

Homework Assignment 6

(due on Tuesday November 26, 2002)

- Read Chapters 2 and 5.
- Exercises 2.2, 2.4, 5.2, 5.5, 7.2, 7.16 (solve this in two different ways: first, by applying the criterion for lossless join decomposition; second, by following the hint given in the book), 7.21
- Complete the part about Third Normal Form in Problems 1 and 2 of the previous Homework Assignment 5.

Problem 1: Let R be a relation schema with attributes A, B, C, D and assume that the functional dependencies in the set $F = \{A \rightarrow B, C \rightarrow D, D \rightarrow A\}$ hold on R .

1. Determine whether R is in Third Normal Form.
2. Give a BCNF, lossless join decomposition of R .