

Suppose we have a system with four resource types, A, B, C and D and 5 processes, P₀, P₁, P₂, P₃ and P₄. The number of resources of Type A is 12, Type B is 12, Type C is 8 and Type D is 10. At a given point in time the allocations and maximal demands and each of the resources is given by:

	Allocation				Max			
	A	B	C	D	A	B	C	D
P ₀	2	0	0	1	4	2	1	2
P ₁	3	1	2	1	5	2	5	2
P ₂	2	1	0	3	2	3	1	6
P ₃	1	3	1	2	1	4	2	4
P ₄	1	4	3	2	3	6	6	5

- (i) Is this a safe state? If it is, give a safe sequence.
- (ii) Suppose that P₁ makes a request for (1, 1, 0, 0) should that request be granted?
- (iii) Suppose that P₄ makes a request for (0, 0, 2, 0), should that request be granted.