10_Transaction_Exercises

Due Mar 17 at 9pm **Points** 4 **Questions** 4 **Time Limit** None **Allowed Attempts** 3

Attempt History

	Attempt	Time	Score
KEPT	Attempt 3	less than 1 minute	3 out of 4
LATEST	Attempt 3	less than 1 minute	3 out of 4
	Attempt 2	less than 1 minute	1.5 out of 4
	Attempt 1	29 minutes	1 out of 4

Score for this attempt: **3** out of 4
Submitted Mar 18 at 11:37am
This attempt took less than 1 minute.

Question 1 — 1 / 1 pts

How many serial schedules are there for 5 transactions?

Correct! 120

Correct Answers 120

5! = 120 possible schedules

Question 2

1 / 1 pts

How many serial schedules is the following schedule conflict equivalent with? If the schedule is not conflict-serializable, answer 0.

```
r1(A);r3(B);r2(C);w1(A);w3(B);c3;c1;r2(B);w2(B);w2(C);c2;
```

Correct! 3

Correct Answers 3

The schedule is conflict serializable. Of the 6 possible serial schedules, 3 can be achieved from this conflict-serializable schedule: 1,3,2 ; 3,1,2 ; 3,2,1. By drawing the precedence graph, we see that there is only one edge from 3 to 2 as the w3(B) conflicts with the r2(B) and must precede it in any serial schedule. That is the only conflict. First, note that T1 conflicts with neither T1 or T3, so its operations may be moved anywhere in the schedule. T3 must always be before T2, so T1 can be the first transaction in one serial schedule followed by T3 and T2. T1 also can be between T3 and T2 or T1 could follow the others.

Question 3

0.5 / 1 pts

Given the following schedule:

```
r1(A);w2(A);r1(C);c1;r2(B);w2(B);c2;r3(B);r3(A);w3(B);w3(C);c3;r4(A);r4(B);r4(C);w4(D);c4
```

Is it conflict serializable (yes/no)? yes

How many edges in the graph? 6 Note: If there is an edge from T2 to T3 with label A and an edge between T2 and T3 with label B, count that as two separate edges.

Answer 1:

Correct! yes

Answer 2:

You Answered 6

Correct Answer 8

Question 4

0.5 / 1 pts

Given the following schedule:

```
w4(D);r1(A);w2(A);r4(A);r1(C);c1;r2(B);w2(B);c2;r4(B);r3(B);r3(A);w3(B);w3(C);c3;r4(C);c4
```

Is it conflict serializable (yes/no)? no

How many edges in the graph? 3 Note: If there is an edge from T2 to T3 with label A and an edge between T2 and T3 with label B, count that as two separate edges.

Answer 1:

Correct! no

Answer 2:

You Answered 3

Correct Answer 8

Quiz Score: **3** out of 4