TIC1001—Introduction to Computing and Programming
National University of Singapore

Lecture 10: Operating System

Question 1: Interleaved Execution

Which of the following is the most accurate description of the execution of the OS itself?

~~OS is executing at all times, that's why it can do process switching.~~
~~OS is not executing at all times. Process will "wake it up" to do the process switching.~~
OS is not executing at all times. At regular interval, OS will be automatically invoked to do process switching.
~~None of the above.~~

Question 2: Memory Management

Select all benefits of using "paging" to manage memory.

~~Paging allows a process to stay at the same physical memory location between different runs.~~
Paging allows a process to occupy disjoint (i.e. not nearby) physical memory locations.
~~Paging allows simpler execution. All addresses in the program can be directly accessed without further modification.~~
Paging allows multiple processes to share the physical memory.

Question 3: File Management

Select all true statements regarding file management.

A user program can never directly access the hard disk without OS's help.
A folder (directory) structure can never have a cycle in it.
The same kind of file management scheme can be applied to hardware with different specifications (e.g. magnetic hard disk vs SSD, different capacity etc.)
~~We cannot control who has the right to access a file.~~