

- A. For fixed sized partitioning, memory is divided into fixed partitions. Processes are loaded into continuous. This can potentially cause internal fragmentation. In paged memory, the memory is split into equally sized frames, and the processes are split into pages. Because of this, paged memory requires a page table for address translation, unlike fixed sized partitioning. However, this does mean that paged memory eliminates the risk for internal fragmentation.
- B. For variable sized partitioning divides memory into contiguous sized blocks to fit processes, whereas segmentation logically divides memory into segments by program components (data, stack) instead of process size. Variable size partitioning also uses a single base and limit register per block for addressing, whereas segmentation uses segment numbers and offsets. This allows processes to address their logical segments independently from each other.
- C.

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jefferson@jefferson-VMware-Virtual-Platform: ~/Desktop/OS/hw9
jefferson@jefferson-VMware-Virtual-Platform: ~/Desktop/OS/hw9$ gcc -o lab9_producer lab9_producer.c -lrt -lpthread
jefferson@jefferson-VMware-Virtual-Platform: ~/Desktop/OS/hw9$ ./lab9_producer 10
Producer: Address of n: 0x5ad5a348f010
Producer: Shared buffer start address: 0x79867c36b000
(0.002957) produced [0]: 0
(0.002997) produced [1]: 1
(0.003015) produced [2]: 1
(0.003032) produced [3]: 2
(0.003050) produced [4]: 3
(0.311057) produced [5]: 5
(0.311126) produced [6]: 8
(0.311259) produced [7]: 13
(0.311422) produced [8]: 21
(0.311536) produced [9]: 34
jefferson@jefferson-VMware-Virtual-Platform: ~/Desktop/OS/hw9$

jefferson@jefferson-VMware-Virtual-Platform: ~/Desktop/OS/hw9$ gcc -o lab9_consumer lab9_consumer.c -lrt -lpthread
jefferson@jefferson-VMware-Virtual-Platform: ~/Desktop/OS/hw9$ ./lab9_consumer 10
Consumer: Address of n: 0x606889d0a010
Consumer: Shared buffer start address: 0x74ac009d0000
(0.003087) consumed [0]: 0
(0.003149) consumed [1]: 1
(0.003190) consumed [2]: 1
(0.003249) consumed [3]: 2
(0.003302) consumed [4]: 3
(0.003471) consumed [5]: 5
(0.003595) consumed [6]: 8
(0.003602) consumed [7]: 13
(0.003840) consumed [8]: 21
(0.004219) consumed [9]: 34
jefferson@jefferson-VMware-Virtual-Platform: ~/Desktop/OS/hw9$

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- D. Included in part C.
- E. Virtual.
- F. Included in part C.
- G.

