



Establishing the Python Programming Environment

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Online Python Training

IDE (Integrated Development Environment)



- An integrated development environment (IDE) is a software application that helps software developers make the software development process more efficient.
- IDEs combine various features such as text editing, debugging, code completion, compiling and compiling.
- IDEs help software developers write code faster, find bugs faster, and manage their code more efficiently. IDEs also enable software developers to be more productive and develop better software.

We will use ANACONDA Jupyter



- Anaconda offers all the tools and libraries needed for data science in one place.
- Anaconda is a distribution designed specifically for data science. This helps data professionals get the performance and features they need.
- Anaconda is open source and free.

We will use ANACONDA Jupyter



- Anaconda includes the latest version of Python .
- It includes commonly used libraries for data science such as Anaconda , NumPy , SciPy , Pandas, Matplotlib, and TensorFlow .
- Anaconda , Anaconda Navigator and Anaconda It includes tools like Prompt that make it easier to develop and run data science projects.

ANACONDA – Python Software



- Once installed, ANACONDA includes the Python program in its own content.
- If you want to run Python on your computer, you must install the Python program separately.



C:\Users\uname\anaconda3



C:\Python311

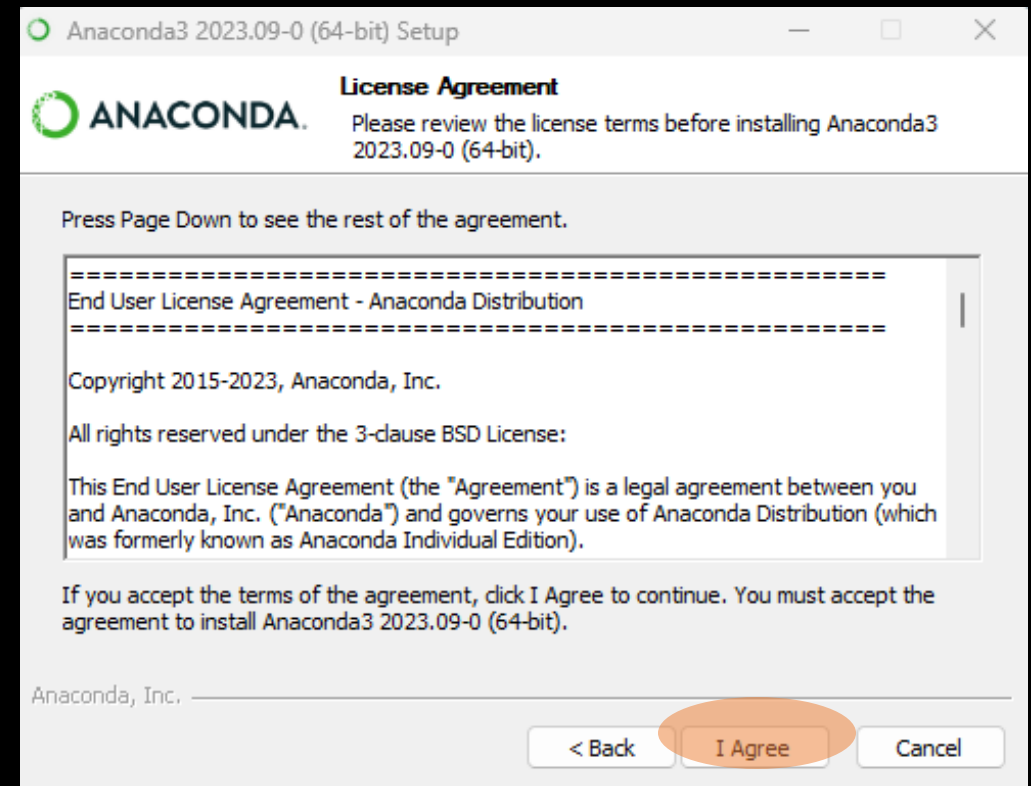
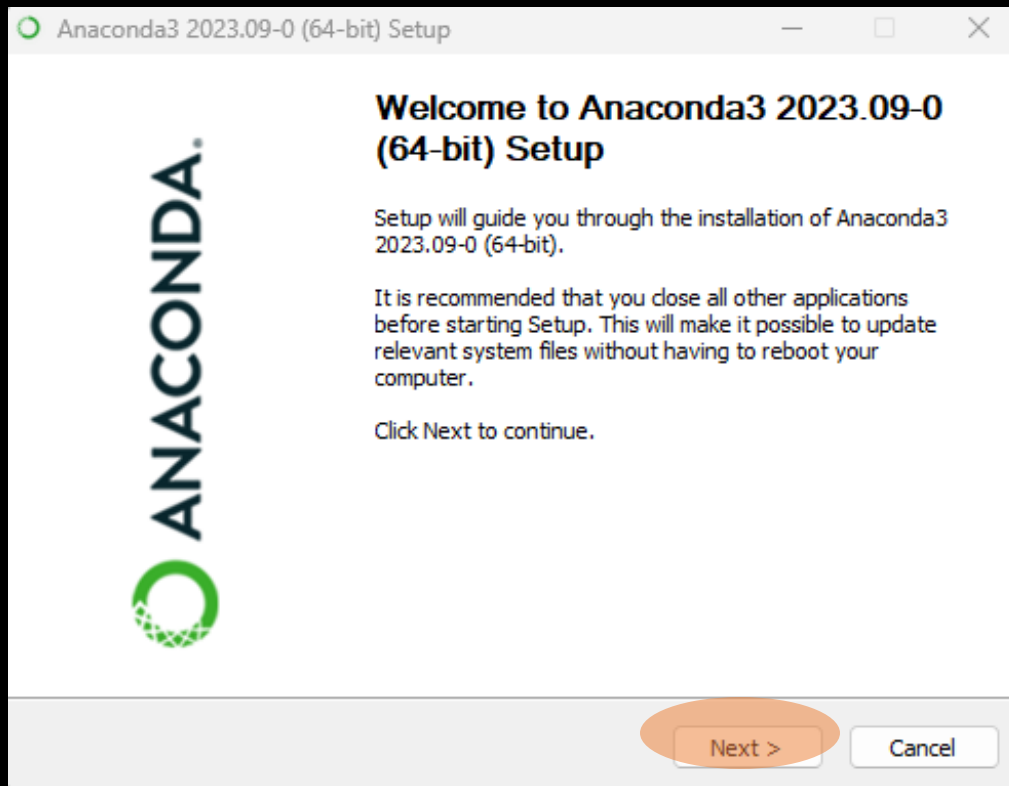
Installing ANACONDA Software



