DATABASE MANAGEMENT SYSTEMS
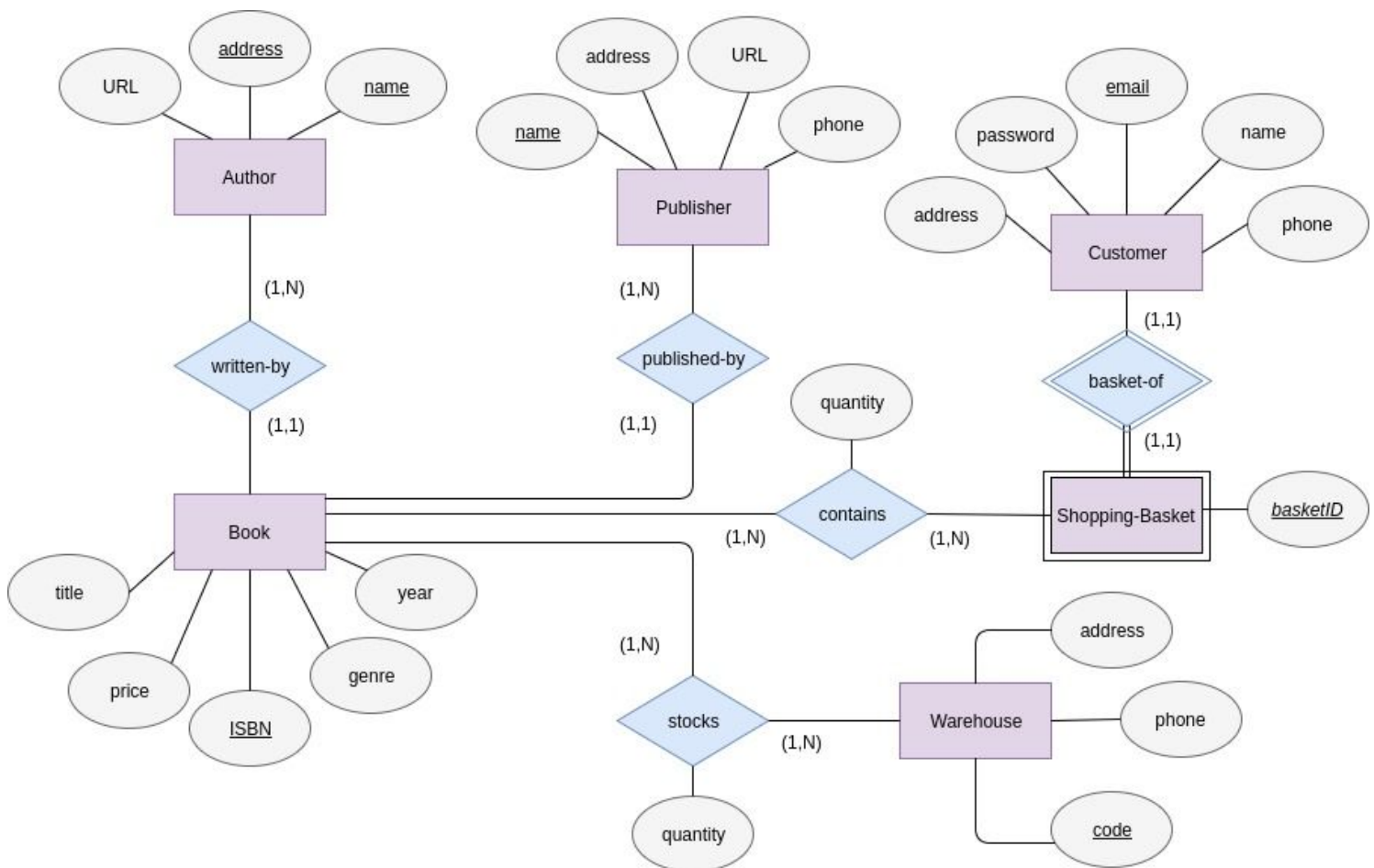## ER-DIAGRAM AND RELATIONAL SCHEMA

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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 (<u>name</u>, <u>address</u>, URL)
  - name, address(alphanumeric) and URL are all characters(VARCHAR).
- Publisher (<u>name</u>, address, URL, phone)
  - name, address(alphanumeric) and URL are all characters(VARCHAR).
  - phone is a number(NUMBER).
- Customer (<u>e-mail</u>, name, address, phone, password)
  - name, address (alphanumeric) and URL are all characters(VARCHAR).
  - phone is a number(NUMBER).
  - password is alphanumeric(VARCHAR).
- Shopping-Basket (<u>basketID</u>, <u>customer_email</u>)
  - basketID is alphanumeric and customer_email is a character (VARCHAR).
- Book (title, price, genre, year, <u>ISBN</u>)
  - title and genre are characters (VARCHAR).
  - price, year and ISBN are numbers (NUMBERS).
- Warehouse (<u>code</u>, phone, address)
  - phone is a number (NUMBERS).
  - code and address are alphanumeric (VARCHAR).
- Written-by (<u>author_name</u>, <u>author_address</u>, <u>ISBN</u>)
  - ISBN is a number (NUMBERS).
  - author_name and author_address(alphanumeric) are characters (VARCHAR).
- Published-by (<u>publisher_name</u>, <u>ISBN</u>)
  - ISBN is a number (NUMBERS).
  - publisher_name is a character (VARCHAR).
- Contains (<u>ISBN</u>, <u>basketID</u>, quantity)
  - ISBN, quantity are numbers (NUMBERS).
  - basketID is alphanumeric (VARCHAR).
- Stocks (<u>ISBN</u>, <u>warehouse_code</u>, quantity)
  - ISBN, quantity are numbers (NUMBERS).
  - code is alphanumeric (VARCHAR).