

ActiveNET

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C Curriculum

Introduction

- What is a program?
- What is a programming language?
- Steps in Programming
- Skills needed to do programming
- A little introduction to C
- Writing a Program
- Fundamentals of a Programming Language
- Different Programming Techniques
- Procedural Programming
- Modular Programming
- Object Oriented Programming
- Getting started with compiler

Words and Sentences in C language

- Alphabets in C
- Keywords in C
- Rules of forming Words in C language
- Data Variables, Data Types and Rules for naming and declaring data Variables
- Basic Data Types in C
- Constants
- Comments in C

C Instructions and Rules for Writing

Types of instructions
Data Manipulation Instructions
Input/Output Instructions

Operators in C

Assignment operator
Mathematical operators
Unary Increment and Decrement operators
Relational operators
Logical operators
Bitwise operators
 1's complement operator
 Right shift operator
 Left shift operator
 Bitwise AND operator
 Bitwise OR operator
 Bitwise XOR operator

Control Structures

Flow Control Instructions

Decision Control Instructions
If
If-else
If-else-if
Nested if-else

Flow Control Instructions

Loop Control Instructions
For Loop
While Loop
Do While
Break
Continue

Functions

Why use Functions
Components of Function
Name of a function
Body of a function

- Local variables of a function
- Parameters or Arguments to a function
- Return Values
- Prototype of a function

Arrays

- What is an array?
- Array Declaration
- Array Initialization
- Accessing individual elements of an array
- Two Dimensional Arrays
- Passing an array element to a function
- Rules of using an array

Pointers

- What is a pointer?
- Declaring a Pointer variable
- Initializing a pointer variable
- Using a Pointer Variable
- Pointer Arithmetic
- Pointers and array
- Passing an entire array to a function

Strings

- What are strings?
- String I/O
- String Manipulation Functions

Structures

- Declaring and Accessing Structure variables
- Uses of Structures
- Unions

Storage Classes and Scoping

- Automatic
- Register
- External
- Static
- Scope of a Variable

File Input/Output

- File operation

- Opening a File

- Writing into File

- Reading a File

- Closing File

- Counting Characters, Tabs, Spaces

- File opening modes

- Writing String/Lines into I/O

- Dealing with Text and Binary files