- Third normal form (3NF)
- 3NF decomposition algorithm
- 3NF synthesis algorithm
- Multivalued dependency
    - Equality-generating dependencies
    - Tuple-generating dependencies
    - Embedded multivalued dependencies
- Closure
- Fourth normal form (4NF)
- Restriction of D to R_i
- Fifth normal form

- Domain-key normal form (DKNF)
- Atomic domains
- First normal form (1NF)
- Unique-role assumption
- Denormalization
- Crosstabs
- Temporal data
- Snapshot
- Temporal functional dependency
- Temporal primary key
- Temporal foreign-key
- Temporal join

Practice Exercises

7.1 Suppose that we decompose the schema $R = (A, B, C, D, E)$ into

$$(A, B, C)$$
$$(A, D, E).$$

Show that this decomposition is a lossless decomposition if the following set F of functional dependencies holds:

$$A \rightarrow BC$$
$$CD \rightarrow E$$
$$B \rightarrow D$$
$$E \rightarrow A$$

7.2 List all nontrivial functional dependencies satisfied by the relation of Figure 7.18.

A	B	C
a_1	b_1	c_1
a_1	b_1	c_2
a_2	b_1	c_1
a_2	b_1	c_3

Figure 7.18 Relation of Exercise 7.2.