**ONLINE BOOKSTORE**

**GROUP 1**

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**SUB-MODULES**

|  |  |
| --- | --- |
| Sub Module | Schema / Attributes |
| Books | ISBN\_no  Language  Dimension  Pages  Cover  Ranking  Price |
| Author | author\_id  Name  Description |
| Publisher | Pub\_id  Name |
| Customer | C\_id  Name  E\_mail  Phone Number  Password |
| Supplier | supplier\_id  Name  Rating |

**Relations between submodules**

published\_by {

ISBN\_no

pub\_id

}

authored\_by {

ISBN\_no

author\_id

}

supplied\_by {

ISBN\_no

supplier\_id

}

reviews {

ISBN\_no

customer\_id

data

review\_text

rating

}

buys {

data

discount

quantity

}

similar {

ISBN\_no\_1

ISBN\_no\_2

}

**FUNCTIONALITIES SUPPORTED / QUERIES HANDLED :**

* Maintain data associated with the inventory (a collection of books)

•A book has a title, author and price

•The inventory also keep track of the stock/quantity of each book

•Maintain records for many customers

•A customer can be either a member or non-member.

•A customer has a username (unique across all users), password (no restrictions), email address (no restrictions), and postal address (unverified.)

•Anyone may sign up for a customer account.

•Allow any customer to become a member.

•Show a listing of available books

Books are to be displayed in ascending alphabetical order by title.

•Each book will list the following from left to right

•Title

•Author

•Price

•Allow customers and managers to log in and out of the system.

•Users (both customers and the manager) will be logged out if inactive for 30 minutes.

•Shopping cart

•Anyone is able to add one or more books to the shopping cart.

•The shopping cart does not need to allow multiple copies of any book.

•Checkout

•Checkout is only available to logged-in customers. A user that is not logged in as a customer is given a chance to log in.

•Member customers may enter a promotion code.

•Only one promotion code may be used per purchase

•The promotion is a fixed percentage discount that is to be applied to an entire order.

•The discount is specified by the manager at the time of the promotion’s creation or most recent update/edit.

•Collect a 16-digit credit card number from the customer

•Log/record the transaction

•Allow manager to specify a stop-order for a book

•Each book has its own stop-order status–either on or off. Details of its use are involved in the following feature.

•Notify manager when books need to be reordered

•When the quantity a book falls below a threshold, the manager is notified that the book needs to be reordered.

•One exception is if the manager has already specified a stop-order for this book.

•Every book must either have stop-order enabled or disabled

•Allow manager to update stock quantities

•Allow manager to change any book's price

•Allow manager to view transaction logs

•Allow manager to create promotions

•A promotion is a percentage discount that can be applied to an entire order

•Promotions may only be used by member customers

•A promotion has an expiration date specified by the manager

When a promotion is created, it is emailed to all member customers via the email address on record.

**SCHEMAS**

CREATE TABLE AUTHOR ( AUTHOR\_ID VARCHAR (200), NAME VARCHAR (200), CONSTRAINT pk\_author\_id PRIMARY KEY (AUTHOR\_ID));

CREATE TABLE SUPPLIER ( SUP\_ID VARCHAR (200), NAME VARCHAR (200), RATING NUMERIC (3,1), CONSTRAINT pk\_sup\_id PRIMARY KEY (SUP\_ID), CONSTRAINT chk\_supplier\_rating CHECK (RATING <= 10.0 and RATING >= 0.0));

CREATE TABLE PUBLISHER ( PUB\_ID VARCHAR (200), NAME VARCHAR (200), CONSTRAINT pk\_pub\_id PRIMARY KEY (PUB\_ID));

CREATE TABLE BOOKS ( ISBN VARCHAR (200), LANGUAGE VARCHAR (200), DIMENSION VARCHAR (200), PAGES INTEGER, COVER VARCHAR (200), RANKING INTEGER, PRICE FLOAT, CONSTRAINT pk\_isbn PRIMARY KEY (ISBN));

