Scheduling Report

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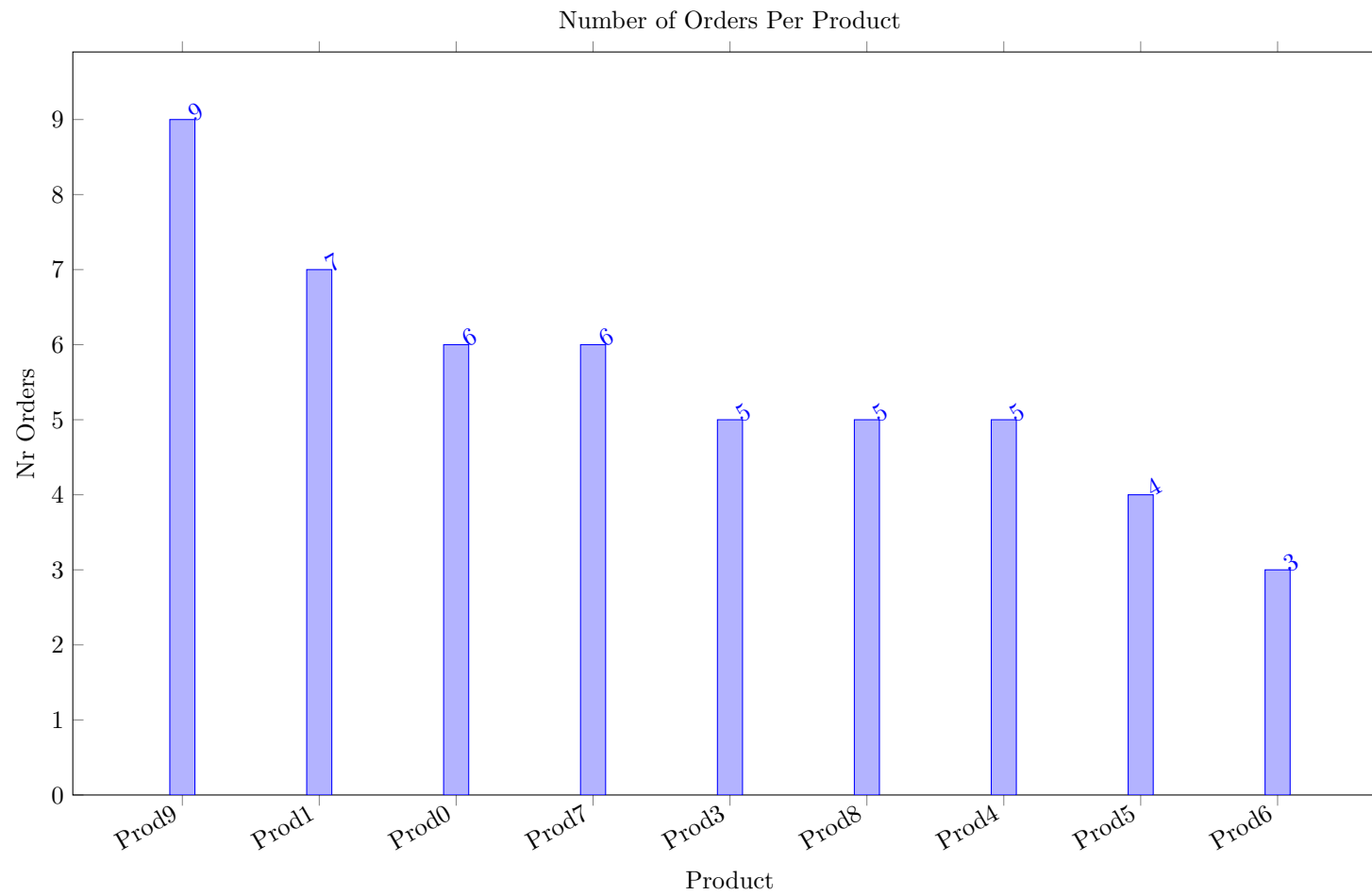
