CSE3241: Operating System and System Programming

Class-22

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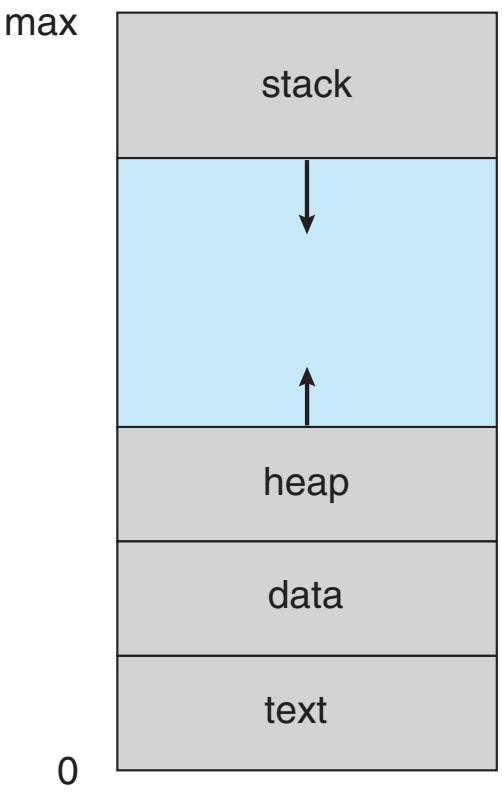
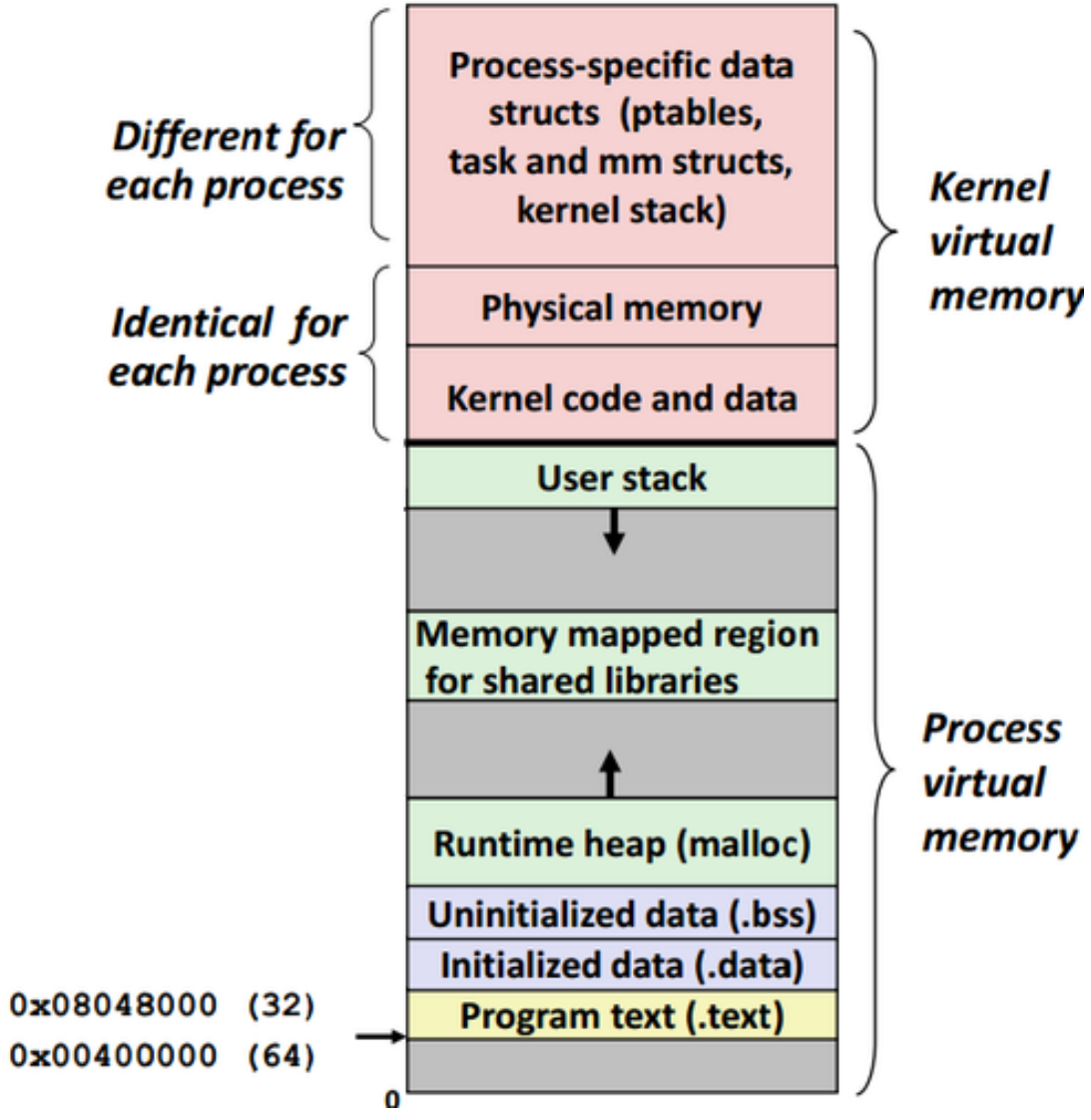
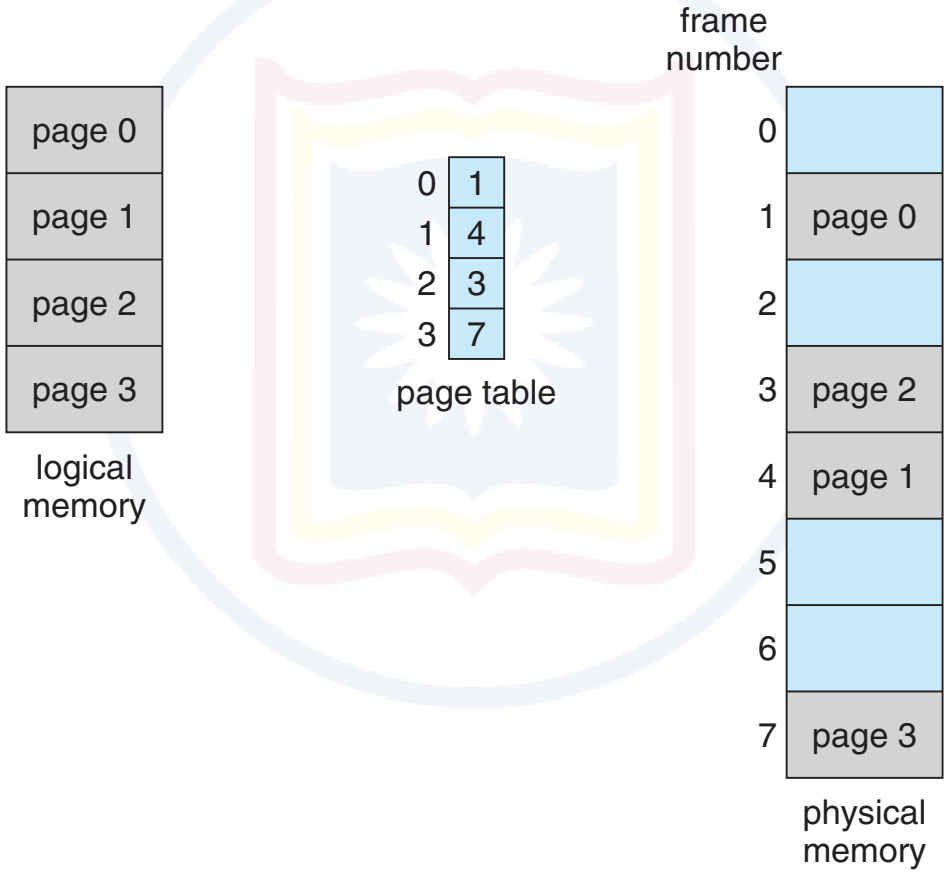
Memory Layout of a Process





Paging Model[1]

- Physical memory is broken down into fixed-sized blocks called **frames**.
- Logical memory is broken down into fixed-sized blocks called **pages**.



