

# Introduction to Python and Building a Calculator

Learn the basics of Python and create a simple calculator

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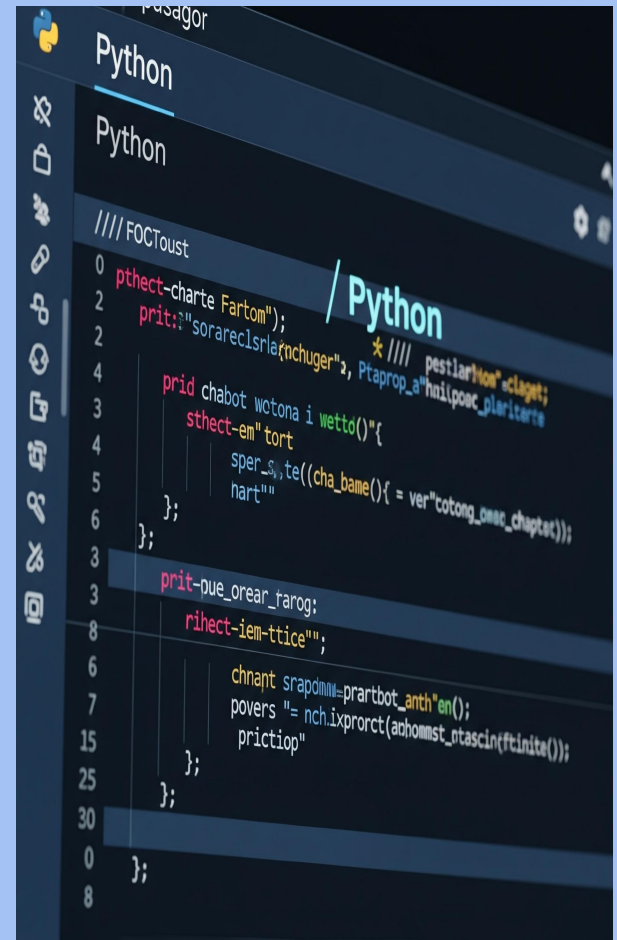


# What is Python?

- Python is a high-level, easy-to-read programming language.
- Created by Guido van Rossum, released in 1991.
- Used for web development, data analysis, AI, scripting, and more.
- Syntax is clear and simple, great for beginners.

## Why Learn Python?

- Beginner-friendly
- Large community and lots of resources
- Widely used in the tech industry
- Powerful libraries for many tasks (math, AI, etc.)



# Python Syntax Basics

Python uses indentation, not braces `{}`.

Variables do not need explicit types.

Example:

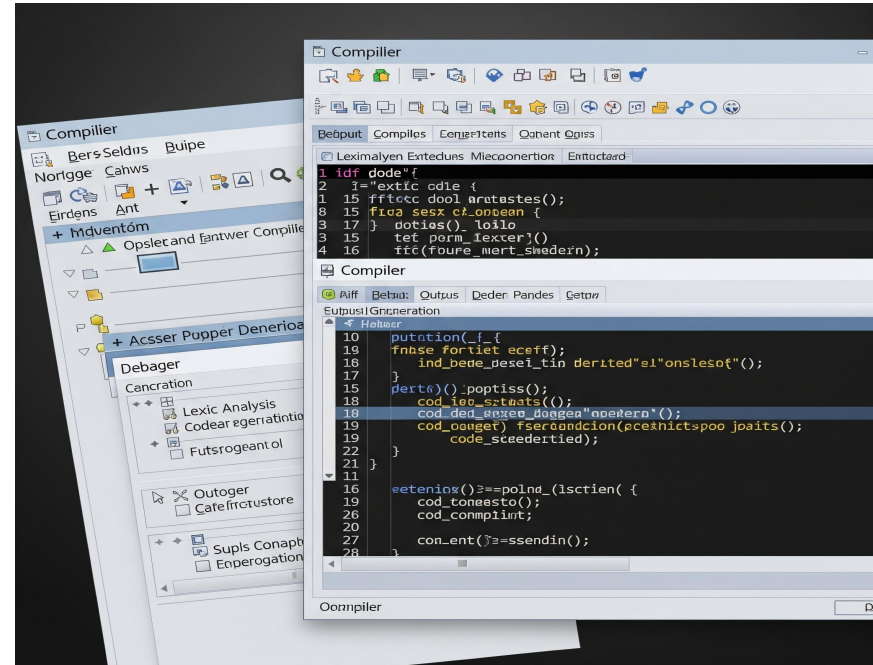
```
x = 5
print("Hello, world!")
```

# Free Python Compilers

A compiler is a technology where you enter the computer code to run the python language to get your calculator software program to work in this tutorial.

