edX

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Q1

1/1 point (ungraded)

Three of the following four expressions finds the names of all students who did not apply to major in CS or EE. Which one finds something different? (Hint: You should not assume student names are unique.)

- ○ $\pi_{sName}\left(Student \bowtie \left(\pi_{sID}\,Student - \left(\pi_{sID}\left(\sigma_{major=`CS` \, Ap}\right.\right.\right.\right.$

- ○ $\pi_{sName}\left(Student \bowtie \left(\pi_{sID}\,Student - \pi_{sID}\left(\sigma_{major=`CS`\lor ma}\right.\right.\right.$

- ○ $\pi_{sName}\left(\pi_{sID,sName}\,Student - \pi_{sID,sName}\left(Student \bowtie \pi_{sII}\right.\right.$

- ⦿ $\pi_{sName}\,Student - \pi_{sName}\left(Student \bowtie \pi_{sID}\left(\sigma_{major=`CS`\lor m}\right.\right.$

✔

Explanation

If there are two students named Susan, one who did not apply to CS or EE, and one who did, then 'Susan' will correctly be included in the result of the first three expressions, but will incorrectly be omitted from the result of the last one.

Submit	You have used 1 of 4 attempts

ℹ Answers are displayed within the problem

Q2

1/1 point (ungraded)

Which of the following English sentences describes the result of this expression:

$\pi_{cName}\,College - \pi_{cName}\left(Apply \bowtie \left(\pi_{sID}\left(\sigma_{GPA>3.5}\,Student\right)\cap\right.\right.$

- ○ All colleges with no GPA>3.5 applicants who applied for a CS major at that college

- ⦿ All colleges with no GPA>3.5 applicants who applied for a CS major at any college

- ○ All colleges where all applicants either have GPA>3.5 or applied for a CS major at that college

- ○ All colleges where no applicants have GPA>3.5 or no applicants applied for a CS major at that college

✔

Explanation

The intersection finds the IDs of all students who have GPA>3.5 and applied for a CS major at any college. The natural-join with Apply finds all colleges those students applied for. The minus finds

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