

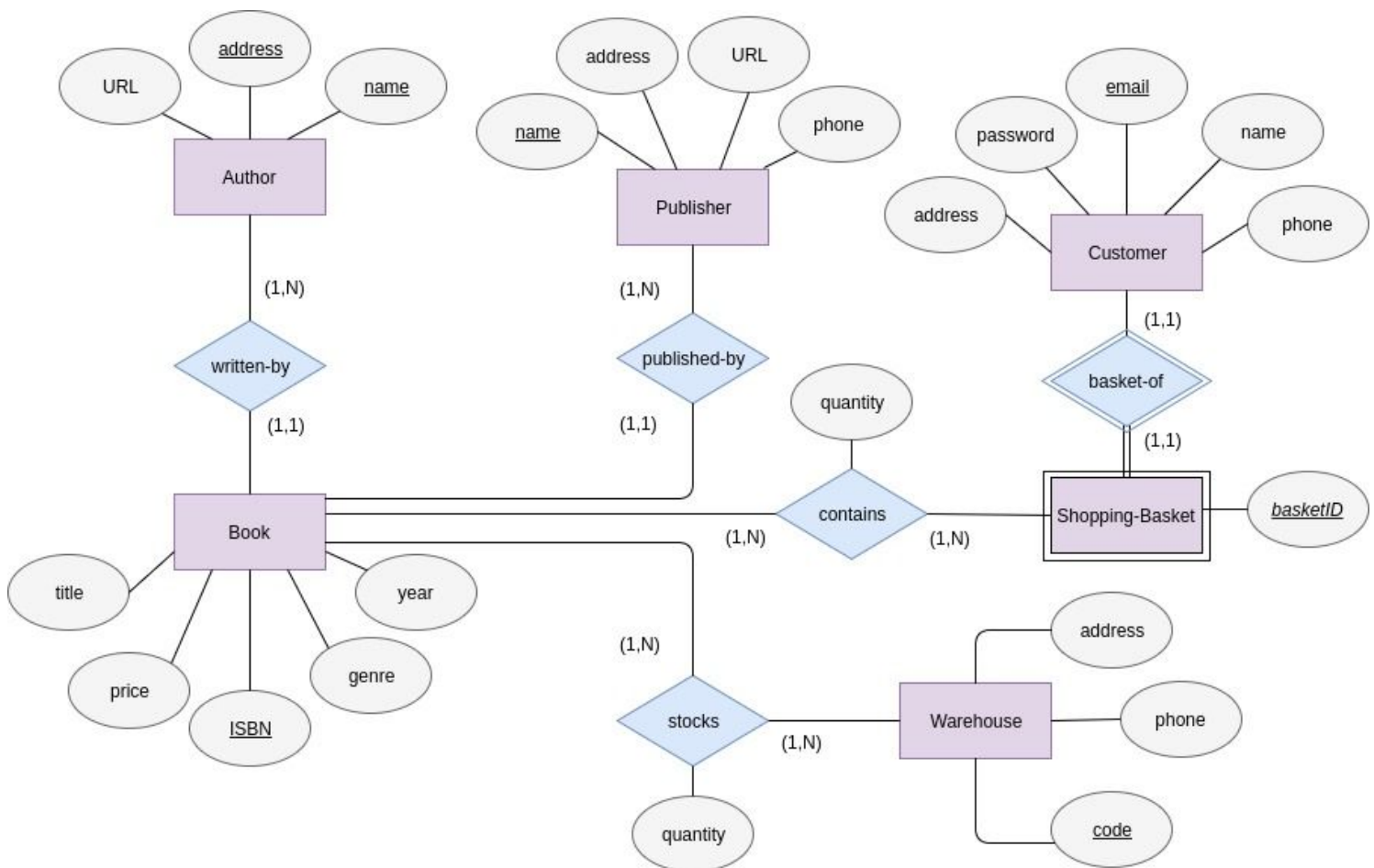
DATABASE MANAGEMENT SYSTEMS

ER-DIAGRAM AND RELATIONAL SCHEMA

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ER-Diagram :



Note: There are books that might not have author(s) or might not have publisher(s), thus, no total participation from books' side is required.

Relational Schema :

- Author (author_name, author_address, author_URL)
 - name, address(alphanumeric) and URL are all characters(VARCHAR).
- Publisher (publisher_name, publisher_address, publisher_URL, publisher_phone)
 - name, address(alphanumeric) and URL are all characters(VARCHAR).
 - phone is a number(NUMBER).
- Customer (customer_email, customer_name, customer_address, customer_phone, password)
 - name, address (alphanumeric) and URL are all characters(VARCHAR).
 - phone is a number(NUMBER).
 - password is alphanumeric(VARCHAR).
- Shopping-Basket (customer_email , basketID)
 - basketID is alphanumeric and customer_email is a character (VARCHAR).
- Book (title, price, genre, year, ISBN)
 - title and genre are characters (VARCHAR).
 - price, year and ISBN are numbers (NUMBERS).
- Warehouse (warehouse_code, warehouse_phone, warehouse_address)
 - phone is a number (NUMBERS).
 - code and address are alphanumeric (VARCHAR).
- Written-by (author_name, author_address, ISBN)
 - ISBN is a number (NUMBERS).
 - author_name and author_address(alphanumeric) are characters (VARCHAR).
- Published-by (publisher_name, ISBN)
 - ISBN is a number (NUMBERS).
 - publisher_name is a character (VARCHAR).
- Contains (ISBN, basketID, basket_quantity)
 - ISBN, quantity are numbers (NUMBERS).
 - basketID is alphanumeric (VARCHAR).
- Stocks (ISBN, warehouse_code, stock_quantity)
 - ISBN, quantity are numbers (NUMBERS).
 - code is alphanumeric (VARCHAR).