MIS 533 – Database Management for Decision Making

**Lab Check – Advanced Queries – Erwin Chege**

Instructions

* Write down the SQL codes according to the requirements given and take a screen shot of the results.
* All submissions should be made through ***Canvas***. Submissions through emails will be accepted ***ONLY*** under the circumstances when unresolvable technical difficulties occur.
* Keep a digital backup of your work and do ***NOT*** modify the backup file after the assignment is due. For any technical reason preventing me from opening/grading your assignment, you need to provide me the backup file with a last modified date earlier than the due date.
* Submit your assignment before the due date. Late submissions will be accepted with a penalty. A 10% grade will be deducted from your assignment score for each 24-hour increment overdue.
* All submissions should be in ***electronic format***. No paper-based submissions will be accepted.
* This is an ***individual*** assignment.

Problems

Please write queries based on the following requirements using DML In-Class Data Set (SQLDataSet.sql). ***For each question, you are required to submit 1) SQL query code; 2) a screen shot of your query result. You should copy and paste your SQL query code to the word document instead of taking a screenshot of your code. Missing either part for each question will result in 0 for this question.***

1. List the total number of parts ordered on each day. Rank your results in ascending order on order date.

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| SELECT order\_date, SUM(number\_ordered) AS total\_parts\_ordered  FROM orders  JOIN order\_line ON orders.order\_number = order\_line.order\_number  GROUP BY order\_date  ORDER BY order\_date ASC; |
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1. List the full name and mailing address of customers who placed an order on 04-AUG-2013. If same customer has placed more than one order on this day, only show his/her information once.

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| select c.clast , c.cfirst AS full\_name, c.street , c.city ,c.state , c.zip\_code AS mailing\_address  from customer c  join orders o ON c.c\_number = o.c\_number  where o.order\_date = TO\_DATE('04-08-2013', 'DD-MM-YYYY'); |
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1. List the order date, order number, total quoted price for each order placed between 03-AUG-2013 and 06-AUG-2013.

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| SELECT o.order\_date, o.order\_number,  (SELECT SUM(quoted\_price)  FROM order\_line ol  WHERE ol.order\_number = o.order\_number) AS total\_quoted\_price  FROM orders o  WHERE o.order\_date BETWEEN TO\_DATE('03-08-2013', 'DD-MM-YYYY') AND TO\_DATE('06-08-2013', 'DD-MM-YYYY')  ORDER BY o.order\_date, o.order\_number; |
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1. List the average commission rate (rename to AVG\_RATE) and the highest total commission (rename to MAX\_COMMISSION) of sales representatives who sold SG class items.

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| SELECT  AVG(sr.commission\_rate) AS AVG\_RATE,  MAX(sr.total\_commission) AS MAX\_COMMISSION  FROM  sales\_rep sr, customer c, orders o, order\_line ol, part p  WHERE  sr.slsrep\_number = c.slsrep\_number  AND c.c\_number = o.c\_number  AND o.order\_number = ol.order\_number  AND ol.part\_number = p.part\_number  AND p.item\_class = 'SG'; |
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1. List the warehouse number and the total number of orders from each warehouse.

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| select  p.warehouse\_number,  (select COUNT(o.order\_number)  from orders o, order\_line ol, part p2  where o.order\_number = ol.order\_number  AND ol.part\_number = p2.part\_number  AND p2.warehouse\_number = p.warehouse\_number) AS total\_orders  from part p  group by p.warehouse\_number; |
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1. List the full name of the sales representatives, order number, and total quoted price for each order (rename to TQP) handled by each sales representative.

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| select  sr.srlast , sr.srfirst AS full\_name,  o.order\_number,  (select SUM(ol.quoted\_price)  from order\_line ol, customer c, orders o2  where c.slsrep\_number = sr.slsrep\_number  AND o2.c\_number = c.c\_number  AND o2.order\_number = ol.order\_number) AS TQP  from sales\_rep sr, orders o, customer c  where c.slsrep\_number = sr.slsrep\_number  AND o.c\_number = c.c\_number; |
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1. List the part number and part description of parts with units on hand higher than the average units on hand across all parts.

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| select part\_number, part\_description  from part  where units\_on\_hand > (select AVG(units\_on\_hand) from part); |
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1. List the full name and credit limit of customer who bought a Gas Grill.

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| select c.clast , c.cfirst, c.credit\_limit  from customer c  where c.c\_number IN (  select o.c\_number  from orders o, order\_line ol, part p  where o.order\_number = ol.order\_number  AND ol.part\_number = p.part\_number  AND p.part\_description = 'Gas Grill'  ); |
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1. List the warehouse number and total dollar amount of all items sold from that warehouse. Rename the calculated column TOTAL\_VALUE. TOTAL\_VALUE=SUM(NUMBER\_ORDERED\*QUOTED\_PRICE).

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| SELECT p.warehouse\_number, SUM(ol.number\_ordered \* ol.quoted\_price) AS TOTAL\_VALUE  FROM order\_line ol, part p  WHERE ol.part\_number = p.part\_number  GROUP BY p.warehouse\_number; |
|  |

1. List the part description of the part with the most units on hand.

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| SELECT part\_description  FROM part  WHERE units\_on\_hand = (SELECT MAX(units\_on\_hand) FROM part); |
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1. List the part description of the part that was sold the most (in terms of total number ordered).

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| SELECT  p.part\_description  FROM  part p, order\_line ol  WHERE  p.part\_number = ol.part\_number  GROUP BY  p.part\_description  ORDER BY  MAX(ol.number\_ordered) DESC  FETCH FIRST ROW ONLY; |
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1. List the full name and number of different parts for each order each customer has placed. Rename the calculated column as TOTAL\_PARTS.

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| SELECT c.clast , c.cfirst AS customer\_name,  o.order\_number,  COUNT(DISTINCT ol.part\_number) AS TOTAL\_PARTS  FROM customer c, orders o, order\_line ol  WHERE c.c\_number = o.c\_number  AND o.order\_number = ol.order\_number  GROUP BY c.clast, c.cfirst, o.order\_number; |
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1. List the order date of an order containing a part description with letter D (or d) in it.

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| SELECT o.order\_date  FROM orders o, order\_line ol, part p  WHERE o.order\_number = ol.order\_number  AND ol.part\_number = p.part\_number  AND UPPER(p.part\_description) LIKE '%D%'; |
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1. List the customer name of those who purchased products with a unit price of more than $150.

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| SELECT clast , cfirst AS customer\_name  FROM customer  WHERE c\_number IN (  SELECT DISTINCT o.c\_number  FROM order\_line ol, part p, orders o  WHERE ol.part\_number = p.part\_number  AND ol.quoted\_price > 150  AND o.order\_number = ol.order\_number  ); |
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1. List sales representative number and the number of customers handled by each sales representative who got paid at most as the average total commission. Rename the number of transactions as NO\_Customers.

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| SELECT  sr.slsrep\_number,  COUNT(c.c\_number) AS NO\_Customers  FROM  sales\_rep sr, customer c  WHERE  sr.slsrep\_number = c.slsrep\_number  AND sr.total\_commission <= (SELECT AVG(total\_commission) FROM sales\_rep)  GROUP BY  sr.slsrep\_number; |
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