

C

Description

Professional C programming course skims through the basics of C and soon jumps over to core of C programming language which looks simple but difficult to master. Our C Training will make the participant learn deep C secrets and develop a fairly advanced level of C programming expertise which is essential to write complex systems and application software.

Expectations and Goals

Advanced C Programming course will be delivered by our Expert with experience in Linux Kernel and software development. The C training flow will be an assignment driven model so that participants can develop an expert level C programming skills.

Participants will be writing lots of C programs dealing with operator precedence, conditional constructs, strings, pointers, arrays, arrays & pointers, double pointers, function pointers, pointers to arrays, internal storage for various data-types, creating in memory data-structures, bit-field operators, recursions, function call and stack formation, standard file I/O library, buffered IO, etc.

Prerequisites

None

Course Schedule

Module	Topic	Hours
Module 1	Programming Logic and Technique Introduction to Programming language What is Procedural Programming Language Algorithm and Flow Chart Some examples using Flow Chart Deals with Expression Introduction to C What is Compiler and Interpreter	3 hrs.
Module 2	C Language preliminaries Data types (Primary, Secondary, User Defined) What is variable and constant Identifiers and Keyword Declarations and expressions Different C compilers(gcc/tcc)	3 hrs.
Module 3	Input Output and Pre-Processor Statement Pre-processor Directives getchar, putchar, scanf, printf gets, puts Header File and #include Different types preprocessor directives A small C program example	4 hrs.
Module 4	Storage classes in C What is storage class? Different types of storage Classes (Auto, static, register, extern) Different features of a variable(memory, default	3 hrs.

	initial value, scope, life time)	
Module 5	Operators and Control Statements Different types of operators (arithmetic, logical, relational etc.) If, else, else – if with some examples Conditional operator (? :) Switch case with example Use of Break, Continue	8 hrs.
Module 6	Loop What is iterations Different types of loops For, while, do-while with some examples Nesting of loops Pattern printing using nested for loop	6 hrs.
Module 7	Array, String What is array Different types of array (both 1D and 2D) Examples of 1D array, and 2D array (matrix addition) Introduction to character array and string	4 hrs.
Module 8	Function What is function Declarations, definitions and calling of a function Arguments and parameters Recursive function Passing array to a function String library function	6 hrs.
Module 9	Pointers Definitions of pointer Declaring and accessing a pointer Passing pointer to a function Operations on pointer, pointer arithmetic Pointer and array	6 hrs.
Module 10	Structures What is structure Processing and accessing structure variable Array of structure Union, typedef Pointer to structure	6 hrs.
Module 11	File File handling in C Text file, binary file File creation, opening Reading and writing to a file File copy	6 hrs.
Module 12	C99 and C11 specification additions	2 hrs.