

# C++ Course (Advance Level) 60 Days

Sr. No.	Chapters	Sub Chapters
1	C++ Basics	Know about the background introduction, C++ introduction, How do C++ Programs Run, Comments in C++, etc
		Setting up the development environment (IDE, JDK)
2	Variables and Data Types	Learn about the variables in C++ & Naming Rules, Data Types in C++, Range of Data Types, Const in C++, Auto Keyword in C++, Type Conversion C++
		Why do we need Programming Languages
		Writing and running your first Java program
3	Input Output in C++	learn Inputs & Outputs in C++
4	Operators	Build your knowledge on Operators like, Arithmetic, Comparison, Logical, Assignment, Bitwise, Arithmetic Progression, Geometric Progression, etc
5	Flow Control	Learn about If else, Nested If else, Switch statement in C++
6	Loops	For Loops ,While Loops, Do While Loops, Break & Continue statements
7	Array	Introduction to Arrays in C++, Declaring and Initializing Arrays, Array Traversal, Check if Array is Sorted, Maximum in an Array, etc
8	References	Get to know about References in C++, Function Parameters & References
9	Pointers	Get to know about Address and Dereference Operators , Introduction to Pointers, Function Parameter and Pointers, NULL in C++, nullptr in C++, Dynamic Memory Allocation, etc
10	String	Learn about String in C++, String Operations (Length, Substring and Find), String Comparison, String Traversal, Reverse a String, Pattern Searching, etc
11	Structure and Union	Get to know about Struct in C++ (Introduction), Struct vs Class in C++, Structure Alignment and Padding, Union in C++
12	Multidimensional Array	Get to know all about Multidimensional array in CPP, Passing 2D arrays as arguments in CPP
13	Templates	Get insights on Templates in C++ STL, Function Templates in C++ STL, Class Templates in C++ STL, etc
14	Object-oriented Programming	Learn about Object Oriented Programming, Constructors and Destructors, Static Members, Inheritance, Multiple Inheritance, Operator Overloading, etc
15	Exception Handling	Get to know all about Exception Handling, Try Throw and Catch in C++ Exception Handling, Stack Unwinding in C++ Exception Handling, User Defined Exceptions in

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		C++, etc
16	STL Overview	Iterators in C++, Templates in C++, Function Templates in C++ STL and much more
17	Simple Containers	Pairs: Learn about Pair in C++ STL, Sort an array according to another array and much more
18	Sequenced Containers	Vector: Get to know vector from its Introduction to internal working, Sample problem on vector and much more.
		forward_list and List: Learn about forward_list and List, Josepohus problems, etc.
		Deque: Deque in C++ STL, Sliding Window Maximum and much more
19	Container Adapters	Stack: Learn about Stack in C++ STL, reverse Items using Stack, Balanced Parenthesis problem, etc
		Queue: Get to know Queue in C++ STL, Generate numbers using given digits, Reverse first K items in a Queue and much more
		Priority Queue: Play with Priority Queue in C++, K largest elements in an array, Find K most frequent elements, etc
20	Associative Containers	Set & Multiset: Get to know Set in C++ STL, Ceiling on right, Multiset in C++ STL and much more
		Map & Multimap: Learn about Map in C++ STL, Multimap in C++ STL, Design a DS for Prices with Duplicates allowed, etc
		Unordered Set: Solve problems like Print Distinct Elements of Array, Intersection of two unsorted Arrays with Unordered Set.
		Unordered_map: Learn about Unordered_map in C++ STL, Design a DS for storing user balance and much more
21	STL Algorithms	Non-Mutating STL Algorithms: Learn about various functions like find, Lower Bound/Upper Bound, is_permutation() and much more
		Mutating STL Algorithms: Get your hands dirty by solving problems using sort(), make_heap() in C++ STL, merge() in C++ STL and much more