistema **Linux** multi usuários
- Cada **aplicativo** é um **usuário diferente**
- Um **usuário** não tem permissão para acessar os **arquivos** de outro
- **Princípios** do Android:
 - Cada aplicativo tem o **mínimo de permissão** possível
 - Precisa **solicitar permissão** para acessar dados do usuário
 - **Exemplo:** SMS, Contatos, Câmera, etc

Componentes

- Atividades
 - Serviços
 - Broadcast receivers
 - Content providers
-
- Todos os componentes e recursos utilizados devem ser cadastrados no arquivo de **Manifesto**

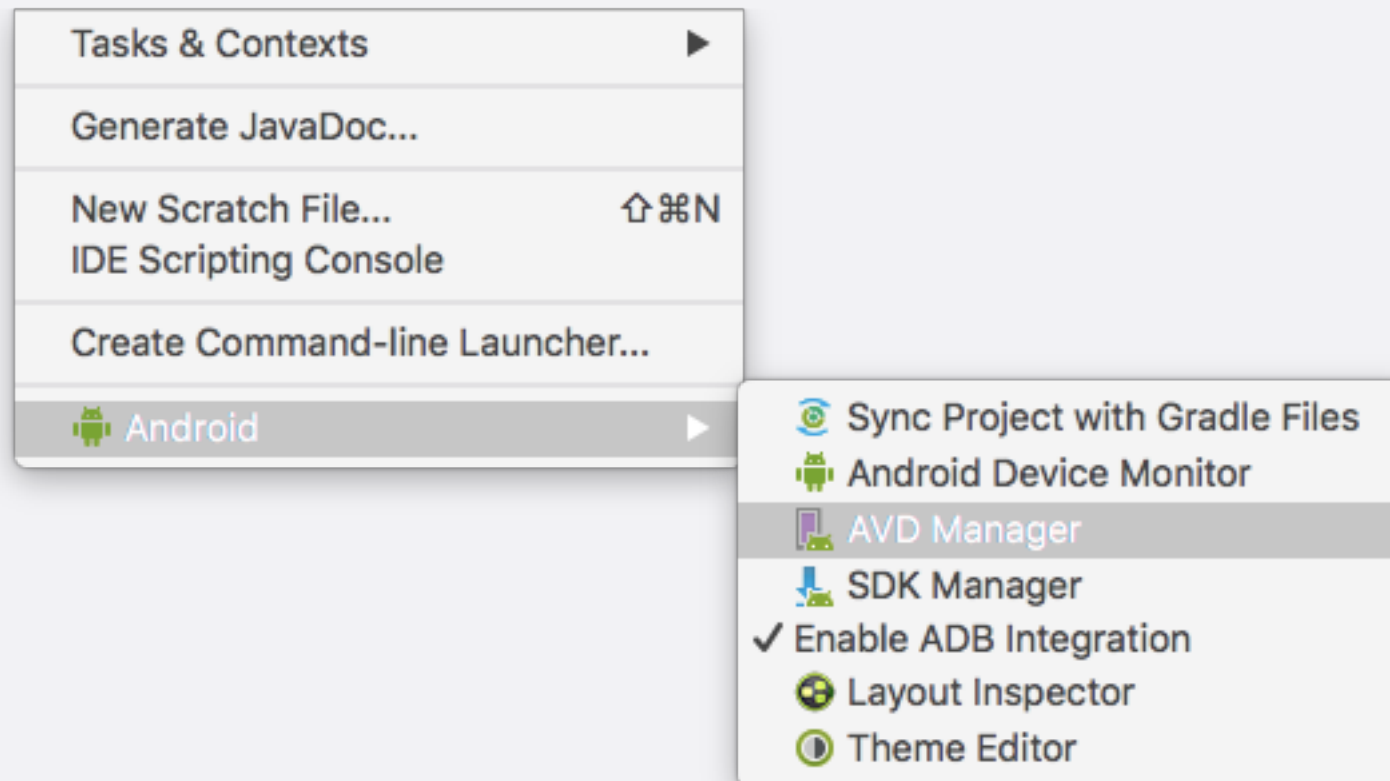
