操作系统原理

第三章：操作系统结构

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目录

Outline

System structure

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  - Virtual machine

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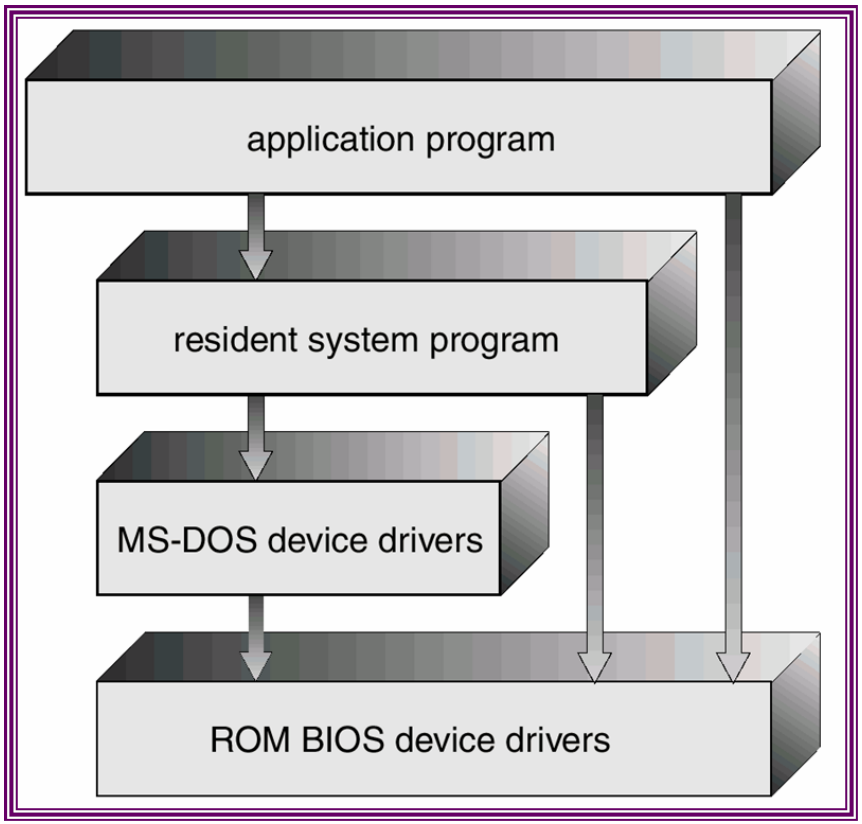

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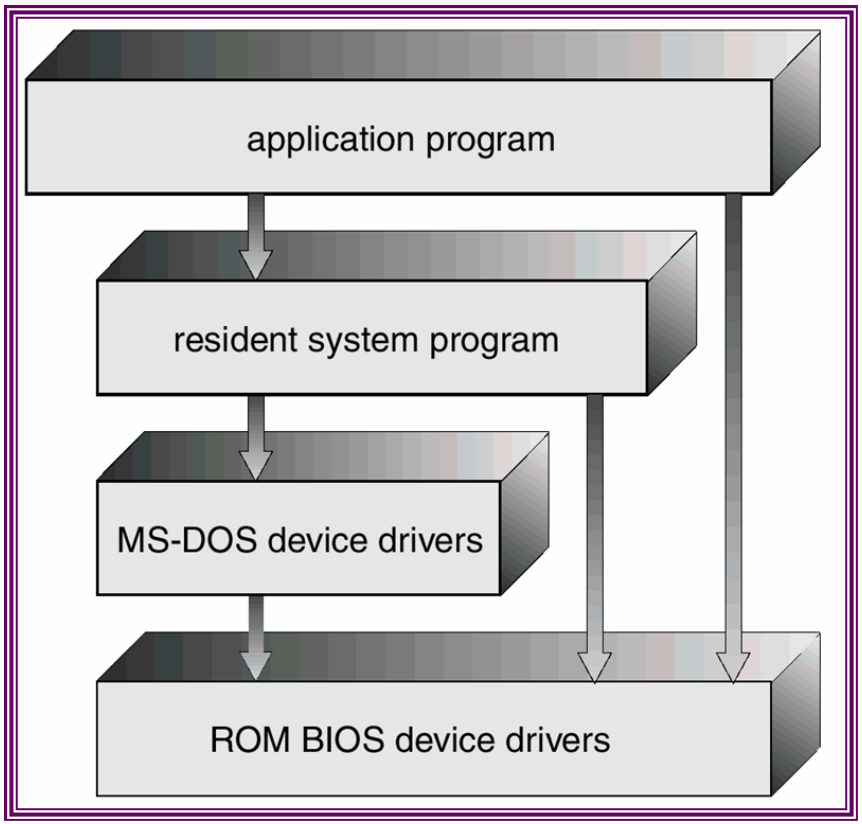

