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Portable coding in Python is possible, thanks to the Pydroid 3 integrated development environment (IDE). Pydroid is a minimalist Python 3 interpreter that lets you execute minor projects and do minimal coding on your Android device. If you also want to learn Python programming anywhere without a PC, while replicating the PC platform for Python on Android, Pydroid 3 is the right app to try out. Whether you're new to Python programming or you're an expert, let's see some of the ways you can use Pydroid 3 to its full potential on your Android device. Get Pydroid 3 and its Plugins Set-up The Pydroid 3 IDE is available on the Play Store. However, to make the app more useful and easy to work with, you need to download the Pydroid repository plugin from the Play Store. While installing this plugin might not be compulsory, it makes automatic pip installation of packages much easier. By default, Pydroid 3 doesn't have permission to access your device storage. This makes the creation of project folders difficult or impossible without some technical manipulation. To solve that problem, download the Pydroid permissions plugin from the Play Store, which allows Pydroid to create folders and files on your device. Download: Pydroid 3 - IDE for Python 3 (Free, in-app purchases available) Download: Pydroid repository plugin (Free) Download: Pydroid permissions plugin (Free) Once you have everything set-up, you can start using pip to install packages for your projects, just like on a PC. Pydroid 3 comes with an interface that allows you to install packages without writing your commands in the terminal. There are several ways to install pip packages on Pydroid 3. To access that feature, tap on the menu icon (which looks like three lines) at the top-left corner of the app. Next, go to Pip. At the top of the Pip menu, select SEARCH LIBRARIES to get more options about the module you want to install. Or you can tap the QUICK INSTALL option to install the packages listed by default. However, a better and free-hand option is to tap on INSTALL and check the Use prebuilt libraries repository box. Next, type your preferred package name in the search bar and tap the INSTALL button to get the named package. To check if the package was installed successfully, tap the LIBRARIES option. That menu gives you access to a list of all currently installed libraries. Pydroid 3 offers a minimal Linux command-line interface (CLI) as well. To access it, tap on the menu icon at the top-left corner of the app, and select Terminal. Although running the pip install packages command via its inbuilt terminal takes some time to load, it still lets you navigate easily between folders and create new ones wherever writing permission is allowed on your device. However, while the slow loading of pip installing packages via the terminal is a minor issue with the Pydroid IDE, its Pip menu solves it. If you want to use the provided command line for any other purpose, the Android OS is built on Linux, so you need to have a basic understanding of how to use the Linux command line. The blank page that appears when you open Pydroid 3 is its inbuilt Python shell. Just like the Python shell on your PC, it sees any command written on it as a Python code by default. To use the shell, type any Python command and click the big play button at the editor's lower-left corner. This opens a Python interpreter that displays the output of your code. However, you can also access the Python shell from the command line. To do that, go to Terminal by clicking on the three menu icon at the app's top-left corner. Next, type python and tap the enter arrow on your soft keyboard to open the command line Python interpreter. Type exit() to leave the command line Python shell. Just like any other code editor, Pydroid 3 has an interface that lets you save your file in any named folder on your device. If you want to create a project folder, you also get to make new folders with its file saving options. To use the folder option, tap the folder sign at the top-right corner of the editing shell. Tap Save and select InternalStorage. Next, tap on a preferred destination folder and tap SELECT FOLDER at the top of the screen. On the next menu, enter a preferred file name and click on SAVE. However, if you like to create a new project folder, repeat the process above, but tap on the NEW FOLDER option instead of SELECT FOLDER. Give your new folder a preferred name and tap CREATE to save the folder. Next, click on the SELECT FOLDER option. Name your new file and tap SAVE to save your new file in the folder you just created. Note that the newly created file doesn't need a file extension if it's a Python file. But in case you need to use another language file to serve your project, ensure that you include the file extension that applies to that language while saving such a file. For instance, a CSS file should be saved as Name.css, replacing Name with your preferred file name. To update the changes you've made to an existing file, tap the folder sign at the top-right corner of the editor, and select Save. To create a new file entirely, tap