

C Programming - Complete Tutorial For Beginners

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› C Programming - Complete Tutorial For Beginners

C Programming - Complete Tutorial For Beginners



Category
BUSINESS



















What You Will Learn










write C programs independently
face technical interviews with confidence
will be able to do assignments in C programs

Curriculum

SECTION 1: START LEARNING C PROGRAMMING

		Introduction	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/0/0)
		How to use Xcode (on MAC) for writing C Program	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/0/1)
		How to download and install Codeblocks for Mac	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/0/2)
		Download install and use Codeblocks for Windows	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/0/3)
		Compiling from Windows terminal using gcc	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/0/4)
		Download, install and use Visual Studio 2017 Community edition.	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/0/5)
		Using Netbeans in Mac	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/0/6)
		Executing C program from MAC terminal	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/0/7)

SECTION 2: FUNDAMENTALS THAT YOU ALWAYS NEED TO KNOW

		Understanding the first program	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/1/0)
		How to input and store values in C program.	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/1/1)
		Initialisation of variable, octal and hex initialisation.	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/1/2)
		Arithmetical Operators in C	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/1/3)
		Dealing with characters	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/1/4)
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➤ ▶	Flushing problem while taking character input	VIDEO (/video/c-programming-complete-tutorial-for-beginners/1/5)
➤ ▶	Idea of casting	VIDEO (/video/c-programming-complete-tutorial-for-beginners/1/6)
➤ ▶	The secret of printf	VIDEO (/video/c-programming-complete-tutorial-for-beginners/1/7)
➤ ▶	The secret of scanf	VIDEO (/video/c-programming-complete-tutorial-for-beginners/1/8)
➤ ▶	The most neglected operator - Assignment operator	VIDEO (/video/c-programming-complete-tutorial-for-beginners/1/9)
➤ ▶	Relational operators for comparing values	VIDEO (/video/c-programming-complete-tutorial-for-beginners/1/10)
➤ ▶	Can you take this challenge?	VIDEO (/video/c-programming-complete-tutorial-for-beginners/1/11)
➤ ▶	Introduction to Logical Operator, AND operation	VIDEO (/video/c-programming-complete-tutorial-for-beginners/1/12)
➤ ▶	Logical OR operation	VIDEO (/video/c-programming-complete-tutorial-for-beginners/1/13)
➤ ▶	Logical NOT operation	VIDEO (/video/c-programming-complete-tutorial-for-beginners/1/14)
➤ ▶	Unary increment and decrement operator	VIDEO (/video/c-programming-complete-tutorial-for-beginners/1/15)
➤ ▶	Short circuit feature of AND and OR operation	VIDEO (/video/c-programming-complete-tutorial-for-beginners/1/16)

SECTION 3: BRANCHING, TAKING COURSE OF ACTION ON THE BASIS OF RESULT OF CONDITION

➤ ▶	"To be or not to be" - how to decide using if-else	VIDEO (/video/c-programming-complete-tutorial-for-beginners/2/0)
➤ ▶	Going further, the if-else-if structure	VIDEO (/video/c-programming-complete-tutorial-for-beginners/2/1)
➤ ▶	Another programming example on if-else-if, this will help you more.	VIDEO (/video/c-programming-complete-tutorial-for-beginners/2/2)
➤ ▶	Are you sure you can answer this? Take a look.	VIDEO (/video/c-programming-complete-tutorial-for-beginners/2/3)
➤ ▶	Ops! Not done yet, here is some more information on if-else	VIDEO (/video/c-programming-complete-tutorial-for-beginners/2/4)




➤ ▶	Make it smart using conditional operator, the only ternary operator in C	VIDEO (/video/c-programming-complete-tutorial-for-beginners/2/5)
➤ ▶	Nested if-else, checking leap year.	VIDEO (/video/c-programming-complete-tutorial-for-beginners/2/6)
➤ ▶	Understand switch-case	VIDEO (/video/c-programming-complete-tutorial-for-beginners/2/7)

SECTION 4: DO IT AGAIN AND AGAIN UNTIL SATISFIED, TECHNIQUE FOR ITERATION.











