

Entities relationship:

1) Book and author: many to many relationship. The relation entity is **book_author**. Each book is written by 1 or more authors and each author writes one or more book. Both of them have a total participation in book_author because all book that the store stores have author(s) and all author have book(s)

2) Book_author, translator and publisher: many to many relationship. The relation entity is **book_details**. Each book has 1 or more publishers and 0 or more translators. Each publisher has 1 or more books and 0 or more translators. Each translator has 1 or more books and 1 or more publisher. All of them have a total participation in book_details.

3) detail_order with inventory, book_details, orders, orderBookStatus: many to many relationship. Each book of book_details has one or more book in inventory, orders and orderBookStatus. Order_book and orderBookStatus have total participation in detail_order, all customer order has details and all book status has details. Inventory and book_details have partial participation in detail_order because not all are involved into detail_order.

4) sale_price is a weak entity because he doesn't have any own primary key. His primary key is from book_details. The store defines price and weight for each book that they purchase. The discriminator is details_id from book_details. Each book has a sale price.