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CS 352

HW2

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1. Describe the differences among short-term, medium-term, and long-term scheduling.

Answer:

Short Term	**Medium Term**	**Long Term**
Selects a process from those that are in the memory and ready to execute, and then allocates the CPU to it.	**Select process from the ready or blocked queue and removes them from memory, then reinstates them later to continue running.**	**Determines which jobs are brought into the system for processing.**

2. Describe the actions taken by a kernel to context-switch between processes.

Answer: For clock interrupts, the OS saves the PC and user stack pointer of the currently executes the process and then transfer control to the kernel clock interrupt handler. Clock interrupt saves the rest of the registers and other machine state like the state of the floating-point registers, in the process PCB. Also the OS invokes the scheduler to determine the next process to execute. The OS then retrieves the state of the next process from its PCB, and restores the registers. The processor is taking back to the state in which this process was previously interrupted and then executing in user code with user mode privileges.

3. How many processes are created?

Answer: 16

4. What are the pid values?

Answer: A = 0
B = 2603
C = 2603
D = 2600

5. What output will be at Line X and Line Y?
Answer:
Output at line X is: 0, -1, -4, -9, -16
Output at Line Yare: 0, 1, 2, 3, and 4
Since the child is a copy of the parent, so any changes the child makes will occur in its copy of the data and wont be reflected in the parent.