CSCI 315 Operating Systems Design
Activity 17

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The Banker's Safety Algorithm

Source: Problem 8.3, Operating Systems Concepts, Silberschatz, Galvin, and Gagne, 10th edition.

Consider the following snapshot of a system:

	Allocation	Max	Available
	A B C D	A B C D	A B C D
P_0	0 0 1 2	0 0 1 2	1 5 2 0
P_1	1 0 0 0	1 7 5 0	
P_2	1 3 5 4	2 3 5 6	
P_3	0 6 3 2	0 6 5 2	
P_4	0 0 1 4	0 6 5 6	

Answer the following questions **using the safety version of the Banker's Algorithm:**

(a) Show the the content of the matrix **Need**.

(b) Show how you can determine whether the system is in a safe state.

(c) If process P_1 makes a request for (0,4,2,0), can it be granted immediately?