

CH 4 SORTING

INTERNAL SORT - process sorting in entire data is stored in main memory

EXTERNAL SORT - when data being sorted does not fit into MM & needs some external memory

IN-PLACE SORT - Sorting which does not occupy extra space / storage

INTERNAL - SEL | INS | BUBB | QUICK | RADIX |

EXTERNAL - MERGE

IN-PLACE - SEL | INS | BUBB | HEAP

NOT-INPLACE - MERGE | QUICK |

STABLE SORT - Sorting which preserves relative order of records with equal keys

STABLE - MERGE | INS | BUBB

NOT STABLE - SEL | QUICK | HEAP

	BEST	AVG	WORST	SPACE
SELECTION	$\Omega(N^2)$	$\Theta(N^2)$	$O(N^2)$	$O(1)$
BUBBLE	$\Omega(N)$	$\Theta(N^2)$	$O(N^2)$	$O(1)$
INSERTION	$\Omega(N)$	$\Theta(N^2)$	$O(N^2)$	$O(1)$
MERGE	$\Omega(N \log N)$	$\Theta(N \log N)$	$O(N \log N)$	$O(N)$
QUICK	$\Omega(N \log N)$	$\Theta(N \log N)$	$O(N^2)$	$O(N \log N)$
RADIX	$\Omega(NK)$	$\Theta(NK)$	$O(NK)$	$O(N+K)$