

操作系统原理

第一章：介绍

洪明坚

重庆大学软件学院

February 19, 2016

1 课程简介

- 主要内容及参考资料
- 为什么要学习操作系统原理？

2 What's an Operating System?

- Components of a Computer System
- What's an Operating System?
- Components of an operating system
- History of Operating System
- Features migration

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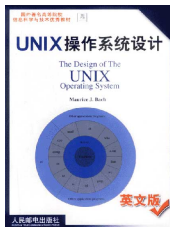
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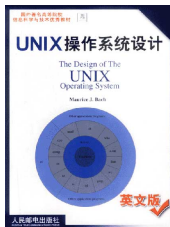
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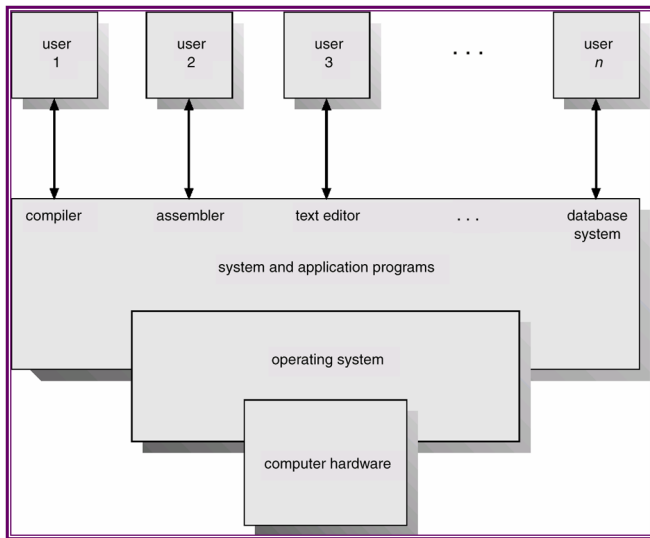
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- The operating system exists because they are a reasonable way to solve the problem of creating a usable computing system.

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- They evolved from simple **batch system**, to **multiprogramming system** and to **time-sharing system**.

Batch systems(1/4)

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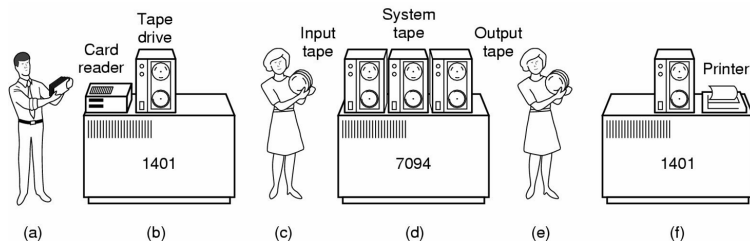
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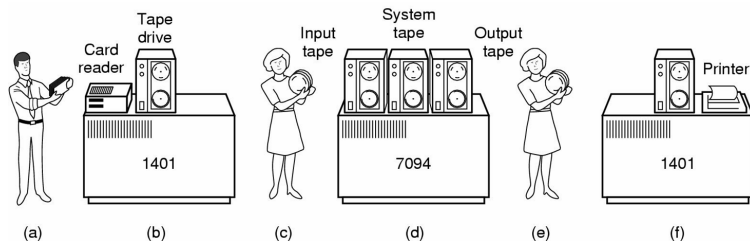
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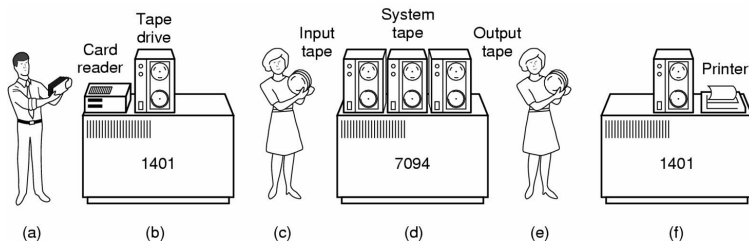


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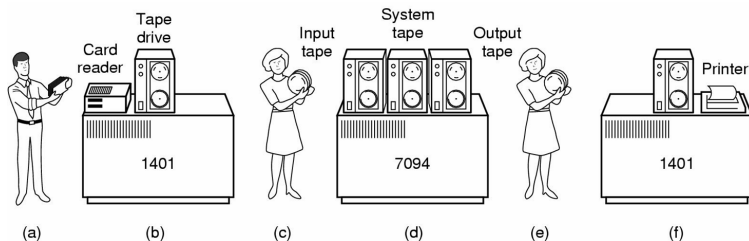
- (a) Programmers bring cards to IBM 1401

