

Name: _____

QUIZ 16 - ICS 321 Fall 2017

Imagine the relvar on the right that holds the recommended closest place by cuisine depending on what campus you are on. A place can only be one type of cuisine.

1. When inserting a new cuisine place for a campus, how does the relvar enforce the integrity constraint that there can be only one closest recommended place of a cuisine per campus?

<u>CAMPUS</u>	<u>CUISINE</u>	PLACE
UHM	Burgers	Burger King Manoa
UHM	Pizza	Boston's Pizza Manoa
UHM	Afgan	Afganistan Love
KCC	Burgers	McDonald's Kahala
KCC	Chinese	Lam's Garden on Waialae
KCC	Afgan	Afganistan Love

2. What normal form is the relvar in and why?

3. Describe an example of an update anomaly that could occur.

4. Using two projections, reduce the relvar into two relvars in BCNF. You only need to write the headers. Make sure you underline the primary keys.

5. Describe an update anomaly that could occur using the two relvars in BCNF.

6. Using three projections, reduce the relvar above into to three relvars. You only need to write the header and underline the primary keys.

7. How does using these three relvars in place of the original one avoid the two update anomalies identified above?