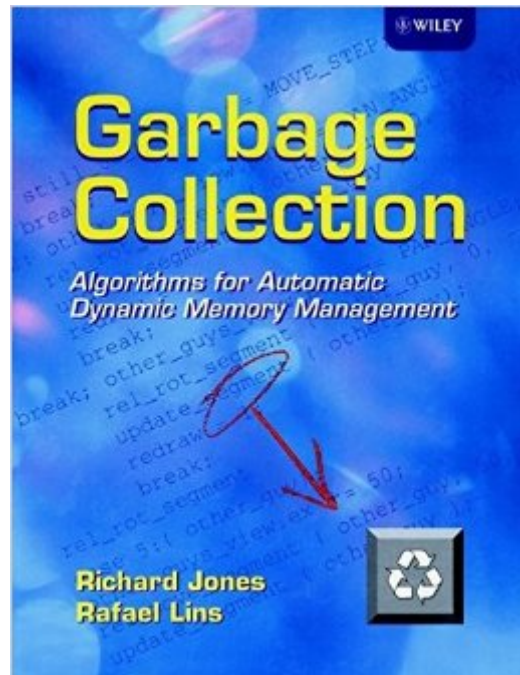# Garbage Collection: Algorithms For Automatic Dynamic Memory Management

Synopsis

Modern software places increasing reliance on dynamic memory allocation, but its direct management is not only notoriously error-prone. Garbage collection eliminates many of these bugs. This reference presents each of the most important algorithms in detail, often with illustrations of its characteristic features and animations of its use.

Book Information

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Customer Reviews

This is the most thorough and readable tract I could have imagined on the complicated subject of GC. It has an excellent introductory chapter, then a survey chapter on the different algorithms, then some in-depth chapters on each algorithm and their many variants, trade-offs, and histories, all copiously referenced to scholarly literature, and each wrapped up with issues to be considered, and then goes on to special topics, such as concurrency. It uses no particular computer language to describe the details of its algorithms, preferring pseudo-code, which I think is a major benefit. It was easier to me to see what was going on without all of the baggage of language syntax. Every term is defined clearly, and there is a good index and glossary. I can't overstate how well-written it is from a purely English point of view.While it has had a few minor updates from its original 1996 publication, I would have liked to see a much more extensive refresh. At the time it was published, garbage collection was not mainstream. Java was very new, so the examples, references, and studies refer almost exclusively to functional languages such as Lisp and ML (which require GC to be usable), and to antiquated hardware. Everything in the book is still as relevant now as it was in 1996

(meaning the final draft was probably submitted in 1995, if not earlier), but with Java and .NET in ascendance for over 10 years now, and 64-bit multicore processors with *megabytes* of L2 and even L3 cache now in mainstream personal computers, it would have been even better for me if there were more attention to concurrency now that it is the norm. I could probably count on one hand the number of times the x86 (let alone the x86-64) was mentioned. Scholarly publications on GC did not end in 1996 either.

Garbage Collection: Algorithms for Automatic Dynamic Memory Management The Garbage Collection Handbook: The Art of Automatic Memory Management (Chapman & Hall/CRC Applied Algorithms and Data Structures series) Memory Exercises: Memory Exercises Unleashed: Top 12 Memory Exercises To Remember Work And Life In 24 Hours With The Definitive Memory Exercises Guide! (memory exercises, memory, brain training) The Gun Digest Book of Firearms Assembly/Disassembly Part I - Automatic Pistols: Pt. 1 (Gun Digest Book of Firearms Assembly/Disassembly: Part 1 Automatic Pistols) Algorithms + Data Structures = Programs (Prentice-Hall Series in Automatic Computation) Evolutionary Electronics: Automatic Design of Electronic Circuits and Systems by Genetic Algorithms (International Series on Computational Intelligence) 7 BOOKS ON MENTAL POWER AND THOUGHT FORCE. THOUGHT-FORCE IN BUSINESS AND EVERYDAY LIFE; MEMORY CULTURE; DYNAMIC THOUGHT; THOUGHT VIBRATION; MENTAL POWER; ... OF LESSONS (Timeless Wisdom Collection) BRAIN: 51 Powerful Ways to Improve Brain Power, Enhance Memory, Intelligence and Concentration NATURALLY! (MEMORY, Memory Improvement, Learning, Brain Training) Quantum Memory: Learn to Improve Your Memory with The World Memory Champion! Memory Management Algorithms And Implementation In C/C++ (Windows Programming/Development) Dynamic Programming and Optimal Control, Vol. II, 4th Edition: Approximate Dynamic Programming Automatic Identification and Data Collection Systems Algorithms in C, Parts 1-5 (Bundle): Fundamentals, Data Structures, Sorting, Searching, and Graph Algorithms (3rd Edition) Evolutionary Algorithms in Theory and Practice: Evolution Strategies, Evolutionary Programming, Genetic Algorithms Applied Cryptography: Protocols, Algorithms, and Source Code in C [APPLIED CRYPTOGRAPHY: PROTOCOLS, ALGORITHMS, AND SOURCE CODE IN C BY Schneier, Bruce (Author) Nov-01-1995 Practical Algorithms in Pediatric Hematology and Oncology: (Practical Algorithms in Pediatrics. Series Editor: Z. Hochberg) Combinatorial Optimization: Theory and Algorithms (Algorithms and Combinatorics) Geometric Algorithms and Combinatorial Optimization (Algorithms and Combinatorics) The Internet Of Garbage How to turn Garbage into Gold: 101 Kid's

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