

Data structure review

B Tree
AVL tree
pen-Block Tree

	Arrays		Linked-lists <i>Random access 불가능</i>		Binary search trees (avg)	Balanced search trees (worst case)	Hash tables (avg)
	Not sorted	Sorted	Not sorted	Sorted			
Search(x)	$O(n)$	$O(\log n)$ <i>Binary Search</i>	$O(n)$	$O(n)$	$O(\log n)$	$O(\log n)$	$O(1)$
Insert(x)	$O(1)$	$O(n)$	$O(1)$	$O(n)$ <i>$O(1)$</i>	$O(\log n)$	$O(\log n)$	$O(1)$
<i>Insert(x)</i> Insert(x) (dup search) <i>x가 있는지 찾기</i>	$O(n) + O(1)$ $O(n)$	$O(n)$	$O(n) + O(1)$ $O(n)$	$O(n)$	$O(\log n)$	$O(\log n)$	$O(1)$
Delete(i) <i>index</i>	$O(1)$	$O(n)$	$O(1)$	$O(1)$	$O(\log n)$	$O(\log n)$	$O(1)$
Delete(x) <i>number</i>	$O(n)$	$O(n)$	$O(n)$	$O(n)$	$O(\log n)$	$O(\log n)$	$O(1)$

worst case: Linked list

worst case: Balanced tree