<https://www.anaconda.com>

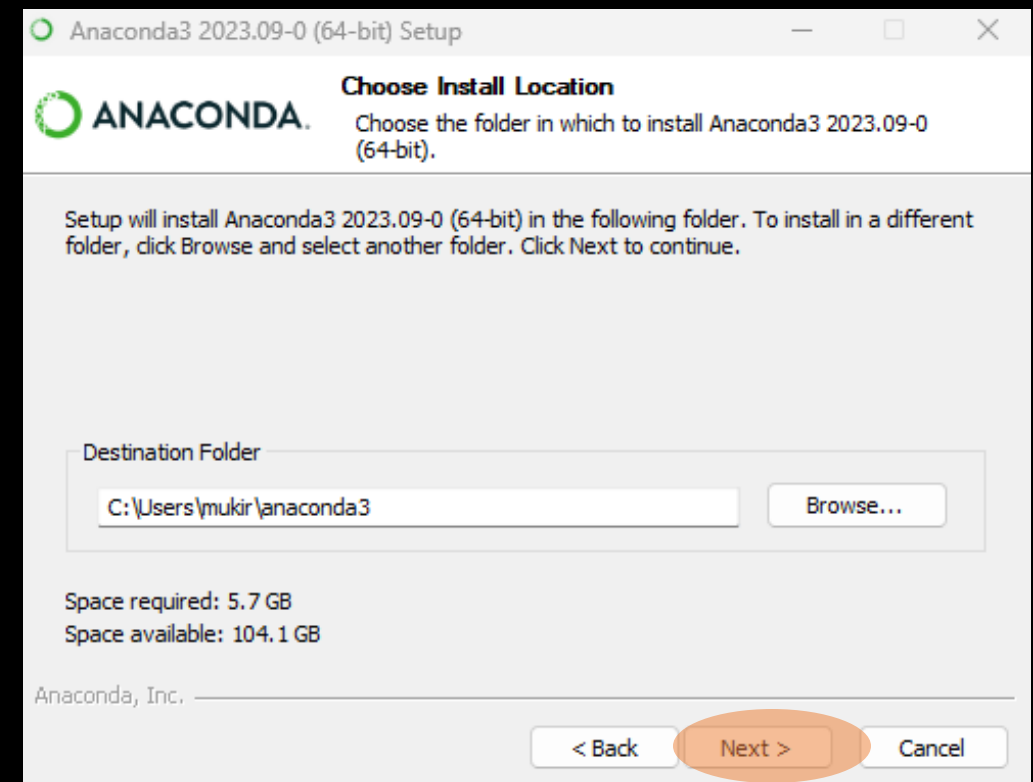
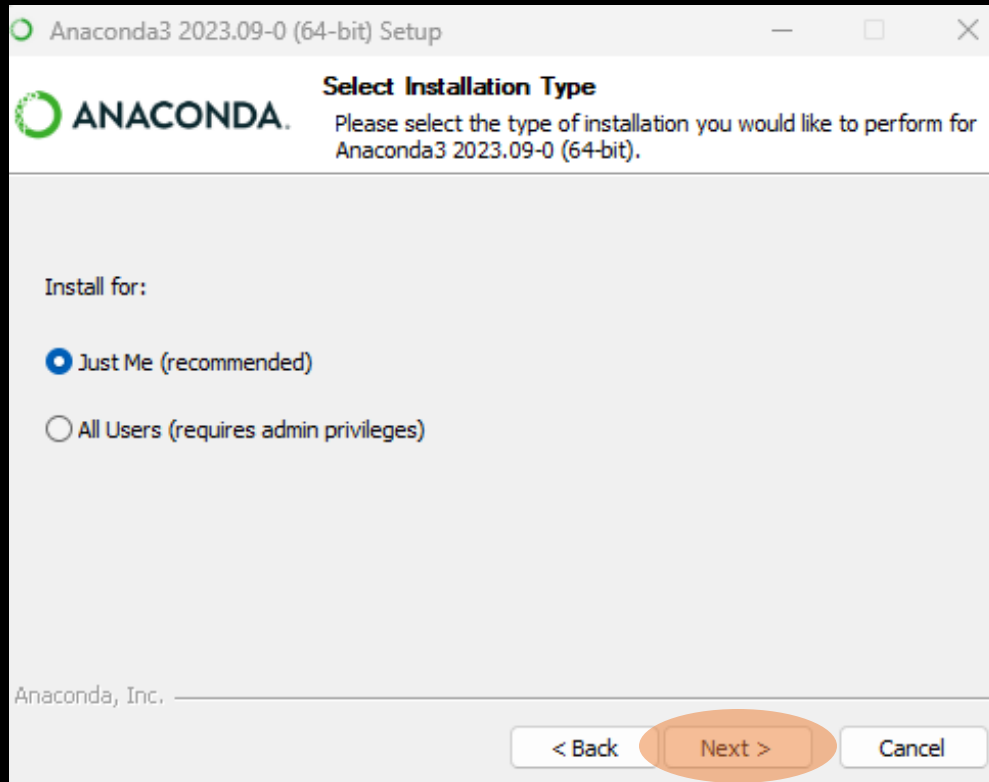


