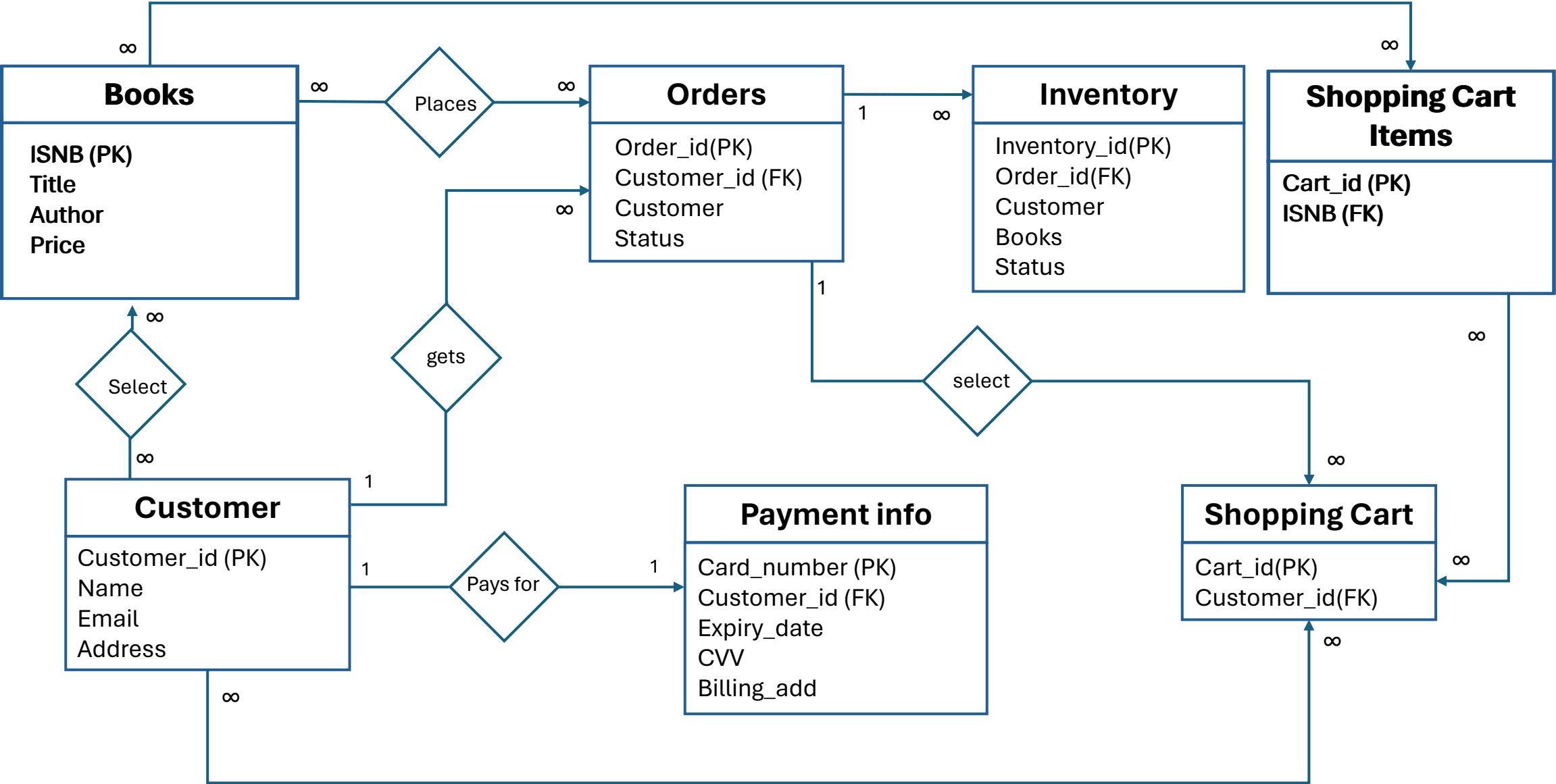


ERD Diagram for Book Store



Ways of Implementing Data Quality in Class diagrams

1. Use of Data Validation:

Make sure that the input data follows predefined rules. When adding a new book for example, ISBN can be validated in the correct format that is unique and no duplicates allowed. Also, when processing a payment, credit card can be validated using specific algorithms to avoid errors.

2. Enforcing Data integrity policies:

Consistency between related data needs to be maintained. Example, when a purchase order is made, make sure that the customer ID in the order exists in the Customer table. Also, when updating the inventory after an order, book IDs need to be verified in the order exist in the database of Books table.

3. Ensure Normalization:

This is used to organize data to reduce dependency and redundancy. To avoid inconsistencies, make sure that the data is stored in the right format and in the right place. Example, instead of storing the customer's address in both the Customer and Orders tables, normalize the database by storing it only in the Customer table and referencing it in the Orders table.

4. Unique Constraints:

Uniqueness is important to make sure that duplicate records are handled accordingly. In the bookstore library, make sure that each ISBN in the Books table is unique to maintain data integrity and avoid confusion. Similarly, customer email addresses can be made unique to prevent multiple accounts creation with the same email.

5. Transaction Management:

This is used to ensure consistency and integrity of data during database operations. For example, upon placing an order, ensure that all related are processed within a single transaction to make it consistent.