

OBJECT ORIENTED PROGRAMMING THROUGH “ C++”

- **C++ PROGRAMMING BASICS**
- **COMPILATION AND EXECUTION**
- **HEADER FILES**
- **TYPES OF ERRORS (Compilation, Execution, Linking errors etc.)**
- **CONDITION CHECKING (IF/ ELSE)**
- **SWITCH CASE**
- **LOOPS (WHILE, FOR, DO WHILE)**
- **FUNCTIONS**
 - Different Forms of Functions, Function Prototyping, Call By Reference, Inline Functions
 - Function Overloading, Function Overriding, Passing Default Arguments in a Function
- **ARRAYS (Static Memory Allocation)**
- **STRINGS (Functions to work with String)**
- **STRUCTURES**
 - Array of Structures, Passing Structures to Functions , Structure Pointer etc.

OBJECT ORIENTED PROGRAMMING CONCEPTS

- **OBJECTS AND CLASSES**
 - Defining Classes, Defining Member Functions, Declaration Of Objects To Class
 - Access To Member Variables From Objects etc, Different Forms Of Member Functions Dependence On Access Specifiers
 - Array Of Objects, Objects As Function Arguments, Function returning Object
 - Pointers To Objects
- **CONSTRUCTORS & *DESTRUCTORS***
 - Explicit, Implicit, Parameterized Constructor, Copy Constructor, Constructor Overloading etc.
- **OPERATOR OVERLOADING (UNARY, BINARY etc.)**
 - Defining Operator Overloading, Overloading (Unary, Binary Operators)
 - Rules For Overloading Operators, Type Conversion
- **DATA ENCAPSULATION /DATA HIDING**
 - Private, Public, Protected Access (Access Combinations)

➤ **INHERITENCE**

- Multi-Level, Hybrid, Multiple Inheritance, Containership, Access Combinations,
- Function Overriding

➤ **MEMORY MANAGEMENT AND POINTERS**

- Using **New** Operator, Comparison Of New Over Malloc, Calloc and Realloc etc
- Memory Freeing Using **Delete** Operator.

➤ **POINTER, VIRTUAL FUNCTIONS, POLYMORPHISM**

- Pointers, Pointers To Objects, ‘This’ Pointer, Pointers To Derived Class, Virtual Functions,
- Pure Virtual Functions, New & Delete Operator Etc.

➤ **FRIEND CLASS, FRIEND FUNCTION, ABSTRACT CLASS**

➤ **MANAGING CONSOLE I/O OPERATIONS**

- C++ Streams, C++ Stream Classes, Unformatted / Formatted I/O Operations, Managing Output with Manipulators.

➤ **WORKING WITH FILES (FILE HANDLING)**

- Creating/ Opening / Closing / Deleting Files, File Pointers And Their Manipulators, Updating
- File Random Access To File, Error Handling During File Operations, Command Line Arguments.

➤ **TEMPLATE CLASS , TEMPLATE FUNCTIONS**

- Class Templates, Function Templates, Overloading Of Template Function

➤ **EXCEPTION HANDLING**

- Exception Handling – Try, Catch, Throw, Throwing, Catching, Re-Throwing an Exceptions, Specifying Exceptions etc.

DURATION :

(2.5 Months X Alternate Days X 1.5- 2 Hrs)

Approx 30 Classes X 1.5-2 Hr.

Details: -

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