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BANKERS ALGORITHM

1. Available Resources => 1 5 2 0

	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				

* Need Matrix:

Process	A	B	C	D
P_0	0	1	0	0
P_1	0	4	2	1
P_2	1	0	0	1
P_3	0	0	2	0
P_4	0	6	4	2

* For process P_0,

Resource Available => A B C D
1 5 2 0

Resource to be provided => A B C D
0 1 0 0

Here resource to be provided is comparatively a subset of Resource available

So the process can be executed without interruption

A B C D
1 5 2 0 (available)
0 1 1 0 (assigned for P_0)
---
1 6 3 0

* For process P_1,

Resource Available => A B C D
1 6 3 0

Resource to be Provided => 0 4 2 1

∴ Process P_1 can't be performed

* For process P_2,

Resource Available => A B C D
1 6 3 0

Resource to be provided => 1 0 0 1

∴ Process P_2 can't be performed

* For process P_3;

Resource Available ⇒ A B C D
1 6 3 0

Resource to be provided ⇒ 0 0 2 0

Here resource to be provided < Resource available

A	B	C	D	
1	6	3	0	(available)
0	6	3	2	(allocated)
1	12	6	2	

* For Process P_1 again,

	A	B	C	D
Resource Available ⇒	1	12	6	2
Resource Provided ⇒	0	4	2	1

Here resource to be provided < Resource available

A	B	C	D	
1	12	6	2	(available)
1	2	3	1	(allocated)
2	14	9	3	

* For process P_2,

	A	B	C	D	
Resource Available ⇒	2	14	9	3	(available)
Resource Provided ⇒	1	3	6	1	(allocated)
	3	17	15	8	

* For process P4 :

A	B	C	D	
3	17	15	8	(available)
0	0	1	4	(allocated)
3	17	16	12	

Max instances of Type A = 3

Max instances of Type B = 17

max instances of Type C = 16

Max instances of type D = 12