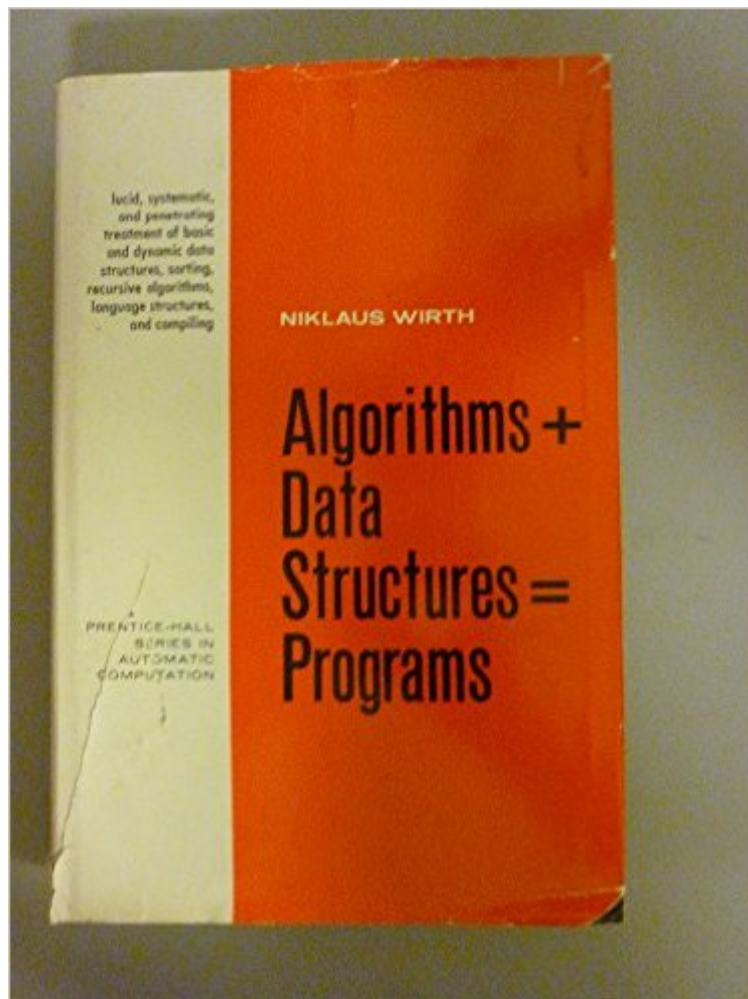


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# Algorithms + Data Structures = Programs (Prentice-Hall Series In Automatic Computation)



## Synopsis

This is a classic book about basic algorithms and data structures. It's a must have book for understanding behind-the-scenes logic of standard libraries in modern programming languages. Should be on every programmer's read list.

## Book Information

Series: Prentice-Hall Series in Automatic Computation

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## Customer Reviews

It might seem completely dated with all its examples written in the now outmoded Pascal programming language (well, unless you are one of those Delphi zealot trying to resist to the Java/.NET dominance), but it is still highly recommended. It is the single book I learnt most from when I was a freshman studying Computer Science at my local University (when Pascal was already declining, I'm not so old ;-). I wish more recent books were as good as this one, but I have not found a single book so focused and, at the same time, so broad in scope as this one. Wirth covers programming fundamentals (including recursion), many sorting algorithms, data structures (from simple data collections to B-trees and hashing), and basic compiler technology. That is, four books into one (and, surprisingly, this is not a hefty tome.)

This is the book every beginning programmer must read. Modern programmers know a lot about specific technical details, but they know nothing about effective algorithms. We're hiring new programmers now. We've tested a lot of folks with 5-8 years experience in Java. The result is

nobody can implement basic operations with B-tree or combinatory algorithm. It's terrible. So read Niklaus Wirth if you want to be a serious programmer.

With only five chapters and 365 pp, this text presents fundamental data structures, sorting, the best treatise I've found on recursion, dynamic information structures, and language structures & compilers. The date of the text precludes object-oriented programming, yet the tools presented here are welcome adjuncts for Delphi developers.

The short size of this book reflects the good taste of its author. Rather than an encyclopedia, Wirth created a minimal set of data structures and algorithms that manage to provide an efficient solution for virtually every relevant problem, even today. The provided code is also very compact, again reflecting good taste and much polishing. Few blocks of code are longer than half a page, most are less than that, and I don't think there is a single block that goes for two whole pages. The concise blocks make it easy to hold the whole procedure in your head and understand it. The language chosen, Oberon, was never popular. But simply translating keywords and operators turns the book's code into almost valid C, Java or (probably most easily) Delphi. After all, the syntax of all these languages has a common ancestor, Algol. The author has made this book publicly available in PDF form at the [ETH Oberon Home Page](#).

With technologies moving faster than the speed of thought, people... especially youngsters work hard to keep up with fast moving specifications, versions of languages etc. and ignore basic programming logic... depth in programming. This is one of those books that is ideally suited for youngsters who want to become good programmers who are not only technically sound, but have programming DEPTH, which is very important.

I bought this book back in 1982 and still refer to it for my current (Delphi) projects. It is a must for any programmer - beginner or professional who wants to write efficient algorithms.

I used this book back in university and still apply its techniques today. Unfortunately, someone \*borrowed\* my copy and I can't get hold of a new one, so: !!!Please reprint!!!!

This book should be on the shelves of every computer science enthusiast and it does not hurt to read it once in a while to reestablish the foundations.

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