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Practice SQL (44-53)

44. What is the name of the product(s) that makes us the most money (qty*price) across all orders for that product? Returns 1.

```sql
SELECT p.productname
FROM products p
WHERE (p.productcode) IN (
SELECT od.productcode
FROM orderdetails od
GROUP BY od.productcode
HAVING SUM(od.priceeach * od.quantityordered) IN (
SELECT MAX(total)
FROM (
SELECT SUM(priceeach * quantityordered) AS total
FROM orderdetails
GROUP BY productcode
) AS revenue
)
);
```

Output:

1. 1992 Ferrari 360 Spider red

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45. List the product lines and vendors for product lines which are supported by < 5 vendors. That is, there are < 5 vendors making products within that product line. Returns 3.

```sql
SELECT productLine, productVendor
FROM Products
WHERE productLine IN (
SELECT productLine FROM Products
GROUP BY productLine
HAVING count(productVendor) < 5);
```

Output:

1. Trains Carousel DieCast Legends
2. Trains Gearbox Collectibles
3. Trains Classic Metal Creations

46. List the product name of the products in the product line(s) with the largest number of products. Returns 38.

```sql
SELECT p.productname
FROM products p
WHERE p.productline IN (
SELECT productline
FROM products
GROUP BY productline
HAVING COUNT(*) = (
SELECT MAX(count)
FROM (
SELECT COUNT(*) as count
FROM products
GROUP BY productline
) AS count
)
);
```

Output:

1. 1952 Alpine Renault 1300
2. 1972 Alfa Romeo GTA
3. 1962 LanciaA Delta 16V
4. 1968 Ford Mustang
5. 2001 Ferrari Enzo
6. 1969 Corvair Monza
7. 1968 Dodge Charger
8. 1969 Ford Falcon
9. 1970 Plymouth Hemi Cuda
10. 1969 Dodge Charger
11. 1993 Mazda RX-7
12. 1965 Aston Martin DB5
13. 1948 Porsche 356-A Roadster
14. 1995 Honda Civic
15. 1998 Chrysler Plymouth Prowler
16. 1999 Indy 500 Monte Carlo SS
17. 1992 Ferrari 360 Spider red
18. 1985 Toyota Supra
19. 1969 Dodge Super Bee

20. 1976 Ford Gran Torino

21. 1948 Porsche Type 356 Roadster

22. 1970 Triumph Spitfire

23. 1957 Corvette Convertible

24. 1957 Ford Thunderbird

25. 1970 Chevy Chevelle SS 454

26. 1970 Dodge Coronet

27. 1966 Shelby Cobra 427 S/C

28. 1949 Jaguar XK 120

29. 1958 Chevy Corvette Limited Edition

30. 1952 Citroen-15CV

31. 1982 Lamborghini Diablo

32. 1969 Chevrolet Camaro Z28

33. 1971 Alpine Renault 1600s

34. 2002 Chevy Corvette

35. 1956 Porsche 356A Coupe

36. 1992 Porsche Cayenne Turbo Silver

37. 1961 Chevrolet Impala

38. 1982 Camaro Z28

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47. Find the first name and last name of all customer contacts whose customer is located in the same state as the San Francisco office. Returns 11.

```sql
SELECT contactfirstname, contactlastname
FROM customers
WHERE state = (
SELECT state
FROM offices
WHERE city = 'San Francisco'
);
```

Output:

1. Susan   Nelson
2. Julie   Murphy
3. Juri   Hashimoto
4. Julie   Young
5. Mary   Young

6. Valarie Thompson
7. Julie   Brown
8. Brian   Chandler
9. Sue   Frick
10. Steve Thompson
11. Sue   Taylor

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48. What is the name of the customer and salesperson of the highest priced order? The price of the order is the sum of the quantity ordered * the price each for all the items within that order. Returns 1.

```sql
SELECT c.customername, CONCAT(e.firstname, ' ', e.lastname) AS salesperson
FROM customers c
JOIN orders o ON c.customernumber = o.customernumber
JOIN employees e ON c.salesrepemployeenumber = e.employeenumber
JOIN (
SELECT od.ordernumber, SUM(od.quantityordered * od.priceeach) AS total_price
FROM orderdetails od
GROUP BY od.ordernumber
) AS ordertotals ON o.ordernumber = ordertotals.ordernumber
WHERE ordertotals.total_price = (
SELECT MAX(total_price)
FROM (
SELECT SUM(quantityordered * priceeach) AS total_price
FROM orderdetails
GROUP BY ordernumber
) AS total_order
);
```