the folder sign. Select New and follow the steps highlighted earlier to save your file in a folder. If you want your new file to be in the same directory as the existing one, ensure that you select the same folder that contains the existing one. You can share your knowledge and progress with others on the Pastebin platform if you like. To do that, tap the three menu icon at the top-left corner of the app. Next, select Pastebin and tap Yes. On the next menu that pops up, tap COPY URL to copy the link to your source code. Open up any browser on your Android device and paste the copied link on the search bar to see your source code on Pastebin. You can also share this link with the people you like to give access to your code. You can also customize the development environment if you like. To change the appearance of your editor, tap the three menu icon at the top-left corner of the screen and go to Settings > Appearance to switch to your preferred theme, or select other available appearance options. To get more customization features, tap the Editor option and select your preferences. You can also tap the other options within the settings menu to see the options available to you. However, when you click on the three menu dropdown icon, the Terminal settings option offers some terminal configurations as well. Installing the Pydroid 3 IDE on your Android device automatically downloads and installs Python 3 on it as well. However, the installed Pydroid 3 IDE for Python functions as a virtual environment on Android. That's because trying to run the Python shell outside the command line of the Pydroid IDE throws an error. If you care to play around and try that out, you need to install a dedicated third-party Android CMD app, preferably Termux from the Play Store. Once you install Termux, open it, ensuring that you've installed Pydroid 3 as well. Then type python on the Termux CMD. It throws a file directory error, indicating that Python doesn't exist in the global Android space until installing it with the pkg install python command via Termux. However, running python on Pydroid 3 inbuilt terminal successfully enters the Python shell. Download: Termux (Free) While coding on Android might be interesting, using Pydroid to manage a big project isn't advisable. However, it's another way to embark on minor projects, especially when they're not for long-term real-life purposes. Beyond managing small projects, Pydroid 3 is also a great tool to play around with to improve your Python coding skills, especially if you don't have a PC to run your Python programs. Python is a widely-used general-purpose, high-level programming language. This article will serve as a complete tutorial on how to download and install Python latest version on Android. Python can run on Android through various apps from the play store library. This tutorial will explain how to run python on Android using Pydroid 3 - IDE for Python 3 application. Features : Offline Python 3.7 interpreter: no Internet is required to run Python programs. Pip package manager and a custom repository for prebuilt wheel packages for enhanced scientific libraries, such as numpy, scipy, matplotlib, scikit-learn and jupyter. Tensorflow is now also available. Examples available out-of-the-box for quicker learning. Complete Tkinter support for GUI. Full-featured Terminal Emulator, with a readline support (available in pip). To install Pydroid app go to play store link here - Pydroid 3 - IDE for Python 3 After installation is complete, Run the app and it will show as installing python. Wait for a minute and it will show the ide. Here you can enter the Python code. Click on the yellow button to run the code. Python is installed successfully. You can check more features of this app here As programmers, there will be countless instances when coding ideas strike us outside of our usual environment, without access to a laptop or desktop. It's crucial to have a quick and reliable solution to jot down those Python code snippets seamlessly. That's where Pydroid 3 comes to the rescue! If you want to code in Python on your Android device, you need more than just a simple notes app. You need a powerful IDE that gives you a full Python environment to work with. Pydroid 3 is the perfect app for that, letting you code anywhere and anytime with ease and flexibility. Now, let me introduce you to Pydroid 3, a feature-packed app that allows you to unleash your coding potential anytime, anywhere. [Disclaimer: I'm not affiliated with Pydroid 3 in any way; I'm simply excited to share this amazing tool with fellow programmers!] Pydroid 3 is a Python IDE for Android devices that allows you to write and run Python code on your phone or tablet. Pydroid 3 supports Python 3.8 and has a pip tool for installing packages from a prebuilt repository or from source code. Pydroid 3 also has a simple code editor, a terminal emulator, and a web browser that can run Python scripts. In this blog post, we'll delve into the exciting features, limitations, and tips to make the most out of Pydroid 3. Download & Install Pydroid 3 is available for free on the Google Play Store. Tap the link below