

### **Python Training course Overview**

Nagpur IT training institute will provide you with the best training in Nagpur. Nagpur IT is one of the top institutes in Nagpur that is committed to providing a great learning experience to students which helps them to reach successful positions in their careers. All our trainers at Nagpur IT Training Institute are qualified professionals who will teach according to the standards of the industry.

Python Programming Training course is created to fit all levels of students to provide in-depth knowledge about python scripting. The instructors for all of your lessons will be professionals in the IT sector who will help you use Python scripting to prepare for your ideal job.

The current scope of Python and real-time requirements are the major topics of training in Nagpur IT Training Institute, which will give beginners a fresh learning experience. The framework of the course was carefully planned for both professionals and beginners who wished to learn Python or enhance their skills in it.

Your coding competence will increase with each module section and with each code test on a Python topic. Your knowledge will be improved by real-world assignments, which will also help you develop interest and learn more. You will leave the course with complete contentment and the information necessary to accomplish your targets.

The topics covered in the python training course are current and essential, and our python trainer is well-versed in the material that will be presented.

### Why you should learn Python Programming?

Below are a few reasons to choose python.

Python has a very simple syntax which is easy to understand.

Millions of job opportunities for python developers.

Python is the most preferred language for Artificial Intelligence, Robotics, Web Development, and DevOps.

Python is one of the premier, flexible, and powerful open-source language that is easy to learn.

Python is easy to use and has powerful libraries for data manipulation and analysis.

For more than a decade, Python has been used in scientific computing and highly quantitative domains such as finance, oil and gas, physics, and signal processing as of today.



## **Python Training course objectives:**

#### Main objectives of the course are as follows:

Write python scripts, unit test code

Programmatically download and analyze data

Learn techniques to deal with different types of data i.e. ordinal, categorical, encoding

Learn data visualization

### **Python Training Course Content**

SECTION I Course Duration: 2 Months

#### **Overview**

- o Why do we need Python?
- o Program structure

#### **Environment Setup.**

- o Python Installation
- o Execution Types
- o What is an interpreter?
- o Interpreters vs Compilers
- o Using the Python Interpreter
- o Interactive Mode
- o Running python files
- o Working with Python shell
- o Integrated Development Environments (IDES)
- o Interactive Mode Programming
- o Script Mode Programming

### **Basic Concepts.**

- o Basic Operators
- o Types of Operator
- o Python Arithmetic Operators
- o Python Comparison Operators
- o Python Assignment Operators
- o Python Bitwise Operators
- o Python Logical Operators
- o Python Membership Operators (in, not in)
- o Python Identity Operators (is, is not)
- o Python Operators Precedence



#### **Data Types**

- o Variables
- o Assigning Values to Variables
- o Multiple Assignment
- o Python Numbers
- o Python Strings
- o Accessing Values in Strings
- o String Special Operators
- o String Formatting Operator
- o Triple Quotes
- o Built-in String Operations
- o Python Lists
- o Accessing Values in Lists
- o Updating Lists
- o Delete List Elements
- o Basic List Operations
- o Indexing, Slicing, and Matrixes
- o Built-in List Functions & Methods
- o Python Tuples
- o Accessing Values in Tuples
- o Updating Tuples
- o Delete Tuple Elements
- o Basic Tuples Operations
- o Indexing, Slicing, and Matrixes
- o Built-in Tuple Functions
- o Python Dictionary
- o Accessing Values in Dictionary
- o Updating Dictionary
- o Delete Dictionary Elements
- o Properties of Dictionary Keys
- o Built-in Dictionary Functions & Methods

#### **Loops and Decision**

- o if statements
- o ..else statements
- nested if statements
- o while loop
- o for loop
- o nested loops
- o Loop Control Statements

- O break statement
- O continue statement
- O pass statement



### **Functions**

- o Defining a Function
- o Syntax
- o Calling a Function
- o Pass by reference vs value
- o Function Arguments
- o Required arguments
- o Keyword arguments
- o Default arguments
- o Variable-length arguments
- o The return Statement
- o Scope of Variables
- o Global vs. Local variables

#### **Basic OOPs Concept**

- o Creating class in Python
- o Documented String
- o Private Identifier
- o Constructor
- o Inheritance
- o Polymorphism

### **Python Modules and Packages**

- o Framework vs Packages
- o Why are modules used?
- o Creating modules
- o The import Statement
- o The from...import Statement
- o The from...import \* Statement
- o Locating Modules
- Namespaces and Scoping
- o The dir() Function
- o The globals() and locals() Functions
- o The reload() Function
- o Packages in Python



### **SQLite**

- o Overview of SQLite
- o Integrating Python with SQLite

#### **Other Concepts**

- O Errors and Exception Handling
- O Standard exceptions
- O Assertions in Python
- O The assert Statement
- O What is Exception?
- O Handling an exception
- O Syntax
- O The except Clause with No Exceptions
- O The except Clause with Multiple Exceptions
- O The try-finally Clause
- O Argument of an Exception
- O Example with Tkinter Application

### **Advanced Concept -- Overviews**

- o Basics of Pandas and Numpy
- o How to use Anaconda
- o Overview of Django