Relational Database Development

152-156

# Single 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. Query result sets are available on my website.

**Premiere Products** (½ point each)

1. List the partId, description and price for all parts.
2. List all the rows and columns for the complete orders table.
3. List the names of the customers with credit limits of $7,500 or less.
4. List the orderId for each order placed by customer number 3 on 10/20/2014.
5. List the Id and name of each customer represented by sales rep 2 or sales rep 3.
6. List the partId and description of each part that is not in item class SG.
7. List the partId, description and number of units on hand for each part that has between 10 and 25 units on hand (including 10 and 25). **Do this two ways**.
8. List the partId, description and on-hand value (units on hand \* unit price) of each part in the item class AP. Assign the name *onHandValue* to the calculated field.
9. List the partId, description and on-hand value for each part whose on-hand value is at least $7,500. Assign the name *onHandValue* to the calculated field.
10. Use the IN operator to list the partId and description for each part in item class AP or SG.
11. Find the Id and name of each customer whose name begins with the letter “K”.
12. List all details about all parts. Sort the output by description.
13. List all details about all parts. Sort the output by partId **within** item class.
14. How many customers have balances that are more than their credit limits?
15. Find the total of the balances for all customers represented by sales rep 3 with balances that are less than their credit limits.
16. List the partId, descsription and on-hand value of each part whose number of units on hand is more than the average number of units on hand for all parts. (Hint: use a subquery).
17. What is the price of the most expensive part in the database?
18. List the partId, description and price of the most expensive part in the database.
19. List the sum of the balances of all customers for each sales rep. Group the results by sales rep Id. Name the calculated field *totalBalance.*
20. List the sum of the balances of all customers for each sales rep, but restrict the output to those sales reps for which the sum is more than $10,000.
21. List the partId of any part with an unknown description.
22. Create a query that determines the average commission for all sales. Name the calculated field *averageCommission*. Format the results for two decimal places.
23. Create a query that shows each customer’s balance. Combine the customer’s name and city into one column (format: *Furniture & Appliance Mart (Stevens Point) )*. Assign an appropriate alias to the calculated field. Sort the list by the concatenated field.
24. Create a query that lists the order ID, order date and payment due date for all orders. Payments are due 45 days after the order date. Assign an appropriate name to the calculated field. Sort the list by payment due date (most recent date first).

**Henry Books** (½ point each)

1. List the bookId and title of each book.
2. List the complete publishers table.
3. List the name of each publisher located in Boston.
4. List the name of each publisher not located in Boston.
5. List the name of each branch that has at least nine employees.
6. List the bookId and book title of each book that has typeId 11.
7. List the bookId and book title of each book that has typeId 11and is in paperback.
8. List the bookId and book title of each book that has typeId 11or is published by publisher 19.
9. List the bookId, title and price of each book with a price between $20 and $30,
10. List the bookId and title of each book that has typeId 6 and a price of less than $20.
11. Customer who are part of a special program get a 10% discount off regular book prices. List the bookId, title and discounted price of each book. Use *discountedPrice* as the name of the calculated field which calculates 90% of the regular price (100% - 10%).
12. Find the name of each publisher containing the word “*and”*. Be sure to only select publishers whose name contains the word “*and*” but not those that contain the letters “*and*” in the middle of a word. For example, your query should select the publisher “Farrar Straus and Giroux,” but should not select “Random House”.
13. List the bookId and title of each book that has the typeId 1, 6 or 11. Use the IN operator in your command.
14. Repeat #13, but sort the books in alphabetically by title.
15. Repeat #13, but include the price and sort the books in descending order by price. Within a group of books that have the same price, sort the books by title.
16. Using the Books table, display a list of the book type IDs used in the database.
17. How many books have typeId 11?
18. For each book typeId, list the type and average price. Name the calculated field *averagePrice*.
19. Repeat #18, but list only paperback books.
20. Repeat #18, but list only paperback books for those types for which the average price is more than $10.
21. What is title and price of the most expensive book in the database?
22. What are the titles and prices of the least expensive book(s) in the database?
23. How many employees does Henry Books have?

**Alexamara Marina** (½ point each)

1. List the slip number for every slip in marina 1 whose rental fee is less than $3,000.
2. Labor is billed at the rate of $60 per hour. List the slipId, categoryId, estimated hours, and estimated labor cost for every service request. To obtain the estimated labor cost, multiply the estimated hours by 60. Name the calculated field *estimatedCost*.
3. How many Dolphin 28 boats are stored at both marinas?
4. Calculate the total rental fees Alexamara receives each year based on the length of the slip. Name the calculated field *totalFees*.

1. Create a query of your own design (using any of the three databases) that implements an SQL function that we have **NOT** discussed in class (see MySQL documentation, [on-line](http://dev.mysql.com/doc)). Order the records in the query results appropriately.

You may not use any of the following functions:

Sum, Avg, Min, Max, Count, AddDate, SubDate, Concat, Format, Date\_Format