to download and install it on your Android device: what do you need to know about Pydroid 3? Pydroid 3 has an offline Python 3 interpreter, which means you can run Python programs without an Internet connection, making it perfect for coding on the move or during offline hours. Package Management Pydroid 3 allows you to use pip to install various Python packages, giving it an edge among other IDEs. However, there is something you need to download before you can use pip install on Pydroid 3. You need to download the Pydroid repository plugin from the Play Store, which allows Pydroid 3 to access a custom repository for prebuilt wheel packages for enhanced scientific libraries, such as numpy, scipy, matplotlib, scikit-learn, and jupyter. This plugin makes the installation of packages much easier and faster. After you have downloaded and installed these plugins, you can use pip install on Pydroid 3 by following these steps - Tap on the menu icon (which looks like three lines) at the top-left corner of the app - Select Pip from the menu - Tap on Install and check the Use prebuilt libraries repository box - Type the name of the package you want to install in the search bar and tap the Install button - Wait for the installation to complete and check if the package was installed successfully by tapping on Libraries. You can also use the Terminal option to run pip commands from the command line. Pydroid 3 offers an array of Learning Resources Learn Python effectively using provided examples of various topics and projects. Discover how to work with loops, lists, functions, and more. Access Permissions You may also want to download the Pydroid permissions plugin from the Play Store, which allows Pydroid 3 to create folders and files on your device storage. This plugin can help you with the creation and management of project folders. Download Pydroid permissions plugin- 3 has a full-featured code editor! It also supports customizing your coding experience with code prediction, auto-indentation, real-time code analysis, syntax highlighting, themes, and tabs. Let's explore the code editor: 1. Open Pydroid 3.2. Tap the menu icon (three lines). 3. Select "Settings." 4. Then select "Code editor." 5. Try out different themes and font sizes for a personalized look. Terminal The terminal allows you to execute shell commands on your Android device for tasks like installing packages, managing files, and running other programs. Graphical Libraries Support You can build GUIs, games, and more with support for libraries like OpenCV, TensorFlow, PyTorch, Kivy, PyQT5, matplotlib, and pygame. One-Click Code Sharing Pydroid 3 has a one-click share on Pastebin feature that allows you to easily share your code online with others. Here's the link to the Pastebin code: 3 Limitations Pydroid 3 is a great app for learning and practicing Python on your Android device. However, it also has some limitations: Device Memory Requirement Ensure you have at least 250MB of free internal memory, especially for heavy libraries like scipy. Unsupported Features Some Python features or libraries that rely on operating system or hardware functionality, such as multiprocessing, sockets, curses, or pygame.mixer, may not be supported. Not Suitable for Large Projects While excellent for learning and experimentation, Pydroid 3 might not be the best choice for managing complex or extensive applications. Premium Features & Upgrade The premium version offers an ad-free experience and access to exclusive features, like code prediction, priority support, and more libraries such as pandas, lxml. Upgrading to the premium version for a one-time payment of \$9.99 allows you to access the exclusive benefits. However, the free version of Pydroid 3 is incredibly versatile and can cater to a wide range of coding needs. You can learn, practice, and explore Python without any limitations. The app's rich set of features, offline Python interpreter, and graphical library support are readily available for free. Conclusion With Pydroid 3, you have a powerful Python coding tool right at your fingertips. Use it to learn, practice, and experiment with Python on your Android device, no matter where you are. Embrace its extensive library support, user-friendly code editor, and seamless package management, allowing you to unlock your coding potential. If you are interested in learning Python, or if you are a Python developer who wants to be able to code on the go, then I highly recommend checking out Pydroid 3. So, are you ready to embark on your Python coding journey with Pydroid 3? Let's dive in and get coding! Python is a versatile and powerful programming language that is widely used for a variety of applications, from web development to data analysis. While Python is typically run on computers, it is also possible to run Python on mobile devices such as Android smartphones and tablets. In this article, we will discuss how to install and code Python on Android using Pydroid 3. Pydroid 3 is a Python IDE for Android devices that allows users to write, run, and debug Python code on their mobile devices. It provides a full-fledged Python development environment with