Page Table vs. Frame Table [1]

- Page Table contains the base address of each page in physical memory.
- Frame Table contains information about each frame such as: whether it is free or not, to which process(es) it is allocated.

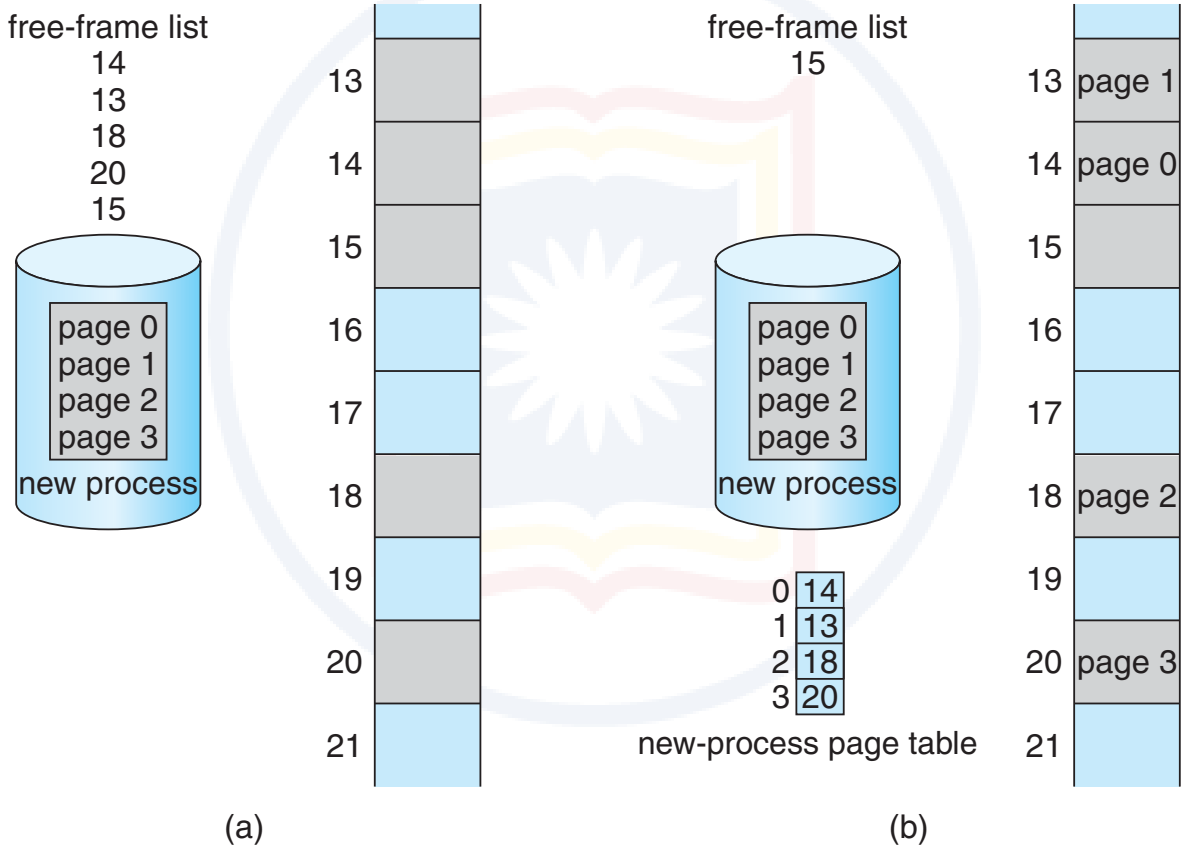
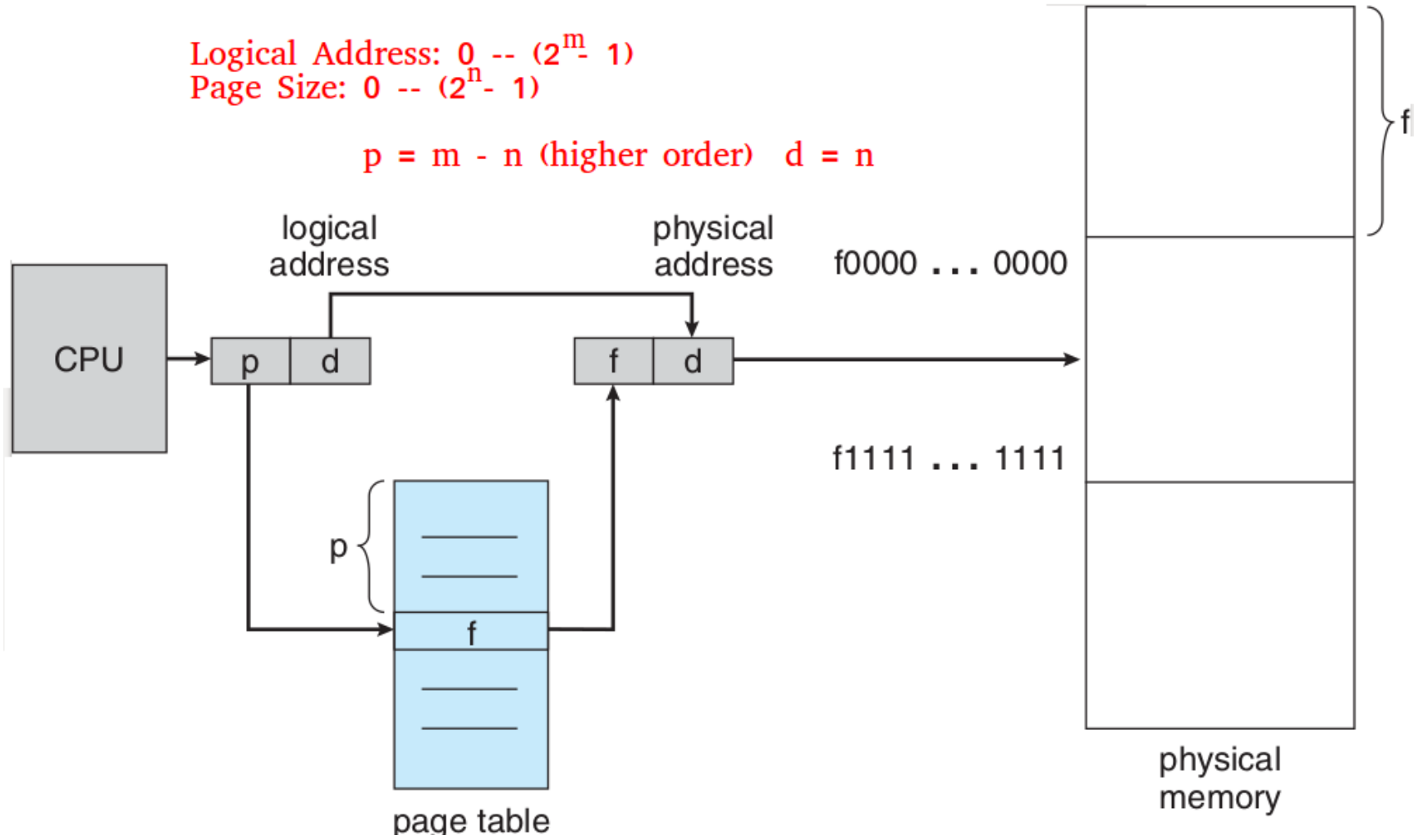
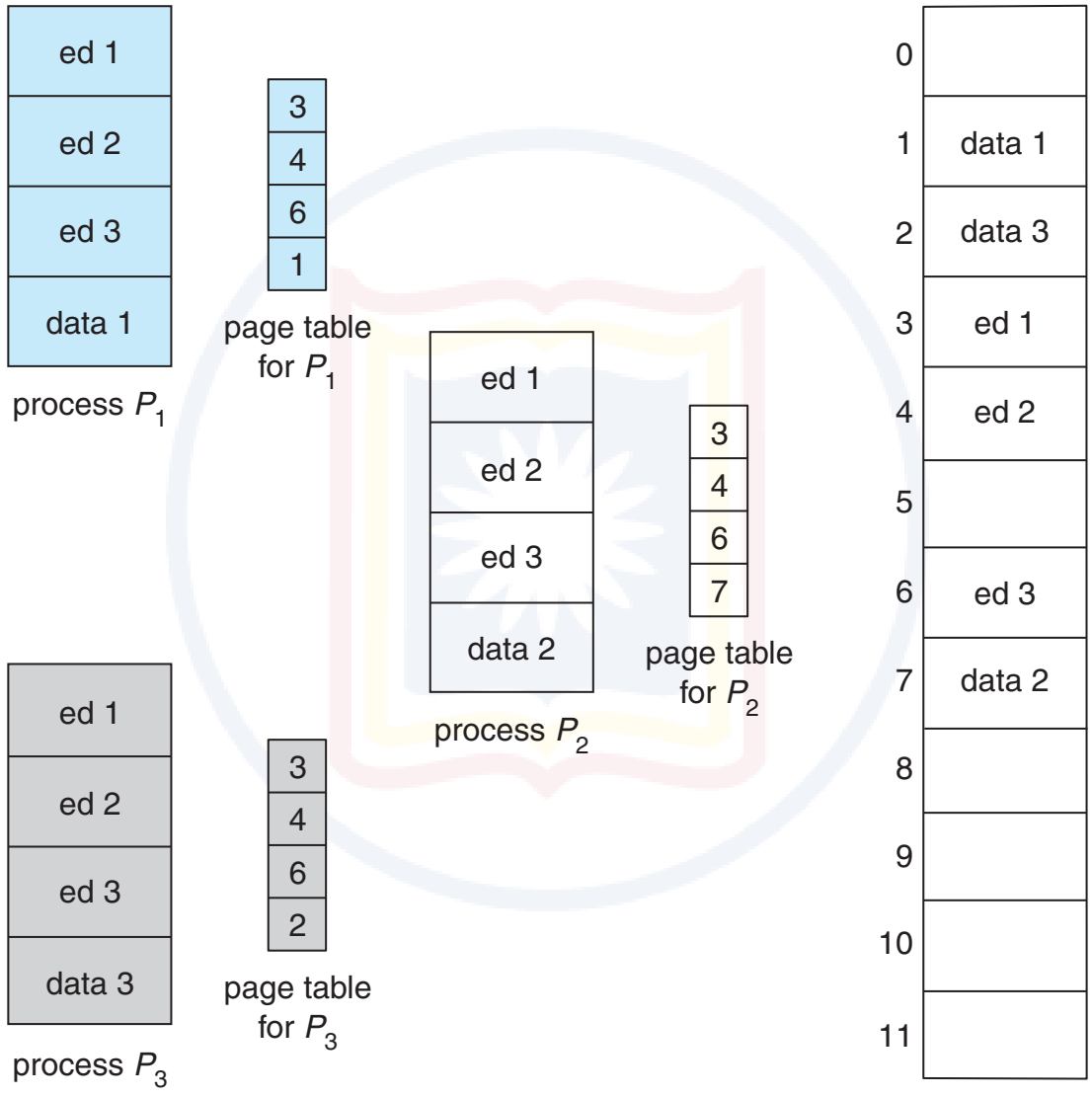


