One-to-One Relationships

```
Employee and Employee Details:
CREATE TABLE employee (
  emp_id INT PRIMARY KEY,
  emp_name VARCHAR(100)
);
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:
CREATE TABLE user (
  user_id INT PRIMARY KEY,
  username VARCHAR(100),
  password VARCHAR(100)
);
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:
CREATE TABLE department (
  dept_id INT PRIMARY KEY,
  dept_name VARCHAR(100)
);
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:
CREATE TABLE customer (
  customer_id INT PRIMARY KEY,
  customer_name VARCHAR(100)
);
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:
CREATE TABLE student (
  student_id INT PRIMARY KEY,
  student_name VARCHAR(100)
);
CREATE TABLE course (
  course_id INT PRIMARY KEY,
  course_name VARCHAR(100)
);
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:
CREATE TABLE author (
```

```
author_id INT PRIMARY KEY,
  author_name VARCHAR(100)
);
CREATE TABLE book (
  book_id INT PRIMARY KEY,
  book_title VARCHAR(200)
);
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:
CREATE TABLE product (
  product_id INT PRIMARY KEY,
  product_name VARCHAR(100),
  price DECIMAL(10, 2)
);
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:
CREATE TABLE orders (
  order_id INT PRIMARY KEY,
  order_date DATE,
  total_amount DECIMAL(10, 2)
);
```

```
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:
CREATE TABLE customer (
  customer_id INT PRIMARY KEY,
  customer_name VARCHAR(100)
);
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:
CREATE TABLE doctor (
  doctor_id INT PRIMARY KEY,
  doctor_name VARCHAR(100),
  specialization VARCHAR(100)
);
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)
);
```