

SYSC4001_A3_P2 - Part C Report:

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Through tests with 2 TA's, 3 TA's, and 6 TA's, there were no observed deadlocks/livelocks in any of the outputs.

Below is the output for a system with 3 TA's, showing an example output that would clearly indicate any deadlocks/livelocks if they were to occur.

TA Exam Marking System

Number of TAs: 3

```
Found 20 exam files in Input directory
Rubric loaded into shared memory
Accessing exam 2
Semaphores initialized for synchronization
```

```
TA 1 started
TA 1 accessing rubric
TA 2 started
TA 2 accessing rubric
TA 3 started
TA 3 accessing rubric
TA 1 correcting rubric exercise 3 ('C' -> 'D')
TA 1 marking question 1 of exam 2
TA 2 correcting rubric exercise 1 ('A' -> 'B')
TA 1 finished marking question 1 of exam 2
TA 1 marking question 2 of exam 2
TA 1 finished marking question 2 of exam 2
TA 1 marking question 3 of exam 2
TA 1 finished marking question 3 of exam 2
TA 1 marking question 4 of exam 2
TA 2 correcting rubric exercise 5 ('E' -> 'F')
TA 2 marking question 5 of exam 2
TA 3 correcting rubric exercise 1 ('B' -> 'C')
```

TA 3 correcting rubric exercise 2 ('B' -> 'C')

TA 1 finished marking question 4 of exam 2

TA 3 correcting rubric exercise 3 ('D' -> 'E')

TA 2 finished marking question 5 of exam 2

Accessing exam 67

TA 2 accessing rubric

TA 1 marking question 1 of exam 67

TA 1 finished marking question 1 of exam 67

TA 1 marking question 2 of exam 67

TA 3 correcting rubric exercise 5 ('F' -> 'G')

TA 3 marking question 3 of exam 67

TA 2 correcting rubric exercise 1 ('C' -> 'D')

TA 1 finished marking question 2 of exam 67

TA 1 marking question 4 of exam 67

TA 3 finished marking question 3 of exam 67

TA 3 marking question 5 of exam 67

TA 1 finished marking question 4 of exam 67

TA 2 correcting rubric exercise 5 ('G' -> 'H')

TA 3 finished marking question 5 of exam 67

Accessing exam 1234

TA 3 accessing rubric

TA 2 marking question 1 of exam 1234

TA 1 marking question 2 of exam 1234

TA 1 finished marking question 2 of exam 1234

TA 1 marking question 3 of exam 1234

TA 2 finished marking question 1 of exam 1234

TA 2 marking question 4 of exam 1234

TA 3 correcting rubric exercise 3 ('E' -> 'F')

TA 2 finished marking question 4 of exam 1234

TA 2 marking question 5 of exam 1234

TA 1 finished marking question 3 of exam 1234

TA 3 correcting rubric exercise 5 ('H' -> 'T')

TA 2 finished marking question 5 of exam 1234

Accessing exam 1332

TA 2 accessing rubric

TA 3 marking question 1 of exam 1332

TA 1 marking question 2 of exam 1332

TA 2 correcting rubric exercise 1 ('D' -> 'E')

