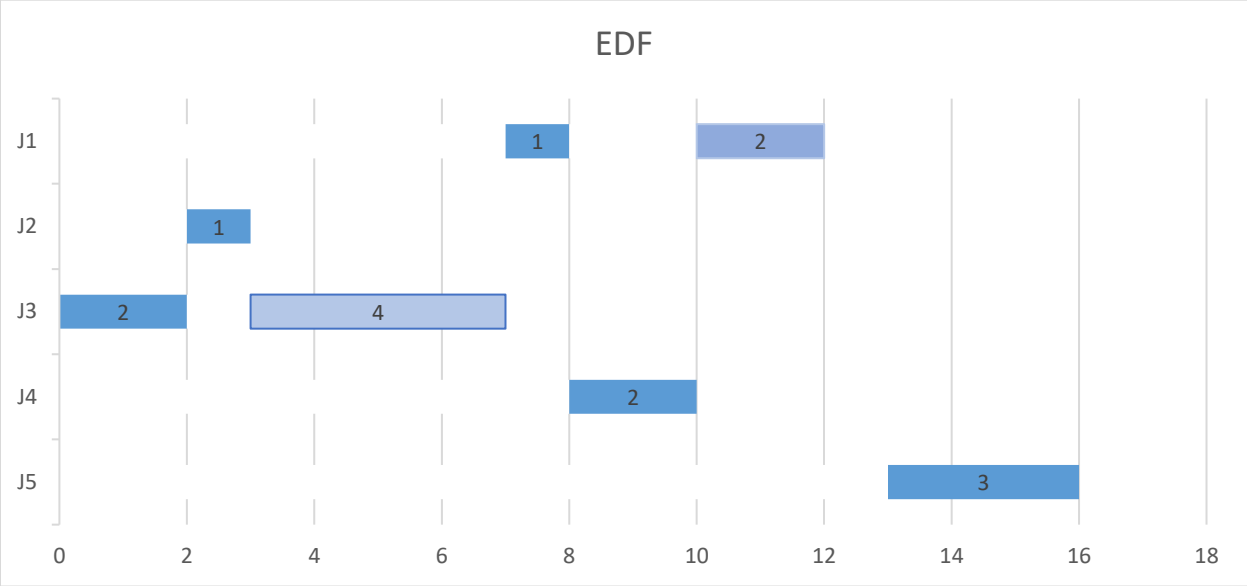
1)

a)



The schedule using EDF is feasible.

b) $c_1(3) = 3 \quad c_2(3) = 0 \quad c_3(3) = 4$
$c_4(3) = 2 \quad c_5(3) = 3 \quad c_x(3) = 2$

$$\forall i \sum_{k=1}^{i} c_k(t) \leq d_i - t \qquad (Tasks\ sorted\ by\ their\ deadlines)$$

