

4. Provide simple English descriptions of the dependencies in Questions 2 and 3.

5. List *all* superkeys and *all* keys of **Courses**, given the dependencies in Question 3.

6. Compute $\{\mathbf{title}\}^+$ and $\{\mathbf{id}, \mathbf{ta}\}^+$ given the dependencies of Question 3.

7. Consider $R(A, B, C, D, E)$ with dependencies

$$AB \rightarrow C$$

$$BC \rightarrow A$$

$$D \rightarrow E$$

$$CE \rightarrow B$$

List all keys of R

8. Project the dependencies of Question 7 onto the relation $R'(A, B, C)$.

9. Decompose R as necessary to generate a BCNF schema. For each decomposition used, clearly indicate the dependency used and the relations before and after the decomposition. List the projected dependencies for each decomposed relation.