

# Instalação e Configuração do Android Studio no Sistema Operacional Windows

# Programação Multiplataforma Prof. Sérgio Luiz Banin



Instalação e configuração do Android Studio

Acesse a página do Android Studio e baixe o instalador

#### https://developer.android.com/studio

Eu vou usar a versão para Windows, mas você pode desejar usar a versão Linux ou Mac. Sem problemas, nessa mesma página você as encontrará.

Note que este programa instalador tem mais de 900 Mb

Quando preparei esta série de aulas do curso a versão estável mais recente tem o número 2020.3.1, denominada "Arctic Fox" Nesta versão foi introduzida uma nova sistemática de referência à versão do Android Studio

Para saber mais sobre essa nova numeração acesse o link:

https://www.thurrott.com/dev/244591/android-studio-moves-to-a-new-versioning-scheme

Todas as versões anteriores de Android Studio estão disponíveis através deste link

https://developer.android.com/studio/archive





Instalação e configuração do Android Studio

## Observações

- Recomendo que você utilize essa versão porque todas as nossas aulas são baseadas nela;
- Ficará mais fácil acompanhar o curso se você usar a mesma versão, porque todos os botões, menus, painéis e ferramentas serão os mesmos;
- É comum que o Google altere a posição desses elementos de uma versão para outra, então se você usar outra versão terá que procurar elementos que tenham outra localização;
- Neste curso vou utilizar o sistema operacional Windows. Você pode usar o Linux ou até mesmo um Mac. Se a versão do Android Studio for a mesma, todos os elementos da interface serão os mesmos e estarão no mesmo local.

#### Requisitos do Sistema

#### Windows

- 64-bit Microsoft® Windows® 8/10
- x86\_64 CPU architecture; 2nd generation Intel Core or newer, or AMD CPU with support for a <u>Windows Hypervisor</u>
- 8 GB RAM or more
- 8 GB of available disk space minimum (IDE + Android SDK + Android Emulator)
- 1280 x 800 minimum screen resolution

#### Mac

- MacOS® 10.14 (Mojave) or higher
- ARM-based chips, or 2nd generation Intel Core or newer with support for <u>Hypervisor.Framework</u>
- 8 GB RAM or more
- 8 GB of available disk space minimum (IDE + Android SDK + Android Emulator)
- 1280 x 800 minimum screen resolution

#### Linux

- Any 64-bit Linux distribution that supports Gnome, KDE, or Unity DE; GNU C Library (glibc) 2.31 or later.
- x86\_64 CPU architecture; 2nd generation Intel Core or newer, or AMD processor with support for AMD Virtualization (AMD-V) and SSSE3
- 8 GB RAM or more
- 8 GB of available disk space minimum (IDE + Android SDK + Android Emulator)
- 1280 x 800 minimum screen
  resolution

#### Chrome OS

For information on recommended devices and specifications, as well as Android Emulator support, visit <u>chromeos.dev</u>.

#### Instalação e configuração do Android Studio

#### Vamos à Instalação





Instalação e configuração do Android Studio

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🚈 Android Studio Setup		- 🗆 X
2	Choose Components Choose which features of Andro	id Studio you want to install.
Check the components y install. Click Next to cont	ou want to install and uncheck the co inue.	mponents you don't want to
Select components to ins	stall: Android Studio	Description Position your mouse over a component to see its description,
Space required: 1.5GB		
	< <u>B</u> ack	<u>N</u> ext > Cancel



Instalação e configuração do Android Studio

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ndroid Stu	udio Setup					—		×
k		Configu Install L	ration Sett ocations	lings				
Android Sti The loca Click Bro	udio Installa tion specifie wse to cust	ition Location d must have omize:	at least 500	MB of free	space.			
D:\Arq	uivos de Pro	ogramas\Andr	oid Studio			Br	owse	
D: (Arq	uivos de Pro	ogramas (Andr	oid Studio			Br	owse	
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Instalação e configuração do Android Studio

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	Choose S	tart Menu	Folder				
24	Choose a	Start Menu	folder for	the Andro	oid Studio	shortcu	S.
Select the Start Menu folde	r in which yo	u would like	to create	the progr	am's sho	rtcuts. Y	ou
can also enter a name to cr	eate a new f	folder.					
Android Chudie							
Anarola Studio							_
Accessibility							^
Accessories							
Android Studio							
Aplicativo Itaú							
Bloodshed Dev-C++							
DataNumen Disk Image							
Dell							
EaseUS Partition Master 1	5.5						
Embarcadero RAD Studio ) EPSON	(E5						~
Do not create shortcuts							
Do not create shortcuts							
Do not create shortcuts			< Pack	Inc	tall	Car	cel