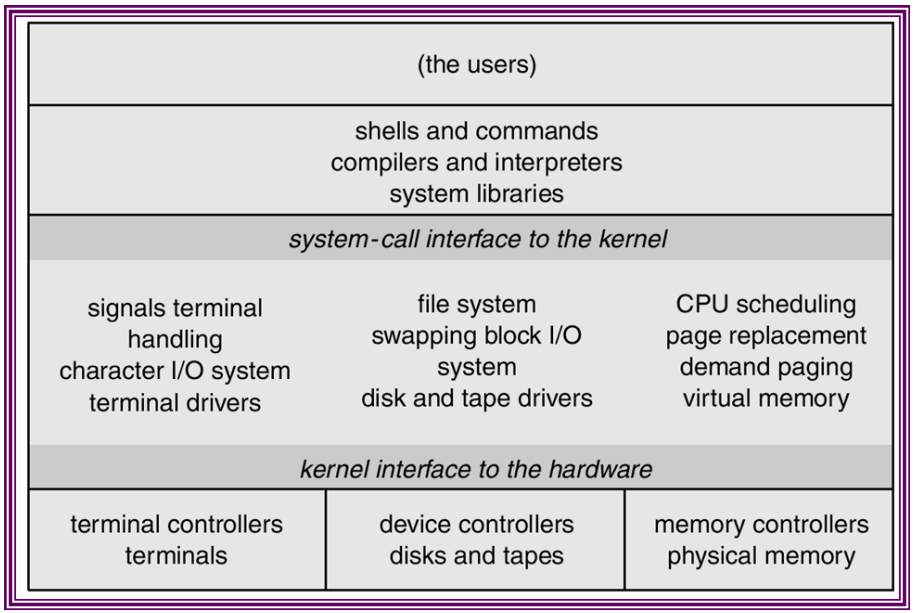

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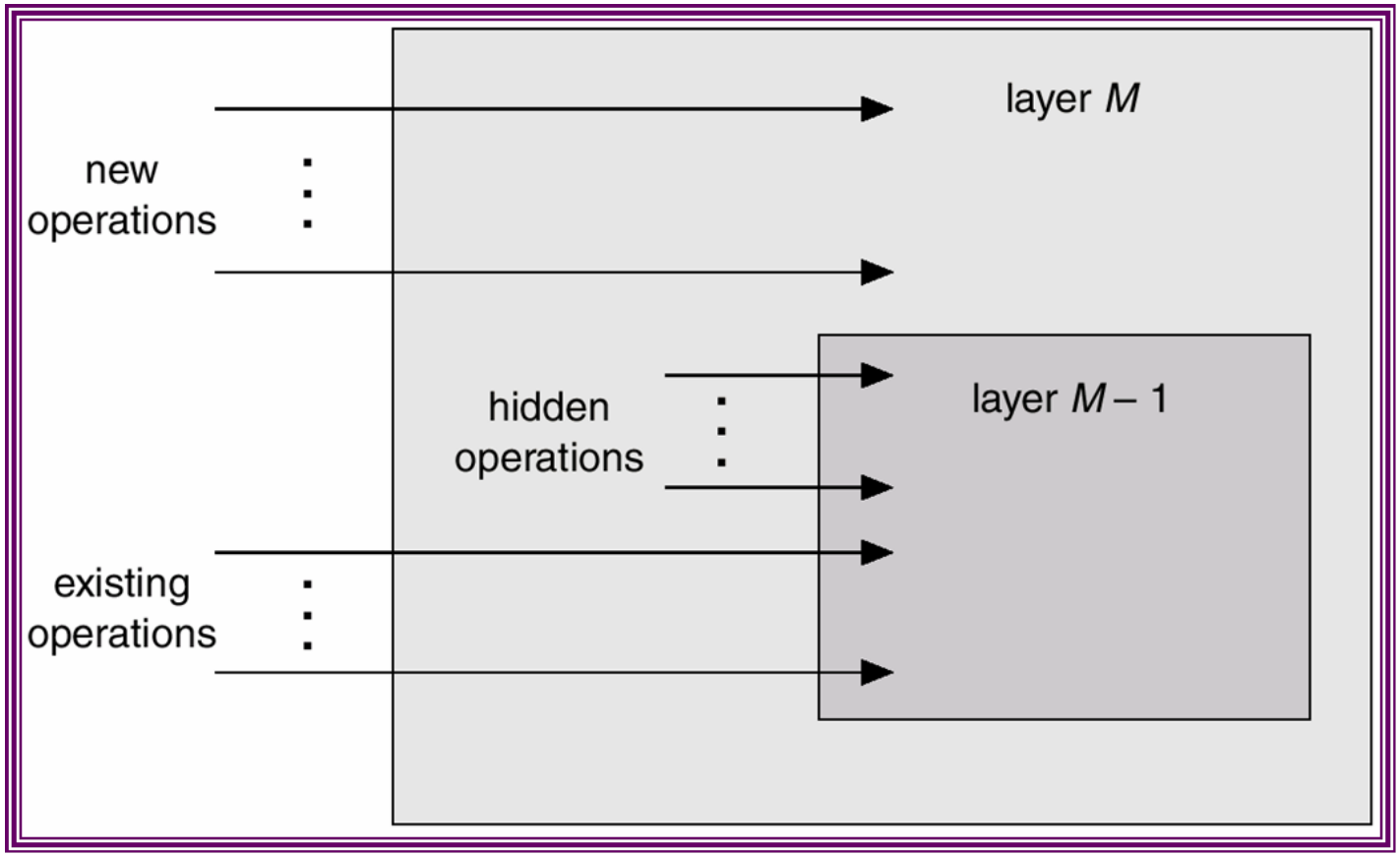

Layered structure (2/4)

Layered structure (2/4)

- Example 1:

Layered structure (2/4)

- Example 1:
  - The **THE** operating system by Dijkstra.

Layer	Function
5	The operator
4	User programs
3	Input/output management
2	Operator-process communication
1	Memory and drum management
0	Processor allocation and multiprogramming

Layered structure (3/4)

