Car Retail Store Analysis

S. no	Questions	Query

| 1 | q 1 ) Select the "productline" which is not in the top 3 lists in the month of November<br>q 2 ) Submit the 2nd highest profit amount for the month of October. | ```sql
SELECT *
 .
 FROM (SELECT month_name,
          productline,
          profit,
          Rank ( )
            OVER (
              partition BY month_name
              ORDER BY profit DESC) AS Ranks
        FROM
            (SELECT productline,
                Monthname (o.orderdate)
                AS
                Month_Name
                Sum(( od.priceeach-p.buyprice) *
od.quantityordered)
                AS
                profit
              FROM
                orderdetails od
                JOIN orders o
                  ON od.ordernumber = o.ordernumber
                JOIN products p
                  ON p.productcode = o.productcode
              GROUP BY month_name,
                productline) a) b
WHERE
    ranks <= 3
``` |

| 2 | Q1) Find the Month on Month growth in profit for each year.
Q2) What is the MoM for Feb 2005?
Q3) For the year 2004, select which month shows negative MoM growth? | ```sql
SELECT year_name,
    month_name,
    profit,
    ((profit / Lag (profit, 1, NULL)
            OVER(
              partition BY year_name))-1)) * 100 AS
MoM_Growth
 FROM (SELECT Year(o.orderdate)
AS
          Year_Name,
          Monthname (o.orderdate)
AS
          Month_Name,
          Month(o.orderdate)
AS
          Month_Num,
          Sum((od.priceeach-p.buyprice) * od.quantityordered)
AS profit
      FROM
          orderdetails od
          JOIN orders o
            ON od.ordernumber = o.ordernumber
          JOIN products p
            ON p.productcode = od.productcode
        GROUP BY month_name,
            year_name) a
``` |

| 3 | Q1) What is the Average Order Value?
Q2) number of orders above and below AOV (Average Order Value) for customer number 205. | SELECT customernumber,
    contactfirstname,
    contactlastname,
    Sum(order_value >= avg_order_value) order_above_avg,
    Sum(order_value < avg_order_value) order_below_avg
FROM (SELECT c.customernumber,
      c.contactfirstname,
      c. contactlastname,
      o. ordernumber,
      od. quantityordered,
     od.priceeach,
     priceeach * quantityordered AS order_value,
     Round (Avg (priceeach * quantityordered)
        OVER(), 2) avg_order_value
    FROM orderdetails od
    JOIN orders o
     ON od.ordernumber = o.ordernumber
    JOIN customers c
     ON c.customernumber = o.customernumber) a
GROUP BY customernumber,
    contactfirstname,
    contactlastname |

| 4 | Select the list of productCodes that will be getting out of Stock (i.e "are_we_going_to_fulfill_next_order" value is No) | SELECT orderdate,
productcode,
ordernumber,
quantityinstock AS initial_qnty in stock
quantityordered,
product_sold_so_far,
quantityinstock - product_sold_so_far AS updatedStock
IF(quantityinstock - product_sold_so_far -
Lead (quantityordered, 1, 0)
over (PARTITION BY productcode
ORDER BY orderdate) > 0, "yes", "no")
AS are_we_going_to_fulfill_next_order
FROM (SELECT o.orderdate,
o.ordernumber,
p.productcode,
od.quantityordered,
od.priceeach,
p.quantityinstock,
SUM(od.quantityordered)
over (PARTITION BY p.productcode
ORDER BY o.orderdate) AS product_sold_so_far
FROM orderdetails od
join products p
ON od.productcode = p.producteode
join orders o
ON od.ordernumber = o.ordernumber) a
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