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CS 561-C – Quiz #2

December 2, 2024 (Monday)

NAME _____

SIGNATURE: _____

Introduction:

This quiz is worth 100 points, and you have 15 minutes to finish the quiz. This quiz is closed book and closed notes.

Please write your name and CWID on the space provided above. The space provided below should be sufficient for the answers. If you need more space, use the back side and indicate clearly which question(s) you are answering. Write your answers "clearly."

Questions:1) (30 pts) Based on what we discussed in class, how would you describe a "good" table?

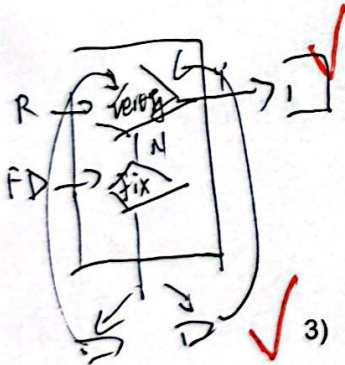
- a) (10 pts.) about 1 thing
- b) (10 pts.) All non-key column is based on key column (No non-key column based on non-key column)
- c) (10 pts.) 3NF / ~~BCNF~~ BCNF

2) (40 pts) Regarding the "design process" of a good table:a) What are the 2 input parameters for the process?

- i) (10 pts.) R ~~schema~~ (relation)
- ii) (10 pts.) FD (functional dependence)

b) Briefly describe the 2 main steps in the process

- i) (10 pts.) verify if a "good table", if yes, then out put.
- ii) (10 pts.) fix it. decompose it into (bad table) separate tables. and then verify its again.



3) (30 pts) Sometimes, combining 2 tables into 1 is ok.

a) (10 pts) How could that be (i.e., under what condition, would such an action be considered ok? Remember the example in one of the slides).

~~"join" along the key column not lossy information~~
they share key

b) (20 pts) How should the 2 tables be combined (Again, remember the example in one of the slides)?

~~along the same key column~~
natural join. along the shared key
~~they share key~~