$J_2: 0 \leq 7 - 3 = 4$

$J_3: 0 + 4 \leq 8 - 3 = 5$

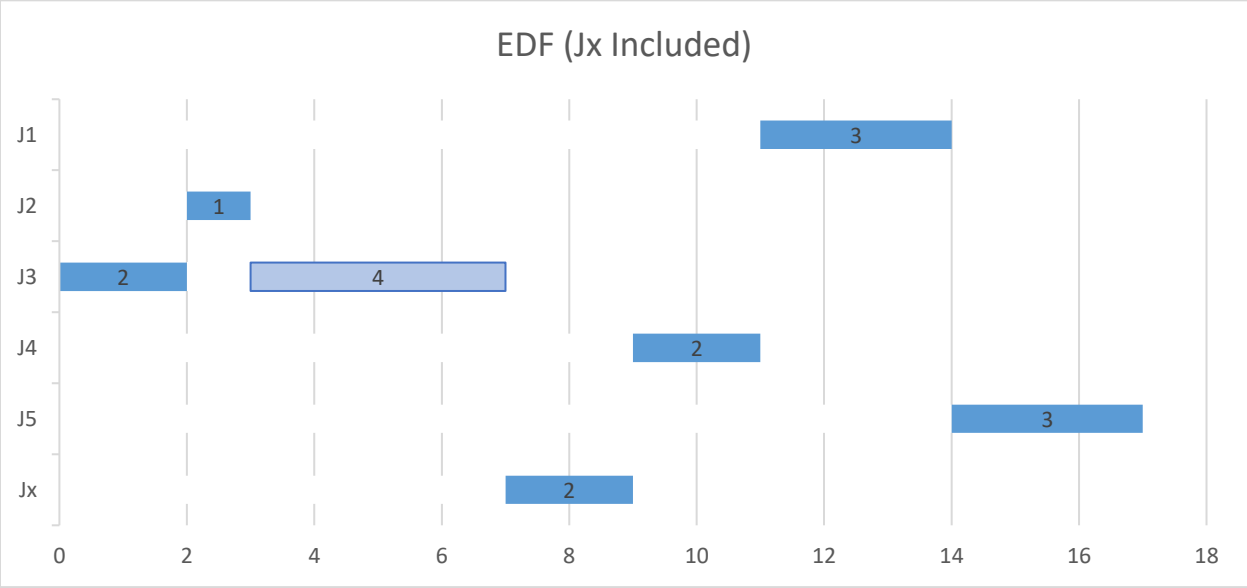
$J_x: 0 + 4 + 2 \leq 10 - 3 = 7$

$J_4: 0 + 4 + 2 + 2 \leq 11 - 3 = 8$

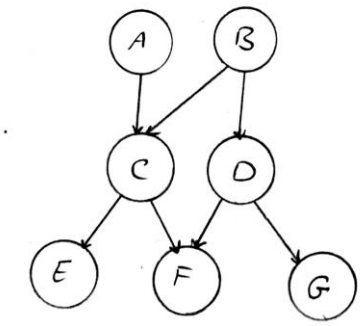
$J_1: 0 + 4 + 2 + 2 + 3 \leq 16 - 3 = 13$

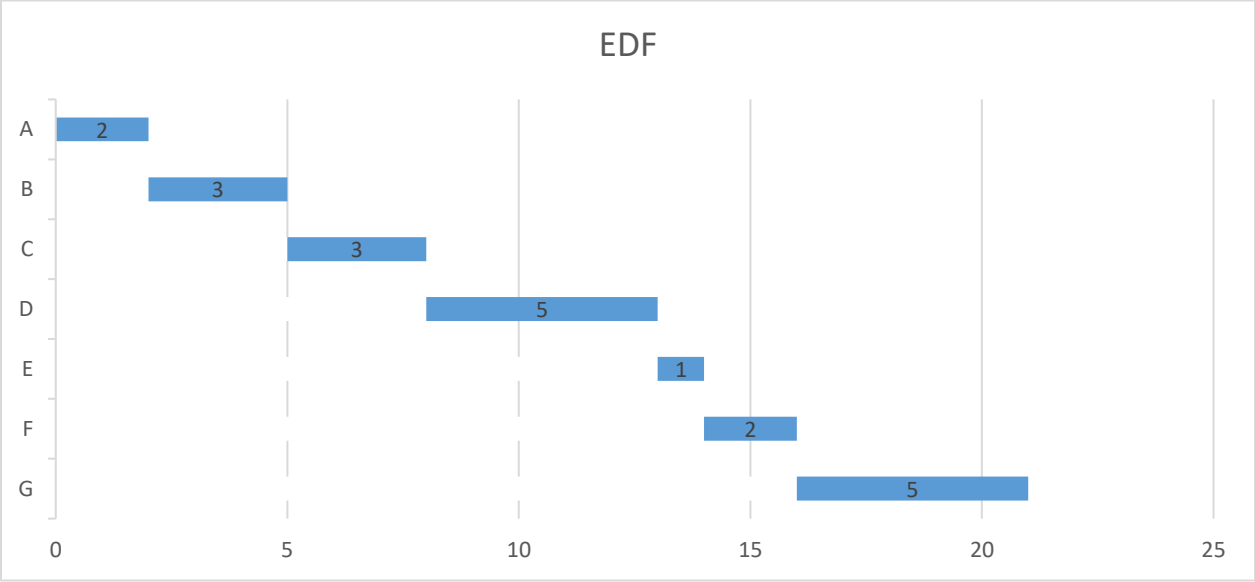
$J_5: 0 + 4 + 2 + 2 + 3 + 3 \leq 18 - 3 = 15$

The task set is schedulable.