➤ ▶	Introduction to loop, while loop.	VIDEO (/video/c-programming-complete-tutorial-for-beginners/3/0)
➤ ▶	While loop - Programming Example 1	VIDEO (/video/c-programming-complete-tutorial-for-beginners/3/1)
➤ ▶	While loop - Programming Example 2	VIDEO (/video/c-programming-complete-tutorial-for-beginners/3/2)
➤ ▶	Take a challenge on while loop, here is interesting "predict output" on while.	VIDEO (/video/c-programming-complete-tutorial-for-beginners/3/3)
➤ ▶	All about smart looking for loop	VIDEO (/video/c-programming-complete-tutorial-for-beginners/3/4)
➤ ▶	First do then check, do-while loop	VIDEO (/video/c-programming-complete-tutorial-for-beginners/3/5)
➤ ▶	How to break a loop early: use of 'break' keyword	VIDEO (/video/c-programming-complete-tutorial-for-beginners/3/6)
➤ ▶	The other loop utility: 'continue' keyword	VIDEO (/video/c-programming-complete-tutorial-for-beginners/3/7)
➤ ▶	Generating random numbers, the rand() function	VIDEO (/video/c-programming-complete-tutorial-for-beginners/3/8)

SECTION 5: ARRAY: THE COLLECTION













➤ ▶	Introduction to one dimensional array	VIDEO (/video/c-programming-complete-tutorial-for-beginners/4/0)
➤ ▶	Initialisation of one dimensional array	VIDEO (/video/c-programming-complete-tutorial-for-beginners/4/1)
➤ ▶	Allocating array dynamically, Example input output operations with array	VIDEO (/video/c-programming-complete-tutorial-for-beginners/4/2)
➤ ▶	A programming example using 1-	VIDEO (/video/c-programming-complete-tutorial-for-

D array	beginners/4/3
  Second assignment on one dimensional array	VIDEO (/video/c-programming-complete-tutorial-for-beginners/4/4)
  Introduction to two dimensional array	VIDEO (/video/c-programming-complete-tutorial-for-beginners/4/5)



SECTION 6: WAY TO STORE AND MANIPULATE STRING IN C PROGRAMMING

  Introduction to string, using character array for storing string	VIDEO (/video/c-programming-complete-tutorial-for-beginners/5/0)
  How to input string from keyboard	VIDEO (/video/c-programming-complete-tutorial-for-beginners/5/1)
  Finding the length of string	VIDEO (/video/c-programming-complete-tutorial-for-beginners/5/2)
  Searching and counting target in string	VIDEO (/video/c-programming-complete-tutorial-for-beginners/5/3)
  Library function for string operations, string.h	VIDEO (/video/c-programming-complete-tutorial-for-beginners/5/4)

SECTION 7: MODULARISE YOUR PROGRAM USING FUNCTION.

  Introduction to function	VIDEO (/video/c-programming-complete-tutorial-for-beginners/6/0)
  Prototype or signature of function, declaring a function.	VIDEO (/video/c-programming-complete-tutorial-for-beginners/6/1)
  Create your own library, distribute functions to others.	VIDEO (/video/c-programming-complete-tutorial-for-beginners/6/2)
  Function example 1, a function to check prime number	VIDEO (/video/c-programming-complete-tutorial-for-beginners/6/3)
  More example on function	VIDEO (/video/c-programming-complete-tutorial-for-beginners/6/4)
  Another example, a function to test Armstrong Number	VIDEO (/video/c-programming-complete-tutorial-for-beginners/6/5)

SECTION 8: RECURSION, HOW TO WRITE RECURSIVE FUNCTIONS.

  Introduction to recursion	VIDEO (/video/c-programming-complete-tutorial-for-beginners/7/0)
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		Introduction to recursion.		(/video/c-programming-complete-tutorial-for-beginners/7/0)
		Introduction continues...		(/video/c-programming-complete-tutorial-for-beginners/7/1)
		Recursion vs Iteration, the big debate, Concept of TAIL recursion.		(/video/c-programming-complete-tutorial-for-beginners/7/2)
		The debate continues... when exactly iteration is preferable.		(/video/c-programming-complete-tutorial-for-beginners/7/3)
		Still in debate... when recursion is preferable.		(/video/c-programming-complete-tutorial-for-beginners/7/4)
		Tower of Hanoi, the classical example of recursion.		(/video/c-programming-complete-tutorial-for-beginners/7/5)
		Implementation of Tower of Hanoi		(/video/c-programming-complete-tutorial-for-beginners/7/6)
		Another example, Fibonacci term.		(/video/c-programming-complete-tutorial-for-beginners/7/7)

SECTION 9: STORAGE CLASS, IMPORTANT CONCEPTION



		Introduction to storage class, the auto storage class		(/video/c-programming-complete-tutorial-for-beginners/8/0)
		Storage class: static		(/video/c-programming-complete-tutorial-for-beginners/8/1)
		Storage class: extern		(/video/c-programming-complete-tutorial-for-beginners/8/2)
		Storage class: register		(/video/c-programming-complete-tutorial-for-beginners/8/3)

SECTION 10: POINTERS, TWEAK WITH MEMORY LOCATIONS.

