Anekant Education Society's

Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati.

(Autonomous)

Department of BBA (Computer Application)

C programming

Course Objectives

1. To introduce students to the history and basic structure of the C programming language, including its fundamental concepts such as character sets, tokens, keywords, and identifiers.
2. To teach students how to perform console-based I/O operations, including the use of built-in functions for formatted input and output.
3. To familiarize students with decision-making structures (if statements, switch statements) and looping constructs (for, while, and do-while loops) to control program flow effectively.
4. To introduce the concepts of functions and pointers, including their definitions, types, and applications in program design, along with memory management through dynamic allocation.
5. To develop students' understanding of arrays (one-dimensional and two-dimensional) and strings, including operations, memory allocation, and the use of standard library functions.
6. To explain the concepts of structures and unions, including their definitions, declarations, and member access, and to differentiate between the two.
7. To introduce the use of the C pre-processor, including macro substitution, file inclusion, and conditional compilation techniques.
8. To teach students about file handling in C, including file operations, modes, and random access, along with the use of command line arguments.

Course Outcomes :

By the end of this course, students should be able to:

CO1. Explain the history, structure, and fundamental elements of the C programming language.

CO2. Use built-in functions effectively to manage console input and output, including formatted data handling.

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CO3. Apply decision-making structures and looping constructs to control the flow of C programs.

CO4. Create and utilize functions, understand calling mechanisms (call by value and reference), and manipulate pointers for effective memory management.

CO5. Create and manipulate one-dimensional and two-dimensional arrays, and work with strings using standard and custom functions.

CO6. Define and use structures and unions to organize data efficiently,

Understanding their respective advantages.

CO7. Use C pre-processor directives for macro substitution, conditional compilation, and file inclusion.

CO8. Open, read, write, and manipulate files using appropriate C functions, and handle command line arguments for program input.

Syllabus

Chapter No.	Topics	No. of Lectures
1	**Introduction to C language** 1.1 History 1.2 Basic structure of C Programming 1.3 Language fundamentals 1.3.1 Character set, tokens 1.3.2 Keywords and identifiers 1.3.3 Variables and data types 1.4 Operators 1.4.1 Types of operators 1.4.2 Precedence and associativity 1.4.3 Expression	3
2	**Managing I/O operations** 2.1 Console based I/O and related built-in I/O functions 2.1.1 printf(), scanf() 2.1.2 getch(), getchar() 2.2 Formatted input and formatted output	2