Demonstração



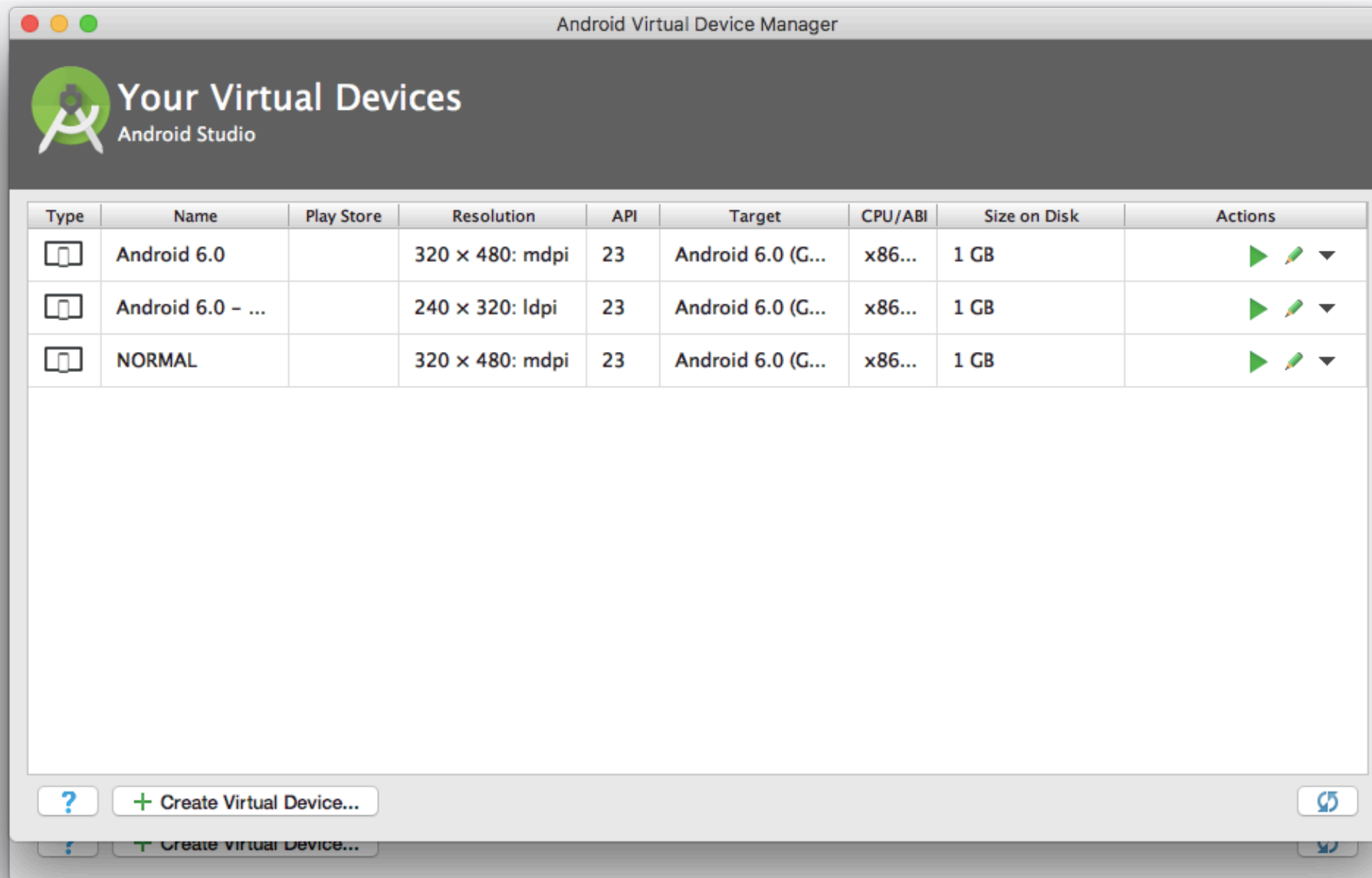
Executando o Aplicativo

Android AVD

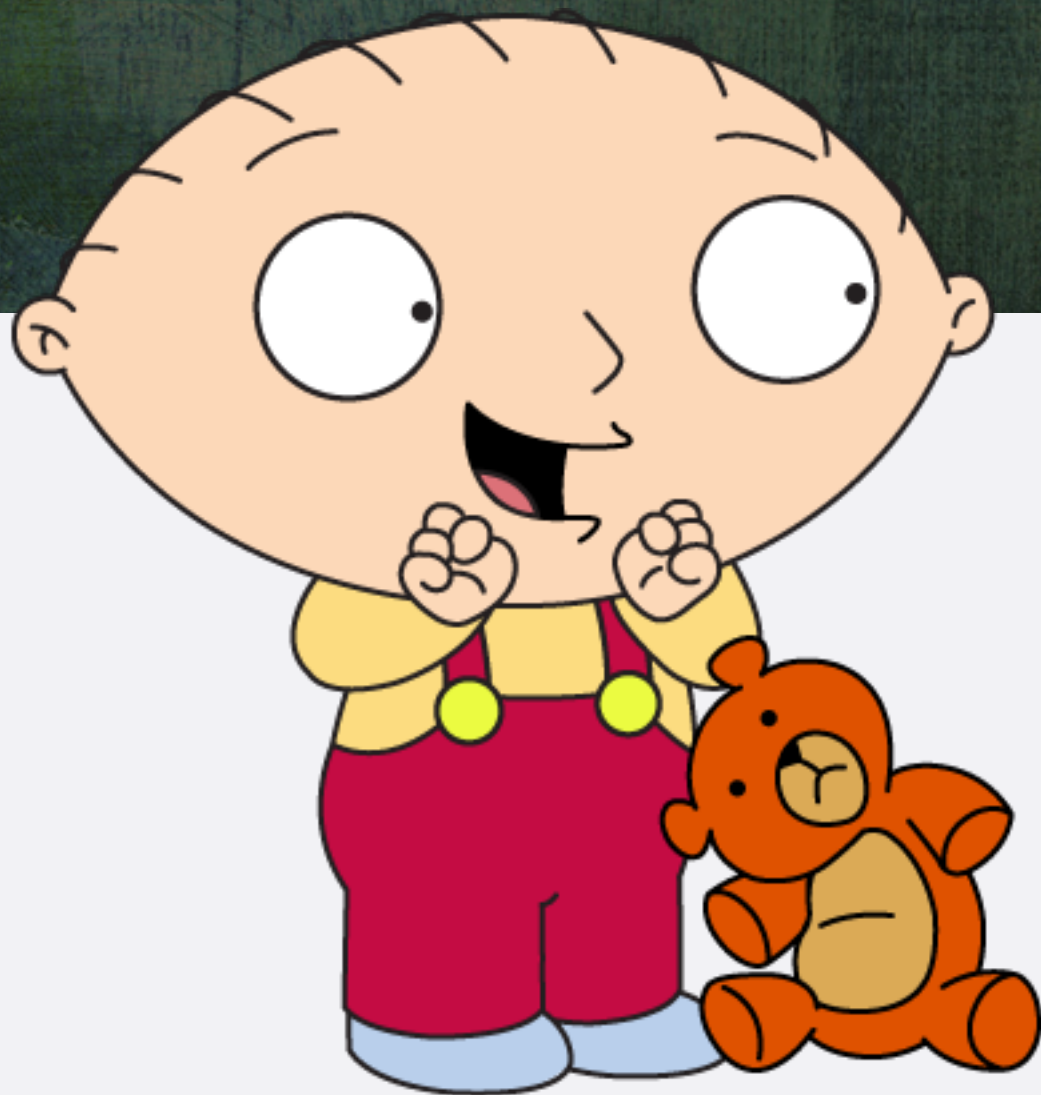
Tools >



Android AVD

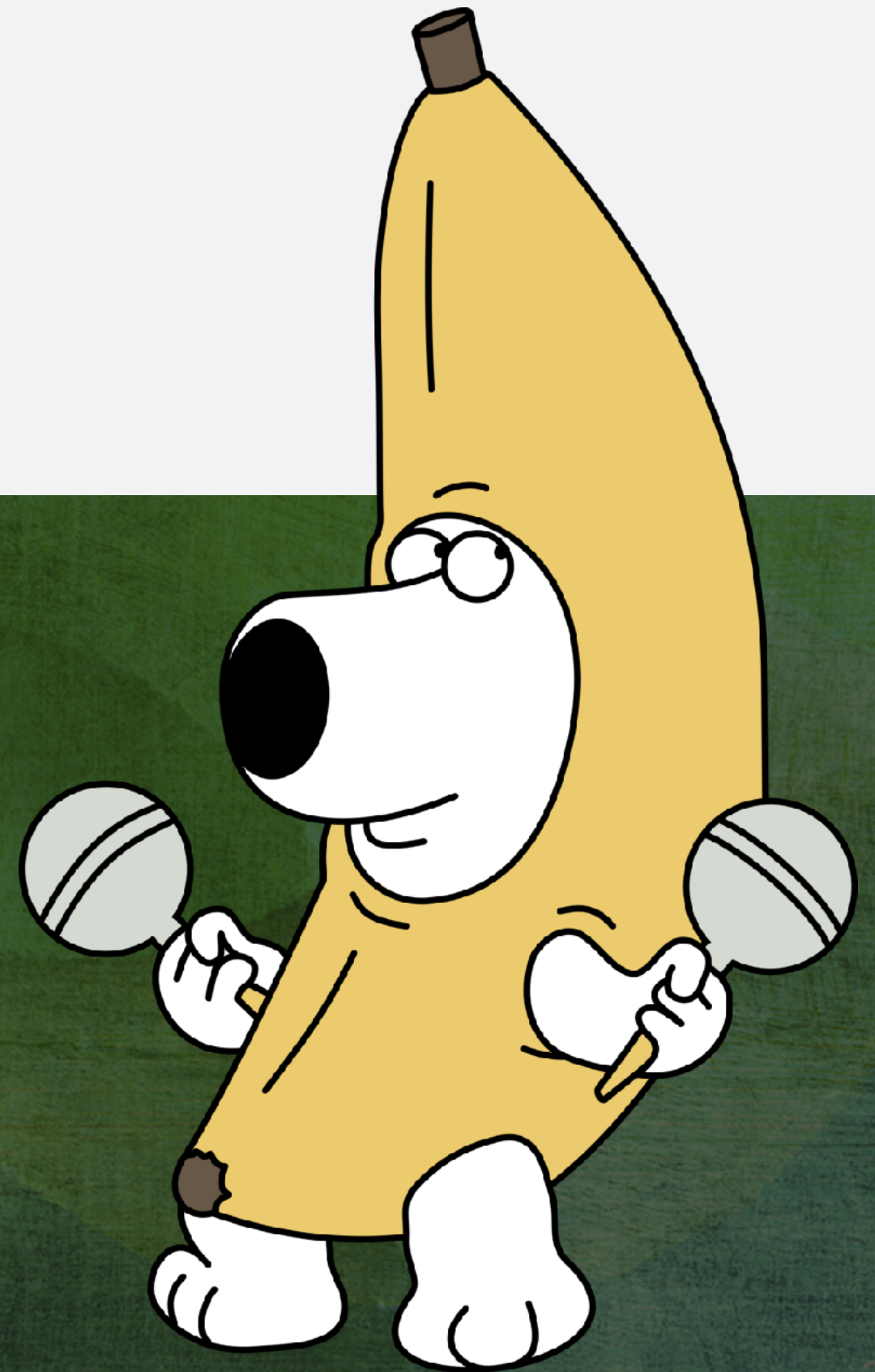


