

**GROUP EXERCISE**  
**Chapter 3**  
**The Relational Model and Normalization**  
**Exercise 2**

Worker-ID	Name	Skill-Type	Building-ID
1235	M. Faraday	Electric	312
1235	M. Faraday	Electric	515
1412	C. Nemo	Plumbing	312
1412	C. Nemo	Plumbing	460
1412	C. Nemo	Plumbing	435
1412	C. Nemo	Plumbing	515
1311	C. Coulomb	Electric	435

1. The **WORKER** table is a poorly designed table. Why? In answering the 'Why?' question, answer the following questions.
  - a. What problems may occur if C. Nemo's Skill-Type is in error and must be updated?
  - b. Suppose that C. Nemo has been on sick leave for three months and all the buildings to which he was assigned are completed. If all rows containing information about completed buildings are deleted, what problems will be created?
  - c. We have hired a new employee named Spandolf, who has not yet been assigned to a building. What problems are created if we assume that the building attribute is not allowed to have null values?
2. How do you suggest that split **WORKER** to solve the poor design of the table? Give names to the new tables. Remember the data.