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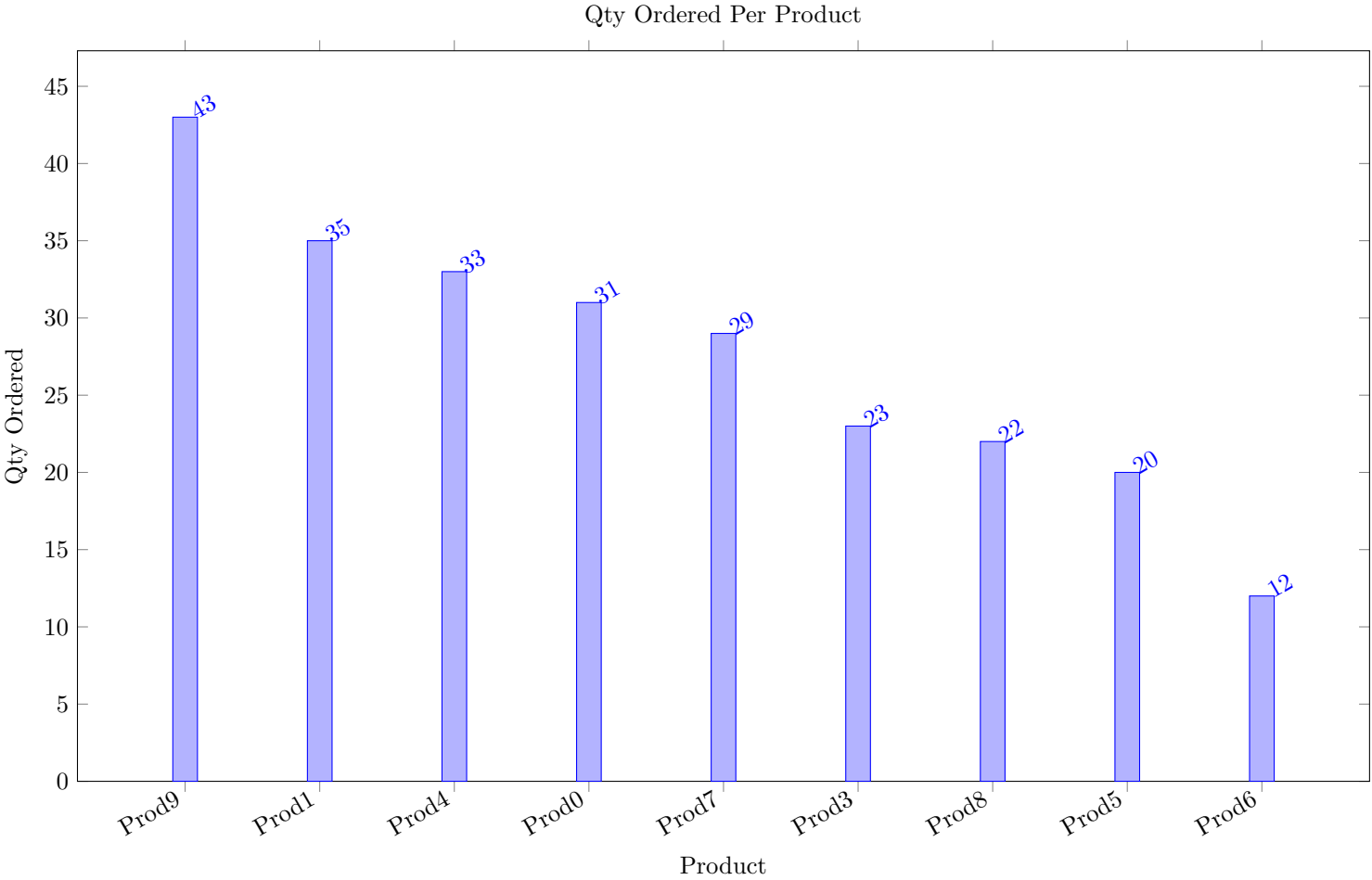