2) Precedence graph:



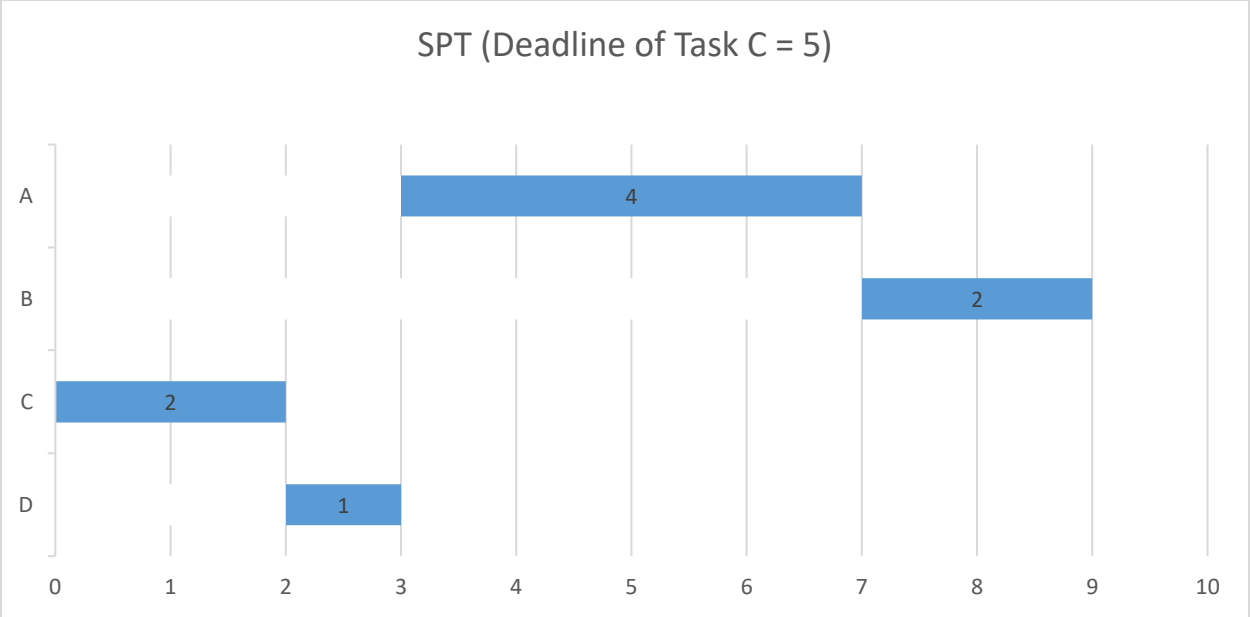


Modified times (according to EDF):

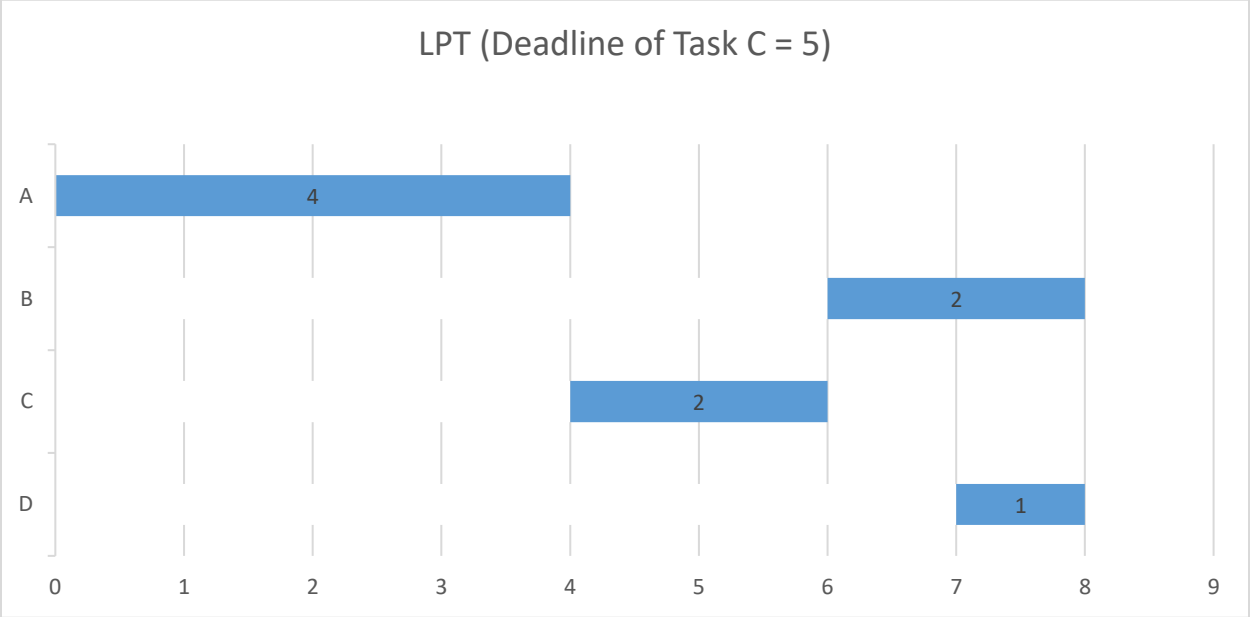
Task	Arrival Time	Relative Deadline
A	0	2
B	2	4
C	5	8
D	8	13
E	13	14
F	14	16
G	16	21

