Data Structures and Algorithm Analysis in C, Third Edition by Mark Allen Weiss

The book is designed for a one or two semester course in data structures and algorithms, and it is appropriate for students who have completed a course in C programming. The book is divided into four parts: (1) Algorithms and Building Blocks, (2) Applications, (3) Implementations, and (4) Analysis of Algorithms. The first part introduces basic data structures and algorithms, including arrays, linked lists, trees, and hash tables. The second part covers advanced data structures and algorithms, such as sorting and selection, priority queues, and graphs. The third part focuses on implementation of data structures, including linked lists, trees, and hash tables. The fourth part covers the analysis of algorithms, including worst-case and average-case analysis.

The book is written in a clear and concise style, with numerous examples and exercises. It is supported by an extensive set of exercises, which are available in both C and Java versions. The book also includes a comprehensive set of solutions to selected exercises, which are available to instructors.

The book is designed to be flexible, allowing instructors to choose the level of detail and the depth of coverage that best suits their course. It includes a wide range of topics, from basic data structures to advanced algorithms, and it provides a solid foundation for further study in computer science.

Overall, the book is an excellent choice for a course in data structures and algorithms. It is well-written, well-organized, and supported by an extensive set of exercises and solutions. It is a valuable resource for students and instructors alike.