Part I: Five jobs (j=1,2,3,4.5) are each to be assigned to a job (m=1,2,3,4,5). The cost C_{jm} of assigning job j to machine m is shown in the table:

j∖m	1	2	3	4	5
1	10	16	13	16	15
	21				
3	11	23	11	19	12
4	11	24	12	23	21
5	14	22	25	23	25

Perform the row and column reductions below and verify that the resulting cost matrix is nonnegative and that a zero-cost assignment can be found.

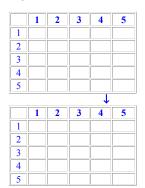
Row reduction by		Co	lun	nn re	edu	ction	ı by
i	1 2 3 4 5	j	1	2	3	4	5
\mathbf{U}_{i}	40138	Vj	6	10	9	12	11

Resulting cost matrix:

	1	2	3	4	5
1					
2					
3					
4					
5					

Job	Machine
1	
2	
3	
4	
5	

	* * * * * * * * * * * * * * * Part III: Another Cost Matrix								
	1	2	3	4	5				
1	14	7	9	7	9				
2	2	4	5	15	12				
3	10	8	9	12	4				
4	16	2	10	4	2				
5	3	1	7	5	13				



Perform the sequence of reductions until a nonnegative cost matrix with a zero-cost assignment has been found.

	1	2	3	4	5
1					
2					
3					
4					
5					



Job	Machine
1	
2	
3	
4	
5	

Assignment Problem

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Assignment Problem

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	* * * * * * * * * * * * * * * Part II: Another Cost Matrix								
	1	2	3	4	5				
1	10	14	24	23	10				
2	16	11	19	22	19				
3	23	25	16	16	16				
4	21	22	22	19	18				
5	20	25	23	11	17				

	1	2	3	4	5
1					
2					
3					
4					
5					
Ļ					

		v					
	1	2	3	4	5		
1							
2							
3							
4							
5							

Perform the sequence of reductions until a nonnegative cost matrix with a zero-cost assignment has been found.

	1	2	3	4	5
1					
2					
3					
4					
5					

Optimal assignment

Job	Machine	
1		
2		
3		
4		
5		