### One-to-One Relationships:

**Employee and Employee Details:**

**Table** employee**:**

sql

Copy code

CREATE TABLE employee (

emp\_id INT PRIMARY KEY,

emp\_name VARCHAR(100)

);

**Table** employee\_details**:**

sql

Copy code

CREATE TABLE employee\_details (

emp\_id INT PRIMARY KEY,

address VARCHAR(200),

phone VARCHAR(20),

FOREIGN KEY (emp\_id) REFERENCES employee(emp\_id)

);

**User and User Profile:**

**Table** user**:**

sql

Copy code

CREATE TABLE user (

user\_id INT PRIMARY KEY,

username VARCHAR(100),

password VARCHAR(100)

);

**Table** user\_profile**:**

sql

Copy code

CREATE TABLE user\_profile (

user\_id INT PRIMARY KEY,

full\_name VARCHAR(200),

email VARCHAR(100),

FOREIGN KEY (user\_id) REFERENCES user(user\_id)

);

### One-to-Many Relationships:

**Department and Employees:**

**Table** department**:**

sql

Copy code

CREATE TABLE department (

dept\_id INT PRIMARY KEY,

dept\_name VARCHAR(100)

);

**Table** employee**:**

sql

Copy code

CREATE TABLE employee (

emp\_id INT PRIMARY KEY,

emp\_name VARCHAR(100),

dept\_id INT,

FOREIGN KEY (dept\_id) REFERENCES department(dept\_id)

);

**Customer and Orders:**

**Table** customer**:**

sql

Copy code

CREATE TABLE customer (

customer\_id INT PRIMARY KEY,

customer\_name VARCHAR(100)

);

**Table** orders**:**

sql

Copy code

CREATE TABLE orders (

order\_id INT PRIMARY KEY,

order\_date DATE,

customer\_id INT,

total\_amount DECIMAL(10, 2),

FOREIGN KEY (customer\_id) REFERENCES customer(customer\_id)

);

### Many-to-Many Relationships:

**Students and Courses:**

**Table** student**:**

sql

Copy code

CREATE TABLE student (

student\_id INT PRIMARY KEY,

student\_name VARCHAR(100)

);

**Table** course**:**

sql

Copy code

CREATE TABLE course (

course\_id INT PRIMARY KEY,

course\_name VARCHAR(100)

);

**Intermediate Table** enrollment**:**

sql

Copy code

CREATE TABLE enrollment (

student\_id INT,

course\_id INT,

PRIMARY KEY (student\_id, course\_id),

FOREIGN KEY (student\_id) REFERENCES student(student\_id),

FOREIGN KEY (course\_id) REFERENCES course(course\_id)

);

**Authors and Books:**

**Table** author**:**

sql

Copy code

CREATE TABLE author (

author\_id INT PRIMARY KEY,

author\_name VARCHAR(100)

);

**Table** book**:**

sql

Copy code

CREATE TABLE book (

book\_id INT PRIMARY KEY,

book\_title VARCHAR(200)

);

**Intermediate Table** author\_book**:**

sql

Copy code

CREATE TABLE author\_book (

author\_id INT,

book\_id INT,

PRIMARY KEY (author\_id, book\_id),

FOREIGN KEY (author\_id) REFERENCES author(author\_id),

FOREIGN KEY (book\_id) REFERENCES book(book\_id)

);

### Additional Examples:

**Products and Reviews:**

**Table** product**:**

sql

Copy code

CREATE TABLE product (

product\_id INT PRIMARY KEY,

product\_name VARCHAR(100),

price DECIMAL(10, 2)

);

**Table** review**:**

sql

Copy code

CREATE TABLE review (

review\_id INT PRIMARY KEY,

product\_id INT,

reviewer\_name VARCHAR(100),

review\_text TEXT,

FOREIGN KEY (product\_id) REFERENCES product(product\_id)

);

**Orders and Order Items:**

**Table** orders**:**

sql

Copy code

CREATE TABLE orders (

order\_id INT PRIMARY KEY,

order\_date DATE,

total\_amount DECIMAL(10, 2)

);

**Table** order\_items**:**

sql

Copy code

CREATE TABLE order\_items (

order\_item\_id INT PRIMARY KEY,

order\_id INT,

product\_id INT,

quantity INT,

price\_per\_unit DECIMAL(10, 2),

FOREIGN KEY (order\_id) REFERENCES orders(order\_id),

FOREIGN KEY (product\_id) REFERENCES product(product\_id)

);

**Customers and Addresses:**

**Table** customer**:**

sql

Copy code

CREATE TABLE customer (

customer\_id INT PRIMARY KEY,

customer\_name VARCHAR(100)

);

**Table** address**:**

sql

Copy code

CREATE TABLE address (

address\_id INT PRIMARY KEY,

customer\_id INT,

address\_line VARCHAR(200),

city VARCHAR(100),

state VARCHAR(50),

zip\_code VARCHAR(20),

FOREIGN KEY (customer\_id) REFERENCES customer(customer\_id)

);

**Doctors and Patients:**

**Table** doctor**:**

sql

Copy code

CREATE TABLE doctor (

doctor\_id INT PRIMARY KEY,

doctor\_name VARCHAR(100),

specialization VARCHAR(100)

);

**Table** patient**:**

sql

Copy code

CREATE TABLE patient (

patient\_id INT PRIMARY KEY,

patient\_name VARCHAR(100),

age INT,

doctor\_id INT,

FOREIGN KEY (doctor\_id) REFERENCES doctor(doctor\_id)

);