Python IDEs

In this lesson, we'll understand what Python IDEs are and why they are so useful.

We'll cover the following

What is an IDE?

An **Integrated Development Environment** (IDE) is a software package which allows us to code in a certain language or environment. It is isolated from the rest of our system, making it safe and easy to use.

We can think of IDEs as off-the-shelf platforms which take away the hassle of installing a new language on our system so that we can move on to the actual code. Furthermore, IDEs usually have all the cool features for a language which would otherwise have to be added manually.

This saves a lot of time, especially for beginners who do not have time to learn how to install a language and its packages.

IDEs for Python

Like many languages, there are powerful IDEs available for Python. We can skip the whole setup process and use a Python IDE to get the full functionality of the language.

Below we've listed some of the most popular Python IDEs available today.

PyCharm

PyCharm is perhaps the most widely used Python IDE. It has both **free** and **paid** versions.

The IDE provides a smart coding editor which automatically formats code and makes it readable.

Furthermore, the paid version extends Python's functionality to other frameworks, making it possible to integrate Python into our web development projects.

The mathematical and data science packages of Python are supported as well.

PyCharm surely lives up to its hefty price tag by providing one of the best Python experiences. It is supported across all major operating systems.

IDLE

IDLE is one of the simplest Python IDEs out there. With a user-friendly interface and all the basic tools of Python, it is a very good option for pure beginners who want to write simple programs.

IDLE is **free and open sourced**.

It also comes pre-packaged with the official installation of Python. Hence, there is

no lack of support for the IDE.

One of the drawbacks of IDLE is that it does not support line numbers, which can be troublesome with longer codes.

Spyder

This **open source** IDE is a personal favorite for many developers. Spyder comes equipped with all the smart coding features such as formatting, highlighting, and debugging.

It is very easy to use and doesn't require a long setup.

Furthermore, Spyder supports many of the latest Python plugins.

A drawback, however, is the lag in speed when too many plugins are being used in a program.

The Disadvantages of an IDE

We've discussed some of the most popular Python IDEs out there. However, there are many more which you can explore.

While IDEs are easy to use, there are certain limitations.

1. They are not always updated with the latest features of the language.
2. An IDE is not a good option if we want to understand the inner workings of a language (which would make us better developers).
3. Several IDEs face performance issues.
4. Integration with other frameworks may be difficult.

1. Integration with other frameworks may be difficult.

In the following lessons, we'll learn how to install the actual Python framework for our system. You may skip them if you are comfortable with an IDE, but a full installation on the operating system is beneficial in the long run.