CSC343 Worksheet 12 Solution

June 30, 2020

1.
   - Key is the id of molecule
   - Functional Dependencies
     1.

Notes:

- Function Dependencies
  - *Functional Dependency* is a relationship between two attributes typically between the key and other non-key attributes within a table.

    Example:

    SIN $\rightarrow$ Name, Address, Birthdate

    Example 2:

    ISBN $\rightarrow$ Title
- Key of Relations
  - One or more attributes $\{A_1, A_2, ..., A_n\}$ is a key for a relation R if
    1. Those attributes functionally determine all other attributes of the relation
    2. No proper subset of $\{A_1, A_2, ...A_n\}$ functionally determines all other attributes of R

       Example:

       Given relation

       R = Movies1(title, year, length, genre, studioName, starName)

       i. {title, year, starName } form a key for the relation **Movies1**

       ii. { year, starName } is not a key. Same star can be in multiple movies per year
  - Superkeys

* Means a a set of attributes that contains a key
* Don't need to be minimal

Example:
Given relation

R = Movies1(title, year, length, genre, studioName, starName)

- { title, year, starName } is a key and superkey
- { title, year, starName, title, year, length} is a superkey

References:

1) OpenTextBC, Chapter 11 Functional Dependencies, link