Instalação e configuração do Android Studio

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🎮 Android Studio Setup	-		$\times$
	Installing Please wait while Android Studio is being installed.		
Extract: kotlin-plugin.jar			
Show <u>d</u> etails			
	< <u>B</u> ack №ext >	Cano	el

🛋 Android Studio Setup			—		$\times$
2	Installation Cor Setup was comp	<b>nplete</b> leted successfu	lly.		
Completed					
Show <u>d</u> etails					
		< <u>B</u> ack	<u>N</u> ext >	Can	cel

#### Pronto! Levou menos de 1 minuto



#### Ao chegar nessa tela a instalação estará finalizada





Instalação e configuração do Android Studio

# Agora começa a etapa de Configuração – Parte 1





Instalação e configuração do Android Studio

#### Configuração – Parte 1 – SDK Padrão

Android Studio Setup Wizard	- D >
SDK Components Setup	
Check the components you want to update/install. Click Next to	continue.
Android SDK – (375 MB)	Android platform libraries for targeting API 31: Android 12
✓ API 31: Android 12 Preview (S) – (108 MB)	
Android SDK Location:	Total download size: 483 MB
D:\AndroidStudio\SDK	156 GB (drive )
	Previo Next Cancel Finish



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#### Configuração – Parte 1 – SDK Padrão



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- Esta próxima etapa da configuração diz respeito à plataforma (ou plataformas) do SDK Android que precisaremos ter disponível na nossa máquina, para poder compilar os aplicativos que desenvolveremos.
- Tais plataformas do SDK são chamadas de APIs
- Na etapa anterior instalamos a API 31 porque era a opção oferecida, sem a possibilidade de alteração
- Agora veremos como é possível alterar isso, ou seja, instalar outras API's
- E também vamos configurar alguns aspectos extras e igualmente necessários







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Instalação e configuração do Android Studio

Settings for New Projects  $\times$ Appearance & Behavior > System Settings > Android SDK Q Manager for the Android SDK and Tools used by the IDE ✓ Appearance & Behavior Android SDK Location: D:\AndroidStudio\SDK Edit Optimize disk space Appearance Menus and Toolbars SDK Platforms SDK Tools SDK Update Sites System Settings Each Android SDK Platform package includes the Android platform and sources pertaining to an API level by HTTP Proxy default. Once installed, the IDE will automatically check for updates. Check "show package details" to display individual SDK components. Data Sharing Date Formats Name API Level Revision Status Updates Android 12 Preview (S) 31 1 Installed Android 11.0 (R) 30 3 Not installed Process Elevation Android 10.0 (Q) 29 5 Not installed Passwords 28 Android 9.0 (Pie) 6 Not installed 27 Android 8.1 (Oreo) 3 Not installed Memory Settings Android 8.0 (Oreo) 26 2 Not installed 25 3 Notifications Android 7.1.1 (Nougat) Not installed Android 7.0 (Nougat) 24 2 Not installed Quick Lists Android 6.0 (Marshmallow) 23 3 Not installed Path Variables Android 5.1 (Lollipop) 22 2 Not installed Keymap Android 5.0 (Lollipop) 21 2 Not installed > Editor Android 4.4W (KitKat Wear) 20 2 Not installed Android 4.4 (KitKat) 19 > Build, Execution, Deployment 4 Not installed Android 4.3 (Jelly Bean) 18 3 Not installed Kotlin Android 4.2 (Jelly Bean) 17 3 Not installed > Tools 16 5 Android 4.1 (Jelly Bean) Not installed Android 4.0.3 (IceCreamSandwich) 15 5 Not installed Android 4.0 (IceCreamSandwich) 14 4 Not installed Hide Obsolete Package Show Package Details ? Cancel Apply



