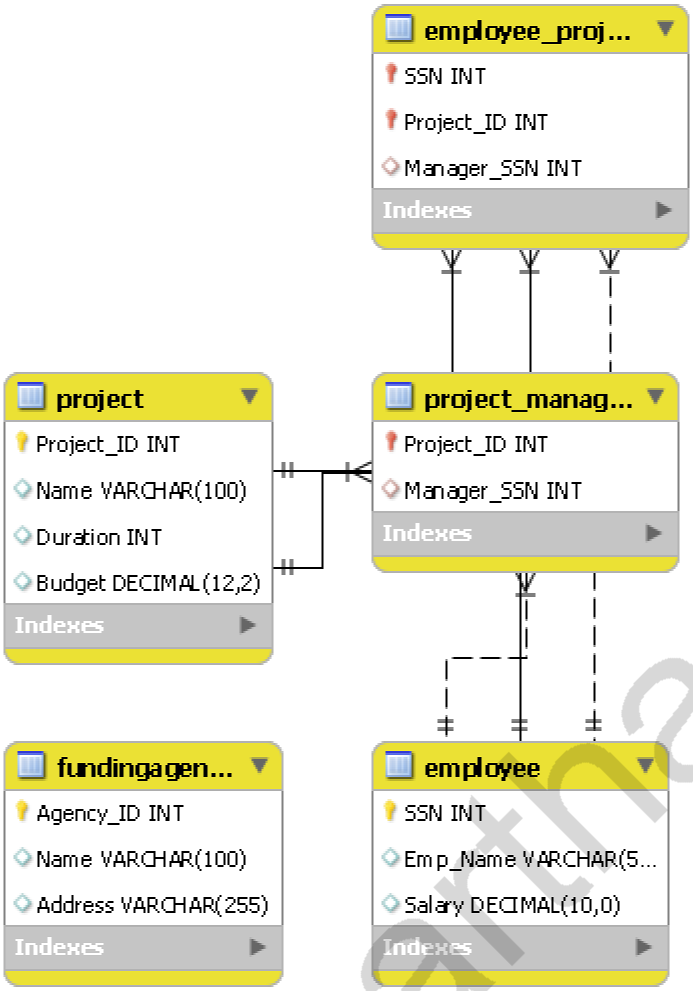
# Project 3: Online Book Publishing and Sales Platform

- The database should store information about:
    - **Books:** Title, ISBN, edition, publication year, price, publisher, and genres.
    - **Authors:** ID, name, biography; an author can write multiple books.
    - **Publishers:** Name, contact details; a publisher publishes many books.
    - **Customers:** Customer ID, name, Shipping Addresses (multiple), and Wishlist of books.
- **Orders:**
    - Each order has:
        - Order number, order date, delivery status, and whether it’s a pre-order.
        - Customer who placed it.
        - List of books in the order, their quantities, and per-item discounts.
        - Payment details, including method and payment date.
- **Other relationships:**
    - A book can have **multiple authors** (co-authored books).
    - A book can belong to **multiple genres**.
    - A customer can have **multiple delivery addresses**.
    - A customer can maintain a **wishlist of books**.
- **Additional scenarios to account for:**
    - Co-authored books, special editions, pre-orders.
    - An order may have different discounts for each book in it.

- Each book edition is associated with **just one publisher**.



### Author table

```
CREATE TABLE Author (
   author_id INT PRIMARY KEY AUTO_INCREMENT,
   name VARCHAR(100),
   biography TEXT
);
```

### Publisher table

```
CREATE TABLE Publisher (
   publisher_id INT PRIMARY KEY AUTO_INCREMENT,
   name VARCHAR(100),
   contact_details TEXT
);
```

### Genre table

```
CREATE TABLE Genre (
   genre_id INT PRIMARY KEY AUTO_INCREMENT,
   genre_name VARCHAR(50) UNIQUE
);
```

### Book Edition table (includes ISBN + Edition + Year combo as unique)

```
CREATE TABLE Book (
   book_id INT PRIMARY KEY AUTO_INCREMENT,
   title VARCHAR(200),
   isbn VARCHAR(20),
   edition VARCHAR(50),
   publication_year INT,
   price DECIMAL(10, 2),
   publisher_id INT,
   FOREIGN KEY (publisher_id) REFERENCES Publisher(publisher_id)
);
```