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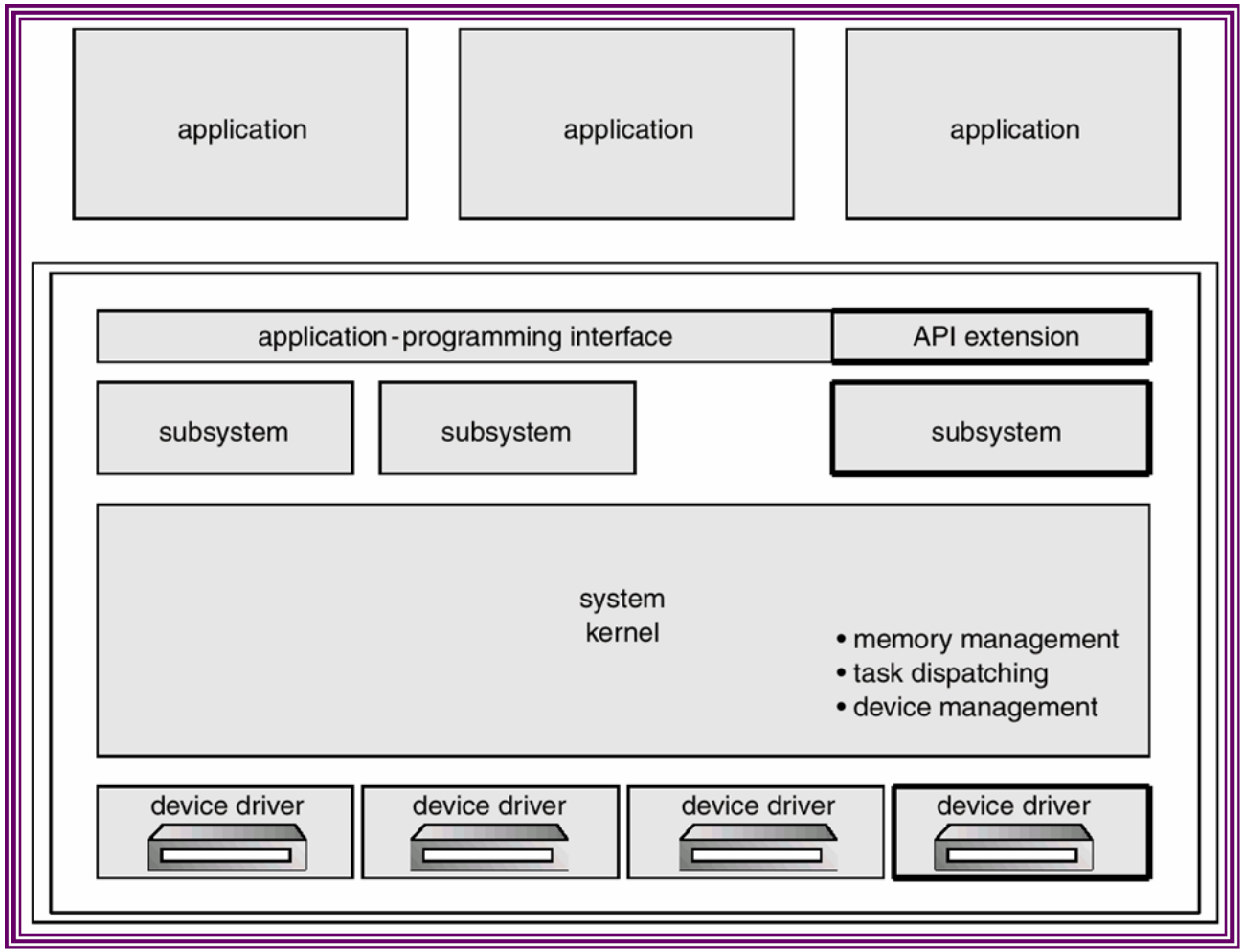