features such as code completion, syntax highlighting, and code folding. Pydroid 3 also supports popular Python libraries such as NumPy, SciPy, and Matplotlib, making it a powerful tool for mobile Python development. In this article, we will walk you through the process of installing Pydroid 3 on your Android device and writing your first Python program. We will also discuss some tips and tricks for coding Python on Android and offer some resources for further learning. Installing Pydroid 3 To install Pydroid 3 on your Android device, follow these steps: Open the Google Play Store on your Android device. Search for "Pydroid 3" in the search bar. Click on the Pydroid 3 app in the search results. Click on the "Install" button to download and install the app on your device. Once the app is installed, open it from your app drawer. You will be prompted to install the Pydroid 3 components. Click on the "Install" button to download and install the required components. Once the components are installed, you will be taken to the Pydroid 3 home screen. Writing your first Python program Now that you have Pydroid 3 installed on your Android device, let's write your first Python program. Follow these steps to create a new Python script: Open Pydroid 3 on your Android device. Click on the "+" icon in the top right corner to create a new file. Enter a name for your file, such as "hello.py". Tap on the "OK" button to create the new file. You will be taken to the code editor, where you can write your Python code. Type the following code into the editor: print("Hello, World!") Once you have finished typing the code, click on the "Run" button in the top right corner to run the program. You should see the output "Hello, World!" displayed in the console at the bottom of the screen. Congratulations! You have successfully written and run your first Python program on Android using Pydroid 3. Tips for coding Python on Android Coding Python on Android can be a different experience from coding on a computer, as mobile devices have smaller screens and touch-based input. Here are some tips to help you code Python more effectively on Android: Use an external keyboard: Typing on a mobile device's touchscreen keyboard can be cumbersome, especially for writing code. Consider using an external Bluetooth keyboard for a more comfortable typing experience. Use a stylus: If you prefer to write code by hand, you can use a stylus on your Android device's touchscreen to write code in the Pydroid 3 editor. Enable code completion: Pydroid 3 provides code completion and suggestions as you type, which can help speed up coding on a mobile device. Make sure to enable this feature in the settings. Use shortcuts: Pydroid 3 supports keyboard shortcuts for common tasks such as running code, saving files, and navigating between tabs. Learn and use these shortcuts to improve your coding workflow. Customize the editor: Pydroid 3 allows you to customize the editor's appearance and behavior. Experiment with different themes, font sizes, and indentation settings to find a setup that works for you. Backup your code: Mobile devices can be prone to data loss, so make sure to regularly backup your Python code to a cloud storage service or external storage device. Resources for further learning If you are new to Python or mobile development, there are many resources available to help you learn and improve your skills. Here are some resources to get you started: Python documentation: The official Python documentation is a valuable resource for learning about Python's features, syntax, and standard libraries. Visit the Python website to access the documentation. Online tutorials: Websites such as Codecademy, Coursera, and UdeMY offer online tutorials and courses on Python programming. These resources can help you learn Python from scratch or deepen your understanding of advanced topics. Python community: Joining the Python community can provide you with access to forums, mailing lists, and meetups where you can connect with other Python developers and seek help with coding challenges. Mobile development guides: If you are interested in mobile development, check out resources such as the Android developer website, which offers guides, tutorials, and documentation for developing apps on the Android platform. Conclusion In this article, we have discussed how to install and code Python on Android using Pydroid 3. Pydroid 3 provides a powerful Python development environment for Android devices, allowing users to write, run, and debug Python code on the go. By following the steps outlined in this article, you can start coding Python on your Android device and explore the possibilities of mobile Python development. Remember to experiment with different features and settings in Pydroid 3, and don't be afraid to seek help from the Python community or online resources. With practice and persistence, you can become proficient in coding Python on Android and develop mobile apps, games, and utilities using the power of Python. Happy coding! Python is a versatile programming language that can be used to build sites, apps, automation, AI and software, automate