Figure: Free frames (a) before allocation and (b) after allocation.

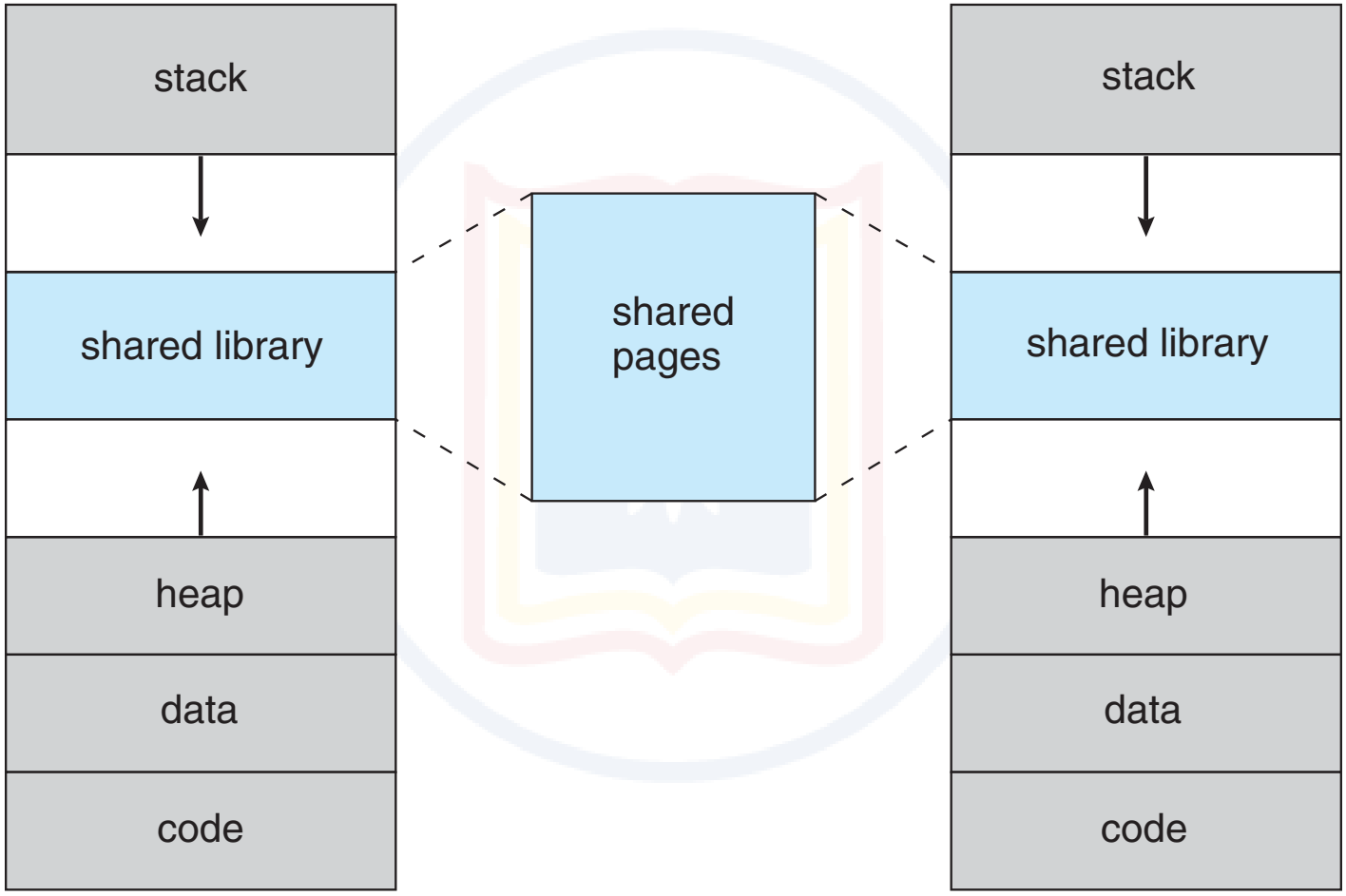
Paging Hardware [1]



Sharing a Code in a Paging Environment [1]



Shared Library in a Paging Envionment[1]