Installing Anaconda software



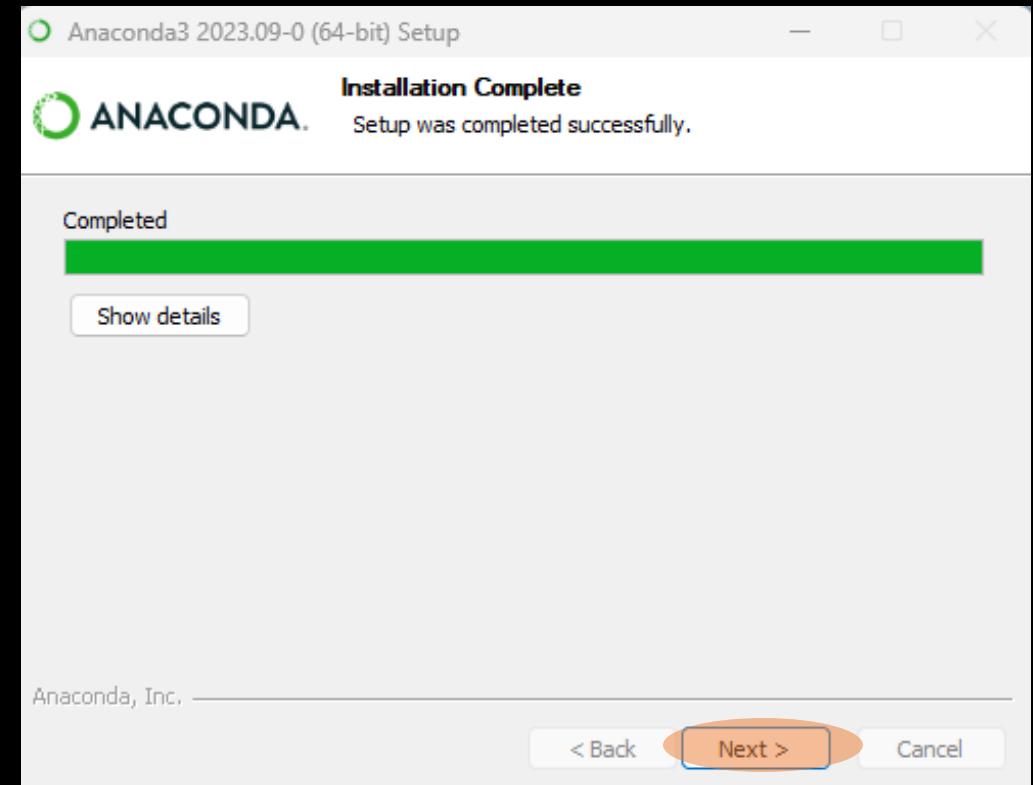
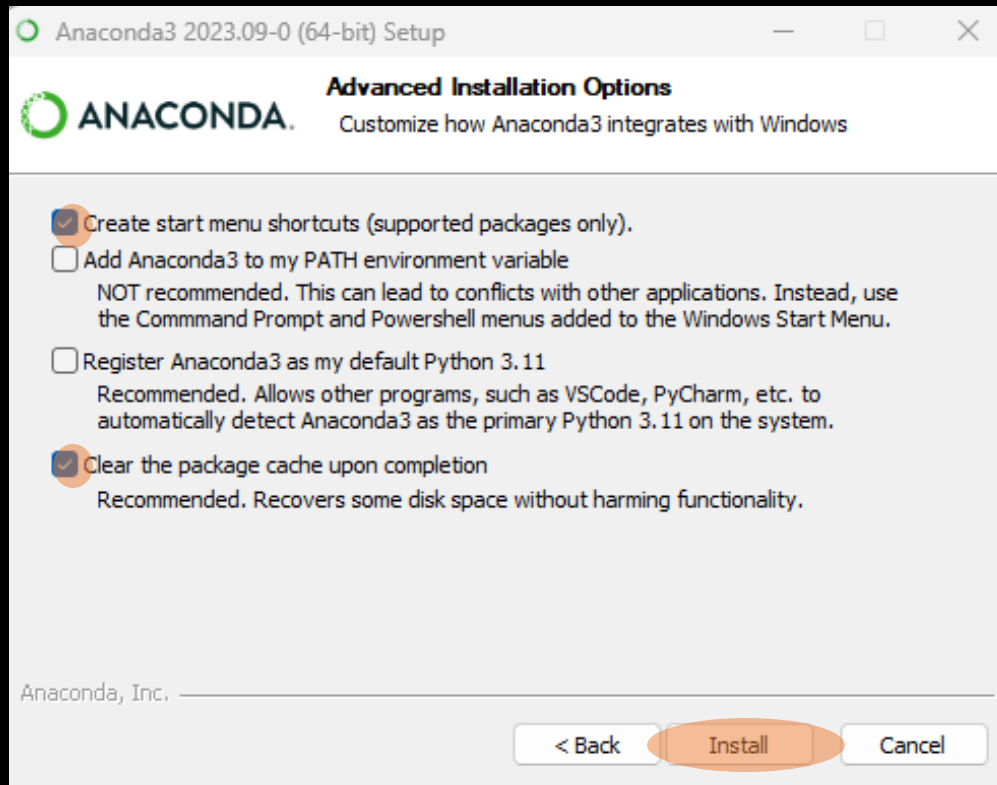