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2	Appearar	ce & Behavior 👌 System Settings 👌 Android SDK				Reset
Appearance & Behavior	Manager	for the Android SDK and Tools used by the IDE				
Appearance	Android S	DK Location: D:\AndroidStudio\SDK		Edit Op	timize disk space	
Menus and Toolbars	SDK Plat	forms SDK Tools SDK Update Sites				
✓ System Settings						
HTTP Proxy	Each An default	droid SDK Platform package includes the Android platform and s Once installed, the IDE will automatically check for updates. Chec	ources pertaining to an k "show package details	API level by		
Data Sharing	individu	al SDK components.	k show package details	to display		
Date Formats	N	lame	API Level	Revision	Status	
Updates	~	Android 12 Preview (S)				
Process Elevation		Android SDK Platform 31	31	1	Installed	
Passwords		Google APIs ARM 64 v8a System Image	31	6	Not installed	
Android SDK		Google APIs Intel x86 Atom_64 System Image	31	6	Not installed	
Momony Settings		Google Play Intel x86 Atom_64 System Image	31	6	Not installed	
Memory Settings		A hard CDK Platform 20	20	2	Net installed	
Notifications	↓ ↓	Ardroid SDK Platform 30	30	3	Not installed	
Quick Lists	-	Ardroid TV Intel v86 Atom System Image	30	3	Not installed	
Path Variables		Google TV Intel x86 Atom System Image	30	3	Not installed	
Keymap		Google APIs ARM 64 v8a System Image	30	11	Not installed	
Editor	<u>+</u>	Gogle APIs Intel x86 Atom System Image	30	10	Not installed	
Build, Execution, Deployment		Gogle APIs Intel x86 Atom_64 System Image	30	10	Not installed	
Kotlin	+	🗹 Gogle Play Intel x86 Atom System Image	30	9	Not installed	
Tools		- Cogle Play Intel x86 Atom_64 System Image	30	10	Not installed	
	~	/ Android 10.0 (Q)				
		Android SDK Platform 29	29	5	Not installed	
		Sources for Android 29	29	1	Not installed	
			Hide Obsolete	Packages 🔽	Show Package De	etails



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📥 Co	onfirm Change	×
A	The following components will be installed: - Android SDK Platform 30 revision 3 - Google Play Intel x86 Atom System Image revision 9 - Sources for Android 30 revision 1 - Google APIs Intel x86 Atom System Image revision 10 Disk usage: - Estimated download size: 1,8 GB - Estimated disk space to be additionally occupied on SDK partition after installation: 7,4 ( - Currently available disk space in SDK root (D:\AndroidStudio\SDK): 154,7 GB OK Cancel	ЗB

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Opsss... desabilitado

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## Talvez um café?? ...porque vai demorar um pouco

Component Installer			<b>)</b> /ရ
Installing Requested Components SDK Path: D:\AndroidStudio\SDK		6	
<pre>Packages to install: - Google AFIs Intel x86 Atom System Image (system-images;android-30;google_ap - Sources for Android 30 (sources;android-30) - Google Play Intel x86 Atom System Image (system-images;android-30;google_ap - Android SDK Platform 30 (platforms;android-30) Preparing "Install Google AFIs Intel x86 Atom System Image (revision: 10)". Downloading https://dl.google.com/android/repository/sys-img/google_apis/x86-</pre>	is;x86) is_playstore;x86) 30_r10.zip		Coffee
Downloading x86-30_r10.zip (11%): 68.2 / 620,3 MB			
https://dl.google.com/android/repository/sys-img/google_apis/x86-30_r10.zip Please wait until the installation finishes			



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#### Mas acaba!



SDK Quickfix Installation

Component Installer

#### Installing Requested Components

SDK Path:	D:\AndroidStudio\SDK
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Preparing "Install Android SDK Platform 30 (revision: 3)".	
Downloading https://dl.google.com/android/repository/platform-30_r03.zip	
"Install Android SDK Platform 30 (revision: 3)" ready.	
Installing Google APIs Intel x86 Atom System Image in D:\AndroidStudio\SDK	DK\system-images\android-30\google_apis\x86
"Install Google APIs Intel x86 Atom System Image (revision: 10)" complete.	e.
"Install Google APIs Intel x86 Atom System Image (revision: 10)" finished.	1.
Installing Sources for Android 30 in D:\AndroidStudio\SDK\sources\android-	1-30
"Install Sources for Android 30 (revision: 1)" complete.	
"Install Sources for Android 30 (revision: 1)" finished.	
Installing Google Play Intel x86 Atom System Image in	
D:\AndroidStudio\SDK\system-images\android-30\google_apis_playstore\x86	
"Install Google Play Intel x86 Atom System Image (revision: 9)" complete.	
"Install Google Play Intel x86 Atom System Image (revision: 9)" finished.	
Installing Android SDK Platform 30 in D:\AndroidStudio\SDK\platforms\andro	roid-30
"Install Android SDK Platform 30 (revision: 3)" complete.	
"Install Android SDK Platform 30 (revision: 3)" finished.	
Done	
Background	Previous Next Cancel Finish



