CSCD 327 Lab #4 (15 points)
Due: 11:59pm on October 28, 2020

Use database *booksDB* to complete the following queries in SQL.
Please include both the query statements and the query results in your submission.

Section 1: Multiple-table Queries

1. Determine which orders haven't yet shipped and the name of the customer who placed the order. Sort the results by the date on which the order was placed. List the order number, the corresponding customer name, and order date.

order_num	firstname	lastname	orderdate
1012	BECCA	NELSON	2009-04-03
1016	LEILA	SMITH	2009-04-04
1015	KENNETH	FALAH	2009-04-04
1020	KENNETH	JONES	2009-04-05
1019	GREG	MONTIASA	2009-04-05
1018	BONITA	MORALES	2009-04-05

2. Find a list of all customers who live in the state of *FL* and have ordered books about *COMPUTERs (i.e., category = 'COMPUTER')*. List the customer number, the customer name, and the corresponding order number.

customer_num	firstname	lastname	order_num
1001	BONITA	MORALES	1003
1001	BONITA	MORALES	1018
1003	LEILA	SMITH	1006

3. Determine which books customer *JAKE LUCAS* has purchased. If he has purchased multiple copies of the same book, unduplicate the results. List the book title.

title
PAINLESS CHILD-REARING
HOW TO MANAGE THE MANAGER

4. Determine the profit of each book sold to *JAKE LUCAS*, using the actual price the customer paid (*profit = PaidEach – Cost*). Sort the results by order date first. If more than one book was ordered on the same day, sort the results by profit amount in descending order. List the book title, the order date, and the corresponding profit.

title	orderdate	profit
PAINLESS CHILD-REARING	2009-03-31	37.45
HOW TO MANAGE THE MANAGER	2009-03-31	16.55
PAINLESS CHILD-REARING	2009-04-03	37.45

5. Determine which books were written by an author of last name *ADAMS*? List the isbn and the title of the book.

isbn	title
8843172113	DATABASE IMPLEMENTATION

6. Identify the authors of the books *BECCA NELSON* ordered. List the name of the author and the book title.

fname	lname	title
JANICE	JONES	REVENGE OF MICKEY
WILLIAM	WHITE	HANDCRANKED COMPUTERS
LISA	WHITE	HANDCRANKED COMPUTERS
JACK	BAKER	PAINLESS CHILD-REARING
OSCAR	FIELDS	PAINLESS CHILD-REARING
ROBERT	ROBINSON	PAINLESS CHILD-REARING
ROBERT	ROBINSON	BIG BEAR AND LITTLE DOVE

7. Display a list of all books. If a book has been ordered by a customer, list the book title, and the corresponding order number and the state in which the customer resides. If a book has not been ordered by a customer, only list the book title.
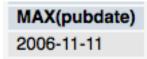
   The correct answer includes 35 tuples.

Section 2: Aggregate Functions

8. Find the number of books which have a retail price of $30.00 or more.

COUNT(*)
8

9. Display the most recent publication date among all books owned by the bookstore.

MAX(pubdate)
2006-11-11

10. Determine the total profit generated by sales to customer 1017. [Note: total profit = sum((retail-cost)*quantity)]

SUM((retail-cost)*quantity)
59.78

11. List the retail price of the least expensive book in the *CHILDREN* category.

MIN(retail)
8.95

12. Determine how many orders have been placed by each customer. Do not include the customers who haven't placed any order. Display the customer number, and the number of orders placed by the customer.

customer_num	COUNT(*)
1001	2
1003	2
1004	1
1005	2
1007	2
1008	1
1010	2
1011	1
1014	1
1015	1
1017	1
1018	2
1019	1
1020	2

13. Determine the average retail price of books by publisher and category (i.e., group by publisher name and book category). Include only the (publisher, category) pair when the corresponding average retail price is more than $50.

name	category	AVG(retail)
AMERICAN PUBLISHING	COMPUTER	52.300000
PUBLISH OUR WAY	CHILDREN	59.950000
PUBLISH OUR WAY	COMPUTER	54.500000
REED-N-RITE	FAMILY LIFE	89.950000

14. List the customers living in *GA* or *FL* who have placed an order totaling more than $80 (hint: use "*group by order_num having …*"). List the name of the customer, the order number, and the corresponding order total. Sort the result by the order total in ascending order. [Note: *Order total* = sum(*retail*quantity*)].

firstname	lastname	order_num	total ▲
LEILA	SMITH	1016	89.95
JAKE	LUCAS	1011	89.95
BONITA	MORALES	1003	106.85
JAKE	LUCAS	1001	121.90

15. What's the retail price of the most expensive book written by *LISA WHITE.*

MAX(retail)
39.95