

# PROGRAMMER'S DEN

“Practical Knowledge > Theoretical Knowledge”

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## Programming in Python Batch Contents: -

### Module 1: C Programming

- History of C Programming Language.
- Features / Characteristics of C Programming Language.
- Tool Chain of C Programming Language.
- Data Types, Variables and Constants in C.
- Operators and Expressions in C.
- Statements in C (Loops, if else if ladder, switch statements).
- Arrays and Pointers in C.
- Functions in C.
- I/O Operations in C.
- Strings and Character Array in C.
- Scope, Linkage, Lifetime and Storage Classes in C.
- Structures, Unions and Enumerations and Bit-fields.
- Dynamic Memory Allocations in C.
- File Handling in C.

- Data Structures in C.

## **Module 2: C++ Programming**

- History of C++ Programming Language.
- Features / Characteristics of C++ Programming Language.
- Tool Chain of C++ Programming Language.
- Data Types, Variables and Constants in C++.
- Operators and Expressions in C++.
- Statements in C++ (Loops, if else if ladder, switch statements).
- Arrays and Pointers in C++.
- Functions in C++.
- I/O Operations in C++.
- Strings and Character Array in C++.
- Scope, Linkage, Lifetime and Storage Classes in C++.
- Structures, Unions and Enumerations and Bit-fields.
- Dynamic Memory Allocations in C++.
- Object Oriented Thinking in C++.
- Object Oriented Programming in C++.
- OOPS Concepts (Encapsulation, Polymorphism, Abstraction, Inheritance) in C++.

- This Pointer in C++ • Types of Inheritance in C++.
- Access Specifiers in C++.
- Inline Functions in C++.
- Static in C++.
- Friend Concept in C++.
- Types of Polymorphisms in C++.
- Function Overloading in C++.
- Function Overriding in C++.
- Operator Overloading in C++.
- Virtual, Pure Virtual Functions in C++.
- Constructors and Destructors in C++.
- Virtual Destructors in C++.
- Pure Virtual Destructors in C++.
- Generic Programming in C++.
- Data Structures in C++.
- File Handling in C++.

### **Module 3: Java Programming**

- History of Java Programming.
- Characteristics of Java Programming.
- Tool Chain of Java.
- Data Types in Java.
- I/O in Java
- Command Line Arguments in Java.

- Arrays in Java.
- Memory Allocation, Deallocation in Java.
- Memory Management in Virtual Machine
- Object Class in Java.
- This Keyword in Java.
- Super Keyword in Java.
- Final Keyword in Java.
- Static in Java.
- String in Java.
- Object Oriented Programming in Java.
- OOPS Concepts (Encapsulation, Polymorphism, Abstraction, Inheritance) in Java.
- Interfaces in Java.
- Class in Java.
- Constructors and Destructors in Java.
- Types of Polymorphism in Java.
- Function Overloading in Java.
- Method(Function) Overriding in Java.
- Packages in Java.
- Abstract Class in Java.
- Wrapper Class in Java.
- Generic Programming in Java.
- Exception Handling in Java.
- Multithreading in Java.

- Data Structures in Java.
- File I/O in Java.

**Note :**

- During Lectures You Have to Do Parallel Coding with Teacher for Better Understanding of All Above Concepts.