TA 3 finished marking question 1 of exam 1332

TA 3 marking question 3 of exam 1332

TA 1 finished marking question 2 of exam 1332

TA 1 marking question 4 of exam 1332

TA 1 finished marking question 4 of exam 1332

TA 1 marking question 5 of exam 1332

TA 3 finished marking question 3 of exam 1332
TA 1 finished marking question 5 of exam 1332
Accessing exam 2003
TA 1 accessing rubric
TA 3 marking question 1 of exam 2003
TA 2 marking question 2 of exam 2003
TA 3 finished marking question 1 of exam 2003
TA 3 marking question 3 of exam 2003
TA 2 finished marking question 2 of exam 2003
TA 2 marking question 4 of exam 2003
TA 1 correcting rubric exercise 3 ('F' -> 'G')
TA 3 finished marking question 3 of exam 2003
TA 3 marking question 5 of exam 2003
TA 2 finished marking question 4 of exam 2003
TA 1 correcting rubric exercise 5 ('I' -> 'J')
TA 3 finished marking question 5 of exam 2003
Accessing exam 2005
TA 3 accessing rubric
TA 2 marking question 1 of exam 2005
TA 1 marking question 2 of exam 2005
TA 1 finished marking question 2 of exam 2005
TA 1 marking question 3 of exam 2005
TA 3 correcting rubric exercise 2 ('C' -> 'D')
TA 2 finished marking question 1 of exam 2005
TA 2 marking question 4 of exam 2005
TA 1 finished marking question 3 of exam 2005
TA 1 marking question 5 of exam 2005
TA 3 correcting rubric exercise 4 ('D' -> 'E')
TA 2 finished marking question 4 of exam 2005
TA 1 finished marking question 5 of exam 2005
Accessing exam 2232
TA 1 accessing rubric
TA 2 marking question 1 of exam 2232
TA 1 correcting rubric exercise 1 ('E' -> 'F')
TA 2 finished marking question 1 of exam 2232
TA 2 marking question 2 of exam 2232
TA 2 finished marking question 2 of exam 2232
TA 2 marking question 3 of exam 2232
TA 1 marking question 4 of exam 2232
TA 3 correcting rubric exercise 5 ('J' -> 'K')
TA 3 marking question 5 of exam 2232
TA 2 finished marking question 3 of exam 2232
TA 1 finished marking question 4 of exam 2232
TA 3 finished marking question 5 of exam 2232

Accessing exam 2555

TA 3 accessing rubric

TA 2 marking question 1 of exam 2555

TA 1 marking question 2 of exam 2555

TA 2 finished marking question 1 of exam 2555

TA 2 marking question 3 of exam 2555

TA 1 finished marking question 2 of exam 2555

TA 1 marking question 4 of exam 2555

TA 3 correcting rubric exercise 3 ('G' -> 'H')

TA 2 finished marking question 3 of exam 2555

TA 2 marking question 5 of exam 2555

TA 1 finished marking question 4 of exam 2555

TA 2 finished marking question 5 of exam 2555

Accessing exam 2989

TA 2 accessing rubric

TA 1 marking question 1 of exam 2989

TA 3 marking question 2 of exam 2989

TA 1 finished marking question 1 of exam 2989

TA 1 marking question 3 of exam 2989

TA 3 finished marking question 2 of exam 2989

TA 3 marking question 4 of exam 2989

TA 1 finished marking question 3 of exam 2989

TA 1 marking question 5 of exam 2989

TA 3 finished marking question 4 of exam 2989

TA 2 correcting rubric exercise 4 ('E' -> 'F')

TA 2 correcting rubric exercise 5 ('K' -> 'L')

TA 1 finished marking question 5 of exam 2989

Accessing exam 3000

TA 1 accessing rubric

TA 2 marking question 1 of exam 3000

TA 3 marking question 2 of exam 3000

TA 3 finished marking question 2 of exam 3000

TA 3 marking question 3 of exam 3000

TA 2 finished marking question 1 of exam 3000

TA 2 marking question 4 of exam 3000

TA 1 correcting rubric exercise 4 ('F' -> 'G')