3)

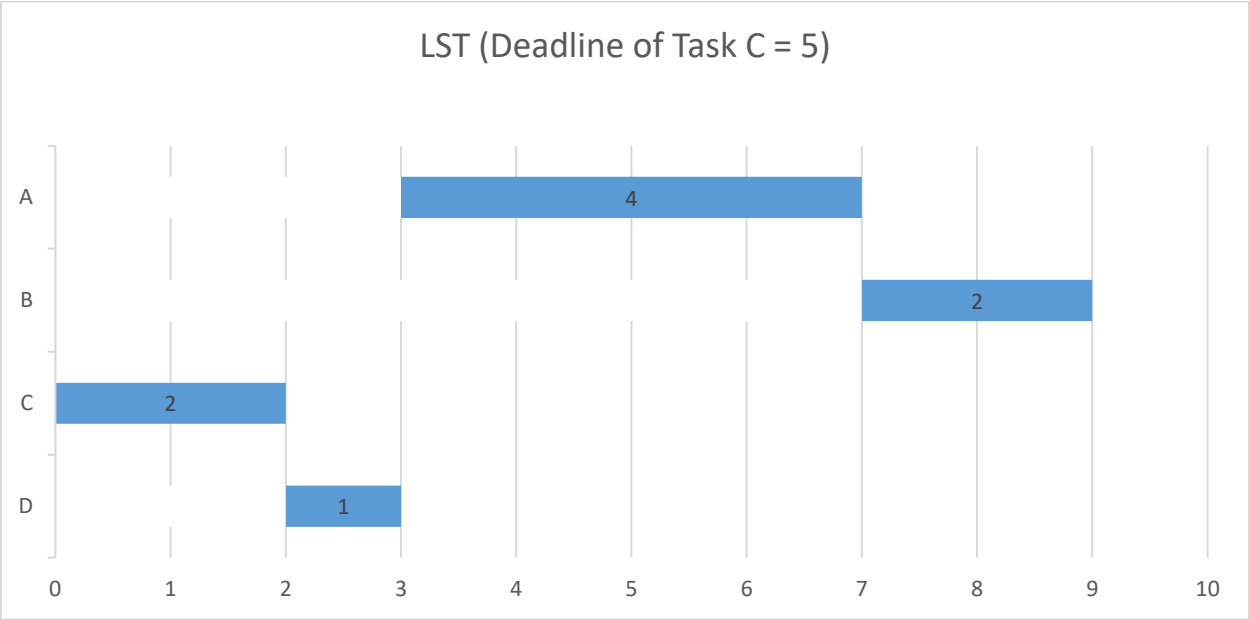
SPT: Shortest Processing Time



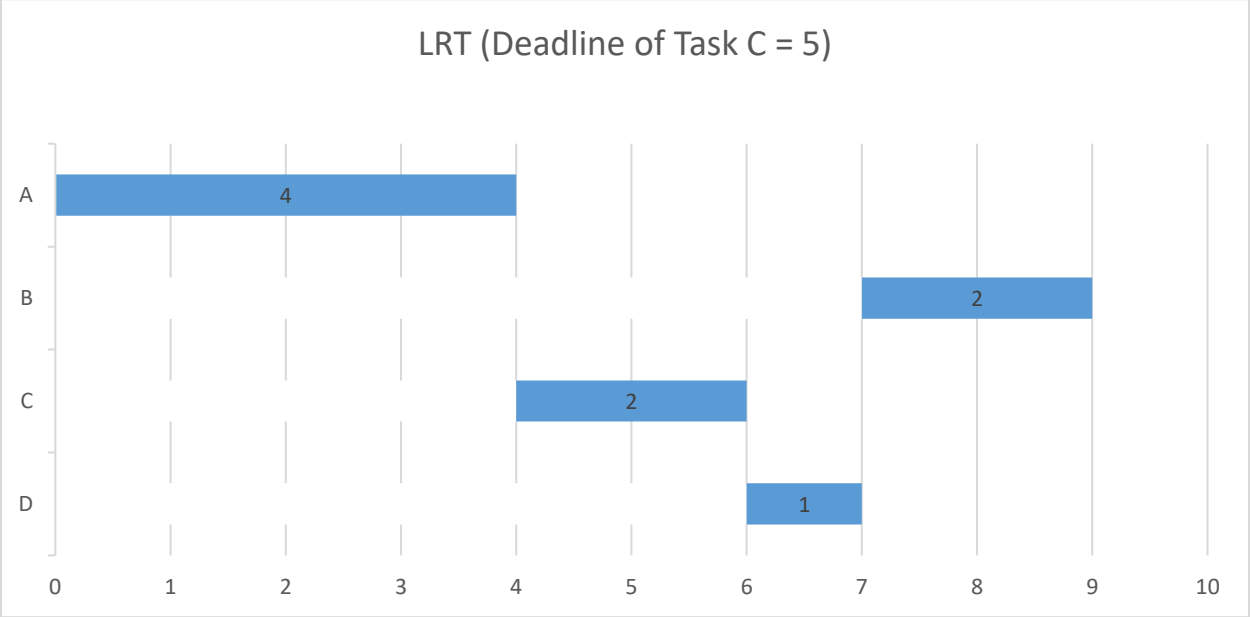
LPT: Longest Processing Time