1 Introduction
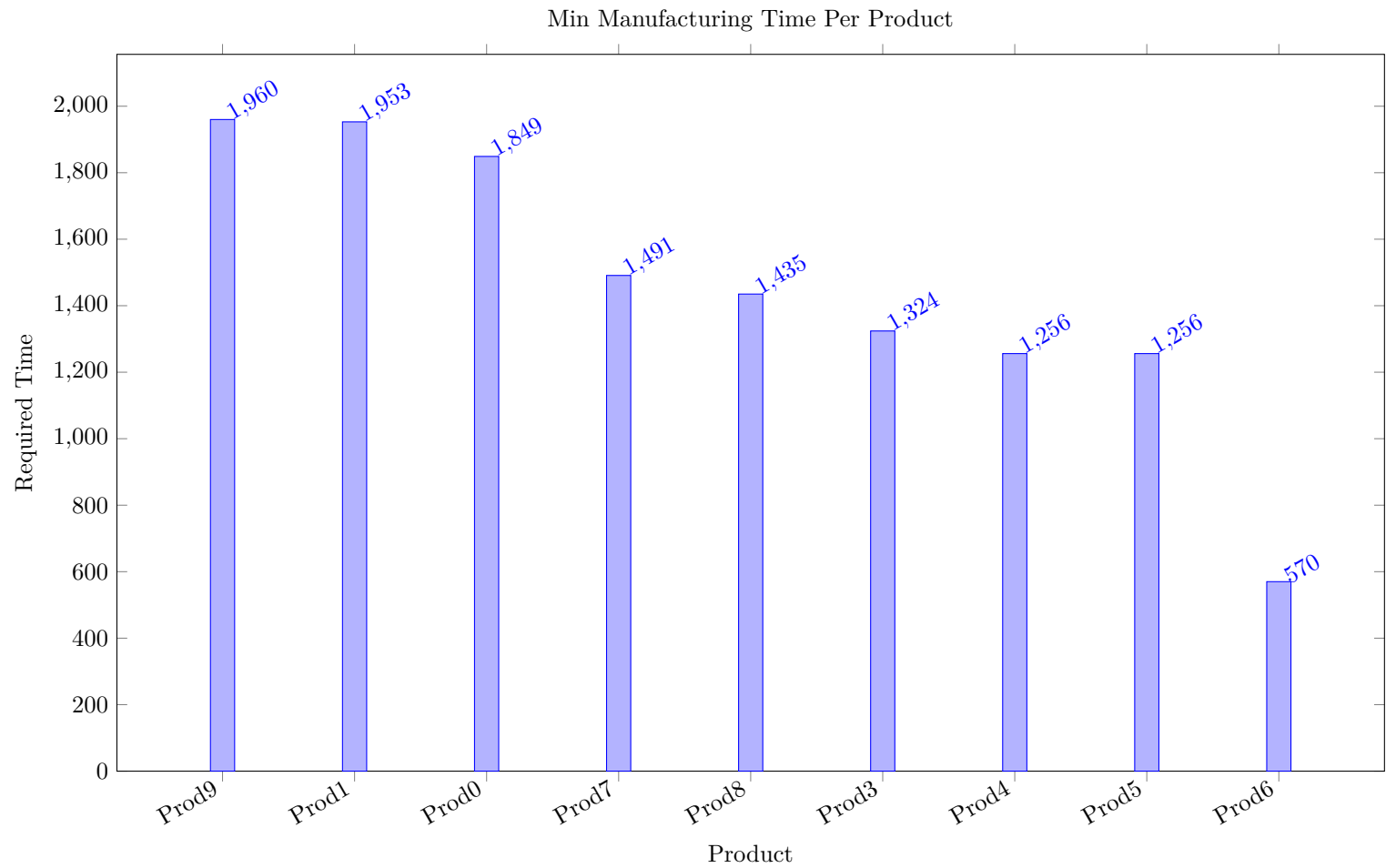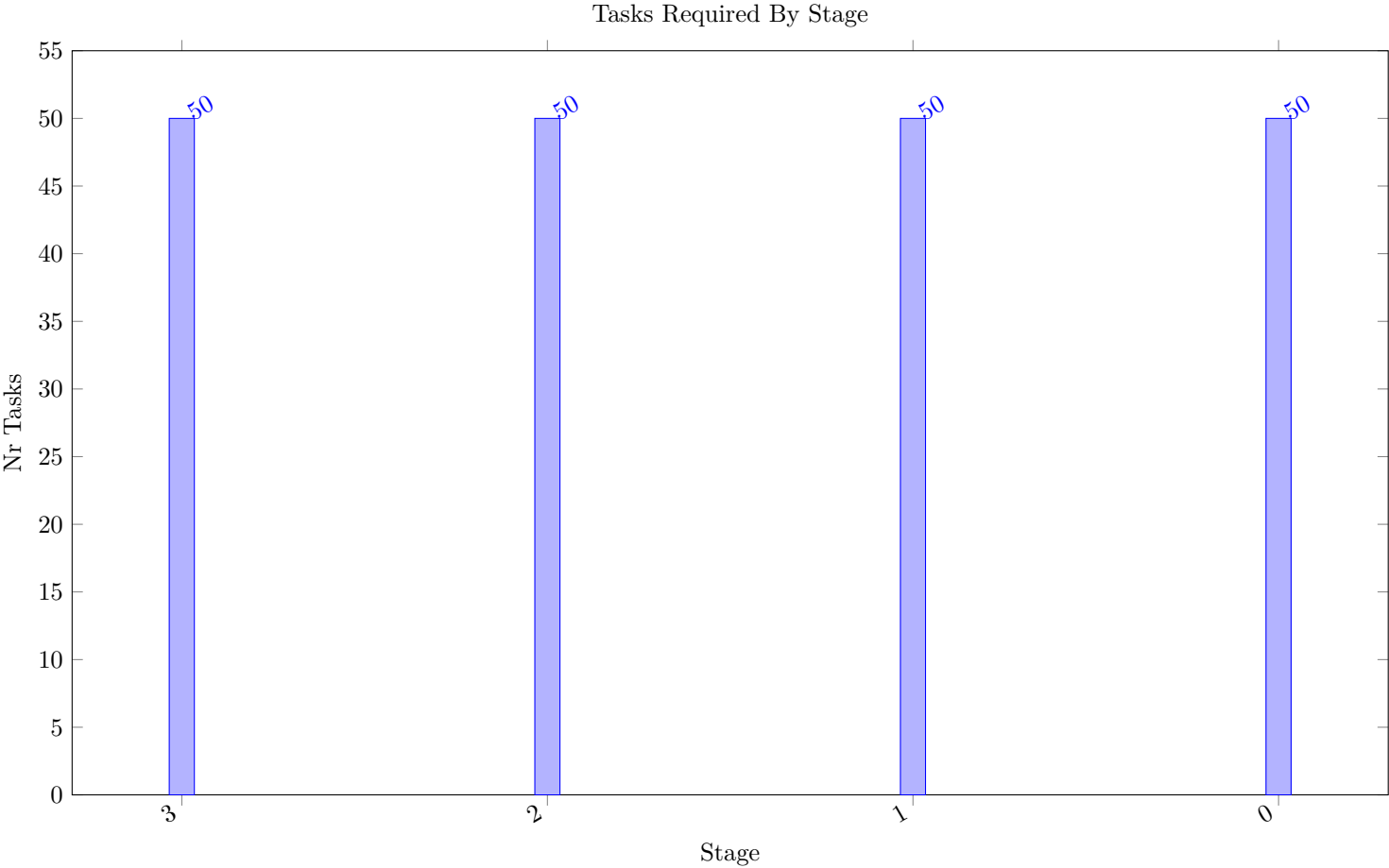
Table 1: Problem