Output:

1. Dragon Souveniers, Ltd.   Mami Nishi

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49. What is the order number and the cost of the order for the most expensive orders? Note that there could be more than one order which all happen to add up to the same cost, and that same cost could be the highest cost among all orders. The cost of an order is the sum of the quantity ordered * the price each for all the items within that order. Returns 1.

```
SELECT o.ordernumber, SUM(od.quantityordered * od.priceeach) AS order_cost
FROM orders o
JOIN orderdetails od ON o.ordernumber = od.ordernumber
GROUP BY o.ordernumber
HAVING SUM(od.quantityordered * od.priceeach) =
(
SELECT MAX(total_cost)
FROM
(
SELECT SUM(quantityordered * priceeach) AS total_cost
FROM orderdetails
GROUP BY ordernumber
) AS ordercost
);
```

Output:

ordernumber	order_cost
1	10165	67392.85

1.

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50. What is the name of the customer, the order number, and the total cost of the most
expensive orders? Returns 1.

```
SELECT c.customername, o.ordernumber, SUM(od.quantityordered * od.priceeach)
AS order_cost
FROM orders o
JOIN orderdetails od ON o.ordernumber = od.ordernumber
JOIN customers c ON c.customernumber = o.customernumber
GROUP BY c.customername, o.ordernumber
HAVING SUM(od.quantityordered * od.priceeach) =
(
SELECT MAX(total_cost)
FROM
(
SELECT SUM(quantityordered * priceeach) AS total_cost
FROM orderdetails
GROUP BY ordernumber
) AS ordercost
);
```

Output:

customername	ordernumber	order_cost
1 Dragon Souveniers, Ltd.	10165	67392.85

1.

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51. Report the sales representative's last name, their first name, and the total of all purchases made by all of that sales representative's customers, but only for those sales representatives whose total is the largest for all sales representatives. (1)

```
SELECT e.lastname, e.firstname, SUM(p.amount) AS total_purchases
FROM employees e
JOIN customers c ON c.salesrepemployeenumber = e.employeenumber
JOIN payments p ON p.customernumber = c.customernumber
GROUP BY e.lastname, e.firstname
HAVING SUM(p.amount) =
(
SELECT MAX(total_purchases)
FROM
(
SELECT SUM(p.amount) AS total_purchases
FROM employees e
JOIN customers c ON c.salesrepemployeenumber = e.employeenumber
JOIN payments p ON p.customernumber = c.customernumber
GROUP BY e.lastname, e.firstname
) AS ordercost
);
```

Output:

lastname	firstname	total_purchases
1 Hernandez	Gerard	1112003.81

1.

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52. List the names of the customers who have ordered at least one product with the name "Ford" in it, that "Dragon Souveniers, Ltd." has also ordered. List them in reverse alphabetical order, and do not consider the case of the letters in the customer name in the ordering. Show each customer no more than once. Returns 61.

```
SELECT customername
FROM (
SELECT DISTINCT c.customername
FROM customers c
```

```sql
JOIN orders o ON c.customernumber = o.customernumber
JOIN orderdetails od ON o.ordernumber = od.ordernumber
WHERE od.productcode IN (
SELECT od2.productcode
FROM customers c2
JOIN orders o2 ON c2.customernumber = o2.customernumber
JOIN orderdetails od2 ON o2.ordernumber = od2.ordernumber
JOIN products p2 ON od2.productcode = p2.productcode
WHERE c2.customername = 'Dragon Souveniers, Ltd.'
AND p2.productname LIKE '%Ford%'
)
) subquery
ORDER BY LOWER(customername) DESC;
```