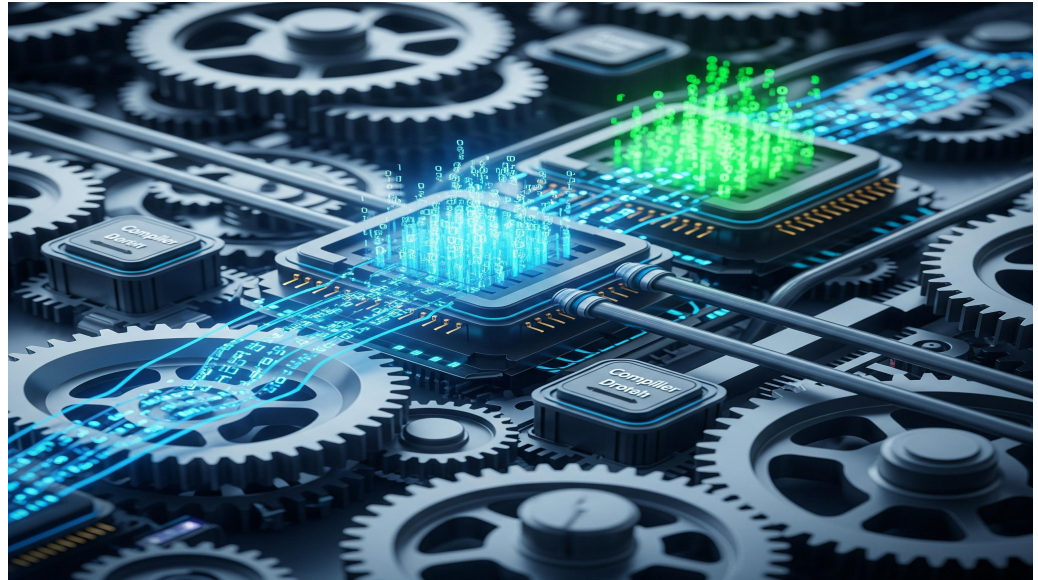
You don't need to buy anything to start coding Python! Here are free tools you can use:

- **Replit (Online):** <https://replit.com>
  - No install needed, works in your browser.
- **Python.org (Official):** <https://www.python.org/downloads>
  - Download and install Python with built-in IDLE editor.
- **Thonny (Beginner IDE):** <https://thonny.org>
  - Simple interface, great for learning.
- **Visual Studio Code (Advanced):** <https://code.visualstudio.com>
  - Powerful and customizable editor with Python extensions.



# What We'll Build in this Tutorial

- A simple **calculator program** in Python.
- It can add, subtract, multiply, and divide two numbers.
- User-friendly input and output.



## Step 1 – Input from User

```
num1 = float(input("Enter first number: "))  
operator = input("Enter operator (+, -, *, /): ")  
num2 = float(input("Enter second number: "))
```

## Step 2 – Perform Calculation

```
if operator == "+":  
    result = num1 + num2  
elif operator == "-":  
    result = num1 - num2  
elif operator == "*":  
    result = num1 * num2  
elif operator == "/":  
    result = num1 / num2  
else:  
    result = "Invalid operator"
```

## Step 3 – Display Result

```
print("Result:", result)
```

# Full Calculator Code

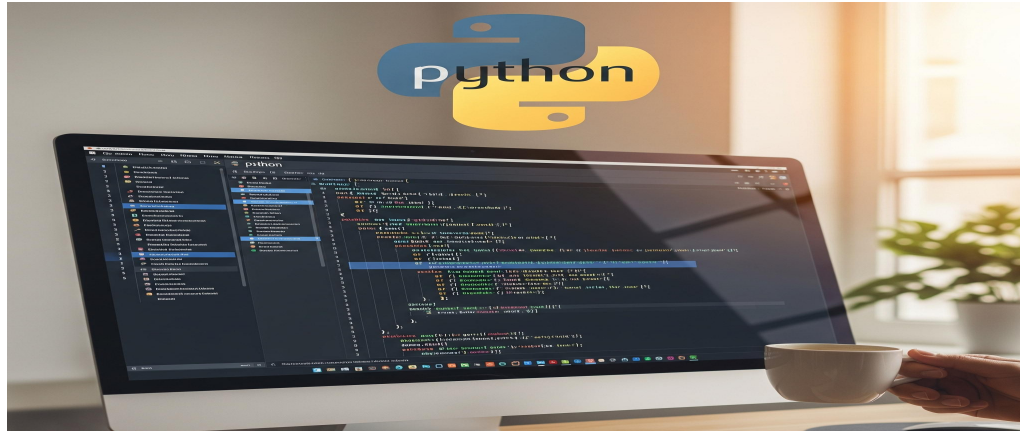
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num1 = float(input("Enter first number: "))
operator = input("Enter operator (+, -, *, /): ")
num2 = float(input("Enter second number: "))

if operator == "+":
    result = num1 + num2
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    result = num1 - num2
elif operator == "*":
    result = num1 * num2
elif operator == "/":
    result = num1 / num2
else:
    result = "Invalid operator"

print("Result:", result)
```

# Recap

- Python is easy to learn and powerful.
- We built a calculator using simple `if` statements.
- Try modifying it: Add exponentiation, more inputs, or a GUI!



# Questions?

**Any questions or comments? Please ask in the blog section of [www.ComputerLiteracyTutorials.com](http://www.ComputerLiteracyTutorials.com)**

Thank you for learning Python with me!



# References

Python Software Foundation. (n.d.). *Download Python*.  
<https://www.python.org/downloads>

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