0/8 Questions Answered

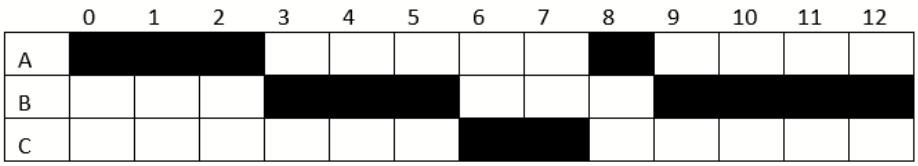
Check-in Quiz05, Scheduling & File System

Q1 Scheduling
5 Points

Consider the following processes that the scheduler sees:

Process	Arrival Time	Duration
A	0	4
B	1	7
C	2	2

If we were to schedule these with a time quantum of 3 we would get the following execution diagram:



If we count the number of context switches, we get 4 of them (not counting the loading of the first process and the unloading of the last process)

In this scenario, we made the following assumptions:

- All processes do not block for I/O or any resource.
- Context switching and running the Scheduler are instantaneous.
- If a process arrives at the same time as the running process' time slice finishes, the one that just arrived goes into the ready queue before the one that just finished its time slice.
- If a process would not finish before the time quantum is up, and there are no other processes to schedule, then the process runs for another time quantum without context switching.

Consider the case where out time quantum is shrunk from 3 time units to 2 time units. For each of the following, please answer what the new value would be and answer it with a number only:

Q1.1
1 Point

The finishing time for process A?

Hint: with a time quantum of 3, process A had a finishing time of 9

Save Answer

Q1.2
1 Point

The finishing time for process B?

Hint: with a time quantum of 3, process B had a finishing time of 13

Save Answer

Q1.3
1 Point

The finishing time for process C?

Hint: with a time quantum of 3, process C had a finishing time of 8

Save Answer

Q1.4
2 Points

The number of context switches there would be between processes A, B and C?

Save Answer

Q2 Number of Seeks
3 Points

One of the things about Hard Disk Drives is that it takes a long time to seek to a new position on disk, so one major factor when deciding a disk allocation scheme is how many seeks it takes to access any specific block of a file.

Consider we have the a file containing 4 blocks of data, how many disk seeks do we need to make to read the 3rd block of the file?

You can assume we already know the physical block number of the first block of the file.

Q2.1 Contigouos Allocation
1 Point

If the disk allocation scheme is contiguous allocation:

- 0
- 1
- 2
- 3
- 4
- None of the above

Save Answer

Q2.2 Linked List Allocation
1 Point

If the disk allocation scheme is linked list allocation:

0

1

2

3

4

None of the above

Save Answer

Q2.3 FAT
1 Point

If we are using a FAT allocation and we have already loaded the FAT table into memory:

0

1

2

3

4

None of the above

Save Answer

Q3 FAT
2 Points

Consider the following FAT table:

index	value
0	
1	-1
2	5
3	9
4	
5	8
6	7
7	2
8	-1
9	1

If we say that file "ngnm.txt" starts at physical block 3, what are all of the blocks that make up that file?

Please answer as a list of comma separated numbers with no white space. Please list the blocks so that they are in the order they logically would be to compose the file.
For example: `7,3,12,5,4`

Save Answer

Save All Answers

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