Name	Label	Timepoints as Date	Nr Products	Nr Process	Nr Disjunctive Resources	Nr Cumulative Resources	Nr Orders	Nr Jobs	Nr Tasks
Generated		true	10	10	8	1	50	50	200

2 Orders

Number of Orders Per Product

Qty Ordered Per Product

Min Manufacturing Time Per Product

Tasks Required By Stage

Manufacturing Time Required By Stage

Cumulative Demand (Resource Time) per Cumulative Resource

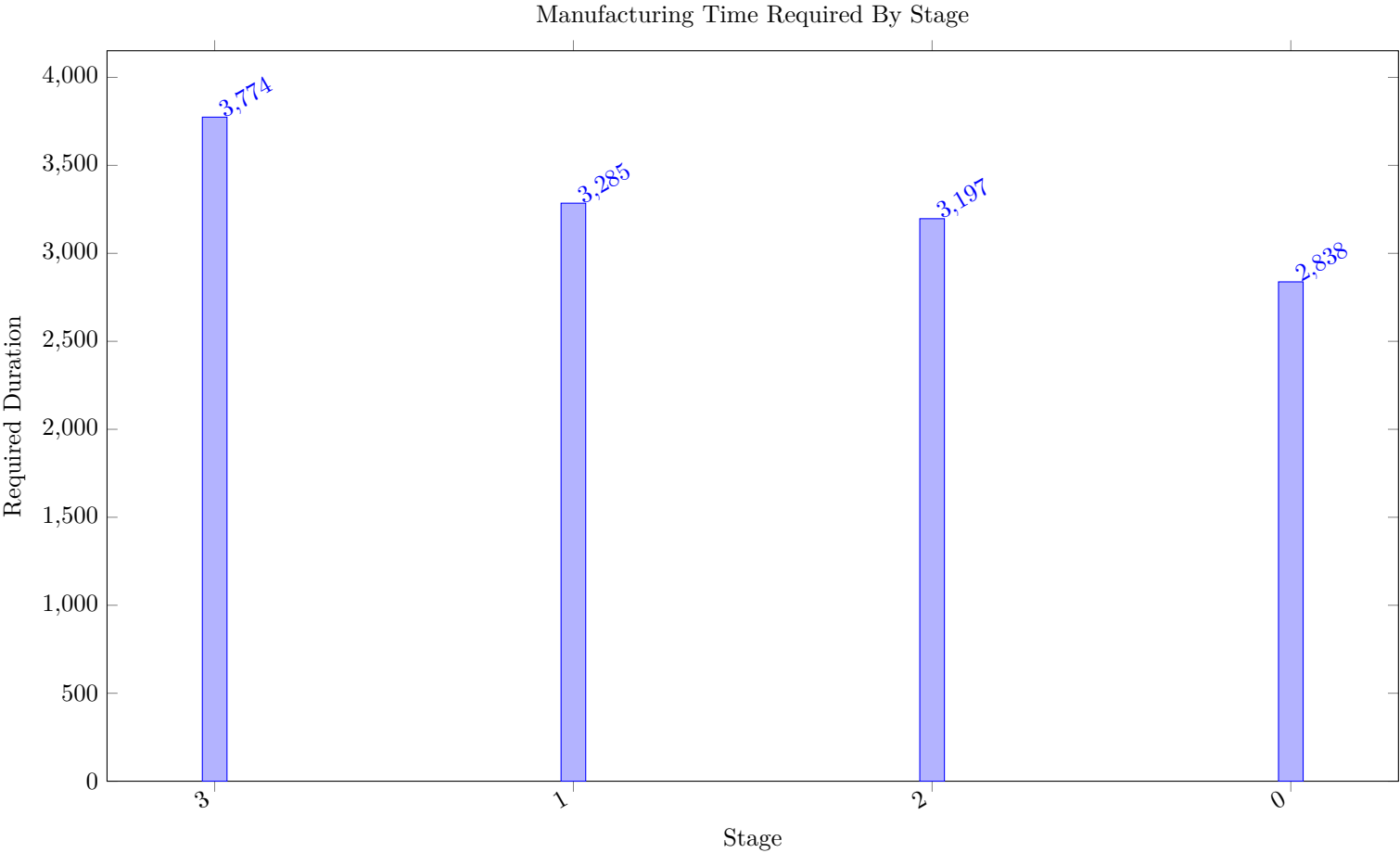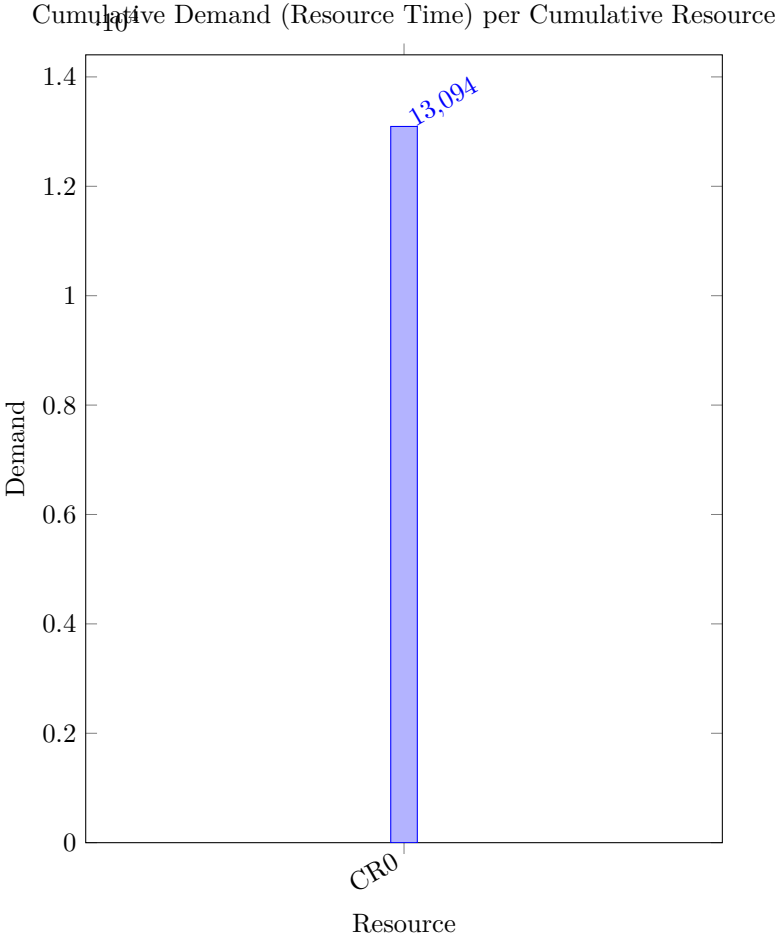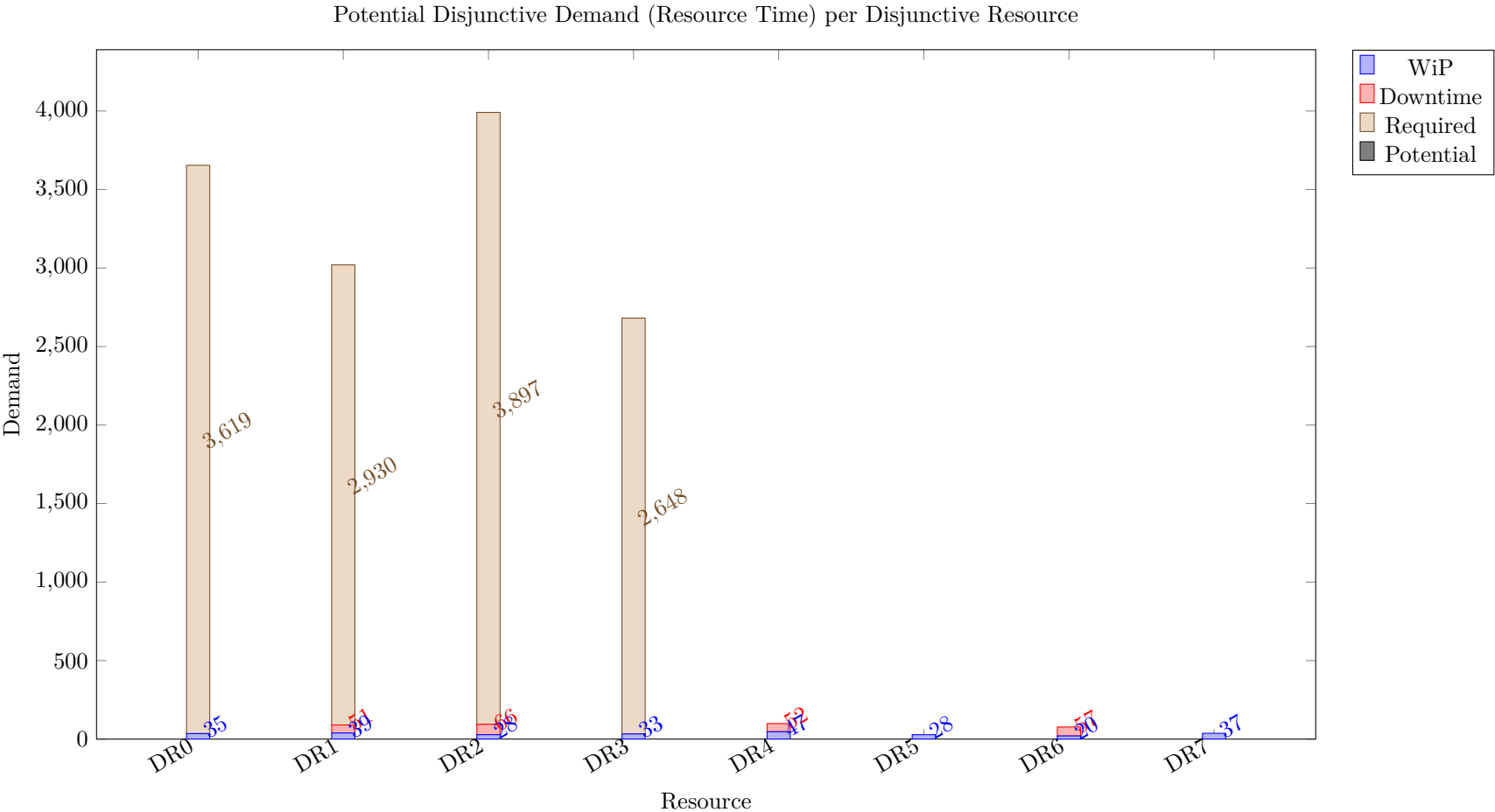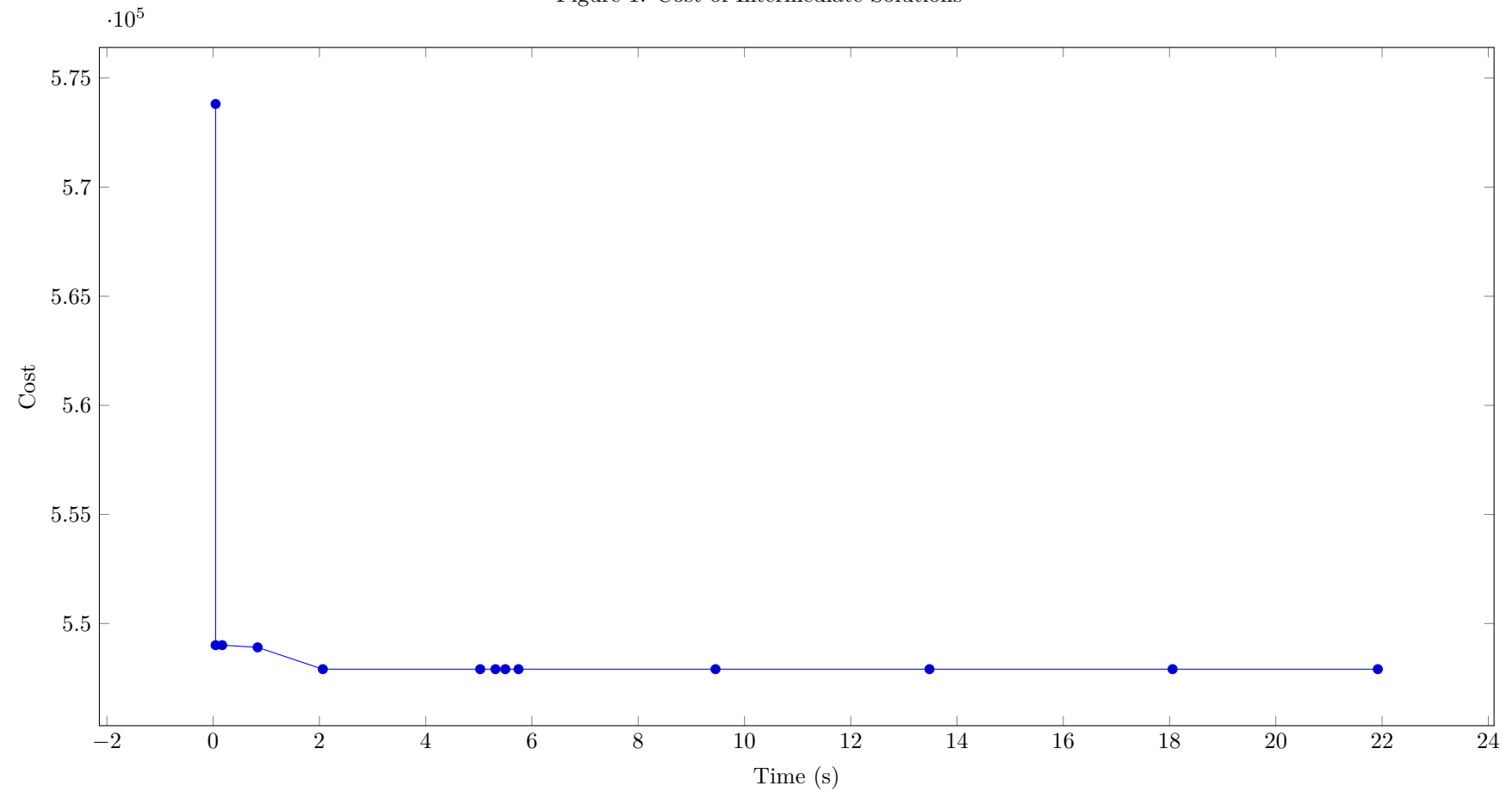Potential Disjunctive Demand (Resource Time) per Disjunctive Resource

