

Python Tutorials Day 1

Welcome to Python!

- Python = Simple, Powerful, Fun
 - Great for beginners and pros
 - Runs on Windows, Mac, Linux
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Why Learn Python? 🚀

- Easy to read, easy to write
 - Popular in Web, Data, AI, Automation
 - Huge community + powerful libraries
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Installing Python 3

- Windows: download from python.org
- Mac: `brew install python3`
- Linux: `sudo apt install python3`

🔧 Exercise:

- Install Python 3 on your machine

- Check installation:

```
python3 --version
```

Running Python Code

- Open terminal: `python3` (interactive mode)
- Save code in `.py` file and run: `python3 myfile.py`
- Exit Python shell: `exit()`

Exercise:

- Run a simple math operation in terminal:

```
2 + 3
```

- Create a `.py` file that prints `"Hello, World!"`
-

Python Syntax Basics

- No semicolons needed
- Indentation defines code blocks
- Comments: `# This is a comment`

- Case-sensitive: `name` \neq `Name`

✅ Example:

```
# Correct
print("Hello")

# Wrong (missing indentation)
def say_hi():
print("Hi") # Error
```

🔧 Exercise:

- Write a function that prints your favorite color.
-

Variables in Python 📦

- Variables store data:

```
name = "Alice"
age = 25
```

- Use **snake_case** for multi-word names (`party_time`)

✅ Example:

```
greeting = "Good Morning!"  
print(greeting)
```

Exercise:

- Create two variables: your city and your favorite food. Print them.
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Data Types Overview

- Numbers: `int`, `float`
- Text: `str`
- Boolean: `bool`
- Collections: `list`, `tuple`, `set`, `dict`

Example:

```
age = 30          # int  
height = 5.9      # float  
is_student = True # bool  
name = "Charlie"  # str
```

Exercise:

- Declare one variable of each type.

Typecasting

- Convert between types easily:

```
str(32)      # '32'  
int('32')   # 32  
float('3.2')# 3.2
```

✅ Example:

```
num = "100"  
print(int(num) + 50) # Outputs 150
```

🔧 Exercise:

- Ask user for two numbers using `input()`, convert them to `int`, add them, and print the result.

Getting User Input

- Capture input from the user:

```
name = input("What's your name? ")  
print("Hello,", name)
```

- Input is always **string** by default.

✅ Example:

```
age = input("Enter your age: ")  
print("You are " + age + " years old!")
```

🔧 Exercise:

- Ask the user for their favorite animal and color. Print a sentence combining them!
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✅ End of Day 1

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