

NOTE: The instructor notes are already added at the bottom of various slides in the respective lecture PPTs. Also, notes & explanation have been made available via additional slides (in conjunction with the author slides) and added to the lecture slide deck. Here are some additional notes and text book references:

Lecture PPT Filename	Slide Number	Notes/Explanation	Text Book Reference
Operating Systems Lecture 57 Unit5_1	4	Device driver runs in Kernel mode and occupies major percentage of Operating System code.	Section 13.1, Page 576
Operating Systems Lecture 60 Unit5_4	9	Multics ("Multiplexed Information and Computing Service") was an influential early time-sharing operating system based on the concept of a single-level memory . Multics "has influenced all modern operating systems since, from microcomputers to mainframes. Developers: MIT, GE, Bell Labs. With a single-level storage the entire storage of a computer is thought of as a single two-dimensional plane of addresses, pointing to pages. Pages may be in primary storage (RAM) or in secondary storage (disk); however, the current location of an address is unimportant to a process. The operating system takes on the responsibility of locating pages and making them available for processing. If a page is in primary storage, it is immediately available. If a page is on disk, a page fault occurs and the operating system brings the page into primary storage. No explicit I/O to secondary storage is done by processes: instead, reads from secondary storage are done as the result of page faults; writes to secondary storage are done when pages that have been modified since being read from secondary storage into primary storage are written back to their location in secondary storage.	Section 14.3.3, Page 616
Operating Systems Lecture 59 Unit5_3	5	CPU uses two methods to perform input/output operations between the CPU and peripheral devices in the computer. These two methods are called memory mapped IO and IO mapped IO. Memory-mapped IO uses the same address space to address both memory and I/O devices. Thus, the CPU instructions used to access the memory can also be used for accessing devices. On the other hand, I/O mapped I/O uses separate address spaces to address memory and I/O devices. This often uses a special class of CPU instructions designed specifically for performing I/O, such as the in and out	Section 13.5, Page 599

		instructions found on microprocessors based on the x86 and x86-64 architectures	
		System Protection	Section 14.1-14.7, Page 611-627
		System Security	Section 15.1-15.3, Page 641-658
		Case Study: Windows 7 File System	Section 17.5, Page 775-781