3 Solution

Table 2: Relaxation of Constraints

Name	Label	Enforce Release Date	Enforce Due Date	Enforce Cumulative	Enforce WiP	Enforce Downtime	Objective Type	Weight Makespan	Weight Flowtime	Weight Lateness	Weight Earliness	Nr Threads	Timeout (s)
Sol2		true	false	true	true	true	Makespan	1	1	1	1	2	30
Sol3		true	true	true	true	true	Makespan	1	1	1	1	2	30
Sol4		true	true	true	true	true	Hybrid	100	1	1	1	2	30

Table 3: Solutions (Total 3)

Name	Solver Status	Objective Type	Objective Value	Bound	Gap	Makespan	Flowtime	Total Lateness	Max Lateness	Nr Late	Total Earliness	Max Earliness	Nr Early	Model Type	Time (s)
Sol2	Optimal	Makespan	3,925	3925.00	0.00	3,925	124,483	23,531	3,164	18	54,457	3,984	32	CPO	0.08
Sol3	Optimal	Makespan	3,925	3925.00	0.00	3,925	116,816	0	0	0	38,593	1,937	50	CPO	0.05
Sol4	Solution	Hybrid	547,909	435359.00	0.21	3,925	120,208	0	0	0	35,201	1,974	50	CPO	30.05

