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Class: MIS 431

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1. **What are the product names, product lines, and product description of all products whose scale is 1:18**

```
SELECT productName, productLine, productDescription
FROM CM_products
WHERE productscale = '1:18'
```

productName	productLine	productDescription
1969 Corvair Monza	Classic Cars	1:18 scale die-cast about 10" long doors open, hood opens, trunk opens and wheels roll
1940 Ford Pickup Truck	Trucks and Buses	This model features soft rubber tires, working steering, rubber mud guards, authentic Ford log...
1993 Mazda RX-7	Classic Cars	This model features, opening hood, opening doors, detailed engine, rear spoiler, opening trunk...
1937 Lincoln Berline	Vintage Cars	Features opening engine cover, doors, trunk, and fuel filler cap. Color black
1936 Mercedes-Benz 500K Special Roadster	Vintage Cars	This 1:18 scale replica is constructed of heavy die-cast metal and has all the features of the ori...

2. **What products can be purchased for prices between \$95 and \$105?**

```
SELECT productName, buyPrice
FROM CM_products
WHERE buyPrice between '95' and '105'
```

productName	buyPrice
1952 Alpine Renault 1300	98.58
1962 LanciaA Delta 16V	103.42
1968 Ford Mustang	95.34
2001 Ferrari Enzo	95.59
1998 Chrysler Plymouth Prowler	101.51

3. **List the product code, quantity in stock, MSRP, and buy price for the lowest priced motorcycle**

```
SELECT productCode, quantityInStock, MSRP, COALESCE(buyPrice, 0) AS buyPrice
FROM CM_products
WHERE productLine = 'Motorcycles' AND buyPrice = (SELECT MIN(buyPrice) FROM CM_products
WHERE productLine = 'Motorcycles')
```

productCode	quantityInStock	MSRP	buyPrice
S32_2206	9241	40.23	24.14

4. **List the product name and buy price for products that are Motorcycles and 1:10 Produce Scale that are greater than the average buy price for products that are Motorcycles and 1:10 product scale. Please format your average to two decimal places.**

```
SELECT productName, buyPrice
FROM CM_products
WHERE productLine = 'Motorcycles' AND productScale = '1:10' AND buyPrice > (
    SELECT ROUND(AVG(buyPrice),2)
```

```

FROM CM_products
WHERE productLine = 'Motorcycles' AND productScale = '1:10'
)

```

productName	buyPrice
2003 Harley-Davidson Eagle Drag Bike	91.02

5. Which employees have a last name starting with the letter T? Format so the output is only one column with a comma and space between the last name and the first name

```

SELECT CONCAT(lastName, ', ', firstName) AS employee_name
FROM CM_employees
WHERE lastName LIKE 'T%';

```

employee_name
Thompson, Leslie
Tseng, Foon Yue

6. List the product name and buy price of those products with the same buy price; only include buy price under \$70.

```

SELECT p1.productName, p1.buyPrice, p2.productName, p2.buyPrice
FROM CM_products p1 JOIN CM_products p2
ON p1.buyPrice = p2.buyPrice
WHERE p1.buyPrice < 70 and p1.productName != p2.productName;

```

productName	buyPrice	productName	buyPrice
Pont Yacht	33.3	1911 Ford Town Car	33.3
1982 Ducati 996 R	24.14	1939 Cadillac Limousine	24.14
1939 Cadillac Limousine	24.14	1982 Ducati 996 R	24.14
1911 Ford Town Car	33.3	Pont Yacht	33.3

7. List the customer contact name, productline, orderdate, and product name for the sales that occurred in January. Customer name should be formatted to one column, with a space between first name and last name and then labeled as customer in the heading.

```

SELECT CONCAT(contactFirstName, ' ', contactLastName) AS customer, productLine, orderDate,
productName
FROM CM_customers cus
JOIN CM_orders ord ON cus.customerNumber = ord.customerNumber
JOIN CM_orderdetails ord_details ON ord.orderNumber = ord_details.orderNumber
JOIN CM_products pro ON pro.productCode = ord_details.productCode
WHERE MONTH(orderDate) = 01

```

customer	productLine	orderDate	productName
Dorothy Young	Vintage Cars	2020-01-06	1917 Grand Touring Sedan
Dorothy Young	Vintage Cars	2020-01-06	1911 Ford Town Car
Dorothy Young	Vintage Cars	2020-01-06	1932 Alfa Romeo 8C2300 Spider Sport
Dorothy Young	Vintage Cars	2020-01-06	1936 Mercedes Benz 500k Roadster
Roland Keitel	Vintage Cars	2020-01-09	1932 Model A Ford J-Coupe
Roland Keitel	Vintage Cars	2020-01-09	1928 Mercedes-Benz SSK

