Introduction to C Programming Language

History

Overview of the development of the C programming language.

- Compilers and Interpreters

Understanding the role of compilers and interpreters in C programming.

- First Program

Steps to write and compile a simple C program.

- Declarations in C

Syntax and usage of C declarations.

- Tokens and Delimiters

Explanation of tokens and delimiters in C programming.

- Identifiers and Constants

Rules for naming identifiers and types of constants in C.

- Escape Sequences

Common escape sequences used in C.

- Variables and Data Types

Declaration, initialization, and types of variables in C.

- Operators and Expressions

Overview of operators and expressions in C.

- Input and Output

Input and output operations in C programming.

- Decision Making

Usage of decision-making statements like if, else, switch.

- Loop Control

Explanation of loop control statements like while, do-while, for.

- Arrays

Introduction to arrays and array manipulation in C.

- Strings and Standard Functions

String handling functions and their usage.

- Pointers

Understanding pointers and their manipulation in C.

- Functions

Declaration, definition, and usage of functions in C.

- Storage Classes

Different storage classes in C (auto, extern, static, register).

- Preprocessor Directives

Usage of preprocessor directives like #define, #include.

- Structure and Union

Introduction to structure and union in C programming.

- File Handling

File operations in C (opening, reading, writing, closing files).

- Graphics
- Basic graphics programming using C.

Introduction to C++ Programming Language

Programming with C++

Introduction to the C++ programming language.

- Object-Oriented Programming

Explanation of object-oriented programming concepts in C++.

- Syntax and Control Structures

  Basic syntax and control structures in C++.

- Classes, Objects, Constructors, and Destructors

  Understanding classes, objects, constructors, and destructors in C++.

- Functions and Overloading

  Functions and function overloading in C++.

- Inheritance

  Concepts of inheritance and its types in C++.

- Polymorphism

  Virtual functions, abstract classes, and polymorphism in C++.

- File Handling with Stream Classes

  Input and output file operations using stream classes in C++.

- Exception Handling

  Handling exceptions in C++ programming.

- Templates
- Overview of templates and their usage in C++.