Installing Anaconda software

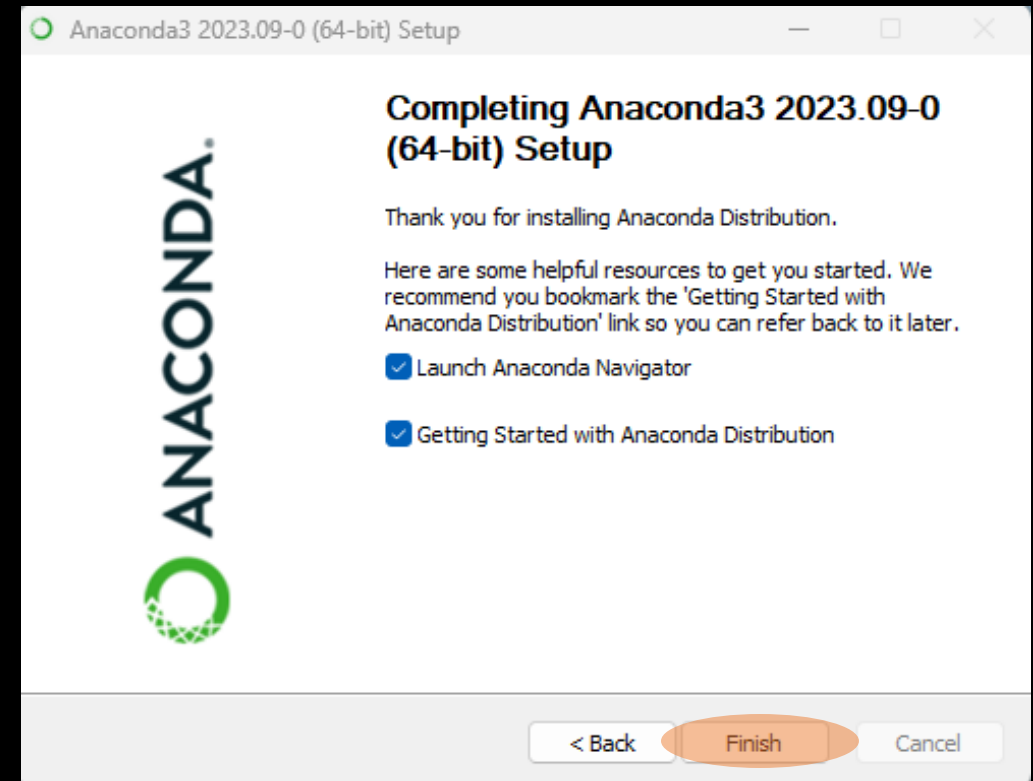




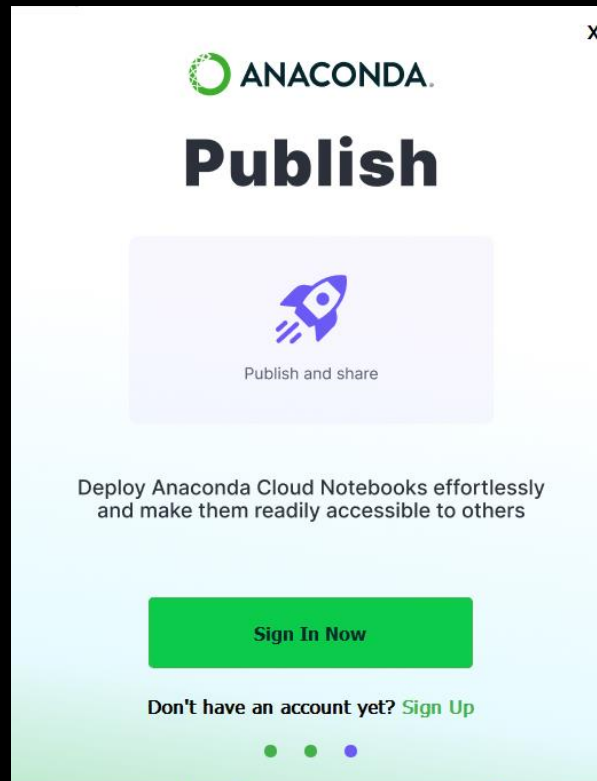
Installing Anaconda software



Installing Anaconda software



Installing Anaconda software



Anaconda Interface



- Anaconda applications - Jupyter / Spider
- Python Packages
- Jupyter Notebook interface and Notebook creation.
- Creating/running Python files with code editor
- Working with visual studio