		Conception of stack and heap memory		(/video/c-programming-complete-tutorial-for-beginners/9/0)
		Introduction to pointers		(/video/c-programming-complete-tutorial-for-beginners/9/1)
		Introduction to pointers, continues...		(/video/c-programming-complete-tutorial-for-beginners/9/2)
		Introduction to pointers, continues...		(/video/c-programming-complete-tutorial-for-beginners/9/3)

		Address arithmetic	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/9/4)
		More on pointers	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/9/5)
		How and when to use pointers in C program	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/9/6)
		More programming example	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/9/7)
		Relationship between one dimensional array and pointers	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/9/8)
		Passing one dimensional array to function	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/9/9)
		More example on passing one dimensional array to function	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/9/10)
		use of const keyword with pointer	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/9/11)
		Add some more glue	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/9/12)
		The generic pointer is void pointer	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/9/13)
		Dynamic memory allocation - malloc function	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/9/14)
		Dynamic memory allocation - calloc function	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/9/15)
		Dynamic memory allocation - realloc function	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/9/16)
		Immutable property of string literals	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/9/17)
		Array of pointers - part 1	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/9/18)
		Array of pointers-part 2(Simulation of dynamic 2D array using array of pointers)	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/9/19)

SECTION 11: USER DEFINED TYPE IN C - STRUCTURE, UNION AND ENUM

		Introduction to User Defined Type, struct keyword	VIDEO	(/video/c-programming-complete-tutorial-for-beginners/10/0)
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➤ ▶	typedef keyword, creating alias to type	VIDEO (/video/c-programming-complete-tutorial-for-beginners/10/1)
➤ ▶	pointer to struct object	VIDEO (/video/c-programming-complete-tutorial-for-beginners/10/2)
➤ ▶	Writing behaviour (functions) for struct types - part1	VIDEO (/video/c-programming-complete-tutorial-for-beginners/10/3)
➤ ▶	Writing behaviour (functions) for struct types - part2	VIDEO (/video/c-programming-complete-tutorial-for-beginners/10/4)
➤ ▶	Using struct type within another struct type	VIDEO (/video/c-programming-complete-tutorial-for-beginners/10/5)
➤ ▶	declaring enumerated constants, enum keyword	VIDEO (/video/c-programming-complete-tutorial-for-beginners/10/6)
➤ ▶	Only one at a time in group, use of enum keyword	VIDEO (/video/c-programming-complete-tutorial-for-beginners/10/7)































SECTION 12: VARIADIC FUNCTIONS - HOW TO PASS VARIABLE ARGUMENTS TO A FUNCTION

➤ ▶	How to pass variable arguments to function.	VIDEO (/video/c-programming-complete-tutorial-for-beginners/11/0)
➤ ▶	Passing variable arguments of different types	VIDEO (/video/c-programming-complete-tutorial-for-beginners/11/1)






















SECTION 13: COMMAND LINE ARGUMENT PASSING.

➤ ▶	Command line arguments, parameters to main method	VIDEO (/video/c-programming-complete-tutorial-for-beginners/12/0)
➤ ▶	Command line arguments - more example	VIDEO (/video/c-programming-complete-tutorial-for-beginners/12/1)
➤ ▶	Passing cmd line args in Netbeans	VIDEO (/video/c-programming-complete-tutorial-for-beginners/12/2)
➤ ▶	How to pass command line arguments in Codeblocks	VIDEO (/video/c-programming-complete-tutorial-for-beginners/12/3)
➤ ▶	Get information about environment, the environmental parameter in main	VIDEO (/video/c-programming-complete-tutorial-for-beginners/12/4)

SECTION 14: FILE HANDLING

		Introduction to file handling, writing characters into a text file using fputc()	 (/video/c-programming-complete-tutorial-for-beginners/13/0)
		Reading content of a text file character by character using fgetc().	 (/video/c-programming-complete-tutorial-for-beginners/13/1)
		Reading a line from text file into a character array using fgets function	 (/video/c-programming-complete-tutorial-for-beginners/13/2)
		Reading formatted data from text file using fscanf function	 (/video/c-programming-complete-tutorial-for-beginners/13/3)
		Writing formatted data into text file using fprintf function	 (/video/c-programming-complete-tutorial-for-beginners/13/4)
		Formatted data reading and writing - another example	 (/video/c-programming-complete-tutorial-for-beginners/13/5)
		Writing in binary mode - fwrite function	 (/video/c-programming-complete-tutorial-for-beginners/13/6)
		Reading in binary mode - fread function	 (/video/c-programming-complete-tutorial-for-beginners/13/7)
		Moving the file pointer at any desired location using fseek	 (/video/c-programming-complete-tutorial-for-beginners/13/8)
		Calculating the number of records in a binary file using ftell	 (/video/c-programming-complete-tutorial-for-beginners/13/9)

SECTION 15: BITWISE OPERATORS - LEARN HOW TO MANIPULATE BITS.

