54. List all the customers who have never made a payment on the same date as another customer. Order by customer name. (57)

SELECT DISTINCT c1.CUSTOMERNAME FROM CUSTOMERS c1

WHERE NOT EXISTS

(SELECT p1.paymentDate FROM Payments p2 INNER JOIN PAYMENTS p1 ON p1.paymentDate = p2.PAYMENTDATE

WHERE p1.CUSTOMERNUMBER != p2.CUSTOMERNUMBER AND c1.CUSTOMERNUMBER = p1.CUSTOMERNUMBER)

ORDER BY c1.CUSTOMERNAME;

Text

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Text

Description automatically generated with medium confidence

55. Find customers who have ordered the same thing. For instance, if ‘AV Stores, Co.’ orders a particular item five times, and ‘Land of Toys Inc.’ orders that same item 4 times, it only counts as one item that they have ordered in common. Find only those customer pairs who have ordered at least 40 different items in common (3).

SELECT Customer1.CUSTOMERNAME AS Customer1,

Customer2.CUSTOMERNAME AS Customer2 FROM

(SELECT c.CUSTOMERNAME, c.CUSTOMERNUMBER, od.PRODUCTCODE FROM Customers c

INNER JOIN Orders o ON c.CUSTOMERNUMBER = o.CUSTOMERNUMBER

INNER JOIN OrderDetails od ON o.ORDERNUMBER = od.ORDERNUMBER

GROUP BY c.CUSTOMERNAME, c.CUSTOMERNUMBER, od.PRODUCTCODE) AS Customer1

INNER JOIN

(SELECT c.CUSTOMERNAME, c.CUSTOMERNUMBER, od.PRODUCTCODE FROM Customers c

INNER JOIN Orders o ON c.CUSTOMERNUMBER = o.CUSTOMERNUMBER

INNER JOIN OrderDetails od ON o.ORDERNUMBER = od.ORDERNUMBER

GROUP BY c.CUSTOMERNAME, c.CUSTOMERNUMBER, od.PRODUCTCODE) AS Customer2

USING(productCode)

WHERE Customer1.CUSTOMERNUMBER < Customer2.CUSTOMERNUMBER

GROUP BY Customer1.CUSTOMERNAME, Customer2.CUSTOMERNAME,

Customer1.CUSTOMERNUMBER, Customer2.CUSTOMERNUMBER

HAVING COUNT(\*) > 40;

Graphical user interface, text, application

Description automatically generated

56. What is the manager who manages the greatest number of employees (2)

SELECT employeeNumber, lastName, firstName

FROM employees

WHERE employeeNumber IN

(

SELECT reportsto

FROM employees

GROUP BY reportsto

HAVING COUNT(employeeNumber) =

(

SELECT MAX(manager.noe)

FROM

(

SELECT reportsto,COUNT(employeeNumber) AS noe

FROM employees

GROUP BY reportsto

)AS manager

)

);

Graphical user interface

Description automatically generated

57. Select all employees and their manager who work for the manager that manages the greatest number of employee (12)

SELECT EmployeeNumber, LastName, FirstName FROM Employees

WHERE ReportsTo IN

(SELECT reportsTo FROM Employees

GROUP BY reportsTo HAVING COUNT(\*) =

(SELECT MAX(Manager.NumsManaged) FROM

(SELECT COUNT(\*) AS NumsManaged FROM EMPLOYEES

GROUP BY reportsTo)Manager));

A screenshot of a computer

Description automatically generated with medium confidence

58. List all pairs of employees that have the same last name. Make sure each combination is listed only once (5)

SELECT e1.firstName,e1.lastName,e2.firstName,e2.lastName

FROM employees e1 INNER JOIN employees e2

USING(lastName)

WHERE e1.firstName > e2.firstName;

Graphical user interface, text, application

Description automatically generated

59. Select the name of each of two customers who have made at least one payment on the same date as the other. Make sure that each pair of customers only appears once. (46)

SELECT c1.customernumber, c1.paymentdate, c2.customernumber, c2.paymentdate

FROM Payments c1 INNER JOIN Payments c2

USING (paymentdate)

WHERE c1.customernumber > c2.customerNumber;

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Description automatically generated with medium confidence

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Description automatically generated

60. Find customers that share the same state and country. The country must be one of the following: UK, Australia, Italy or Canada. Remember that not all countries have states at all, so you need to substitute a character sting like ‘N/A’ for the state in those cases so that you can compare the states. (15)

SELECT c1.CUSTOMERNAME AS Customer1, c2.CUSTOMERNAME AS Customer2, c1.country , c1.state FROM CUSTOMERS c1

INNER JOIN Customers c2 ON COALESCE(c2.state, 'N/A') = COALESCE(c1.state, 'N/A') AND

c1.COUNTRY = c2.COUNTRY

WHERE c1.COUNTRY IN ('UK', 'Australia', 'Italy', 'Canada')

AND c1.CUSTOMERNUMBER < c2.CUSTOMERNUMBER;

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Description automatically generated

61. Find all of the customers who have the same sales representative as some other customer, and either customer name has ‘Australian’ in it. List each of the customers sharing a sales representative, and the name of the sales representative. Order by the name of the first customer, then the second. Do not show any combination more than once. (9)

SELECT c1.CustomerName AS Customer1, c2.CUSTOMERNAME AS Customer2,

e.FIRSTNAME AS RepFirstName, e.LASTNAME AS RepLastName

FROM Customers c1 INNER JOIN Customers c2 ON c1.SALESREPEMPLOYEENUMBER = c2.SALESREPEMPLOYEENUMBER

INNER JOIN Employees e ON c1.SALESREPEMPLOYEENUMBER = e.EMPLOYEENUMBER

WHERE c1.CUSTOMERNUMBER != c2.CUSTOMERNUMBER AND

(c1.CUSTOMERNAME LIKE '%Australian%' OR c2.CUSTOMERNAME LIKE '%Australian%')

AND c1.CUSTOMERNUMBER < c2.CUSTOMERNUMBER

ORDER BY c1.CUSTOMERNAME, c2.CUSTOMERNAME;

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Description automatically generated