### Book-Author (Many-to-Many)

```
CREATE TABLE BookAuthor (
   book_id INT,
   author_id INT,
   PRIMARY KEY (book_id, author_id),
   FOREIGN KEY (book_id) REFERENCES Book(book_id),
   FOREIGN KEY (author_id) REFERENCES Author(author_id)
);
```

### Book-Genre (Many-to-Many)

```
CREATE TABLE BookGenre (
    book_id INT,
    genre_id INT,
    PRIMARY KEY (book_id, genre_id),
    FOREIGN KEY (book_id) REFERENCES Book(book_id),
    FOREIGN KEY (genre_id) REFERENCES Genre(genre_id)
);
```

### Customer table

```
CREATE TABLE Customer (
    customer_id INT PRIMARY KEY AUTO_INCREMENT,
    name VARCHAR(100)
);
```

### Customer Shipping Addresses (Multiple Addresses)

```
CREATE TABLE ShippingAddress (
    address_id INT PRIMARY KEY AUTO_INCREMENT,
    customer_id INT,
    full_address TEXT,
    FOREIGN KEY (customer_id) REFERENCES Customer(customer_id)
);
```

### Wishlist (Many-to-Many between Customer and Book)

```
CREATE TABLE Wishlist (
    customer_id INT,
    book_id INT,
    PRIMARY KEY (customer_id, book_id),
    FOREIGN KEY (customer_id) REFERENCES Customer(customer_id),
    FOREIGN KEY (book_id) REFERENCES Book(book_id)
);
```

### Order table

```
CREATE TABLE `Order` (
    order_id INT PRIMARY KEY AUTO_INCREMENT,
    customer_id INT,
    order_date DATE,
    shipment_status VARCHAR(50),
    is_preorder BOOLEAN DEFAULT FALSE,
    FOREIGN KEY (customer_id) REFERENCES Customer(customer_id)
);
```

### Payment details

```
CREATE TABLE Payment (
    payment_id INT PRIMARY KEY AUTO_INCREMENT,
    order_id INT,
    payment_method VARCHAR(50),
    payment_date DATE,
    FOREIGN KEY (order_id) REFERENCES `Order`(order_id)
);
```

### Order details (books in each order, quantity, per item discount)

```
CREATE TABLE OrderItem (
    order_item_id INT PRIMARY KEY AUTO_INCREMENT,
    order_id INT,
    book_id INT,
    quantity INT,
    item_discount DECIMAL(5,2), -- e.g., 10.00 means 10% discount
    FOREIGN KEY (order_id) REFERENCES `Order`(order_id),
    FOREIGN KEY (book_id) REFERENCES Book(book_id)
);
```

## Inserting Values:

### Author

```
INSERT INTO Author (name, biography) VALUES
('J.K. Rowling', 'British author best known for the Harry Potter series.'),
('George R.R. Martin', 'American novelist and short-story writer.'),
('Yuval Noah Harari', 'Historian and author of "Sapiens".');
```

### Publisher

```
INSERT INTO Publisher (name, contact_details) VALUES
('Bloomsbury Publishing', 'London, UK - contact@bloomsbury.com'),
('Penguin Random House', 'New York, USA - info@penguinrandomhouse.com'),
('HarperCollins', 'USA - hello@harpercollins.com');
```

### Genre

```
INSERT INTO Genre (genre_name) VALUES
('Fantasy'),
('History'),
('Science');
```

### Book

```
INSERT INTO Book (title, isbn, edition, publication_year, price, publisher_id) VALUES
('Harry Potter and the Philosopher\'s Stone', '9780747532743', '1st', 1997, 19.99, 1),
('A Game of Thrones', '9780553103540', '1st', 1996, 24.99, 2),
('Sapiens: A Brief History of Humankind', '9780062316097', '2nd', 2014, 18.50, 3);
```

