
Data Structures (in C)

- 교과목명 : 자료구조론
- 담당교수: Jong-Il Park(박종일)

-조교 : 심규동

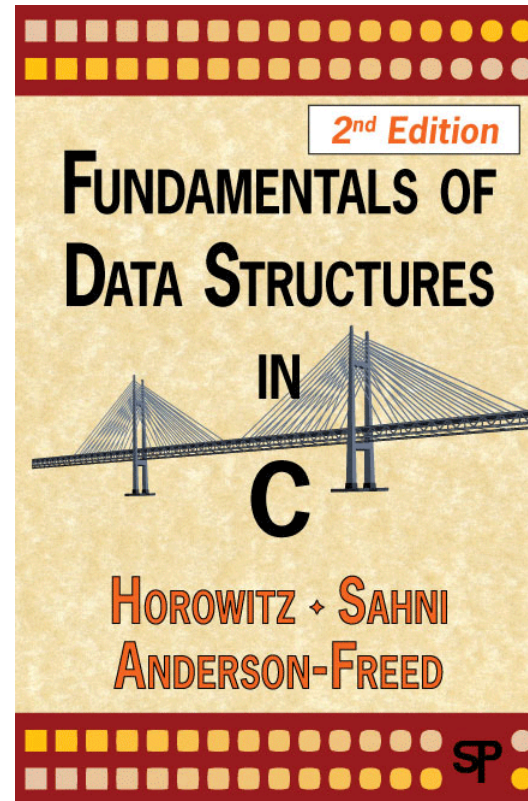
- **Midterm exam: 30 %**
- **Final exam: 30 %**
- **Homework & practice : 40 %**
 - **Homework: 6 or more**
 - **Practice: every week**
- **Note:** Instructor reserves the **right** to modify the grading policy.

- Textbook

Fundamentals of Data Structures in C (2nd Edition)

E. Horowitz, S. Sahni, and S. Anderson-Freed

Silicon Press, 2008



- **Learning efficient data structure**
- **Understanding basic algorithms**
- **Understanding & designing data abstraction and interfaces**
- **Designing & writing large programs**
- **Learning C**

Discrete Math.

- Mathematical Induction Principle
- Algorithm Complexity – Big-Oh
- Recurrence, Recursion
- Relation – Equivalence, Partial Order

C Programming Language

- Array
- Pointer
- Structure
- Recursion

Course Schedule (Horowitz & Shani, Anderson-Freed)

Week 1	Introduction: Recursive Algorithm / ADT / Big-Oh [1.3-1.5]
Week 2	List [4.1, 4.2, 4.3, 4.5 4.8]
Week 3	Stack [3.1, 3.2, 3.6] / Queue [3.3, 3.4]
Week 4	Skip List
Week 5	Tree Terminology & Rep, Binary Tree / Traversal [5.1-2, 5.3.1-3]
Week 6	Heap, Binary Search Tree [5.6, 5.7]
Week 7	Binary Search Tree, AVL [5.7, 10.2]
Week 8	Red-Black Tree, B-Tree [10.3, 11.2]
Week 9	중간고사
Week 10	Hashing [8.1-2, 8.3(?)]
Week 11	Hashing, Bloom Filter [8.4]
Week 12	Graph Rep, Topological Sort [6.1, 6.5.1]
Week 13	Graph - Single Source Shortest Path [6.4.1]
Week 14	Sorting - Insertion, Selection, Merge Sort [7.1, 7.2, 7.5]
Week 15	Quick Sort, {Heap Sort} [7.3{, 7.6}]
Week 16	기말고사

Course Schedule (Weiss)

Week 1	Introduction: Recursive Algorithm / ADT / Big-Oh [1.3, 2.1-4]
Week 2	List [3.1-2]
Week 3	Stack [3.3] / Queue [3.4]
Week 4	Skip List [10.4.2]
Week 5	Tree Terminology & Rep, Binary Tree / Traversal [4.1-2]
Week 6	Heap, Binary Search Tree [4.3, 6.3-4]
Week 7	Binary Search Tree, AVL [4.4]
Week 8	Red-Black Tree, B-Tree [12.2, 4.7]
Week 9	중간고사
Week 10	Hashing [5.1-3]
Week 11	Hashing, Bloom Filter [5.4-5]
Week 12	Graph Rep, Topological Sort [9.1-2]
Week 13	Graph - Single Source Shortest Path [9.3]
Week 14	Sorting - Insertion, Selection, Merge Sort [7.2-3, 7.6]
Week 15	Quick Sort, {Heap Sort} [7.7, 7.5]
Week 16	기말고사