

Table 1.2 Characteristics of Two-Level Memories

	Main Memory Cache	Virtual Memory (Paging)	Disk Cache
Typical access time ratios	5 : 1	1000 : 1	1000 : 1
Memory management system	Implemented by special hardware	Combination of hardware and system software	System software
Typical block size	4 to 128 bytes	64 to 4096 bytes	64 to 4096 bytes
Access of processor to second level	Direct access	Indirect access	Indirect access

Table 1.3 Relative Dynamic Frequency of High-Level Language Operations

Study	[HUCK83]	[KNUT71]	[PATT82]		[TANE78]
Language	Pascal	FORTRAN	Pascal	C	SAL
Workload	Scientific	Student	System	System	System
Assign	74	67	45	38	42
Loop	4	3	5	3	4
Call	1	3	15	12	12
IF	20	11	29	43	36
GOTO	2	9	—	3	—
Other	—	7	6	1	6