

Name: _____

Due: _____

Consider the following snapshot of a system:

	Allocation				Max				Available			
	A	B	C	D	A	B	C	D	A	B	C	D
P0	1	0	0	0	1	4	1	4	2	1	2	2
P1	1	1	0	1	2	4	1	2				
P2	1	1	0	1	2	1	1	2				
P3	1	0	1	0	2	2	3	1				
P4	0	1	1	0	4	2	4	1				

Answer the following questions using the banker's algorithm:

a Show the content of the matrix *Need* below.

Need				
	A	B	C	D
P0				
P1				
P2				
P3				
P4				

- b Show that the system is in a safe state *by listing the order in which processes can be executed without producing a deadlock.*
- c If a request from process P_1 arrives for (1, 0, 0, 0), can the request be granted immediately? **Show the updated NEED and Allocation matrices. If yes, show the safe sequence. If no, list the processes that are possibly in a deadlock.**