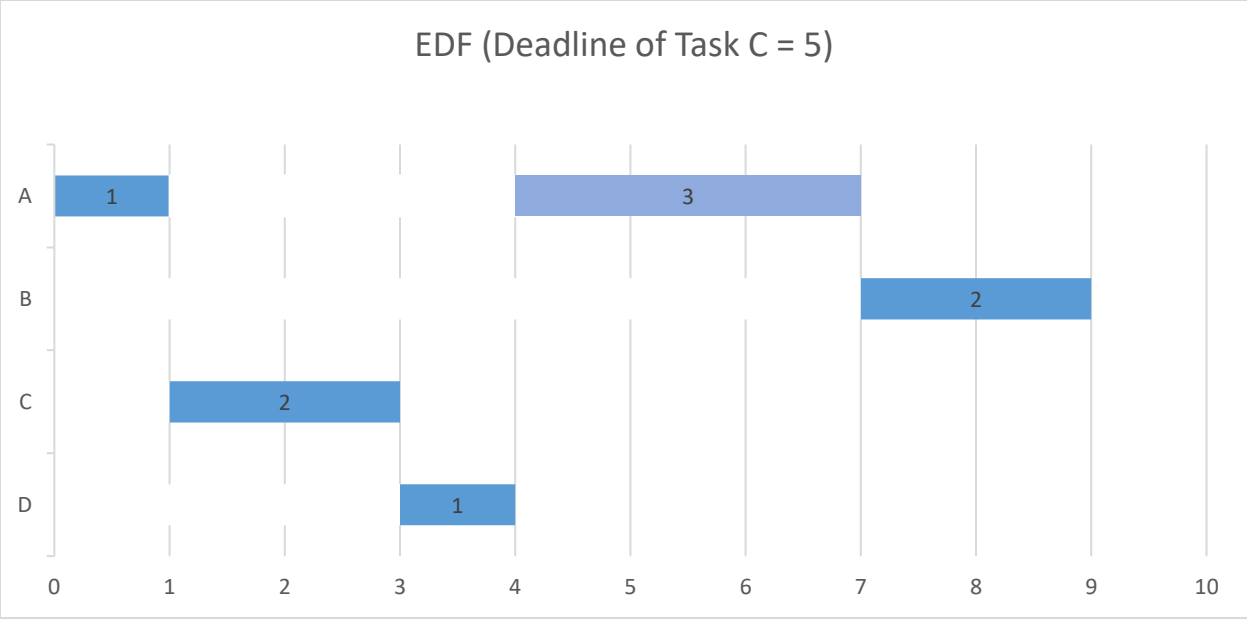
LST: Least Slack Time

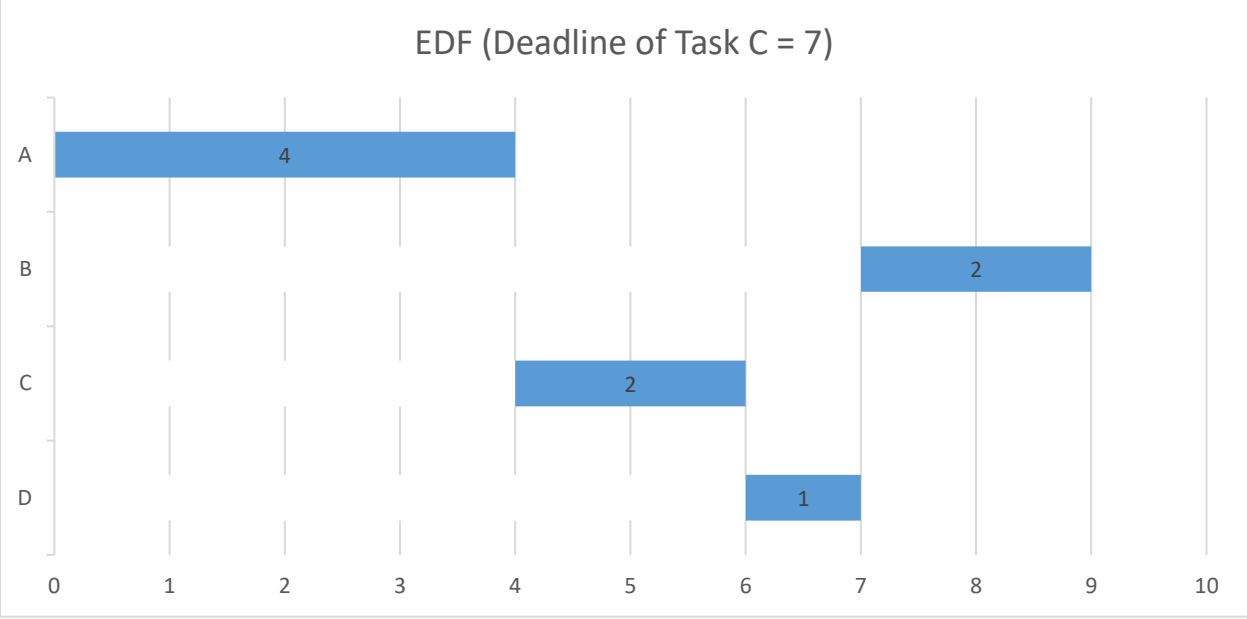


LRT: Latest Release Time

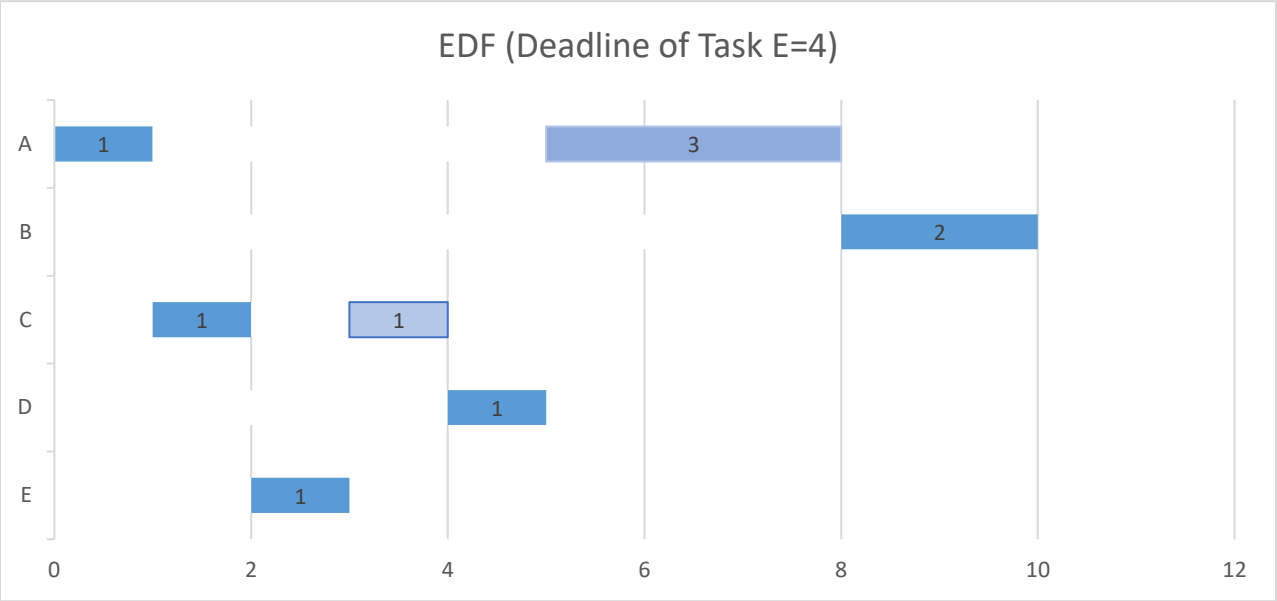


a)

