Regs

L1 cache (SRAM)

Main memory (DRAM)

Local secondary storage (local disks)

Remote secondary storage (distributed file systems, Web servers)

Larger, slower, and cheaper (per byte) storage devices

Smaller, faster, and costlier (per byte) storage devices

L0:

L1:

L2:

L3:

L4:

L5:

L6:

CPU registers hold words retrieved from cache memory.

L1 cache holds cache lines retrieved from the L2 cache.

L2 cache holds cache lines retrieved from L3 cache.

L3 cache holds cache lines retrieved from memory.

Main memory holds disk blocks retrieved from local disks.

Local disks hold files retrieved from disks on remote network servers.