DBMS Laboratory Question

Design a database system that can be used to store information about book publication, distribution

and sales. It is assumed that each book has a publisher who sell books in the market through distributors who in turn maintain adequate warehouses to store hard copies the books available with them. Retail shops or customers purchase the books either directly or through online shopping agencies like Amazon.

The attributes of a book a re : Title, Authors , Unique code (e.g. ISBN), Year and City of publication and the unit Price.

A publisher can publish multiple books each year. A book can have multiple authors) and a person can be author of multiple books.

When a distributor receives purchase requests from its customers, it checks the current stocks and if the desired books are available, informs about their availability. Note a purchase request may involve multiple copies of a book.

If the number available copies of the books requested cannot be met from the available stock, the

distributor places a purchase order to the publisher to supply adequate number copies of the books.

The publisher on receipt of such a purchase order sends the copies of the ordered books in a consignment with a bill through transporters confirming the expected date of delivery.

The distributor is expected to make payment to the publisher on the bill raised after the consignment is received. Similarly, customers or retail shops are expected to make payment to the distributor from whom the books have been purchased.

Each bill of purchase records the details of the purchase made and :namely purchase order no., the title of the book, number of copies , date of purchase and total cost of each consignment.

i. Construct a E-R model by identifying the entities, their attributes and relationships.

ii. Identify primary key and foreign keys.

iii. Assume appropriate data types of the attributes.

iv. Create a relational database Book-Publish with appropriate schema tables) to store and

manipulate the data values using SQL commands

v. Write PYTHON codes to insert data values into the tables

vi. Write PYTHON codes that connects to this database and use SQL commands to select and

retrieve information about availability of books identified by title, author, publisher or year

of publication.