DESCRIPTION

Based on the authors’ market leading data structures books in Java and C++, this textbook offers a comprehensive, definitive introduction to data structures in Python by respected authors. *Data Structures and Algorithms in Python* is the first mainstream object-oriented book available for the Python data structures course. Designed to provide a comprehensive introduction to data structures and algorithms, including their design, analysis, and implementation, the text will maintain the same general structure as *Data Structures and Algorithms in Java* and *Data Structures and Algorithms in C++*.

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FEATURES

• A primer that reviews the basics of programming in Python (Chapter 1), followed by a separate introduction to object-oriented programming in Python (Chapter 2).

• Extensive coverage of recursion (Chapter 4).

• A chapter describing the array-based underpinnings of Python’s standard list, string, and tuple classes (Chapter 5), including both theoretical and empirical analyses of their efficiencies.

• Source code with complete implementations of the majority of data structures and algorithms described in the book; the code follows modern standards for Python 3, and makes use of the standard collections module.

• 500 illustrations that present data structures and algorithms in a clear, visual manner.

• More than 750 exercises, divided into categories of reinforcement, creativity, and projects.

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