Output:

1. West Coast Collectables Co.
2. Volvo Model Replicas, Co
3. Tokyo Collectables, Ltd
4. The Sharp Gifts Warehouse
5. Technics Stores Inc.
6. Super Scale Inc.
7. Suominen Souveniers
8. Stylish Desk Decors, Co.
9. Souveniers And Things Co.
10. Scandinavian Gift Ideas
11. Saveley & Henriot, Co.
12. Salzburg Collectables
13. Rovelli Gifts
14. Reims Collectables
15. Québec Home Shopping Network
16. Petit Auto
17. Oulu Toy Supplies, Inc.
18. Online Diecast Creations Co.
19. Muscle Machine Inc
20. Mini Wheels Co.
21. Mini Gifts Distributors Ltd.
22. Mini Creations Ltd.
23. Mini Auto Werke

24. Marta's Replicas Co.
25. Land of Toys Inc.
26. La Rochelle Gifts
27. La Corne D'abondance, Co.
28. L'ordine Souveniers
29. Kelly's Gift Shop
30. Iberia Gift Imports, Corp.
31. Heintze Collectables
32. Handji Gifts& Co
33. GiftsForHim.com
34. giftsbymail.co.uk
35. Gifts4AllAges.com
36. Gift Depot Inc.
37. FunGiftIdeas.com
38. Euro+ Shopping Channel
39. Dragon Souveniers, Ltd.
40. Down Under Souveniers, Inc
41. Diecast Collectables
42. Diecast Classics Inc.
43. Danish Wholesale Imports
44. Corrida Auto Replicas, Ltd
45. Corporate Gift Ideas Co.
46. Collectables For Less Inc.
47. Clover Collections, Co.
48. Classic Legends Inc.
49. Classic Gift Ideas, Inc
50. Canadian Gift Exchange Network
51. Cambridge Collectables Co.
52. CAF Imports
53. Blauer See Auto, Co.
54. Baane Mini Imports
55. AV Stores, Co.
56. Auto Associés & Cie.
57. Australian Gift Network, Co
58. Australian Collectors, Co.
59. Australian Collectables, Ltd
60. Anna's Decorations, Ltd

61. Amica Models & Co.

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53. List the product name, the MSRP of that product, and the average MSRP for all products but only for those products have an MSRP within 5% of the average MSRP across all products. Order by the product MSRP. If we denote the average MSRP as aMSRP, then the % difference between a particular MSRP and aMSRP is 100 * (MSRP - aMSRP)/aMSRP. Returns 14.

```
SELECT p.productname, p.msrp, (SELECT AVG(msrp) FROM products) AS
average_msrp
FROM products p
WHERE ABS(p.msrp - (SELECT AVG(msrp) FROM products)) / (SELECT AVG(msrp)
FROM products) <= 0.05
ORDER BY p.msrp;
```

Output:
1. 1969 Harley Davidson Ultimate Chopper   95.70   100.4387272727272727
2. 1980's GM Manhattan Express   96.31   100.4387272727272727
3. 1936 Chrysler Airflow 97.39   100.4387272727272727
4. 1917 Maxwell Touring Car   99.21   100.4387272727272727
5. The Queen Mary   99.31   100.4387272727272727
6. America West Airlines B757-200   99.72   100.4387272727272727
7. 1997 BMW F650 ST   99.89   100.4387272727272727
8. The Titanic   100.17 100.4387272727272727
9. Collectable Wooden Train   100.84 100.4387272727272727
10. 1982 Camaro Z28   101.15 100.4387272727272727
11. 1913 Ford Model T Speedster   101.31 100.4387272727272727
12. 1974 Ducati 350 Mk3 Desmo 102.05 100.4387272727272727
13. 1937 Lincoln Berline   102.74 100.4387272727272727
14. 18th Century Vintage Horse Carriage   104.72 100.4387272727272727