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# Gradiance Online Accelerated Learning

## Homework Assignment Submitted Successfully.

**You obtained a score of 50.0 points, out of a possible 100.0 points.**
**You have answered 2 questions correctly.**
**You have answered 2 questions incorrectly.**
**For each correct answer, you received 25.0 points**
**and for each incorrect answer, you lost 0.0 points.**

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| **Submission number:** | 520285 |
| **Submission certificate:** | GA878363 |
| **Submission time:** | 2020-04-02 15:21:17 PST (GMT - 8:00) |

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| **Number of questions:** | 4 |
| **Positive points per question:** | 25.0 |
| **Negative points per question:** | 0.0 |
| **Your score:** | 50 |

**1.** Consider the following transactions:
R: [X := X + 15; Y := Y - 10]
S: [X := X - 5; Y := X + 5]
T: [X := X * 2; Y := Y * 3]
Assuming initial values of X = 10 and Y = 20, which of the following is a possible state of the database resulting from a serializable execution of R, S and T?

a) X = 45; Y = 20
b) X = 45; Y = 50
c) X = 45; Y = 10
d) X = 40; Y = 35

Answer submitted: **b)**

You have answered the question correctly.

**2.** The relation R(x) consists of a set of integers --- that is, one-component tuples with an integer component.
Alice's transaction is a query:
SELECT SUM(x)
FROM R;
COMMIT;

Betty's transaction is a sequence of inserts:
INSERT INTO R VALUES(10);
INSERT INTO R VALUES(50);
INSERT INTO R VALUES(70);
COMMIT;

Carol's transaction is a sequence of deletes:
DELETE FROM R WHERE x=70;
DELETE FROM R WHERE x=50;
COMMIT;

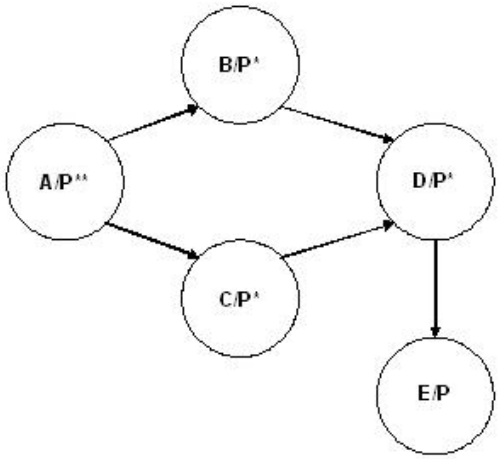
Before any of these transactions execute, the sum of the integers in R is 5000, and none of these integers are 10, 50, or 70. If Alice's, Betty's, and Carol's transactions run at about the same time, and each runs under isolation level READ COMMITTED, which of these sums could be produced by Alice's transaction?

a) 5080
b) 5050
c) 5060
d) 5070

Answer submitted: **c)**

Your answer is incorrect.

**3.**




Above is a grant diagram involving users A through D and a single privilege P. Suppose A executes

REVOKE P FROM C CASCADE

Compute the resulting grant diagram. Then, tell which of the following is a consequence of the revocation?

a) D no longer has privilege P
b) D has privilege P
c) A no longer has privilege P
d) D retains privilege P, but without the grant option

Answer submitted: **b)**

You have answered the question correctly.

**4.** In order to execute the following SQL statement:

UPDATE S
SET c = 'New York'

```
WHERE a IN (SELECT a FROM R) AND
EXISTS (SELECT b FROM T WHERE T.a > S.a);
```

Which of the following privileges is not useful in allowing the above statement to be executed?

To be precise, say a privilege P is useful if there is some set of other privileges such that the statement cannot be executed with just those privileges, but if we add privilege P, then the statement can be executed.

a) SELECT on T(a)
b) INSERT on S(a)
c) SELECT on T
d) UPDATE on S(c)

Answer submitted: **a)**

Your answer is incorrect.