tasks, and conduct data analysis. The platform is irrelevant as you can now install, create and run Python programs on your Android smartphone. However, we would suggest the experience is somewhat addicting and very geeky! It is quite a high-level, widely used, and general-purpose language that can run on Android via different applications from the PlayStore library. Python provides the following in a nutshell: It offers full Tkinter support for Graphical User Interface. It is a feature-rich Terminal Emulator that comes with a read-line backing. Examples are available out of the box for quick learning. Tensorflow is also available now. Offline Python version 3.7 interpreter: The Internet is unnecessary to run Python programs. Package manager and custom repository for pre-built wheel packages for enhanced scientific libraries like NumPy, scipy, matplotlib, Scikit-learn and Jupyter. Install, Create and Run Python Apps/Programs on Android Smartphone Just imagine building and running a Python app, whether a command line tool developed to fetch your favorite curated articles from the web or starting a web server that runs right in your hand. Well, it is possible, here is how: 1) Download and Install Pydroid 3 IDE for Android You need to install Pydroid Application, and for this head towards PlayStore. Once the process of installation is completed, all you need to do is run the application and it shall show as installing Python. Wait for around a minute and it shall show the IDE, in here enter the Python code. After this hit the yellow button to run it. It has been installed successfully. ALSO SEE: How To Create Your Own Bluetooth Signal Jammer App with Python (Source Code) 2) Termux installation on Android You need to install the Termux application, which is quite a powerful terminal emulator that offers you the most popular Linux commands along with hundreds of additional packages for an easy installation process. The best thing is that it does not need any special permissions, you can either use the default Google Play store or open the source application repository. Once this has been installed, you need to launch it and perform certain requisite software installations with the help of using Termux pkg command which is as follows: Just add "pkg" in the beginning of each command below before running it. You need to subscribe to an additional repository "root-repo": Paul@ninja-ide:~# install root-repo Then perform the update to bring all the installed software up to date: Paul@ninja-ide:~# update Next, install Python by using the following command: Paul@ninja-ide:~# install python Once the process of installation and auto set-up of configuration is completed it's now time to build the application. Compile and Build Full Python Apps on Android As the terminal has been installed, you can work on Android Smart Phone devices largely as if it were another Linux system. This however is a great demonstration of how powerful the terminal is. First things first, you need to begin by creating a project directory: Paul@ninja-ide:~# mkdir ninja-android-project Paul@ninja-ide:~# cd ninja-android-project After this, you need to create a Python virtual environment. This is quite a common practice for developers and also helps keep your project of Python independent of the development system. Now, within the venv virtual environment you can install Python modules that are specific to the application, you should read our Python venv 101 guide before continuing to get a better understanding on how it works: Paul@ninja-ide:~# python -m venv venv You need to activate a new virtual environment then (keep in mind that two dots at the beginning are separated by space): Paul@ninja-ide:~# ./venv/bin/activate Keep in mind that the shell prompt is now preceded by (env) to indicate that you are in a virtual environment Now you need to install Flask Python module: Paul@ninja-ide:~# install flask Now you are all ready and only need to write code for the application. You must have experience with a classic text editor such as Visual Studio. We have used vi. If you don't have any familiarity with this then install and try vimtotor app which can teach you how to use it. If you somehow carry a different one you prefer like Emacs, you can install and use those as well. As the demonstration application is simple for now you can use the shell's heredoc function which allows you to enter text at your prompt directly. This shall be a six-line code but with this, you need to import Flask, create an application and then route the incoming traffic towards the function known as hello world. After this you shall have the web-server code all ready, it is now time that you set up some environment variables and begin the web server on your smartphone device. This informs that you carry a tiny web server running there in your local host, your device. This is a server that lists requests looking for port 7000. On your smartphone, you need to open to see the web application. You have not compromised the security of your phone. You are just running a local server, meaning the phone is not accepting any requests from the outside world. Only you