GROUP EXERCISE
Chapter 3
The Relational Model and Normalization
Exercise 1

Definition:

If ***A*** and ***B*** are attributes in relation ***R*** , then a **Functional Dependency**,

FD: A → B,

means that if any two tuples in ***R*** have the same value for their ***A*** attribute, the tuples ***MUST*** have the same value for their ***B*** attribute.

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) What are the functional dependencies in the **WORKER** relation that is shown above? Write your answer in two ways (once):

   a) with functional notation, e.g., **X → Y** and
   b) with a sentence, e.g., **X** functionally determines **Y**.

2) What are the unique determinants (candidate keys) of **WORKER**?

Adapted from Hanson, G., & Hanson J. (1996). Database Management and Design (2nd ed.).Upper Saddle River, NJ: Prentice Hall.