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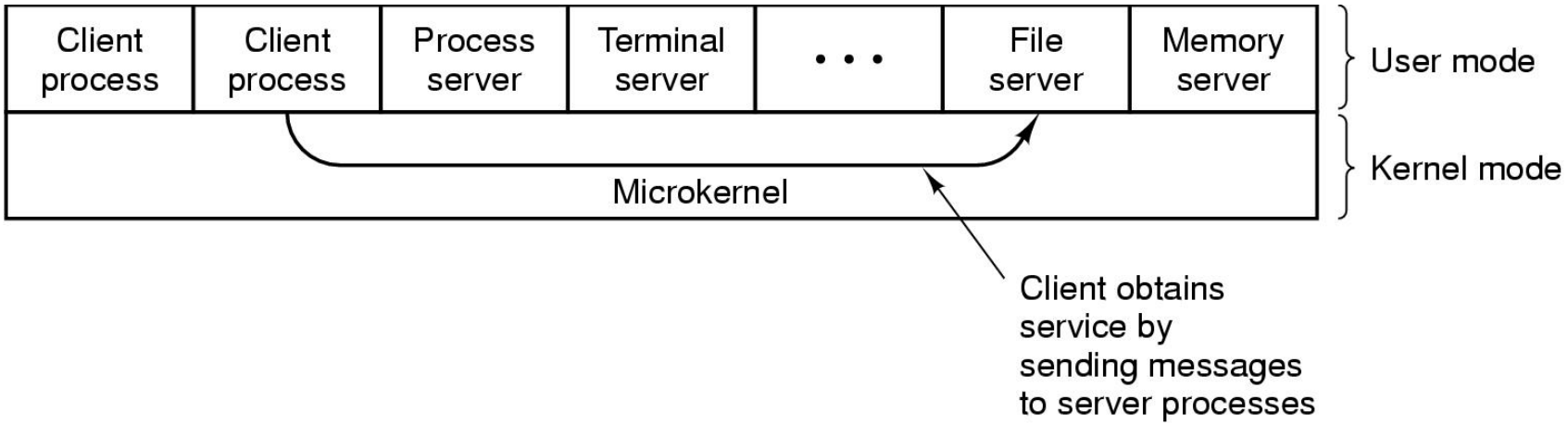

