

🌟 Introduction to Python

Python is World's most popular programming language. It is a beginner-friendly programming language widely used in web development, artificial intelligence, data analysis, automation, networking, and many other fields.

🚀 What Can You Do with Python?

- Web Development
- Automation
- Backend API Development
- AI and Machine Learning
- Data Analysis
- Web Scripting
- Game Development
- Cloud Computing
- Cybersecurity
- QA Testing
- Networking
- Internet of Things (IoT), etc.

🌟 Why Learn Python?

- Easy to Learn: Start coding quickly, even if you're a beginner
- Global Opportunities: Python skills are in demand worldwide
- Top Companies Use Python: Google, Facebook, NASA, and more
- Great Salary: Python developers earn an average of \$126,952 annually in the US (according to Indeed.com)

🌐 Python is Used By:

- Google
- Instagram
- Netflix
- NASA
- And almost every tech company you can think of!

💻 Installing Python

Let's get Python up and running on your machine!

On Windows:

1. Download Python from the official website:
[python.org/downloads](https://www.python.org/downloads/)
2. Run the installer.
3. Check the box that says "Add Python to PATH".
4. Click "Install Now".

5. Open Command Prompt and type ``python --version`` to check the installation.

On Mac:

1. Download Python from the official website:

[python.org/downloads](https://www.python.org/downloads/)

2. Run the installer.

3. Open Terminal and type ``python3 --version`` to check the installation.

On Linux:

1. Open Terminal.

2. Type ``sudo apt-get update``.

3. Type ``sudo apt-get install python3``.

4. Type ``python3 --version`` to check the installation.



Installing Visual Studio Code (VS Code)

VS Code is a great code editor to write Python. Let's get it set up!

On Windows:

1. Download VS Code from the official website:

code.visualstudio.com

2. Run the installer.

3. Open Visual Studio Code.

4. Click on Extensions.

5. Search for "Python".

6. Click "Install".

On Mac:

1. Download VS Code from the official website:

code.visualstudio.com

2. Run the installer.

3. Open Visual Studio Code.

4. Click on Extensions.

5. Search for "Python".

6. Click "Install".

On Linux:

1. Download VS Code from the official website:

code.visualstudio.com

2. Run the installer.

3. Open Visual Studio Code.

4. Click on Extensions.

5. Search for "Python".

6. Click "Install".



Running Python Code in VS Code

Let's write and run your first Python code in VS Code!

1. Create a folder named `python-course`.
2. Open Command Prompt at the folder location.
3. Type `code .` to open VS Code.
4. Create a new file with a `.py` extension (e.g., `hello.py`).
5. Write your Python code in the file:

```
print("Hello, World!")
```

6. Save the file.
7. Open Command Prompt and type `python hello.py` to run the code.



Python Examples

Example 1: Print Your Name

```
print("John Doe")
```

Example 2: Print Your Name and Address

```
print("John Doe")  
print("123 Main Street")  
print("New York, NY 10001")
```



Escape Characters in Python

Escape characters let you include special characters in strings. Here are some handy ones:

Escape Character	Description
\n	New Line
\t	Tab
\"	Double Quotes
\'	Single Quotes
\\	Backslash



Challenge 1: Write About Yourself

Write a little about yourself using 10 different print statements. Have fun and be creative!