IE 313
Supply Chain Management
Spring 2022

Assignment 2
Due Date: 13 May 2022, 17:00

You are expected to plan the lot sizes for two products (P1 and P2) for the following 12 weeks. The net weekly requirements, as well as the relevant cost figures are given below.

	P1	**P2**
Initial Inventory	85	50
Inventory holding cost	2	3
Setup Cost	750	450
Capacity Requirement	0,5	1,3
Backlog cost	1	2

Requirements		
Week	**P1**	**P2**
22	226	171
23	117	177
24	5	144
25	11	192
26	211	188
27	91	210
28	147	185
29	182	221
30	92	196
31	36	208
32	188	172
33	11	200

1. Plan the production orders (timing and lot sizes) for both products using the economic order quantity (EOQ) approach, with no backlogs
2. Plan the production orders (timing and lot sizes) for both products using the Silver-Meal method, with no backlogs
3. Compare the plans you found in (1) and (2) for both products with the optimal solution. Discuss the differences in terms of % deviation from the optimal. Is there a difference in the deviation from the optimal for different products and different methods? Discuss the possible reasons.
4. Assume that the facility has a total resource capacity of 320 manhours per week. Evaluate your optimal plan taking the capacity requirements into consideration. Develop a feasible alternative and compare its total cost to the optimal solution found in 3. Try to minimize the change in the total cost.