8. List the customers with the Sales Reps who have the employee numbers 1370 or 1165. Please use the In keyword and not a subquery.

```
SELECT cus.customerName, e.lastName, e.firstName, e.employeeNumber
FROM CM_customers cus
JOIN CM_employees e ON cus.salesRepEmployeeNumber = e.employeeNumber
WHERE e.employeeNumber IN (1370, 1165)
```

customerName	lastName	firstName	employeeNumber
Mini Gifts Distributors Ltd.	Jennings	Leslie	1165
Mini Wheels Co.	Jennings	Leslie	1165
Technics Stores Inc.	Jennings	Leslie	1165
Corporate Gift Ideas Co.	Jennings	Leslie	1165
The Sharp Gifts Warehouse	Jennings	Leslie	1165

9. List the customer name, the contact first and last name and if they have a sales rep, the sales rep first and last name. Concatenate the first and last name of the contact, and also the first and last name of the sales rep and name the headers appropriately.

```
SELECT cust.customerName AS customer_name,
       CONCAT(cust.contactFirstName, ' ', cust.contactLastName) AS contact_name,
       CONCAT(e.firstName, ' ', e.lastName) AS sales_rep_name
FROM CM_customers cust
LEFT JOIN CM_employees e
ON cust.salesRepEmployeeNumber = e.employeeNumber;
```

customer_name	Contact Name	Sales Rep Name
Atelier graphique	Carine Schmitt	Gerard Hernandez
Signal Gift Stores	Jean King	Leslie Thompson
Australian Collectors, Co.	Peter Ferguson	Andy Fixter
La Rochelle Gifts	Janine Labrune	Gerard Hernandez
Baane Mini Imports	Jonas Bergulfsen	Barry Jones

10. List the employees last and first name separated by a comma, and the country they are working in and list the Customer contact last and first name separated by a comma and the country they are in. Name the headers Employees\_And\_Customers, and Location. Your result should be in two columns and sort the output by country.

```

Select CONCAT(e.lastname, ' ', e.firstName) as employees_and_customers, o.country as
location
from CM_employees e
JOIN CM_offices o ON e.officecode = o.officecode
UNION ALL
select CONCAT(c.contactlastname, ' ', c.contactfirstName) as employees_and_customers,
c.country as location
from cm_customers c
order by location

```

employees_and_customers	location
Patterson, William	Australia
Fixter, Andy	Australia
Marsh, Peter	Australia
King, Tom	Australia
Ferguson, Peter	Australia
O'Hara, Anna	Australia

**11. List the product description and number of products that are Classic Cars**

```

select productDescription, count(productLine) as number_of_products
from cm_products
where productLine = 'Classic Cars'
group by productDescription

```

productDescription	number_of_products
Turnable front wheels; steering function; detailed interior; detailed engine; opening hood; ope...	4
Features include: Turnable front wheels; steering function; detailed interior; detailed engine; o...	3
Hood, doors and trunk all open to reveal highly detailed interior features. Steering wheel actua...	1
1:18 scale die-cast about 10" long doors open, hood opens, trunk opens and wheels roll	1
1:12 scale model of a 1968 Dodge Charger. Hood, doors and trunk all open to reveal highly de...	1

**12. Using the case keyword, for each Product, display the name, product line, product vendor, and if the product is product scale 1:10, display "Small Size", if 1:12, display "Mid Size", else display "Other Size"**

```

SELECT
    productName,
    productLine,
    productVendor,
    CASE
        WHEN productScale = '1:10' THEN 'Small Size'
        WHEN productScale = '1:12' THEN 'Mid Size'
        ELSE 'Other Size'
    END AS product_scale
FROM
    CM_products

```

productName	productLine	productVendor	product_scale
1969 Harley Davidson Ultimate Chopper	Motorcycles	Min Lin Diecast	Small Size
1952 Alpine Renault 1300	Classic Cars	Classic Metal Creations	Small Size
1996 Moto Guzzi 1100i	Motorcycles	Highway 66 Mini Classics	Small Size
2003 Harley-Davidson Eagle Drag Bike	Motorcycles	Red Start Diecast	Small Size
1972 Alfa Romeo GTA	Classic Cars	Motor City Art Classics	Small Size

**13. List the Product name, Product Description, and Product Vendor of the cheapest Product using BuyPrice**

```

SELECT productName, productDescription, productVendor
FROM CM_products
WHERE buyPrice = (SELECT MIN(buyPrice) FROM CM_products)

