

C Programming Language: Fundamentals, Applications and Its Importance in Computer Education

Dr. Prerna Nagpal, Assistant Professor, Department of computer Science, Sunrise University, Alwar

Abstract

C is one of the most influential programming languages and has played a significant role in the development of computer science and programming education. Its simple syntax, structured programming approach, efficiency, and ability to provide low-level memory access make it an important language for understanding fundamental programming concepts. This paper reviews the basic concepts of C programming, including variables, data types, operators, control structures, functions, arrays, pointers, structures, and file handling. It also examines the practical applications of C in system programming, embedded systems, operating systems, and software development. The paper highlights the importance of C in computer education, particularly in developing logical thinking, problem-solving skills, and a strong foundation in programming. The study concludes that despite the emergence of modern programming languages, C continues to provide essential knowledge of programming fundamentals and computer system operations.

Keywords: C Programming, Programming Fundamentals, Computer Education, Structured Programming, Programming Concepts, System Programming, Problem Solving