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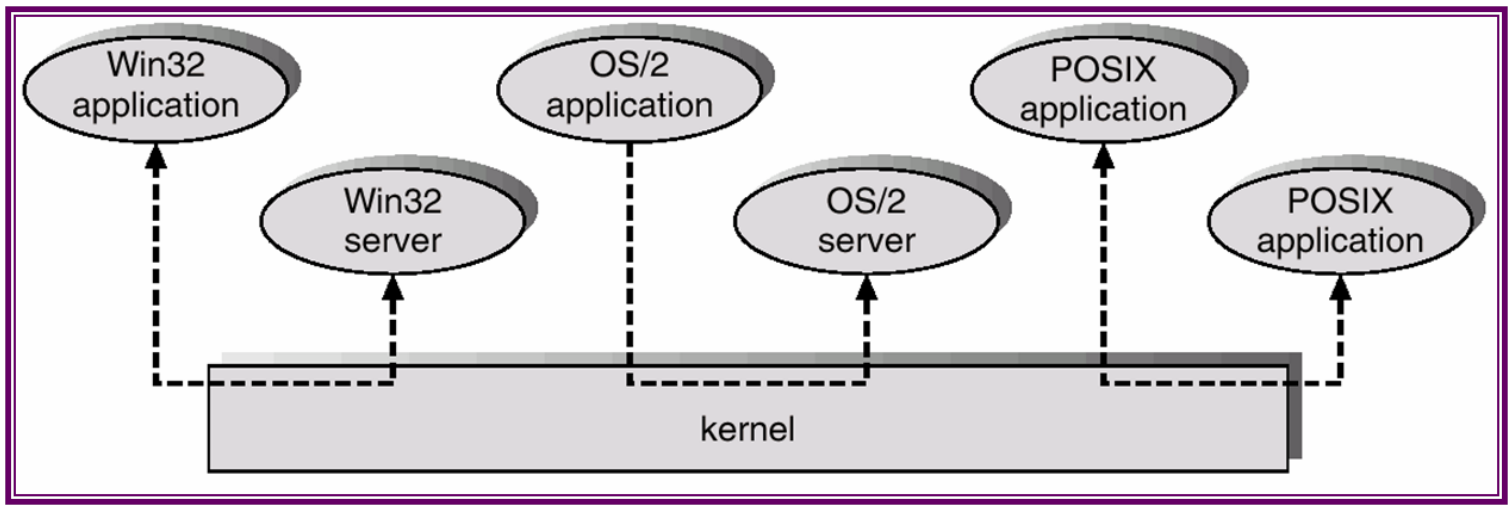

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- Then, the operating system functionality is built on top of the virtual machines.