TA 3 finished marking question 3 of exam 3000

TA 3 marking question 5 of exam 3000

TA 2 finished marking question 4 of exam 3000

TA 3 finished marking question 5 of exam 3000

Accessing exam 3001

TA 3 accessing rubric

TA 1 marking question 1 of exam 3001

TA 2 marking question 2 of exam 3001

TA 2 finished marking question 2 of exam 3001
TA 2 marking question 3 of exam 3001
TA 3 correcting rubric exercise 2 ('D' -> 'E')
TA 1 finished marking question 1 of exam 3001
TA 1 marking question 4 of exam 3001
TA 3 correcting rubric exercise 3 ('H' -> 'T')
TA 2 finished marking question 3 of exam 3001
TA 2 marking question 5 of exam 3001
TA 1 finished marking question 4 of exam 3001
TA 2 finished marking question 5 of exam 3001
Accessing exam 3500
TA 2 accessing rubric
TA 3 marking question 1 of exam 3500
TA 1 marking question 2 of exam 3500
TA 1 finished marking question 2 of exam 3500
TA 1 marking question 3 of exam 3500
TA 3 finished marking question 1 of exam 3500
TA 3 marking question 4 of exam 3500
TA 1 finished marking question 3 of exam 3500
TA 1 marking question 5 of exam 3500
TA 3 finished marking question 4 of exam 3500
TA 1 finished marking question 5 of exam 3500
Accessing exam 3699
TA 1 accessing rubric
TA 2 marking question 1 of exam 3699
TA 3 marking question 2 of exam 3699
TA 3 finished marking question 2 of exam 3699
TA 3 marking question 3 of exam 3699
TA 2 finished marking question 1 of exam 3699
TA 2 marking question 4 of exam 3699
TA 1 correcting rubric exercise 3 ('I' -> 'J')
TA 3 finished marking question 3 of exam 3699
TA 3 marking question 5 of exam 3699
TA 2 finished marking question 4 of exam 3699
TA 3 finished marking question 5 of exam 3699
Accessing exam 4001
TA 3 accessing rubric
TA 2 marking question 1 of exam 4001
TA 1 marking question 2 of exam 4001
TA 3 correcting rubric exercise 1 ('F' -> 'G')
TA 1 finished marking question 2 of exam 4001
TA 1 marking question 3 of exam 4001
TA 2 finished marking question 1 of exam 4001
TA 2 marking question 4 of exam 4001

TA 2 finished marking question 4 of exam 4001
TA 2 marking question 5 of exam 4001
TA 1 finished marking question 3 of exam 4001
TA 3 correcting rubric exercise 4 ('G' -> 'H')
TA 2 finished marking question 5 of exam 4001
Accessing exam 5000
TA 2 accessing rubric
TA 1 marking question 1 of exam 5000
TA 3 marking question 2 of exam 5000
TA 1 finished marking question 1 of exam 5000
TA 1 marking question 3 of exam 5000
TA 3 finished marking question 2 of exam 5000
TA 3 marking question 4 of exam 5000
TA 3 finished marking question 4 of exam 5000
TA 3 marking question 5 of exam 5000
TA 1 finished marking question 3 of exam 5000
TA 3 finished marking question 5 of exam 5000
Accessing exam 6000
TA 3 accessing rubric
TA 1 marking question 1 of exam 6000
TA 2 marking question 2 of exam 6000
TA 3 correcting rubric exercise 1 ('G' -> 'H')
TA 3 correcting rubric exercise 2 ('E' -> 'F')
TA 2 finished marking question 2 of exam 6000
TA 2 marking question 3 of exam 6000
TA 1 finished marking question 1 of exam 6000
TA 1 marking question 4 of exam 6000
TA 3 correcting rubric exercise 4 ('H' -> 'I')
TA 2 finished marking question 3 of exam 6000
TA 2 marking question 5 of exam 6000
TA 3 correcting rubric exercise 5 ('L' -> 'M')
TA 1 finished marking question 4 of exam 6000
TA 2 finished marking question 5 of exam 6000
Accessing exam 7000
TA 2 accessing rubric
Accessing exam 8000
TA 3 accessing rubric
TA 1 marking question 1 of exam 8000
TA 1 finished marking question 1 of exam 8000
TA 1 marking question 2 of exam 8000
TA 3 correcting rubric exercise 3 ('J' -> 'K')
TA 2 correcting rubric exercise 2 ('F' -> 'G')
TA 1 finished marking question 2 of exam 8000
TA 1 marking question 3 of exam 8000

TA 3 marking question 4 of exam 8000
TA 2 correcting rubric exercise 4 ('I' -> 'J')
TA 2 marking question 5 of exam 8000
TA 3 finished marking question 4 of exam 8000
TA 1 finished marking question 3 of exam 8000
TA 2 finished marking question 5 of exam 8000
Accessing exam 9000
TA 2 accessing rubric
TA 1 marking question 1 of exam 9000
TA 3 marking question 2 of exam 9000
TA 3 finished marking question 2 of exam 9000
TA 3 marking question 3 of exam 9000
TA 1 finished marking question 1 of exam 9000
TA 1 marking question 4 of exam 9000
TA 3 finished marking question 3 of exam 9000
TA 3 marking question 5 of exam 9000
TA 1 finished marking question 4 of exam 9000
TA 2 correcting rubric exercise 4 ('J' -> 'K')
TA 3 finished marking question 5 of exam 9000
Accessing exam 9999
Termination exam (9999) reached. Stopping all TAs.
TA 3 finished
TA 1 finished
TA 2 finished

All TAs have finished marking