Tyler and Lucas

Deadlock Simulator Scenarios

Template:

Number of processes:

Available resources: []

Allocated:

[

[]

[]

[]

[]

[]

]

Max:

[

[]

[]

[]

[]

[]

]

Need:

[

[]

[]

[]

[]

[]

]

Correct output:

Legend: Deadlocked. Completed. Smallest to remove. Largest to remove.

1.

Number of processes: 5

Available resources: [2, 1, 0]

Allocated:

[

[1, 0, 1]

[2, 2, 0]

[3, 3, 2]

[0, 0, 1]

[5, 0, 3]

]

Max:

[

[3, 1, 4]

[2, 4, 1]

[3, 5, 4]

[2, 2, 2]

[5, 4, 3]

]

Need:

[

[2, 1, 3]

[0, 2, 1]

[0, 2, 2]

[2, 2, 1]

[0, 4, 0]

]

Correct output: Deadlock

2.

Number of processes: 5

Available resources: [0, 0, 1]

Allocated:

[

[3, 4, 2]

[1, 0, 0]

[2, 2, 0]

[0, 0, 3]

[1, 1, 2]

]

Max:

[

[4, 4, 3]

[1, 0, 1]

[3, 3, 2]

[4, 0, 3]

[2, 1, 2]

]

Need:

[

[1, 0, 1]

[0, 0, 1]

[1, 1, 2]

[4, 0, 0]

[1, 0, 0]

]

Correct output: No deadlock

3.

Number of processes: 7

Available resources: [1, 2, 0]

Allocated:

[

[1, 1, 4]

[0, 2, 0]

[3, 3, 3]

[1, 2, 2]

[2, 0, 0]

[3, 2, 1]

[0, 0, 5]

]

Max:

[

[2, 2, 6]

[3, 2, 1]

[3, 3, 5]

[1, 4, 4]

[2, 3, 2]

[4, 3, 1]

[1, 2, 5]

]

Need:

[

[1, 1, 2]

[3, 0, 1]

[0, 0, 2]

[0, 2, 2]

[0, 3, 2]

[1, 1, 0]

[1, 2, 0]

]

Correct output: No deadlock

4.

Number of processes: 3

Available resources: [2, 2, 2]

Allocated:

[

[4, 7, 2]

[6, 1, 3]

[0, 2, 5]

]

Max:

[

[12, 12, 12]

[6, 3, 4]

[7, 5, 7]

]

Need:

[

[8, 5, 10]

[0, 2, 1]

[7, 3, 2]

]

Correct output: No deadlock

5.

Number of processes: 7

Available resources: [1, 2, 1]

Allocated:

[

[1, 0, 0]

[1, 2, 0]

[3, 0, 2]

[2, 3, 1]

[0, 0, 0]

[1, 0, 0]

[2, 1, 6]

]

Max:

[

[1, 2, 1]

[11, 8, 0]

[9,1, 8]

[7, 8, 4]

[0, 0, 1]

[2, 0, 0]

[8, 8, 10]

]

Need:

[

[0, 2, 1]

[10, 6, 0]

[6, 1, 6]

[5, 5, 3]

[0, 0, 1]

[1, 0, 0]

[6, 7, 4]

]

Correct output: Deadlock

6.

Number of processes: 5

Available resources: [0, 0, 1]

Allocated:

[

[2, 2, 0]

[4, 5, 2]

[8, 7, 9] (largest to remove)

[1, 0, 0]

[1, 3, 4]

[2, 3, 3] (smallest to remove)

]

Max:

[

[2, 2, 1]

[9, 9, 5]

[14, 11, 15]

[2, 1, 0]

[3, 4, 4]

[7, 4, 3]

]

Need:

[

[0, 0, 1]

[5, 4, 3]

[6, 4, 6]

[1, 1, 0]

[2, 1, 0]

[5, 1, 0]

]

Correct output: