Relational Database Development

152-156

# Multi-Table Queries

25 points

Using the MySQL Workbench, complete the following exercises. Save your queries as a .sql file. Indent **and number /\* 1 \*/** your queries to improve readability. For each query, use the fewest number of tables required. Unless the question below designates otherwise, **you must use Join** to connect tables (not Where).

Query result sets are available on my website.

**Premiere Products** (½ point each)

1. For each order, list the order ID and date along with the customer ID and name of the customer who placed the order.
2. For each order placed on October 21, 2014, list the order ID along with the ID and name of the customer that placed the order.
3. For each order, list the order ID, date, part ID, number of units ordered and quoted price for each order line that makes up the order.
4. Use the IN operator and a subquery to find the ID and name of each customer that placed an order on October 21, 2014.
5. Find the ID and name of each customer that did not place an order on October 21, 2014.
6. For each order, list the order ID, order date, part ID, part description and item class for each part that makes up the order.
7. Repeat #6, but order the rows by item class and then by order date descending.
8. Use a subquery to find the rep ID, last name and first name of each sales rep who represents at least one customer with a credit limit of $5,000. List each sales rep only once in the results.
9. Repeat #8, but do not use a subquery.
10. Find the ID and name of each customer that currently has an order on file for a Gas Range.
11. List the part ID, part description and item class for each pair of parts that are in the same item class. (For example, one such pair would be part AT94 and part FD21 because the item class for both is HW). Ensure each pair is only listed once.
12. List the order ID and order date for each order placed by the customer named Johnson’s Department Store.
13. List the order ID and order date for each order that contains an order line for an Iron.
14. List the order ID and order date for each order that was placed by Johnson’s Department Store or that contains an order line for a Gas Range using only Joins. Only include an order in the result set once.
15. Repeat #14 using a Set operation. (Do not include the customer name or description in the results. They are included in the key for reference purposes only).
16. List the order ID and order date for each order that was placed by Johnson’s Department Store and that contains an order line for a Gas Range using a Join.
17. **(Extra Credit: ½ point):** Repeat #16 using a Set operation. You will not be able to test this query using MySQL.
18. List the order ID and order date for each order that was placed by Johnson’s Department Store that **does not** contain an order line for a Gas Range using only Joins.
19. **(Extra Credit: ½ point):** Repeat #18 using a Set operation. You will not be able to test this query using MySQL.
20. List the part ID, part description, unit price and item class for each part that has a unit price greater than the unit price of every part in item class AP. Use either ANY or ALL as appropriate.
21. For each part, list the part ID, description, units on hand, order ID and number of units ordered. All parts should be included in the results. For those parts that are currently not on order, the order ID and number of units ordered should be left blank. Order the results by part ID.

**Henry Books** (½ point each)

1. For each book, list the book ID, title, publisher ID and publisher name. Order the results by publisher name.
2. For each book published by Plume, list the book ID, title and price.
3. List the book ID, book title, and price of each book published by Plume that has price of at least $14.
4. List the book ID, book title and units on hand for each book in branch ID 4.
5. List the book title for each book that has the type Psychology and is published by Jove Publications.
6. Find the book title for each book written by Camus (last name) using IN and subqueries.
7. Find the book ID and title for each book located in the branch on 1289 Bedford written by John Steinbeck.
8. List the titles of each pair of books that have the same price. Include the price once, in the results. Order the results by price descending. Ensure each pair of books is only listed once.
9. Find the book title, author last name and units on hand for each book in the Henry Eastshore branch.
10. Repeat #9 including only paperback books.
11. Find the book ID and title for each book whose price is more than $10 or that was published in Boston. Use a Join.
12. Repeat #11 using a Set operation.
13. Find the book ID and title for each book whose price is more than $10 and that was published in Boston. Use a Join.
14. **(Extra Credit: ½ point):** Repeat #13 using a Set operation. You will not be able to test this query using MySQL.
15. Find the book ID and title for each book whose price is more than $10 but was **not** published in Boston. Use a Join.
16. **(Extra Credit: ½ point):** Repeat #15 using a Set operation. You will not be able to test this query using MySQL.
17. Find the book ID and title for each book whose price is greater than the book price of every book that has the type Horror.
18. Find the book ID and title for each book whose price is greater than the book price of at least one book that has the type Horror.
19. List the book ID, title and units on hand for each book in the 1289 Bedford branch location. Include every book regardless whether it is currently in stock at that location. Order the output by title. (Tip: join branches to inventories, then books to that).

**Alexamara Marina** (½ point each)

1. List the name of any pair of boats that have the same type. Include each boat name, but only include the boat type once. The first boat name listed should serve as the primary sort key; the second name should be the secondary sort key.
2. List the slip **number**, boat name, owner last name, service ID, number of estimated hours and number of spent hours for all **engine repairs**.
3. **Extra Credit: 2 points**Repeat #2 but:
   1. add the marina name
   2. list all slips regardless of whether they’ve had this repair  
      Hint: only three slips have had this service.