Demonstração



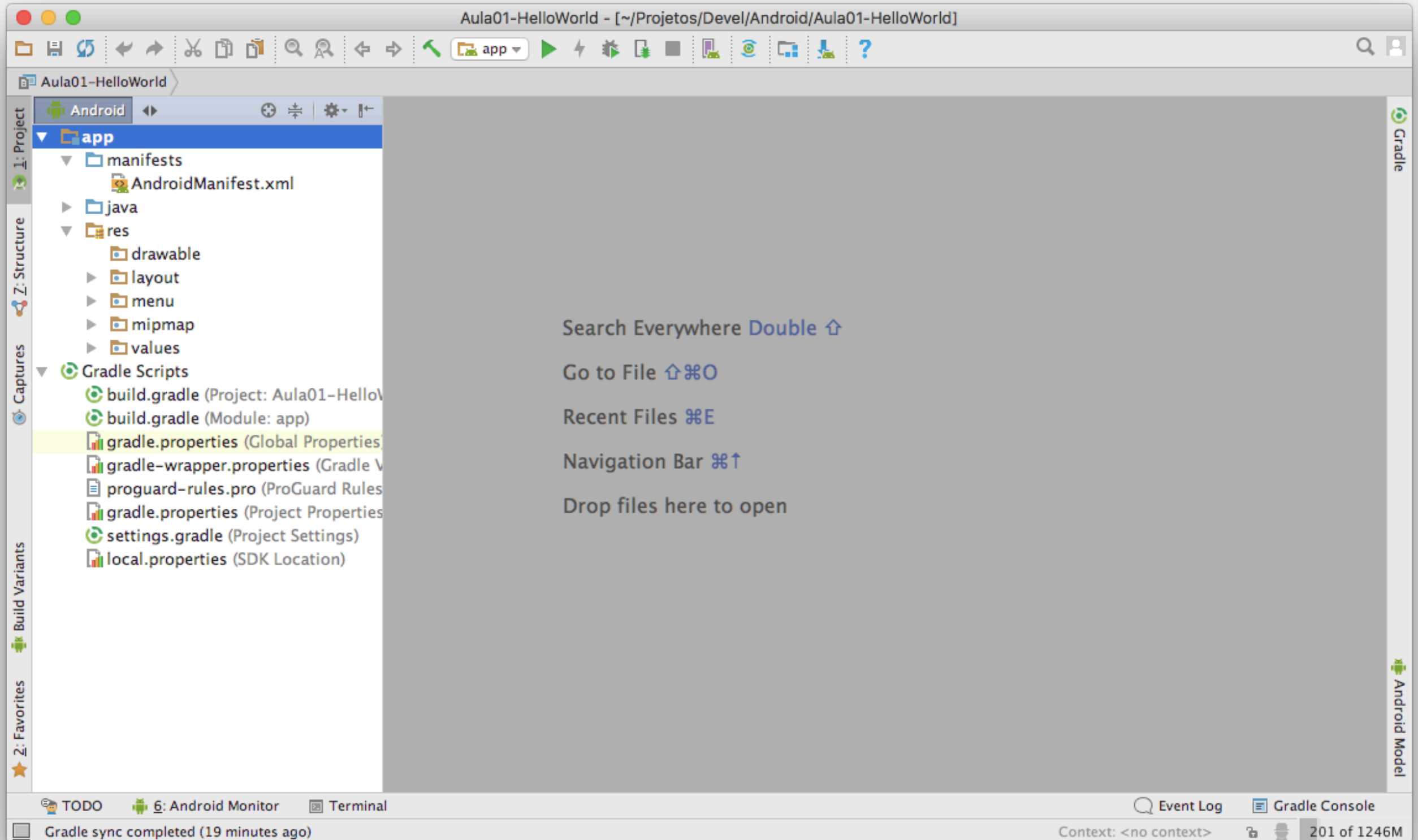
Alterando o Aplicativo

Demonstração



Estrutura de um Projeto Android

Entendendo a Estrutura de um Projeto



Dúvidas?