have access to your Flask server. If you intend to make your server visible, you can disable flask's debugging mode by adding host=0.0.0.0 to run the command. It is an open port, so make sure to use it wisely. Pressing Ctrl + C from the keyboard would be best to stop the server. Remember: You can always change the port number, the default is 5000. Conclusion Android is a very popular platform that allows a lot of freedom and features on the device. You can create fully-fledged Python apps on Android using Pydroid and Termux with venv virtual environments. How much more geeking can you want? You are now successfully running Python code on Android. Last Updated on 27 April 2025 We usually run our Python code on computers using a Python compiler. But do you know it's possible to run Python on Android devices? Luckily, there are several tools available on the Play Store. In this article, we'll explore how to use Python for Android, the available apps, and how you can even build Android apps with Python. "Python for Android" simply refers to running Python code or developing Python applications on an Android device. There are various tools and apps, you can now write Python code and execute it directly on your phone or tablet. This is especially useful for learners, developers, and hobbyists who want to code on the go without needing a computer. Python is a very popular language used for web development, automation, data science, machine learning, and much more. By running Python on Android, you can: Practice coding anytime, anywhere: Perfect for learners who want to practice without a laptop. Experiment with Python projects: Useful for testing scripts and small programs. Develop Android apps: Python frameworks allow you to create and package Android applications. Several apps and platforms offer Python for Android. Here are some of the best tools you can use: Overview: Pydroid 3 is one of the most popular IDEs for running Python on Android. It provides an easy-to-use interface where you can write, run, and debug Python code. Features: Supports Python 3. Built-in Python interpreter. Allows installing additional Python libraries through pip. Best for: Beginners and intermediate programmers looking for a simple solution. Play Store Link: Pydroid 3 - IDE for Python 3 Overview: QPython is another great app that provides a full Python environment on Android. It supports both Python 2 and Python 3. Features: Built-in editor and console. Support for third-party libraries. Can run Python scripts as Android apps. Best for: Those interested in developing Python apps or running complex scripts on Android. Play Store Link: QPython - Learn Python & AI Overview: Termux is a terminal emulator that gives you access to a Linux-like environment on Android. You can install Python and other programming tools directly in Termux. Features: Command-line interface. Ability to install and run Python along with other development tools. Best for: Developers comfortable with command-line interfaces. Play Store Link: Termux You may wonder if Python can be used to build Android apps. The answer is yes! While Java and Kotlin are the main languages for Android development, Python can also be used with the help of certain frameworks and tools: What is it?: Kivy is an open-source Python library used to create multitoouch applications. It allows you to build apps that work across platforms, including Android. How it works: You write the app code in Python, and tools like Builderz package it into an Android APK file. What is it?: BeeWare is a collection of tools that lets you write Python code and compile it into standalone Android apps. How it works: BeeWare uses its "Briecase" tool to package your Python code for Android. What is it?: Chaquopy is a plugin for Android Studio that enables you to use Python alongside Java or Kotlin. How it works: It integrates with Android Studio, allowing you to call Python code from Java/Kotlin in Android apps. While Python can be used on Android, there are a few limitations to keep in mind: Performance: Python tends to be slower than native languages like Java or Kotlin, especially for performance-critical applications. App Size: Python apps can be larger in size since they often include a Python interpreter and necessary libraries. Limited Access to Android APIs: While tools like Chaquopy and Kivy allow access to Android APIs, it might not be as straightforward as using Java or Kotlin. Recommended: Google Colab for Python: Advantages vs Disadvantages Running Python code on Android devices has become more accessible and thanks to a variety of apps and frameworks. Whether you're learning to code, testing scripts, or just creating Android apps, tools like Pydroid 3, QPython, and Termux make it easy. If you're looking to develop full-fledged Android applications, frameworks like Kivy, BeeWare, and Chaquopy offer a pathway. So, if you're interested in coding or developing apps using Python on Android devices, there are multiple options to explore. Start by downloading one of the apps mentioned above and bring Python to your mobile device today! Happy Coding! Tags# Android# Comprehensive Tutorials