

OS complete notes

- by Unknown

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loc 551 | Monday, December 6, 2021 4:58:45 PM

“In a multiprogramming environment, several processes may compete for a finite number of resources. A process requests resources; if the resources are not available at that time, the process enters a wait state. It may happen that waiting processes will never again change state, because the resources they have requested are held by other waiting processes. This situation is called deadlock. ”

loc 556-558 | Monday, December 6, 2021 5:06:44 PM

“A process must request a resource before using it, and must release the resource after using it. ”

loc 560-561 | Monday, December 6, 2021 5:07:04 PM

“Under the normal mode of operation, a process may utilize a resource in only the following sequence: 1. Request: If the request cannot be granted immediately, then the requesting process must wait until it can acquire the resource. 2. Use: The process can operate on the resource. 3. Release: The process releases the resource ”

loc 561-564 | Monday, December 6, 2021 5:09:12 PM

“A deadlock situation can arise if the following four conditions hold simultaneously in a system: ”

loc 565-566 | Monday, December 6, 2021 5:10:40 PM

“if the graph contains no cycles, then no process in the system is deadlocked. If, on the other hand, the graph contains the cycle, then a deadlock must exist. ”

loc 581-582 | Monday, December 6, 2021 5:18:55 PM

“If a process that is holding some resources requests another resource that cannot be immediately allocated to it, then all resources currently being held are preempted. ”

loc 615-616 | Monday, December 6, 2021 5:34:55 PM

“An alternative method for avoiding deadlocks is to require additional information about how resources are to be requested. For example, in a system with one tape drive and one printer, we might be told that process P will request first the tape drive, and later the printer, before releasing both resources. ”

loc 623-625 | Monday, December 6, 2021 5:38:49 PM

“We can provide protection by using two registers, usually a base and a

limit, as shown in fig. 7.1. the base register holds the smallest legal physical memory address; the limit register specifies the size of the range. "

loc 680-681 | Thursday, December 9, 2021 7:09:50 AM

"An address generated by the CPU is commonly referred to as a logical address, "

loc 705-706 | Thursday, December 9, 2021 7:29:39 AM

"an address seen by the memory unit is commonly referred to as a physical address. "

loc 706-706 | Thursday, December 9, 2021 7:29:45 AM

"A directed edge $P_i \rightarrow R_j$ is called a request edge; a directed edge $R_j \rightarrow P_i$ is called an assignment edge. "

loc 577-578 | Tuesday, December 21, 2021 5:04:33 AM

"A state is safe if the system can allocate resources to each process (up to its maximum) in some order and still avoid a deadlock. "

loc 629-630 | Tuesday, December 21, 2021 5:18:06 AM

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