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Q4

1/1 point (ungraded)

Consider the relation $\text{StudentInfo}(\text{sID}, \text{dorm}, \text{courseNum})$. Students typically live in several dorms and take many courses during college. Suppose the data does not capture which dorm(s) a student lived in when taking a specific course, i.e., all dorm-course combinations are recorded for each student. What are all of the multivalued dependencies for relation StudentInfo ?

☐ $\text{sID} \twoheadrightarrow \text{dorm}$

☐ $\text{sID} \twoheadrightarrow \text{courseNum}$

☒ $\text{sID} \twoheadrightarrow \text{dorm}, \text{sID} \twoheadrightarrow \text{courseNum}$

☐ $\text{sID} \twoheadrightarrow \text{dorm}, \text{sID} \twoheadrightarrow \text{courseNum}, \text{dorm} \twoheadrightarrow \text{courseNum}$



Explanation

Answer 1 and Answer 2 both omit the implied symmetric multivalued dependency. The third multivalued dependency in Answer 4 says all students in each dorm take the same set of courses.

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You have used 1 of 4 attempts

i Answers are displayed within the problem

Q5

1/1 point (ungraded)

Consider the relation $\text{StudentInfo}(\text{sID}, \text{dorm}, \text{courseNum})$ with multivalued dependencies $\text{sID} \twoheadrightarrow \text{dorm}$ and $\text{sID} \twoheadrightarrow \text{courseNum}$. Is StudentInfo in Fourth Normal Form?

☐ Yes

☒ No



Explanation

4NF requires the left-hand side of multivalued dependencies to be a key for the relation. sID is not a key for StudentInfo .

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