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Assignment 6

Due	Apr 17 by 11:59pm	Points	100	Submitting	a file upload	File Types	pdf
Available	Apr 10 at 12am - Apr 19 at 11:59pm	10 days					

This assignment was locked Apr 19 at 11:59pm.

CSC134 - Spring 2019 - Applebaum

Assignment 6

Total: 100 points

Submission must be typed and submitted as a PDF file to Canvas

1. (20 pts) Given $F = \{ a \rightarrow b, b \rightarrow c, c \rightarrow \{d, e\} \}$. What is $\{b\}^+$ (i.e. the closure of b)? Show your steps to achieve the answer.
2. (20 pts) Given $F = \{ a \rightarrow b, c \rightarrow d, b \rightarrow \{d, e\}, \{a, b\} \rightarrow c \}$. What is $\{a\}^+$ (i.e. the closure of a)? Show your steps to achieve the answer.
3. (30 pts) Given $R(a, b, c, d, e)$ with two keys, $\{a, b\}$ and c , and given the following set of functional dependencies $F = \{ \{a, b\} \rightarrow \{c, d, e\}, c \rightarrow \{a, b, d\} \}$.

1. Is R in 1NF? Justify your answer.

2. Is R in 2NF? Justify your answer.

3. Is R in 3NF? Justify your answer.
4. (30 pts) Given $R(a, b, c, d, e)$ with a key $\{a, b\}$ and given the following set of functional dependencies $F = \{ a \rightarrow b, \{a, b\} \rightarrow c, b \rightarrow \{d, e\} \}$.

1. Is R in 1NF? Justify your answer.

2. Is R in 2NF? Justify your answer.

3. Is R in 3NF? Justify your answer.

Submission

✓ Submitted!

Apr 17 at 9:18pm

[Submission Details](#)

[Download csc134_A6.pdf](#)

Grade: 98 (100 pts possible)

Graded Anonymously: yes

Comments:
Question 3 • part 2: you have the right answer, but your reason is incomplete. e also needs to be functionally dependent on c, which it is transitively. -2
Kathy Applebaum, Apr 19 at 7:24pm