Python Tutorial - Learn Python Programming Language

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Thank You!

What kind of Experience do you want to share?

Python is one of the most popular programming languages. It’s simple to use, packed with features and supported by a wide range of libraries and frameworks. Its clean syntax makes it beginner-friendly.It's

Do you wish to learn Python in a scheduled manner ?Try our ongoing free coursePython Skillupwith weekly topic coverage, notes, daily quizzes and coding problems.

Here is a simple Python code, printing a string. We recommend you to edit the code and try to print your own name.

In this section, we’ll cover the basics of Python programming, including installing Python, writing first program, understanding comments and working with variables, keywords and operators. These are essential building blocks to get started with Python coding.

Before starting to learn python we need toinstall pythonon our system.

Python Functions are the backbone of organized and efficient code in Python. Here, in this section of Python 3 tutorial we'll explore their syntax, parameter handling, return values and variable scope. From basic concepts to advanced techniques like closures and decorators. Along the way, we'll also introduce versatile functions like range(), map, filter and lambda functions.

Python offers versatile collections of data types, including lists, string, tuples, sets, dictionaries and arrays. In this section, we will learn about each data types in detail.

Python's collections module offers essential data structures, including the following:

To learn data structure and algorithm with python in detail, you can refer to ourDSA with PythonTutorial.

In this section of Python OOPs, we'll explore the core principles of object-oriented programming (OOP) in Python. From encapsulation to inheritance, polymorphism, abstract classes and iterators, we'll cover the essential concepts that helps you to build modular, reusable and scalable code.

In this section of Python Tutorial, we'll explore Python Exception Handling that how Python deals with unexpected errors, enabling us to write fault-tolerant code. We'll cover file handling, including reading from and writing to files.

In this section, we will cover file handling, including reading from and writing to files.

In this section we will learn how to access and work with MySQL and MongoDB databases

Python is a huge collection of Python Packages standard libraries that make development easier. These libraries help with a wide range of tasks and can save you a lot of time by providing ready-to-use tools.

Some commonly used types of libraries in Python include:

1. Foundational Libraries: These are the libraries that form the base for all data science work. Start here to build a strong foundation.

2. Advanced Visualization and Statistical Tools:Once you’re comfortable with basic data handling and visualization, move to creating cleaner visuals and performing statistical analysis.

3. Machine Learning Libraries:After data manipulation and visualization, learn machine learning, starting with simpler models and moving to advanced ones.

4.Deep Learning Frameworks:If you’re interested in AI and deep learning, these libraries will allow you to build and train neural networks.

To learn more, you can refer toPython for Data Science.

1. Core Web Frameworks (Backend Development with Python):These are the tools for building Python-based web applications.

2. Database Integration:Learn how to connect Python web frameworks to databases for storing and retrieving data.

3. Front-End and Backend Integration:Learn how to connect Python backends with front-end technologies to create dynamic, full-stack web applications.

4. API Development:Learn to build APIs (Application Programming Interfaces) for connecting your backend with front-end apps or other services.

To learn more, you can refer toPython for Web Development.

Python quiz page covers topics including variables, data types and how to manage output effectively. You'll explore operators and control flow to structure our code, along with loops (for and while) for repetitive tasks. Additionally, you'll gain knowledge with Python data structures such as lists, tuples, dictionaries and sets.

The Python Coding Practice Problems page offers exercises for all skill levels, covering basics, loops, functions and OOP. You'll work with lists, strings, dictionaries, sets and advanced structures like heaps and deques. These problems help build a strong foundation and boost confidence in solving real-world coding challenges.

Python stands out because of its simplicity and versatility, making it a top choice for both beginners and professionals. Here are some key features or characteristics:

This Python tutorial is updated based on latest Python 3.13.1 version.

Below is the comparison of Python with C, C++ andJava:

These are some Popular companies that use Python in their workflow:

Python offer diverse opportunities across industries, here we have listed all the best career opportunity that anyone can pursue after learning Python.

Python 3.13 is the most recent stable release of the programming language, featuring a blend of updates to its syntax, implementation and standard library. Key enhancements include the introduction of a revamped interactive interpreter, experimental capabilities for operating in a free-threaded mode (as outlined in PEP 703) and the addition of a Just-In-Time (JIT) compiler (detailed in PEP 744).

The upcoming version of Python is Python 3.14 and it is expected to include the following notable updates: UTF-8 Mode Default (PEP 686), Shorthand Syntax for Keyword Arguments, Enhanced f-strings, JSON-based Simple API (PEP 691).

--> In this tutorial, we've provided the latestPython 3.13 versioncompiler where you can edit and compile your written code directly with just one click of the RUN Button. So test yourself with Python first exercises.

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