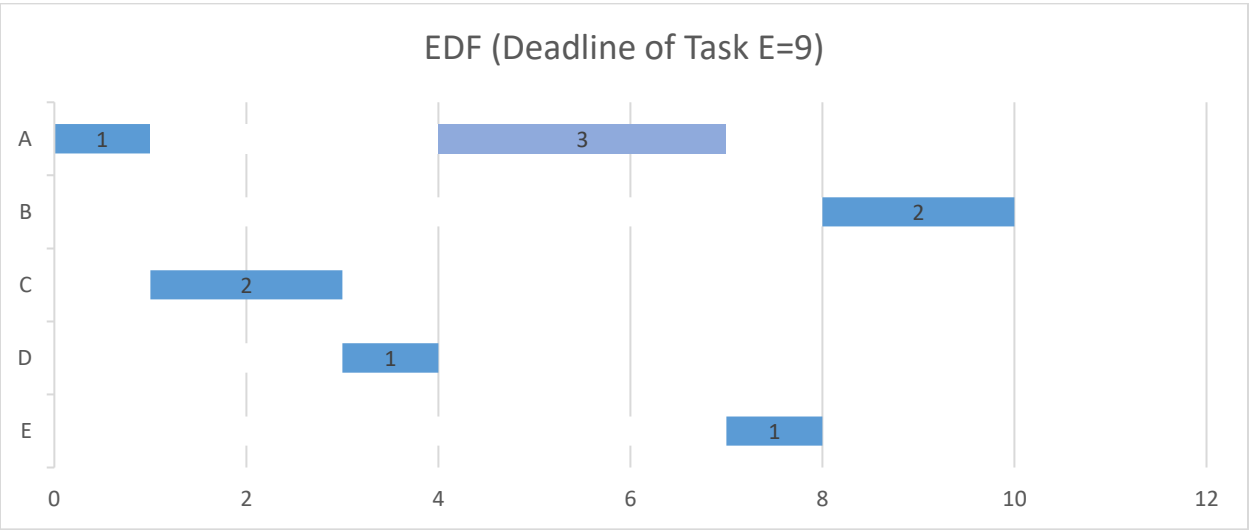

EDF (Deadline of Task C = 5)
A
B
C
D
1
3
2
2
1
0
1
2
3
4
5
6
7
8
9
10


EDF (Deadline of Task C = 7)
A
B
C
D
4
2
2
1
0
1
2
3
4
5
6
7
8
9
10

b)



Not schedulable if deadline of E=4 (A would miss the deadline by one unit).



Schedulable if deadline of E=9.

4)

* EDD minimizes the maximum lateness.