



## Expert Data Structures with C

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## Product Description

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This book starts with the fundamentals of data structures and finally lead to the much detailed discussion on the subject. The very first chapter introduces the readers with elementary concepts of C as type conversions, structures, pointers, dynamic memory management, functions, flow-chart, algorithm and fundamental of data structures. This textbook covers the syllabus of Semester College course on data structures. It provides both a strong theoretical base in data structures and an advanced approach to their representation in C. The text is useful to C professionals and programmers, as well as students of any branch of Engineering of graduate and postgraduate courses. The data structures are presented with in the context of complete working programs that have been tested both on a UNIX system and a personal computer using Turbo-C++, Compiler. The code is developed in a top-down fashion, typically with the low-level data structures implementation following the high-level application code. This approach foster good programming habits and makes subject matter more interesting. The book has three goals- to develop a consistent programming methodology, to develop data structures access techniques and to introduce algorithms. The bulk of the text is developed to make a strong hold on data structures. Programming style and development methodology are introduced and its applications are presented. This has the advantage of allowing the reader to concentrate on the data structures, while illustrating how good practices make programming easier.

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**Chapter 1:** Basics of Data Structures & Programming Language 'C'. **Chapter 2:** Recursion. **Chapter 3:** String Manipulation And Pattern Matching. **Chapter 4:** Arrays. **Chapter 5:** Linked List. **Chapter 6:** Stacks And Queues. **Chapter 7:** Trees. **Chapter 8:** Graphs. **Chapter 9:** Sorting And Searching. **Chapter 10:** File Structures. **Chapter 11:** Variants of B-Tree. **INDEX**



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