Jupyter Notebook



- Jupyter buttons
- For detailed information
 - [Jupyter Notebook Manual](#)



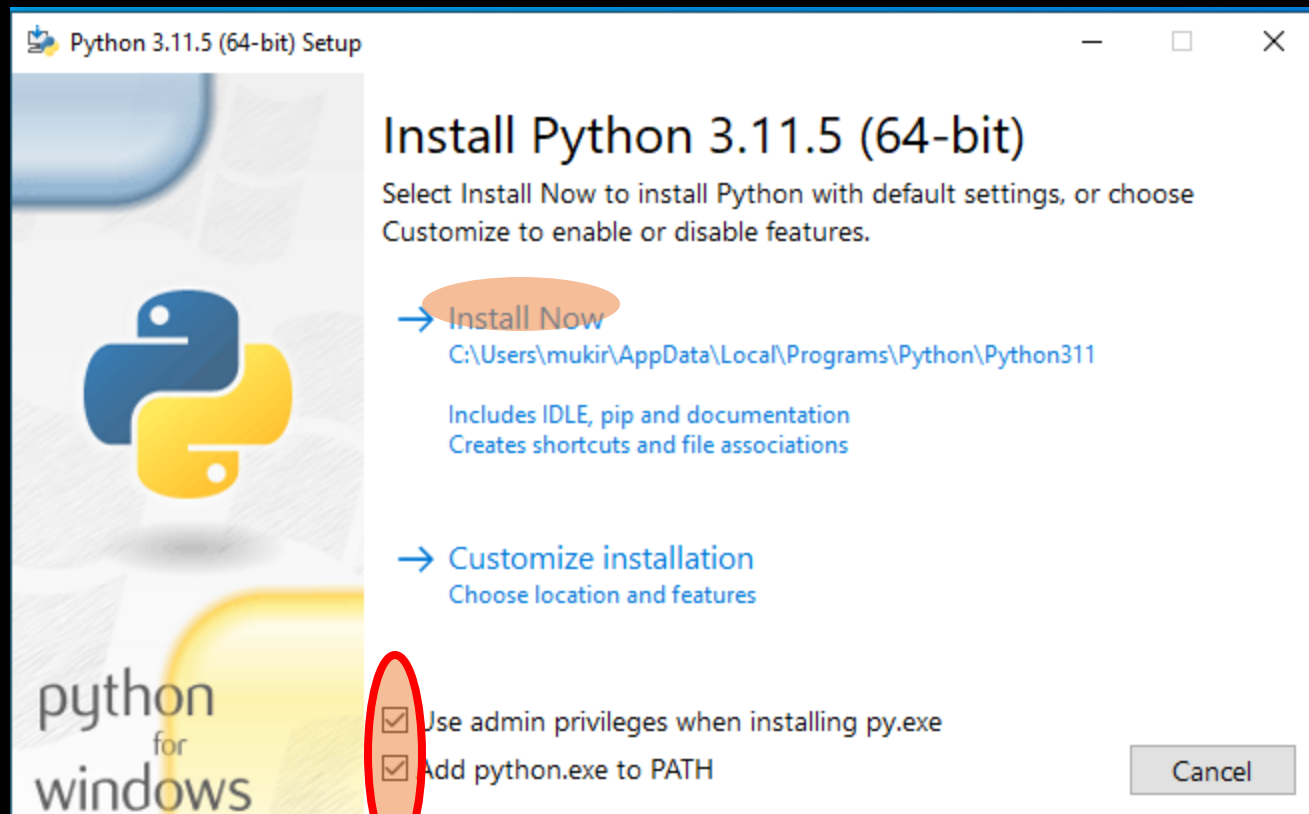
Installing Python on Our Computer



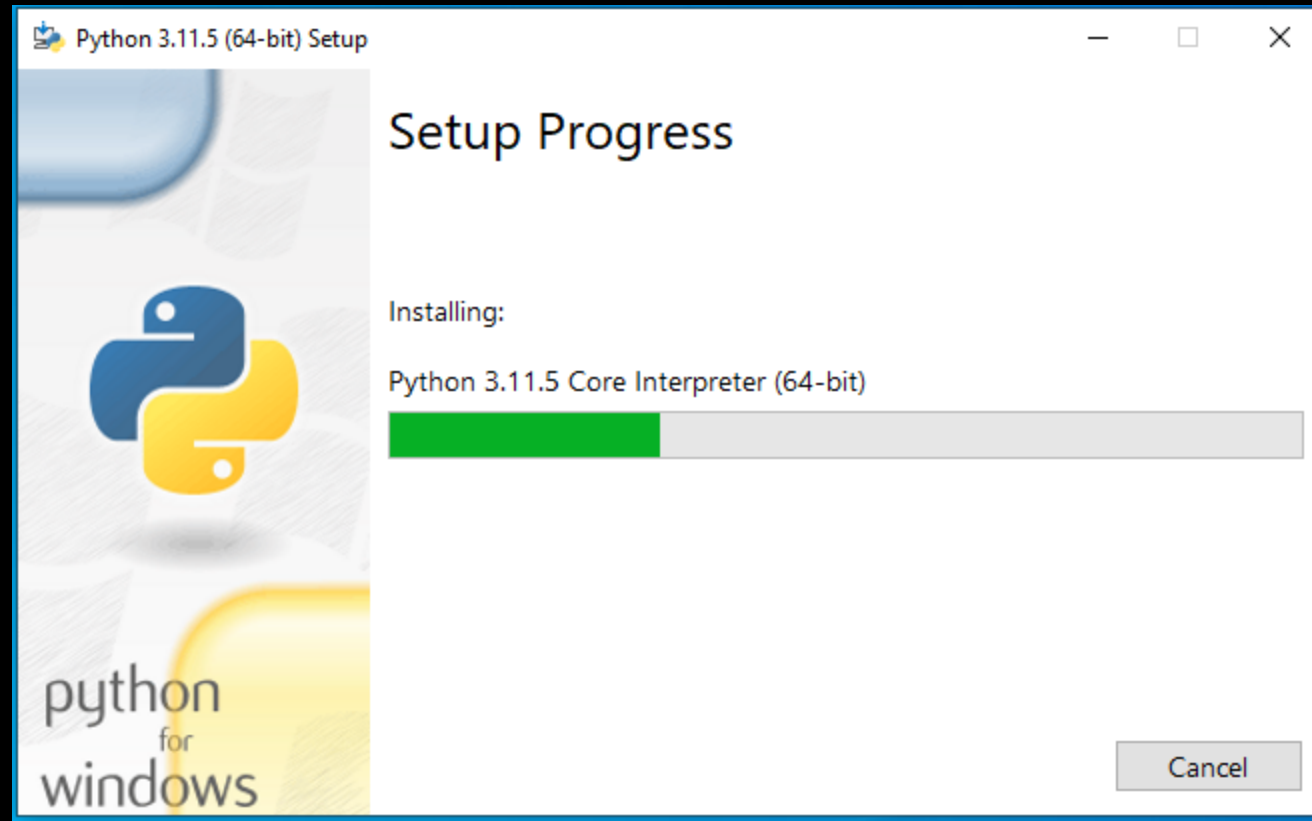
- <https://python.org>

The screenshot shows the Python.org homepage. The 'python' logo is in the top left. A navigation bar contains links: About, Downloads, Documentation, Community, Success Stories, News, and Events. The 'Downloads' menu is open, showing options: All releases, Source code, Windows, macOS, Other Platforms, License, and Alternative Implementations. The 'Windows' option is selected, leading to the 'Download for Windows' section. This section highlights 'Python 3.11.5' and includes a note: 'Note that Python 3.9+ cannot be used on Windows 7 or earlier.' Below the note, it says 'Not the OS you are looking for? Python can be used on many operating systems and environments. View the full list of downloads.' At the bottom of the page, a footer states: 'Python is a programming language that lets you work quickly and integrate systems more effectively. >>> [Learn More](#)'.

