Bankers Algorithm Problem Set

Problem Set-1:

5 processes P0 P4

3 resources A B C

At an instance of time, we have the following snapshot of the system:

	Allocation			Max			Available		
	A	B	C	A	B	C	A	B	C
P_0	0	1	0	7	5	3	3	3	2
P_1	2	0	0	3	2	2			
P_2	3	0	2	9	0	2			
P_3	2	1	1	2	2	2			
P_4	0	0	2	4	3	2			

Is the system is in safe state? If in safe state then what is the possible safe state sequence?

Problem Set-2:

Assume that there are three resources, A, B, and C.

There are 4 processes P0 to P3.

At an instance of time, we have the following snapshot of the system:

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

Is the system is in safe state? If in safe state then what is the possible safe state sequence?

Problem Set-3:

Assume that there are 5 processes, P0 through P4, and 4 types of resources.
At an instance of time, we have the following snapshot of the system:

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

Is the system is in safe state? If in safe state then what is the possible safe state sequence?