

# INDEX

Chapter 1: Oops Fundamentals and Introduction to C++

- 0
- Object Oriented Programming Elements of Object Oriented Programming 0
- 0 Basic Concept of OOPs
- History of C++ 0
- 0 Structure of a Program in C++
- Data Types and Variable Declaration ο
- Standard Input and Output 0
- Scope of Variables 0
- Escape Characters ο
- Why use C++ for OOP? 0
- Operators in C++ 0
- Explicit Type Casting in C++ 0

### Chapter 2: Classes, Objects, Constructor and Destructor

- Object and Classes
- **Access Specifiers** 0
- Creating Multiple Objects of a Class 0
- Constructors and Destructors 0
- **Copy Constructor** ο
- Scope Resolution Operator ο

### Chapter 3: Static Polymorphism

- 0 Introduction to Polymorphism
- 0 Static Polymorphism
- 0 Function Overloading
- **Operator Overloading** 0
- Friend Function 0
- Friend Classes 0

# Chapter 4: Single and Multiple Inheritance

- Introduction to Inheritance 0
- Public, Protected and Private Inheritance 0
- Constructors and Destructors Execution in Inheritance ο
- **Overriding Base Class Members** 0
- Scope Resolution With Overridden Members 0
- **Base Class Initialization** 0
- Introduction to Multiple Inheritance 0
- Constructors and Destructors Execution in Multiple Inheritance 0
- Ambiguities in Multiple Inheritance 0
- Virtual Base Classes 0

Chapter 5: Dynamic Polymorphism

- 0 Pointers to Base Class
- ο Virtual Members
- Abstract Base Classes 0
- 0 **Pure Virtual Members**



# Chapter 6: File Handling in C++

- Streams in C++ 0
- Stream Insertion and Extraction 0
- User-defined Stream 0
- Introduction to File Processing 0
- 0 Opening a File
- Calling the Stream Member Function open() 0
- 0 Writing a Line of Text into a File Reading a Line of Text From a File 0
- Reading and Writing the Variables of Predefined Types Reading and Writing Objects File I/O using Binary Files 0
- 0
- 0

#### **Chapter 7: Templates and Exception Handling**

- **Generic Functions** 0
- Generic Functions with Specific Type Arguments 0
- **Explicitly Overloading a Generic Function** 0
- 0 Generic Classes
- **Giving Default Values to Template Arguments** 0
- Exception Handling 0
- Try Block 0
- Catch Block 0
- Throwing an Exception 0
- More Than One Catch Statement 0