Figure 1: Cost of Intermediate Solutions

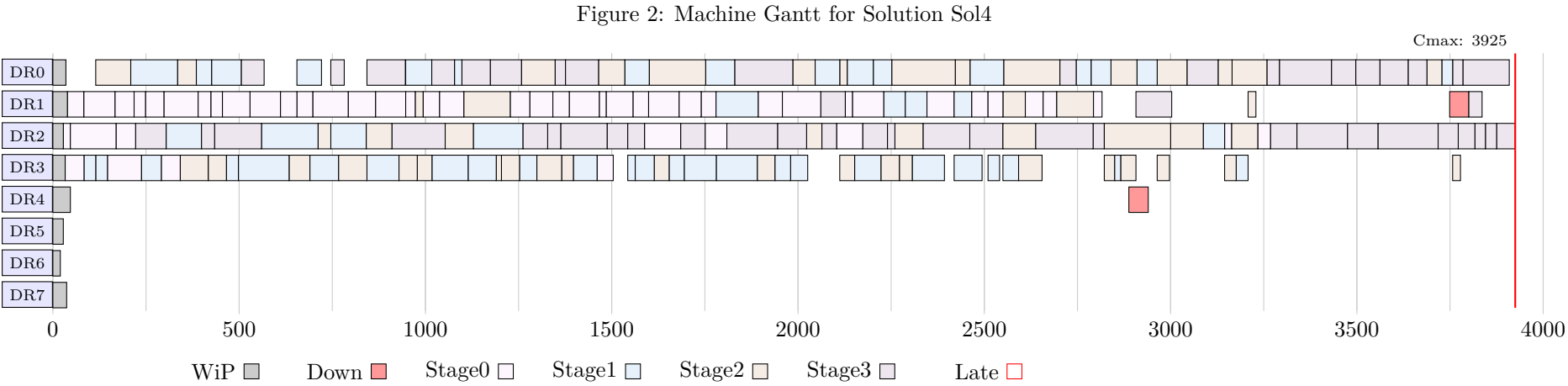Figure 2: Machine Gantt for Solution Sol4
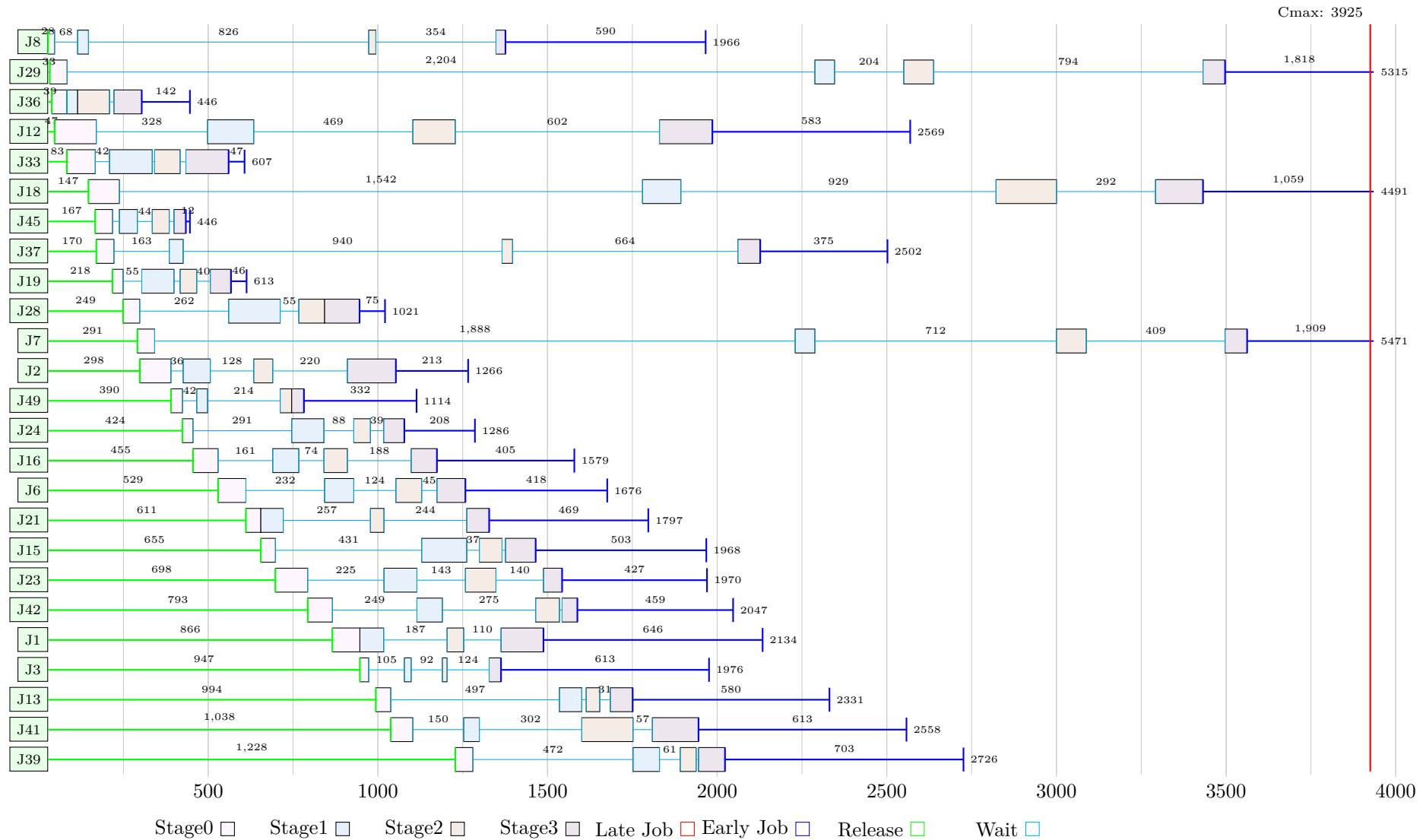
Figure 3: Job Gantt for Solution Sol4 (Part 1 of 2)

Figure 4: Job Gantt for Solution Sol4 (Part 2 of 2)

Figure 5: Resource Utilization for Solution Sol4

Figure 6: Cumulative Resource Use CR0

Figure 7: Earliness/Lateness Over Time