CREATE TABLE SIMILAR (ISBN\_1 VARCHAR (200), ISBN\_2 VARCHAR (200), CONSTRAINT pk\_similar PRIMARY KEY (ISBN\_1,ISBN\_2), CONSTRAINT fk\_similar\_isbn\_1 FOREIGN KEY (ISBN\_1) REFERENCES BOOKS (ISBN), CONSTRAINT fk\_similar\_isbn\_2 FOREIGN KEY (ISBN\_2) REFERENCES BOOKS (ISBN));

CREATE TABLE SUPPLY (ISBN VARCHAR (200), SUP\_ID VARCHAR (200), IN\_OUT\_STOCK CHAR(1), CONSTRAINT pk\_supply PRIMARY KEY (ISBN,SUP\_ID), CONSTRAINT fk\_supply\_isbn FOREIGN KEY (ISBN) REFERENCES BOOKS (ISBN), CONSTRAINT fk\_supply\_sup\_id FOREIGN KEY (SUP\_ID) REFERENCES SUPPLIER (SUP\_ID), CONSTRAINT chk\_in\_out\_stock CHECK (IN\_OUT\_STOCK IN ('Y','N')));

CREATE TABLE AUTHORED\_BY (ISBN VARCHAR (200), AUTHOR\_ID VARCHAR (200), CONSTRAINT pk\_authored\_by PRIMARY KEY (ISBN,AUTHOR\_ID), CONSTRAINT fk\_authored\_by\_isbn FOREIGN KEY (ISBN) REFERENCES BOOKS (ISBN), CONSTRAINT fk\_authored\_by\_author\_id FOREIGN KEY (AUTHOR\_ID) REFERENCES AUTHOR (AUTHOR\_ID));

CREATE TABLE PUBLISHED\_BY (ISBN VARCHAR (200), PUB\_ID VARCHAR (200), CONSTRAINT pk\_published\_by PRIMARY KEY (ISBN,PUB\_ID), CONSTRAINT fk\_published\_by\_isbn FOREIGN KEY (ISBN) REFERENCES BOOKS (ISBN), CONSTRAINT pk\_published\_by\_pub\_id FOREIGN KEY (PUB\_ID) REFERENCES PUBLISHER (PUB\_ID));

CREATE TABLE BS\_CUSTOMER (CUSTOMER\_ID VARCHAR (200), NAME VARCHAR (200), E\_MAIL VARCHAR (200), PHONE\_NUMBER INTEGER, PASSWORD VARCHAR (200), CONSTRAINT pk\_cusotmer\_id PRIMARY KEY (CUSTOMER\_ID));

CREATE TABLE REVIEW (CUSTOMER\_ID VARCHAR (200), ISBN VARCHAR (200), DATE DATE, REVIEW\_TEXT VARCHAR (500), RATING NUMERIC(3,1), CONSTRAINT pk\_review PRIMARY KEY (CUSTOMER\_ID,ISBN), CONSTRAINT fk\_review\_customer\_id FOREIGN KEY (CUSTOMER\_ID) REFERENCES CUSTOMER (CUSTOMER\_ID), CONSTRAINT fk\_review\_isbn FOREIGN KEY (ISBN) REFERENCES BOOKS (ISBN), CONSTRAINT chk\_review\_rating CHECK (RATING >= 0.0 and RATING <= 10.0));

CREATE TABLE BUYS (CUSTOMER\_ID VARCHAR (200), ISBN VARCHAR (200), DATE DATE, COUNT INTEGER, CONSTRAINT pk\_buys PRIMARY KEY (CUSTOMER\_ID,ISBN,DATE,COUNT), CONSTRAINT fk\_buys\_customer\_id FOREIGN KEY (CUSTOMER\_ID) REFERENCES CUSTOMER (CUSTOMER\_ID), CONSTRAINT fk\_buys\_isbn FOREIGN KEY (ISBN) REFERENCES BOOKS (ISBN));