SwapSkill

Skill Content Summary

Category: Programmimg
Skill: C++

Topics Breakdown

- Introduction to C++
  - !’ History of C++
  - !’ Features of C++
  - !’ Applications
- C++ Program Structure
  - !’ Basic Syntax
  - !’ Header Files
  - !’ main() Function
- Data Types in C++
  - !’ Primitive Data Types
  - !’ Derived Data Types
  - !’ User
- Variables and Constants
  - !’ Variable Declaration
  - !’ Scope of Variables
  - !’ Constants
- Operators in C++
  - !’ Arithmetic Operators
  - !’ Relational Operators
  - !’ Logical Operators
- Input and Output in C++
  - !’ cin
  - !’ cout
  - !’ I/O Manipulators
- Control Statements
  - !’ if Statement
  - !’ if
- Looping Statements
  - !’ for Loop
  - !’ while Loop
  - !’ do
- Arrays in C++
  - !’ One Dimensional Arrays
  - !’ Multidimensional Arrays
  - !’ Array Operations
- Strings in C++
  - !’ C

- Functions in C++
  - !’ Function Declaration
  - !’ Function Definition
  - !’ Call by Value
  - !’ Call by Reference
- Recursion
  - !’ Recursive Functions
  - !’ Base Condition
  - !’ Examples
- Pointers
  - !’ Pointer Basics
  - !’ Pointer Arithmetic
  - !’ Pointers and Arrays
- Structures and Unions
  - !’ Structure Definition
  - !’ Union
  - !’ Difference between Structure and Union
- Object
  - !’ Oriented Programming Concepts
- Constructors and Destructors
  - !’ Default Constructor
  - !’ Parameterized Constructor
  - !’ Destructor
- Inheritance
  - !’ Types of Inheritance
  - !’ Access Specifiers
  - !’ Method Overriding
- Polymorphism
  - !’ Function Overloading
  - !’ Operator Overloading
  - !’ Virtual Functions
- Abstraction
  - !’ Abstract Class
  - !’ Pure Virtual Function
  - !’ Interfaces
- Exception Handling
  - !’ try
  - !’ catch
  - !’ throw
- File Handling in C++
  - !’ File Streams
  - !’ Reading from File
  - !’ Writing to File
- Templates
  - !’ Function Templates
  - !’ Class Templates
- Standard Template Library (STL)
  - !’ Containers
  - !’ Iterators
  - !’ Algorithms
- Namespaces

- !’ Need of Namespace
- !’ Using Namespace

• Dynamic Memory Management
- !’ new Operator
- !’ delete Operator