Parent-Child Process in a Paging Envionment

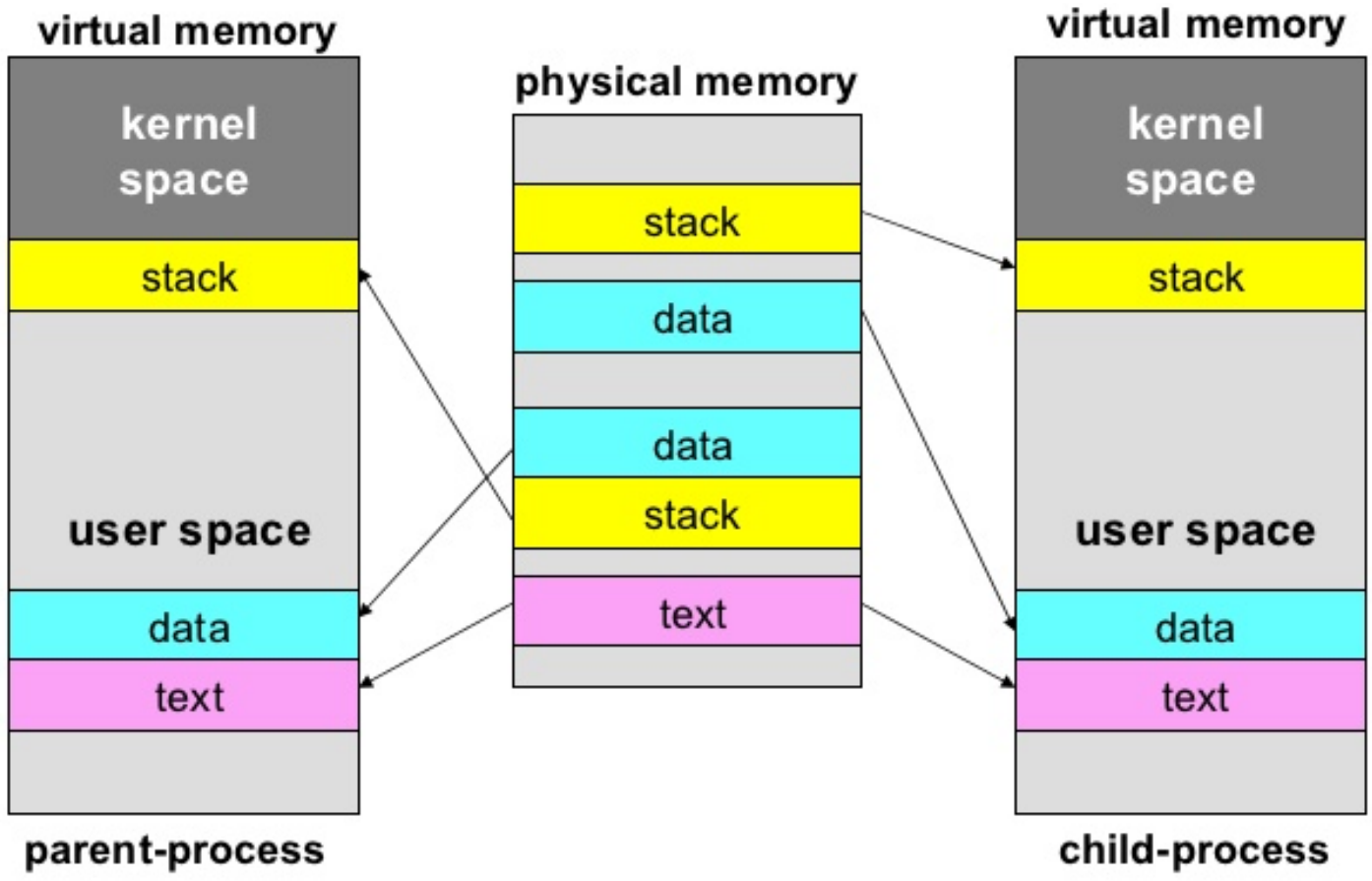


Figure: http://slideplayer.com/slide/10726396/

References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Operating System Concepts.
John Wiley & Sons, 9 edition, 2012.