



Advanced pythonTM

★ About Python Programming ★

Python is a general, multi-purpose, easy to learn and most trending programming language. Python has gained a tremendous response globally and many IT giants such as Facebook, Google, Quora are now relied on Python Programming. It's now used for Artificial Intelligence, Machine Learning, Data Science, Data Mining, Game Development etc. A senior Python Developer gets a salary of around 40 lakhs p.a.

★ Whom is this course for? ★

- ✓ Professionals seeking Job in IT Industry. This course helps to get clear idea about ample of programming concepts and makes you confident for Job Interviews.
- ✓ Students seeking Diploma/Degree in Engineering and have Python as a part of their syllabus.
- ✓ Any student curious to gain practical knowledge on programming with Hands-on training.

★ Prerequisites ★

- ✓ Basic Computer Knowledge & Mathematics Knowledge is expected
- ✓ No programming or any kind of professional course knowledge is expected

★ Syllabus ★

1. Introduction to Python Programming

 6 hrs

- 1.1 What is Python? History of Python.
- 1.2 Foundation of Python & it's Version History.
- 1.3 Installation of Python & it's IDE (PyCharm)
- 1.4 Printing Hello World
- 1.5 Data Types and their functions
- 1.6 7 types of Operators

2. Control Structures

 8 hrs

- 2.1 if ... elif ... else statement
- 2.2 for and for each Loop
- 2.3 while Loop
- 2.4 Iterators
- 2.5 Programs for Practice

3. Functions

 8 hrs

- 3.1 Functions
- 3.2 Parameters & Return Function
- 3.3 Function Overloading
- 3.4 Recursive Functions
- 3.5 Lambda Functions

4. Class and Objects (OOP's Concept)

 12 hrs

- 4.1 Class Concept, Definition, Structure of a class, __init__ method.
- 4.2 What is Object? Application of Objects, Call methods on objects.
- 4.3 Inheritance

5. Exception Handling

 4 hrs

- 5.1 Define Exception, Runtime Exception, Try-Catch Block, User Define Exception, Throws an Exception
- 5.2 Nested Try and Multiple Catch Block
- 5.3 Finally Block

6. Database Connection

 8 hrs

- 6.1 Different Types of Database
- 6.2 Installation of Database
- 6.3 Different Queries.

7. More in Python

 12 hrs

- 7.1 Dates and it's functions
- 7.2 Working with JSON (JavaScript Object Notation)
- 7.3 Regular Expressions
- 7.4 Web Crawling & Web Scrapping
- 7.5 Breif Introduction to NumPy Libarary
- 7.6 Introduction to OpenCV

8. Game Development in Python

 8 hrs

- 8.1 Installation to PyGame
- 8.2 Functions of PyGame
- 8.2 Creation of Snake Game using PyGame

9. GUI Development using Tkinter

 8 hrs

- 9.1 Tkinter Components & it's Function
- 9.2 Creating Calculator using Tkinter
- 9.3 Creating Management System in Tkinter with Database connectivity

- 10.1 Introduction to HTML, Front-End & Back-End Language
- 10.2 Django Installation and understanding it's structure
- 10.3 Creating a Product Management System in Django

★ Final Examination ★

- **Syllabus:** All Modules
- **Marks:** 100 Marks
- **Minimum Passing Marks:** 60
- **Time Limit:** 3 Hours
- **Paper Pattern:** MCQ's + Problem Statements
- **Type of Exam:** Online



★ Internship ★

*Opportunity to work on any of the live ongoing project in Hertzsoft Technologies Pvt. Ltd.
only if candidate clear Final Examination.*

(Offer Letter, Experience Letter & Certificate of Internship Provided)

Hertzsoft Technologies Pvt. Ltd.

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