

CS180 Database Systems - Spring 2004

Homework 5 (cont'd)

Due in class on May 27, 2004

Instructions: Answer all questions *concisely*. Write your name on every answer sheet.

1. We say that two sets F and G of dependencies are equivalent if $F^+ = G^+$, i.e., if they imply exactly the same functional dependencies. Show that the sets

$$F = \{A \rightarrow B, B \rightarrow C, C \rightarrow A\}$$

and

$$G = \{A \rightarrow C, C \rightarrow AB, B \rightarrow C\}$$

are equivalent. You may compute F^+ and G^+ if you want, but there are easier ways to show that F and G are equivalent, namely it suffices to show that $F \subseteq G^+$ and $G \subseteq F^+$ (why?)

2. Exercise 19.10
3. **(This question will not be graded.)** Go through Exercises 19.5, 19.6, and 19.7 on your own.