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Se desejar você pode instalar outras versões do SDK. Eu também uso a API 22

2*	Appearance & Benavior / System Settings / Android SDK			
Appearance & Behavior	Manager for the Android SDK and Tools used by Android Studio			
Appearance Android SDK Location: D:\AndroidStudio\SDK				mize disk space
Menus and Toolbars	SDK Platforms SDK Tools SDK Lindate Sites			
System Settings	SER Hallorins SER Tools SER opdate Sites			
Passwords HTTP Proxy	Each Android SDK Platform package includes the Android platform and s default. Once installed, Android Studio will automatically check for updat display individual SDK components.	ources pertaining to an es. Check "show package	API level by e details" to	
Data Sharing	Name	API Level	Revision	Status
Date Formats	Intel x86 Atom System Image	23	10	Not installed
Updates	Intel x86 Atom_64 System Image	23	10	Not installed
Android SDK	Google APIs ARM EABI v7a System Image	23	33	Not installed
Marray Cattings	Google APIs Intel x86 Atom System Image	23	33	Not installed
Memory Settings	Google APIs Intel x86 Atom_64 System Image	23	33	Not installed
Notifications	Andro 1 5.1 (Lollipop)			
Quick Lists	Goc gle APIs	22	1	Not installed
Path Variables	And roid SDK Platform 22	22	2	Installed
Keymap	Sou ces for Android 22	22	1	Installed
Editor	And roid TV Intel x86 Atom System Image	22	3	Not installed
Pluging	ARI EABI v7a System Image	22	2	Not installed
	Inte x86 Atom System Image	22	6	Not installed
Build, Execution, Deployment	Inte x86 Atom_64 System Image	22	6	Not installed
Kotlin	Google APIs ARM EABI v7a System Image	22	26	Not installed
► Tools	Godgle APIs Intel x86 Atom System Image	22	26	Installed
	Google APIs Intel x86 Atom_64 System Image	22	20	Not installed
		21	1	Notinstalled
	Google APIs	21	2	Not installed
			2	
		🗹 Hide Obsole	te Packages 【	🖉 Show Package De

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Fim.

👅 Welcome to Android Studio				- 0	×
Android Studio Arctic Fox   2020.3.1	Q Search projects	New Project	Open	Get from VCS	Profile or Debug APK
Projects	<b>Teste</b> D:\AndroidStudioProjects\Teste				Import Project (Gradie, Eclipse ADT, etc.)
Customize Plugins	Boas Vindas D:\AndroidStudioProjects\BoasVindas			l	C AVD Manager
Learn Android Studio				Andro	id Virtual Devices
					Android Studio
					Virtual devices allow you to test your application without having to own the physical devices.
\$				_	+ Create Virtual Device
					To prioritize which devices to test your application on, visit the Android Dashboards, where you can get up-to-date information on which devices are active in the Android and Google Play ecosystem.



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Instalação e configuração do Android Studio

Seleção do Hardware que será emulado

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Está escolhida a opção Pixel 2 conforme mostrado ao lado

Select H	Hardware							
Choose a device def	inition							
Q						Pixel 2		
Category Name	•	Play Store	Size	Resolution	Density			
TV Pixel 4	4 XL		6,3"	1440x3040	560dpi			
Phone Pixel 4	4		5,7"	1080x2280	440dpi		Size: large	
Wear OS Pixel	3a XL		6,0"	1080x2160	400dpi	5 0	Ratio: long Density: 420dpi	
Tablet Pixel	За		5,6"	1080x2220	440dpi	5,0 19200		
Automotive Pixel	3 XL		6,3"	1440x2960	560dpi			
Pixel	3		5,46"	1080x2160	440dpi			
Pixel	2 XL		5,99"	1440x2880	560dpi			
Pixel	2	⊳	5,0"	1080x1920	420dpi			
Pixel			5,0"	1080x1920	420dpi			
Nexus	s S		4,0"	480x800	hdpi			
Nexus	s One		3,7"	480x800	hdpi			
New Hardware Profile	Import Hardw	/are Profiles			G			Clone Device

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Seleção da versão do Android que será instalada no emulador