### BookAuthor

```
INSERT INTO BookAuthor VALUES
(1, 1),
(2, 2),
(3, 3);
```

### BookGenre

```
INSERT INTO BookGenre VALUES
(1, 1),
(2, 1),
(3, 2),
(3, 3);
```

### Customer

```
INSERT INTO Customer (name) VALUES
('Alice Smith'),
('Bob Johnson'),
('Charlie Lee');
```

### ShippingAddress

```
INSERT INTO ShippingAddress (customer_id, full_address) VALUES
(1, '123 Elm Street, Springfield'),
(1, '456 Oak Avenue, Metropolis'),
(2, '789 Pine Lane, Gotham');
```

### Wishlist

```
INSERT INTO Wishlist VALUES
(1, 2),
(1, 3),
(2, 1);
```

### Order

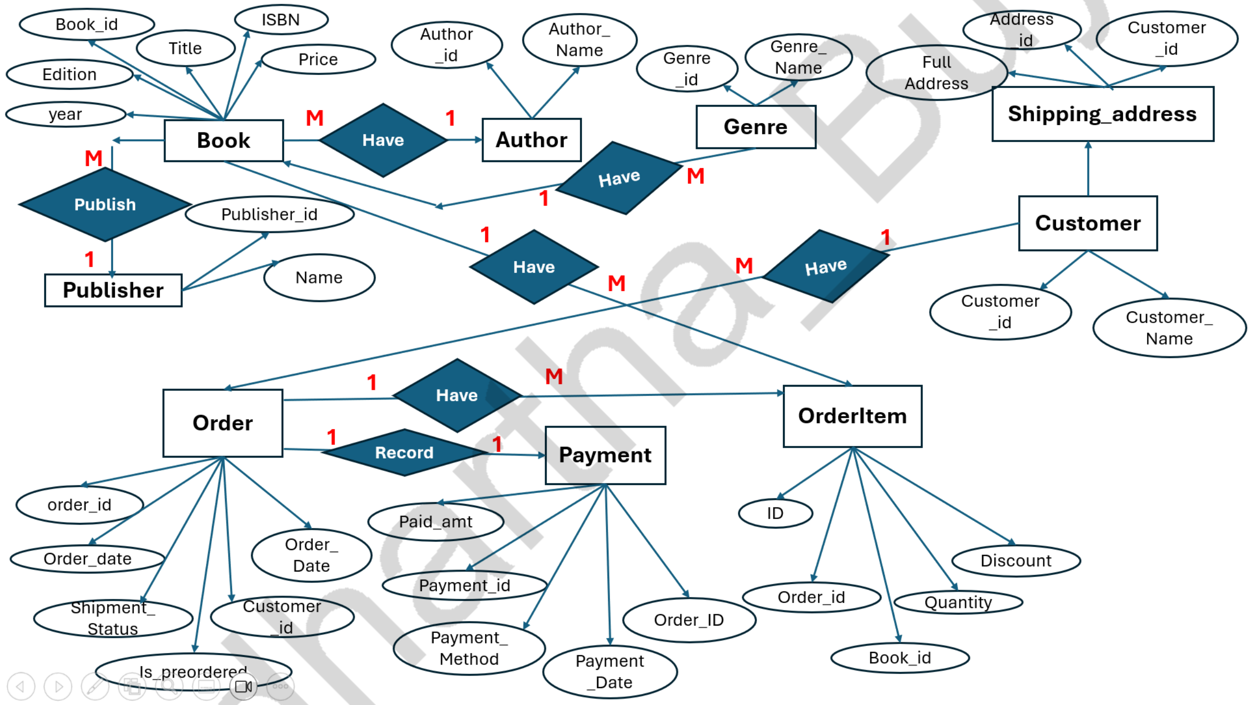
```
INSERT INTO `Order` (customer_id, order_date, shipment_status, is_preorder) VALUES
(1, '2025-06-01', 'Shipped', FALSE),
(2, '2025-06-05', 'Processing', TRUE),
(3, '2025-06-10', 'Delivered', FALSE);
```

### Payment

```
INSERT INTO Payment (order_id, payment_method, payment_date) VALUES
(1, 'Credit Card', '2025-06-01'),
(2, 'PayPal', '2025-06-05'),
(3, 'Debit Card', '2025-06-10');
```

## OrderItem

```
INSERT INTO OrderItem (order_id, book_id, quantity, item_discount) VALUES
(1, 1, 2, 5.00),
(1, 3, 1, 0.00),
(2, 2, 1, 10.00);
```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