```

productName	productDescription	productVendor
1958 Chevy Corvette Limited Edition	The operating parts of this 1958 Chevy Corvette Limited Edition are particularly delicate due to...	Carousel DieCast Legends

**14. List every customer contact name that has not purchased any products.**

```

SELECT c.contactLastName, c.contactFirstName
FROM CM_customers c
LEFT JOIN CM_orders o ON c.customerNumber = o.customerNumber
LEFT JOIN CM_orderdetails od ON o.orderNumber = od.orderNumber
LEFT JOIN CM_products p ON od.productCode = p.productCode

```



WHERE p.productCode IS NULL;

contactLastName	contactFirstName
Piestrzeniewicz	Zbyszek
Franco	Keith
de Castro	Isabel
Walker	Brydey
Kloss	Horst
Camino	Alejandra

**15. How many different customers bought the 1968 Ford Mustang?**

```
FROM CM_customers c
      JOIN CM_orders o ON c.customerNumber = o.customerNumber
      JOIN CM_orderdetails od ON o.orderNumber = od.orderNumber
      JOIN CM_products p ON od.productCode = p.productCode
      WHERE p.productName = '1968 Ford Mustang';
```

number_of_customers
23

**16. Display the different products and their quantity in stock. Use the IF function to generate inventory replenishment status messages. Use 4000 as your benchmark to replenish inventory and put the items in alphabetical order. Therefore, if it's less than 4000, the message should be Replenish inventory, else it should be inventory levels are fine. Also, the column header should be Message.**

```
SELECT productName,
      IF(quantityInStock < 4000, 'Replenish inventory', 'Inventory levels are fine') AS Message
FROM CM_products
ORDER BY productName;
```

productName	Message
18th century schooner	Replenish inventory
18th Century Vintage Horse Carriage	Inventory levels are fine
1900s Vintage Bi-Plane	Inventory levels are fine
1900s Vintage Tri-Plane	Replenish inventory
1903 Ford Model A	Replenish inventory

- 17. List the Customer name, order number, and total cost for the customer who has the most expensive order. Note, a sale may have several items on the order**

```
SELECT c.customername, o.ordernumber, SUM(od.quantityOrdered * od.priceEach) AS
total_cost
FROM CM_customers c
JOIN cm_orders o ON c.customerNumber = o.customerNumber
JOIN cm_orderdetails od ON o.orderNumber = od.orderNumber
WHERE od.priceEach = (
SELECT MAX(priceEach)
FROM cm_orderdetails
)
GROUP BY c.customername, o.ordernumber
```

customername	ordernumber	total_cost
Baane Mini Imports	10103	5571.8
Cambridge Collectables Co.	10228	6214.700000000001
Mini Gifts Distributors Ltd.	10312	10286.400000000001

- 18. List the product name and that has a higher-than-average MSRP and a lower than average buyPrice**

```
SELECT productName
FROM cm_products
WHERE MSRP > (SELECT AVG(MSRP) FROM cm_products)
AND buyPrice < (SELECT AVG(buyPrice) FROM cm_products)
```

productName
1982 Camaro Z28

- 19. List the product name and MSRP where the MSRP is the minimum amount greater than the average MSRP**

```
SELECT productName, MSRP
FROM cm_products
WHERE MSRP > (SELECT AVG(MSRP) FROM cm_products)
```

```

AND MSRP = (
    SELECT MIN(MSRP)
    FROM cm_products
    WHERE MSRP > (SELECT AVG(MSRP) FROM cm_products)
)

```

productName	MSRP
Collectable Wooden Train	100.84

**20. List the Product Number, Name, Scale, Order Date, and number of days since the order date of all within the past 25 days. Name any headers appropriately.**

```

SELECT p.productCode AS Product_Number,
       p.productName AS Name,
       p.productScale AS Scale,
       o.orderDate AS Order_Date,
       DATEDIFF(o.requiredDate, o.orderDate) as Days_Since_Order
FROM cm_products p
JOIN cm_orderdetails od ON p.productCode = od.productCode
JOIN cm_orders o ON od.orderNumber = o.orderNumber
WHERE DATEDIFF(o.requiredDate, o.orderDate) <= 25

```

Product_Number	Name	Scale	Order_Date	Days_Since_Order
S10_1678	1969 Harley Davidson Ultimate Chopper	1:10	2020-02-24	8
S10_1678	1969 Harley Davidson Ultimate Chopper	1:10	2020-05-07	6
S10_1678	1969 Harley Davidson Ultimate Chopper	1:10	2020-07-01	9
S10_1678	1969 Harley Davidson Ultimate Chopper	1:10	2020-08-25	8
S10_1678	1969 Harley Davidson Ultimate Chopper	1:10	2020-10-10	9