**Exercise 1: One-to-One Relationship**

Consider two tables, **employees** and **employee\_details**, where each employee has exactly one corresponding detail record

**Table: employees**

employee\_id

employee\_name

employee\_salary

**Table: employee\_details**

employee\_detail\_id

employee\_id

hire\_date

Insert data into the tables to represent a one-to-one relationship between employees and their details.

(1, 'John Doe', 50000.00)

(2, 'Jane Smith', 60000.00)

(1, 1, '2023-01-01')

(2, 2, '2023-02-01')

**Exercise 2: One-to-Many Relationship**

Consider two tables, **departments** and **employees**, where each department can have multiple employees.

**Table: departments**

department\_id

department\_name

**Table: employees**

employee\_id

employee\_name

department\_id

Insert data into the tables to represent a one-to-many relationship between departments and employees.

(1, 'HR')

(2, 'IT')

(1, 'Alice Johnson', 1)

(2, 'Bob Smith', 1)

(3, 'Charlie Brown', 2)

**Exercise 3: Many-to-Many Relationship**

Consider two tables, **students** and **courses**, where students can enroll in multiple courses, and each course can have multiple students.

**Table: students**

student\_id

student\_name

**Table: courses**

course\_id

course\_name

**Table: enrollments**

enrollment\_id

student\_id

course\_id

Insert data into the tables to represent a many-to-many relationship between students and courses.

**students**

(1, 'Tom Johnson')

(2, 'Emily Davis')

**courses**

(1, 'Mathematics')

(2, 'History')

**enrollments**

(1, 1, 1)

(2, 1, 2)

(3, 2, 1)

**Exercise 4: One-to-Many Relationship with Orders and Order Items**

Consider two tables, **orders** and **order\_items**, where each order can have multiple items.

**Table: orders**

order\_id

customer\_name

order\_date

**Table: order\_items**

item\_id

order\_id

product\_name

quantity

price

Insert data into the tables to represent a one-to-many relationship between orders and order items.

**orders**

(1, 'John Doe', '2023-01-15'),

(2, 'Jane Smith', '2023-02-01');

**order\_items**

(1, 1, 'Laptop', 2, 1200.00),

(2, 1, 'Printer', 1, 200.00),

(3, 2, 'Tablet', 3, 500.00);