

PROFESSIONAL COURSES IN 'C' LANGUAGE

SYLLABUS

Course code- R10602

Overview of the Programming Languages

Introduction of C Language, Why C Language, Future in C Language.

Setting up and Installing C Language

Prerequisite in C Language, Installation of C.

Data Type, Constants & Variables

Data Types in C Language, Integers, long and short

Integers, signed and unsigned, Chars, signed and unsigned

Floats and Doubles, Constants and Variables, Keywords in C, How to get input from user, How to display output to user.

Conditional Statements and Loops

If, IF-Else, If ladder, nesting If Statement, Loop construct, for Loop, nesting of for loop, While Loop, Do-While Loop, Break and Continue in C Language, Switch Case.

Arrays

Arrays and its dimension, A Simple Program Using Array, How to Initialize Array and retrieve value from array, Passing Array Elements in Function, Passing an Entire Array to a Function, Two Dimensional Arrays, Initializing and retrieving values, Passing 2-D array to Function, Three Dimensional Array with practical.

Pointer

An Introduction to Pointers, dimensions, Pointer Notation in C Language, initialization and retrieval, Two dimensional pointer variables of all data types, Pointers and Arrays in C Language, Pointers and 2-Dimensional Arrays, Pointer to an Array, Array of Pointers.

Function

Function in C Language, User Defined Function (UDF), Passing Values between Functions, Returning value, Default argument function, Call by Value (array, pointer, structure), Call by Reference (call by address), Recursive function.

Structures, Union and Enum

What is Structure?, Use of Structures in C Language, Declaring Structure with example, Array of structure, structure of array, Pointer of structure and structure of pointer, What is Union, declaration, uses, Enum, declaration, Use of Enum in C Language.

String

String definition and uses, Variable declaration (array and pointer variables), Initializing and retrieving string values, String operations Operation on string like copying, comparing, concatenation, chopping etc by UDF, Inbuilt string functions

File Operation

Definition of File, types, File Input/Output functions, File Operations, Opening a File, Reading from a File, closing the File, Operations based on string in File system, A File-copy Program in C Language, Writing to a File in C Language, File Opening Modes, String (line) I/O in Files

Bitwise Operators

Operations on Bits, Bitwise Operators, One's Complement Operator, Right Shift Operator, Left Shift Operator, Bitwise AND Operator, Bitwise OR Operator, Bitwise XOR Operator.

Preprocessor

The C Preprocessor, Features of C Preprocessor, Macro Expansion in C Language, Macros with Arguments, Macros versus Functions, File Inclusion, #if and #elif Directives, #undef Directive, #pragma Directive Miscellaneous Directives in C Language.