Está escolhida a versão 5.1 Lollipop – API 22

System Im	lage				
lect a system image					
commended x86 Images Ot	her Images			Lollipop	
Release Name	API Level 💌	ABI	Target		
Nougat Download	24	x86_64	Android 7.0 (Google APIs)		API Level
Nougat Download	24	x86_64	Android 7.0	6	22
Nougat Download	24	х8б	Android 7.0		Andreid
Marshmallow Download	23	x86	Android 6.0 (Google APIs)		5 1
Marshmallow Download	23	x86_64	Android 6.0 (Google APIs)		Google Inc
Marshmallow Download	23	x86	Android 6.0		Google Inc.
Marshmallow Download	23	x86_64	Android 6.0		System Image
Lollipop	22	x86	Android 5.1 (Google APIs)		x86
ollipop Download	22	x86_64	Android 5.1 (Google APIs)		
ollipop Download	22	x86	Android 5.1		
ollipop Download	22	x86_64	Android 5.1		
ollipop Download	21	x86_64	Android 5.0 (Google APIs)		
ollipop Download	21	x86	Android 5.0 (Google APIs)		
Lollipop Download	21	x86_64	Android 5.0	Questions on API lev	el?
			Ø	See the API level dis	tribution chart

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Nesta última tela pode-se fornecer um nome para o emulador configurado, bem como algumas outras opções podem ser selecionadas e configuradas.

Explore um pouco as opções avançadas para verificar o que está disponível

Virtual Device Config	uration					>
횠 And	roid Virtual Device (A	AVD)				
AVD Name Pixel 2	API 22 2					
Pixel 2	5.0 1080x1920 xxhdpi	Change	The name of this AVD.			
🇳 Lollipop	Android 5.1 x86	Change				
Startup orientation	Portrait Landscape					
Emulated Performance	Graphics: Automatic	•				
Device Frame 🛛 En	able Device Frame					
Show Advanced Set	ttings					
2)				Previous Nex	xt <u>C</u> ancel	<u>F</u> inish

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Por fim, é possível configurar diversos emuladores com hardware e versão de API diferentes.

No nosso curso usaremos os dois emuladores que podem ser vistos na imagem Pixel 2 com API 22 Nexus 5 com API 28

Andr	oid Virtual Device Manager							-	-	
	Your Virtual Device	es								
уре	Name 🔺	Play Store	Resolution	API	Target	CPU/ABI	Size on Disk	Action	s	
0	Nexus 5X API 28		1080 × 1920: 420dpi	28	Android 9.0 (Google Play)	x86	8,4 GB			•
D	Pixel 2 API 22		1080 × 1920: 420dpi	22	Android 5.1 (Google APIs)	x86	5,4 GB			-
+ (	Create Virtual Device							G		?

# Configuração: Como ficou

📕   🛃 📜 🔻   D:\AndroidStudio					- 🗆 X
Arquivo Início Compartilhar Exibir					~ 🤇
Fixar no     Copiar     Colar     Colar atalho       Área de Transferência     Área de Transferência	Mover Copiar para para Organizar	Novo item • Fácil acesso • Nova pasta Novo Abri	Abrir - Editar Editar Elimp Hittórico Inver r Propriedade	cionar tudo var seleção ter selecão s de SDK	×
$\leftarrow$ $\rightarrow$ $\checkmark$ $\uparrow$ $\blacksquare$ > Este Computador >	DATA (D:) > AndroidStudio		Versõe	es Anteriores	Personalizado J
	<b>^</b>		Geral	Compartilhamento	Segurança
Videos	Nome	Data de modificação		SDK	
	AVD	17/08/2021 21:45			
	SDK	17/08/2021 18:25	Tipo:	Pasta de arquivos	
SRECYCLE.BIN			Local:	D:\AndroidStudio	
AndroidStudio			Tamanho:	14.2 GB (15 309 721 345 bytes)	
AVD			Tamanho em	14.4 CB (15.464.067.072 butos)	
SDK			disco:	70.507 A	
AndroidStudioProjects			Contem:	/9.56/ Arquivos, 12.150 Pastas	
AndroidStudioProjectsBackup			Criado em:	terça-feira, 17 de agosto de 202	21, 16:45:58
Arquivos de Programas					
Comum			Atributos:	Somente leitura (arquivos d	a pasta)
Config.Msi				Oculto	Avançados
📜 Dados					
📙 database					
Desenvolvimento					
Eleicoes2016					
📜 Entretenimento				OK Car	ncelar Aplicar
FlutterProjects					
2 itens 1 item selecionado	~				

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