**CH01：**

1. operating system is a program that acts as a intermediary between user and computer hardware.
2. Computer system includes:

-hardware

-user

-application programs

-operating system

1. What does the operating system do?

From user: want convenience, ease of use, good performance, don’t care about resource utilization（资源利用率）.

From system: resource allocator& control program.（资源分配器和控制程序）

1. Bootstrap program is loaded at power-up or rebot.（引导程序）

-stored in ROM/EPROM, known as firmware

-initializes all aspects of system

-load operating system kernel and starts execution

1. Von Neumann model describes:

-computer-system organization: one or more CPUs, device controllers connect through common bus providing access to shared memory.

-computer-system operation: concurrent execution of CPUs and devices competing for memory cycles.（并发执行CPU和设备）

-device controller informs CPU that it has finished its operation by causing an interrupt.

1. Interrupts:

-transfers control to the interrupt service routine generally,through the interrupt vector, which contains the address of all the service routines.

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