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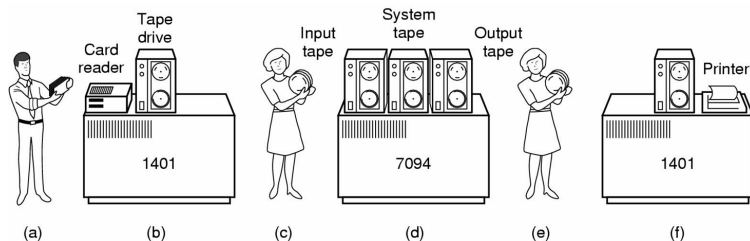
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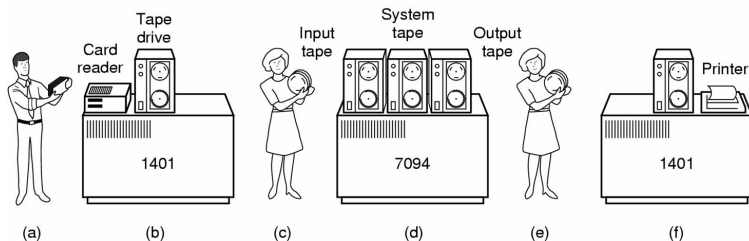
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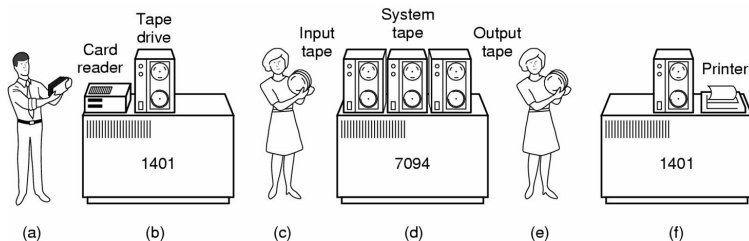
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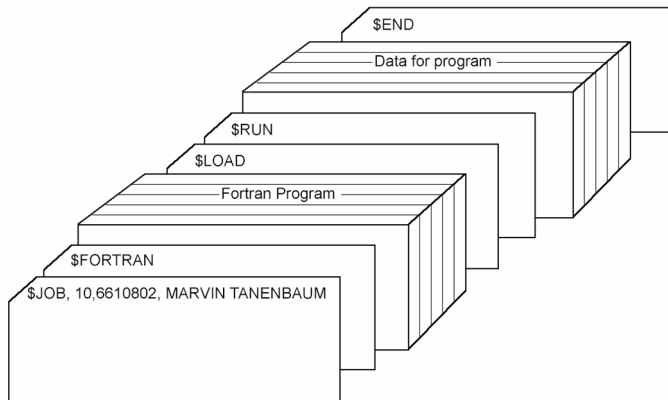
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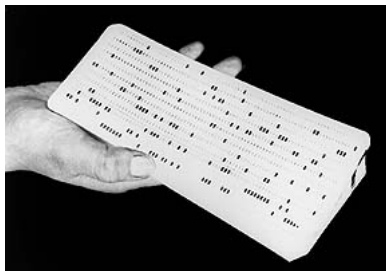
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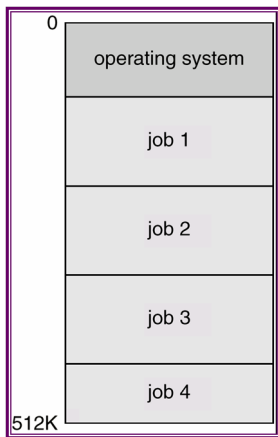
Multiprogramming systems

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- Several jobs are kept in main memory at the same time, and the CPU is multiplexed among them.

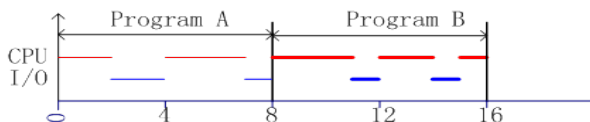
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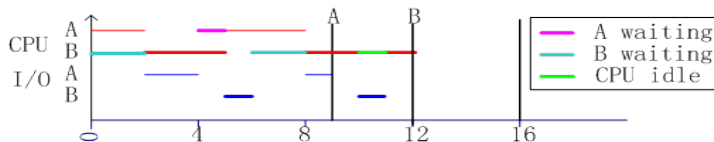
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Uniprogramming

Program A and B complete at time 16

CPU idle: .357 I/O idle: .643



Multiprogramming

Program A and B complete at time 12

CPU idle: .083 I/O idle: .583

Time-sharing systems

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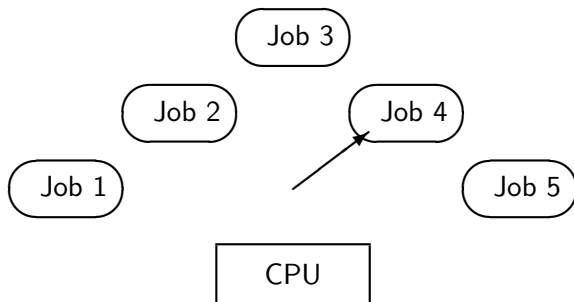
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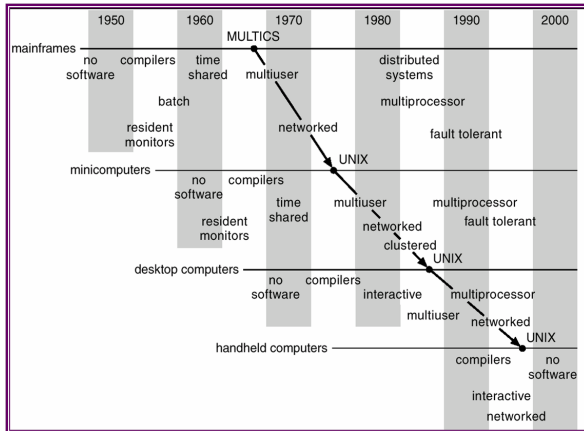
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Questions

- Any questions?

