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SMARTBTR INSTITUTE OF TECHNOLOGY INTERNATIONAL

GOSSAIGAON, KOKRAJHAR BTR ASSAM   +91-8472843238

Course Title : Core C Programming

Course Duration: 3 months

Course Fees: INR. : Rs. 3,000   **Eligibility:**   8th passed

Prerequisites: No experience required

TOPICS
1. Introduction
2. Installing Required Software
3. Starting to write code
4. Basic Concepts
5. Variables and datatypes
6. Operators
7. Control Flow
8. Loop
9. Array
10. Functions
11. Character Strings
12. Debugging
13. Pointer Basics
14. Utilizing Pointer
15. Arithmetic Pointer
16. Dynamic Memory allocation
17. Basic of data structure
18. Conclusion

Session-1: Introduction
- Introduction, Language Features, Overview, Creating a C Program, Quiz 1

Session-2: Installing Required Software
- Overview, Installing the C Compiler, Installing required tool, Using the Command Line Interface, Using the Command Line Interface on, Using a Web-based C compiler

Session-3:Starting to write code
- Exploring the tool Environment, Building/Compiling our first program, What are Compiler Warnings, What are Runtime Errors, What are Logic Errors, (Challenge) Writing a C program that displays your name, (Demonstration) Writing a C program that displays your name, Structure of a C program, Quiz 2

Session-4: Basic Concepts
- Comments, The pre-processor, The #include statement, Displaying Output, Reading input from the terminal, Quiz 3

Session- 5:Variables and datatypes
- Overview, Basic Data Types, Enum and Chars, (Challenge) Create and use an enum type, (Demonstration) Create and use an enum type, Format Specifiers, (Challenge) Print the Area of a Rectangle, (Demonstration) Print the Area of a Rectangle, Command line arguments, Quiz 4

Session-6: Operators
- Overview, Basic Operators, (Challenge) Convert minutes to years and days, (Demonstration) Convert minutes to years and days, Bitwise Operators, The Cast and sizeof Operators, (Challenge) Print the byte size of the basic data types, (Demonstration) Print the byte size of the basic data types, Operator Precedence, Quiz 5

Session-7: Control Flow
- Overview, If Statements, (Challenge) Determine amount of Pay, (Demonstration) Determine the amount of weekly Pay, Switch Statement, For Loop, While and Do-While, Loop, Nested Loop, Break, Continue, (Challenge) Guess the Number, (Demonstration) Guess the Number, Quiz 6

Session-8: Loop
- Loop overview, Use case of loop in our programm, Different kind of loop like for-loop, while loop, for each loop

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Session-9:   Array

- Creating and using Arrays, Initialization, (Challenge) Generate Prime Numbers, (Demonstration) Generate Prime Numbers, Multidimensional Arrays, (Challenge) Create a simple Weather program, (Demonstration) Create a simple Weather Program, Variable Length Arrays, Quiz 7

Session-10: Functions

- Basics, Defining Functions, Arguments and Parameters, Returning data from functions, Local and Global Variables, (Challenge) Write some functions!, (Demonstration), Use case of functions, Quiz 8

Session-11: Character String

- Overview, Defining a String, Constant Strings, (Challenge) Understanding char arrays, (Demonstration) Understanding char arrays Common String Functions, (Challenge) Utilizing common string functions, (Demonstration) Utilizing common string functions, Searching, Tokenizing, and Analyzing Strings, Converting Strings, Quiz 9

Session-12:   Debugging

- Configuring the Debugger , What is Debugging, Understanding the Call Stack, Debugger, Common C Mistakes, Understanding Compiler Errors, Quiz 10

Session-13: Pointer Basics

- Overview, Defining Pointers, Accessing Pointers, (Challenge) Pointer Basics, (Demonstration) Pointer Basics, Quiz 11

Session-14: Utilizing Pointer

- Overview, Pointers and const, void pointers, Pointers and array , Passing pointers to a function, (Challenge) Using Pointers as parameters, (Demonstration) Using Pointers as parameters, Quiz 12

Session- 15: Arithmetic Pointer

- Overview, Pointers and Arrays Example, Pointers and Strings, (Challenge) Counting characters in a String, (Demonstration) Counting characters in a string, Quiz 13
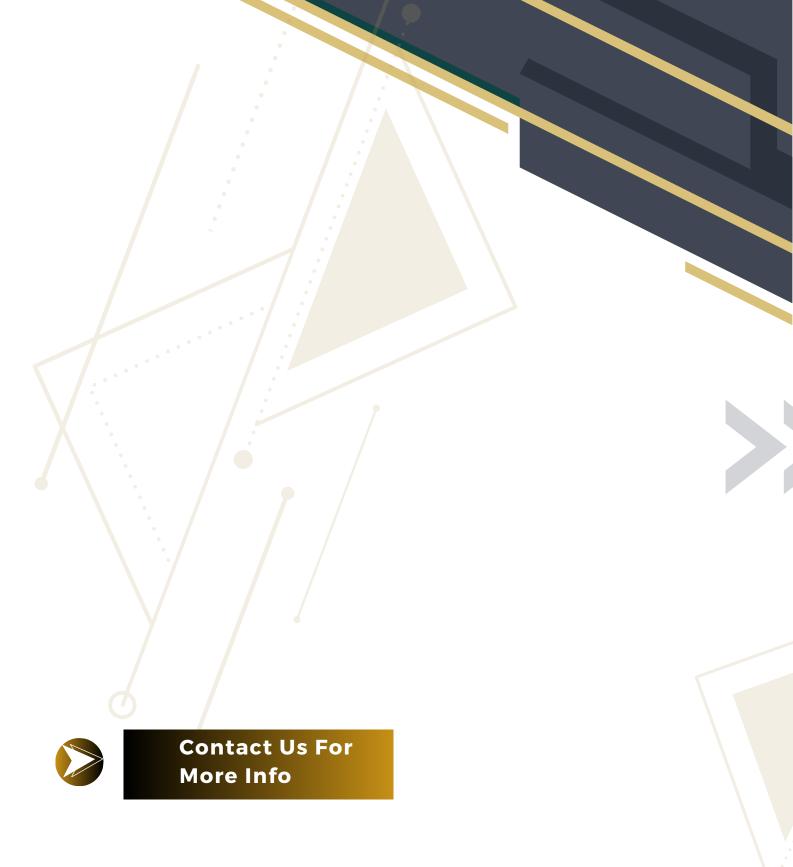
Session-16: Dynamic Memory allocation

- Overview, malloc, calloc, and realloc, (Challenge) Using Dynamic Memory, (Demonstration) Using Dynamic Memory, Quiz 14

Session-17: Basic Fundamental of Data Structure

- Data Structure overview, types of data structure, basic data structure like array, linkedlist, map, set queue, stack, Write programme to understand this data structures

Session-18: Conclusion

- Further Topics of Study, Course Summary

Contact Us For More Info

+91-8472843238

SITKOKRAJHAR@GMAIL.COM

SIT INTERNATIONAL GOSSAIGAON, KOKRAJHAR BTR ASSAM

sitinternational.org@gmail.com