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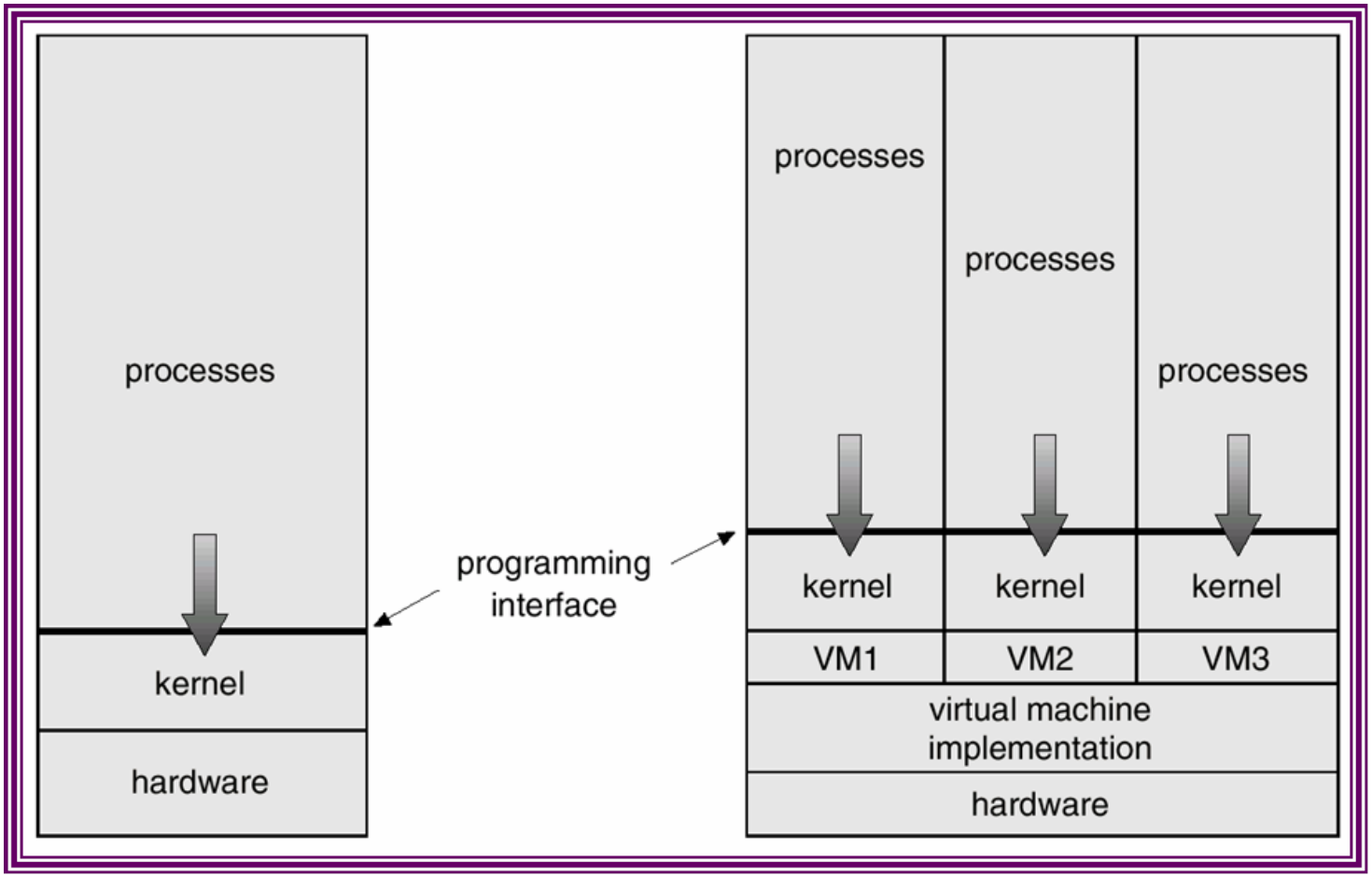

