Description of my Code

The provided code represents the logical structure of a database for a library system. It defines several tables and their relationships using primary key (PK) and foreign key (FK) constraints. Here is a breakdown of the different tables and their columns:

Table: employee\_terms

Columns: id (integer, primary key), employee\_id (integer, primary key), agreed\_salary (decimal with precision 10 and scale 2), salary\_start\_date (date), salary\_end\_date (date)

This table stores the terms of employment for each employee, including their agreed salary and the start and end dates of their salary period.

Table: job\_title\_history

Columns: id (integer, primary key), job\_title\_id (integer, primary key), start\_date (date), end\_date (date)

This table keeps track of the job title history for employees, recording the start and end dates for each job title.

Table: job\_title

Columns: id (integer, primary key), job\_title (varchar of length 255)

This table stores the different job titles available in the library system.

Table: employee

Columns: id (integer, primary key), first\_name (varchar of length 255), last\_name (varchar of length 255), date\_of\_birth (date), job\_title\_id (integer), department\_id (integer), gender\_id (integer), address (varchar of length 255), city\_id (integer), email (varchar of length 255), employment\_start (date)

This table represents the employees in the library system, including their personal information such as name, date of birth, address, and employment details.

Table: department

Columns: id (integer, primary key), department\_name (varchar of length 255)

This table stores the different departments in the library system.

Table: country

Columns: id (integer), country\_name (varchar of length 255)

This table stores the different countries.

Table: city

Columns: id (integer), city\_name (varchar of length 255), country\_id (integer, primary key)

This table represents the cities, along with their respective country.

Table: gender

Columns: id (integer, primary key), gender\_name (varchar of length 255)

This table stores the different genders.

Table: working\_hours\_log

Columns: id (integer, primary key), employee\_id (integer, primary key), start\_time (timestamp), end\_time (timestamp)

This table logs the working hours of employees, capturing the start and end times.

Table: salary\_payment

Columns: id (integer, primary key), employee\_id (integer, primary key), gross\_salary (varchar of length 255), net\_salary (varchar of length 255), salary\_period (date)

This table records the salary payments made to employees, including the gross and net salary amounts and the salary period.

The code also includes several foreign key references to establish relationships between the tables. These relationships are defined using the "Ref" statements. Here is a summary of the relationships:

The "employee\_terms" table references the "employee" table through the "employee\_id" column, ensuring that the employee ID exists in the "employee" table.

The "employee\_terms" table references the "job\_title\_history" table through the "salary\_start\_date" column, ensuring that the salary start date is less than the ID in the "job\_title\_history" table.

The "department" table references the "gender" table through the "department\_name" column, ensuring that the department name is greater than the gender ID.

The "job\_title" table and the "city" table are related through a non-specific relationship, indicated by the "-" symbol.

Overall, this code defines the structure of the database for a library system, including tables for employees, job titles, departments, countries, cities, genders, working hours, and salary payments. The relationships between the tables help establish data integrity and ensure the consistency of the information stored in the database.