		Introduction to bitwise operators	 (/video/c-programming-complete-tutorial-for-beginners/14/0)
		Bitwise leftshift operator	 (/video/c-programming-complete-tutorial-for-beginners/14/1)
		Bitwise right shift operator	 (/video/c-programming-complete-tutorial-for-beginners/14/2)
		Bitwise AND operator - how to check a bit.	 (/video/c-programming-complete-tutorial-for-beginners/14/3)
		Count set bits - Using bitwise AND and left shift.	 (/video/c-programming-complete-tutorial-for-beginners/14/4)
		Print the signed integer as it is.	 (/video/c-programming-complete-tutorial-for-beginners/14/5)
		Bitwise OR operation - How to set an unset bit?	 (/video/c-programming-complete-tutorial-for-beginners/14/6)

- ▶ Bitwise XOR operation. **VIDEO** (/video/c-programming-complete-tutorial-for-beginners/14/7)
- ▶ Bitwise complement - invert every bits. **VIDEO** (/video/c-programming-complete-tutorial-for-beginners/14/8)

SECTION 16: SOME USEFUL C LIBRARY FUNCTIONS - ENHANCE YOUR ABILITY

- ▶ sprintf and snprintf - Write formatted string into character array **VIDEO** (/video/c-programming-complete-tutorial-for-beginners/15/0)
- ▶ Function sscanf - how to scan formatted data from a string **VIDEO** (/video/c-programming-complete-tutorial-for-beginners/15/1)
- ▶ strtok - great tool to extract information from a string separated by delimiters **VIDEO** (/video/c-programming-complete-tutorial-for-beginners/15/2)
- ▶ memset - learn how to initialize block of memory with a character using memset **VIDEO** (/video/c-programming-complete-tutorial-for-beginners/15/3)
- ▶ memcpy - copy from one memory block to other byte-by-byte **VIDEO** (/video/c-programming-complete-tutorial-for-beginners/15/4)
- ▶ clock function to count number of clock ticks and measure elapsed time. **VIDEO** (/video/c-programming-complete-tutorial-for-beginners/15/5)

SECTION 17: ADDITIONAL LEARNING - 1 BUBBLE SORT

- ▶ Bubble Sort Algorithm **VIDEO** (/video/c-programming-complete-tutorial-for-beginners/16/0)
- ▶ Bubble Sort Implementation Using C **VIDEO** (/video/c-programming-complete-tutorial-for-beginners/16/1)
- ▶ Improving the Bubble Sort further, how to exit the loop for early sorting. **VIDEO** (/video/c-programming-complete-tutorial-for-beginners/16/2)
- ▶ How to use library qsort function for sorting arrays. **VIDEO** (/video/c-programming-complete-tutorial-for-beginners/16/3)

SECTION 18: ADDITIONAL LEARNING - 2 FUNCTION POINTERS IN C

- ▶ Function Pointer Introduction **VIDEO** (/video/c-programming-complete-tutorial-for-beginners/17/0)
- ▶ Learn how to declare a function pointer. **VIDEO** (/video/c-programming-complete-tutorial-for-beginners/17/1)



Function pointer in Action - Program that uses function pointer

VIDEO

(/video/c-programming-complete-tutorial-for-beginners/17/2)

Course Description

have been teaching this course to the undergraduate engineering students for last 15 years in class room. This course is well designed and covered almost all the topics that one should know while learning C language. Will not only help the student to build a solid foundation on the topic but will boost their confidence to face technical interviews boldly.

The course contents are mostly video lectures. I would encourage absolute beginners to follow the lectures strictly in chronological manners, please start from the very first video and go to the next one only if you are done with the previous. However, though not recommended, but students with some previous knowledge could jump lectures if they are confident.

The course is structured basically for the new programmers who may not have any previous experience with any programming language. From the very basic to advanced topics. Simple program to complex one in step-by-step.

One should take this course to build a career as a programmer. Programming in C has been considered as foundation for any programming language. If one is confident with C, then can start learning any other language like PHP, C++ or Java.



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