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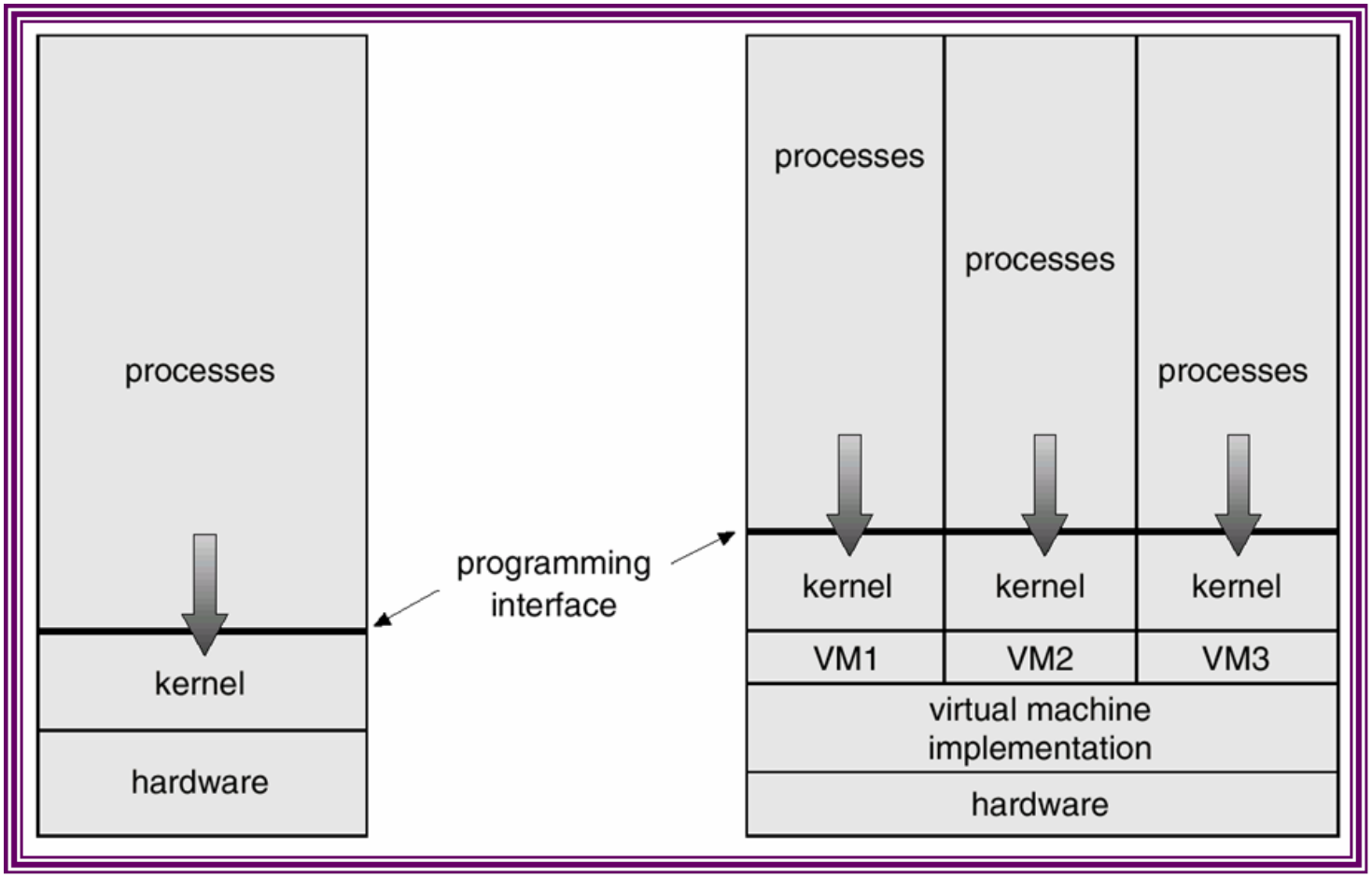

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  - The virtual machine concept is difficult to implement due to the effort required to provide an **exact** duplicate to the underlying machine.

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1. Operating system structures
   - Simple structure
   - Layered structure
   - Micro-kernel
   - Virtual machine
2. Operating system design
   - Policy and mechanism
   - Implementation

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