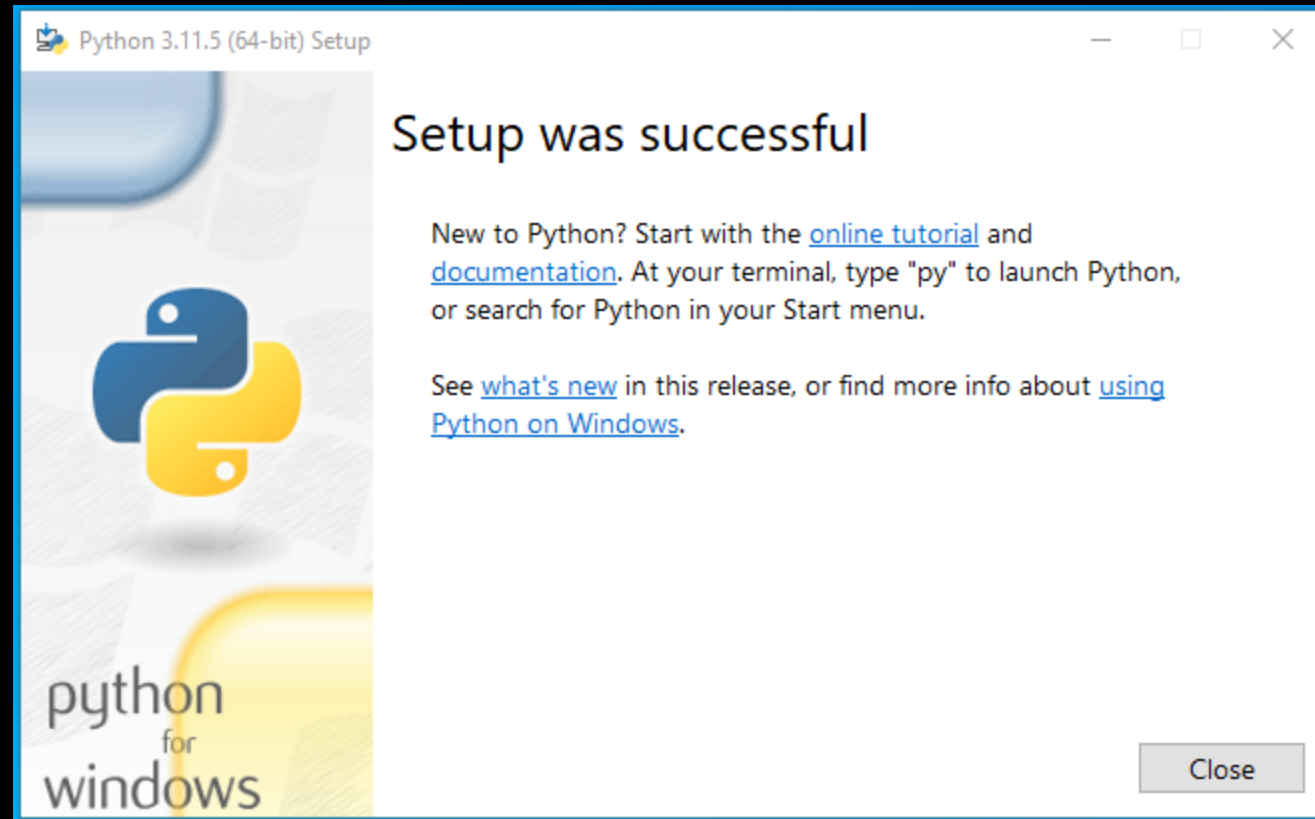
Installing Python on Our Computer



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Installing Python on Our Computer



Installing Python on Our Computer



```
Administrator: Komut İstemi
Microsoft Windows [Version 10.0.19045.2965]
(c) Microsoft Corporation. Tüm hakları saklıdır.

C:\Users\mukir>python --version
Python 3.11.5

C:\Users\mukir>
```

Other Tools for Python Developers



VS Code and PyCharm are among the most popular IDEs .

Black: It is a code formatting tool.

Other Tools for Python Developers



Wily : an application for monitoring the complexity of Python code in tests and applications



pytest : Testing tool.



mypy : It is a tool used to prevent spelling errors.



PyLint : It is a tool used to find errors while coding.

Interpreter, Compiler



- Interpreter is a program that runs the software directly by taking it part by part. Interpreters do not produce standard executable code. Since the interpretation process is not done step by step, the program usually stops running at the first error.
- Compilers, on the other hand, convert the software from code to machine code once and run this machine code.

Advantages and Disadvantages of Interpreters



- Advantages

- It is faster.
- It is easier.
- It is more flexible.

- Disadvantages

- It is less efficient.
- It is less portable.

Areas of Use



- Web development
- Scripting
- Research & Development
- Education

What are Python Distributions?



- Python distributions are packages that contain all the components needed to install and use Python.
 - Cpython
 - Anaconda
 - Miniconda
 - PyCharm