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Practice SQL (37-40, 42, 43)

37) List the name of all customers who didn't order in 2015 (78). Order by customer name.

```
SELECT c.customername FROM customers c
EXCEPT SELECT c.customername FROM customers c
JOIN Orders o ON c.customernumber = o.customernumber
WHERE EXTRACT(YEAR FROM o.orderDate) = 2015
ORDER BY customername;
```

Output:

1. American Souvenirs Inc
2. Amica Models & Co.
3. ANG Resellers
4. "Anton Designs, Ltd."
5. "Asian Shopping Network, Co"
6. "Asian Treasures, Inc."
7. Atelier graphique
8. "Australian Collectors, Co."
9. Auto-Moto Classics Inc.
10. Auto Associés & Cie.
11. "AV Stores, Co."
12. Baane Mini Imports
13. "Bavarian Collectables Imports, Co."
14. BG&E Collectables
15. "Blauer See Auto, Co."
16. CAF Imports
17. Cambridge Collectables Co.
18. Canadian Gift Exchange Network
19. "Classic Gift Ideas, Inc"
20. Classic Legends Inc.
21. "Clover Collections, Co."
22. Collectable Mini Designs Co.
23. "Corrida Auto Replicas, Ltd"
24. "Cramer Spezialitäten, Ltd"
25. Cruz & Sons Co.

26. Daedalus Designs Imports
27. Der Hund Imports
28. Diecast Collectables
29. "Double Decker Gift Stores, Ltd"
30. Enaco Distributors
31. "Feuer Online Stores, Inc"
32. "Franken Gifts, Co"
33. Frau da Collezione
34. Gift Ideas Corp.
35. giftsbymail.co.uk
36. Havel & Zbyszek Co
37. Heintze Collectables
38. Herkku Gifts
39. "Iberia Gift Imports, Corp."
40. "King Kong Collectables, Co."
41. Kommission Auto
42. "Kremlin Collectables, Co."
43. "La Corne D'abondance, Co."
44. Land of Toys Inc.
45. "Lisboa Souvenirs, Inc"
46. Marta's Replicas Co.
47. "Men 'R' US Retailers, Ltd."
48. Messner Shopping Network
49. Microscale Inc.
50. Mini Classics
51. Mini Wheels Co.
52. Mit Vergnügen & Co.
53. Motor Mint Distributors Inc.
54. Muscle Machine Inc
55. Natürlich Autos
56. "Norway Gifts By Mail, Co."
57. Online Diecast Creations Co.
58. Online Mini Collectables
59. Osaka Souvenirs Co.
60. Porto Imports Co.
61. Precious Collectables
62. "Raanan Stores, Inc"

63. Rovelli Gifts
64. "Royal Canadian Collectables, Ltd."
65. "SAR Distributors, Co"
66. "Saveley & Henriot, Co."
67. Schuyler Imports
68. Signal Collectibles Ltd.
69. Signal Gift Stores
70. Stuttgart Collectable Exchange
71. "Stylish Desk Decors, Co."
72. Super Scale Inc.
73. "Toms Spezialitäten, Ltd"
74. "Vida Sport, Ltd"
75. Vitachrome Inc.
76. "Volvo Model Replicas, Co"
77. Warburg Exchange
78. West Coast Collectables Co.

38) List all people that we deal with (employees and customer contacts). Display contact first name, contact last name, company name for the customers. For the employees, display their first name, last name, and just the literal 'Employee' for the employees. Returns 145 rows.

```
SELECT contactfirstname AS first_name, contactlastname AS last_name,  
customername AS company_name  
FROM customers UNION ALL  
SELECT firstname AS first_name, lastname AS last_name, 'Employee' AS  
company_name  
FROM employees  
ORDER BY first_name, last_name, company_name;
```

Output:

1. Adrian,Huxley,Souvenirs And Things Co.
2. Akiko,Shimamura,"Tokyo Collectables, Ltd"
3. Alejandra ,Camino,ANG Resellers
4. Alexander ,Feuer,"Feuer Online Stores, Inc"
5. Alexander ,Semenov,"Kremlin Collectables, Co."
6. Allen,Nelson,Collectables For Less Inc.
7. Andy,Fixter,Employee
8. Ann ,Brown,"Stylish Desk Decors, Co."

9. Anna,O'Hara,"Anna's Decorations, Ltd"
10. Annette ,Roulet,Alpha Cognac
11. Anthony,Bow,Employee
12. Armand,Kuger,"SAR Distributors, Co"
13. Arnold,Cruz,Cruz & Sons Co.
14. Barry,Jones,Employee
15. Ben,Calaghan,"Australian Gift Network, Co"
16. Bradley,Schuyler,Schuyler Imports
17. Braun,Urs,Precious Collectables
18. Brian,Chandler,"Men 'R' US Retailers, Ltd."
19. Brydey,Walker,"Asian Shopping Network, Co"
20. Carine ,Schmitt,Atelier graphique
21. Carmen,Anton,"Anton Designs, Ltd."
22. Catherine ,Dewey,Petit Auto
23. Christina ,Berglund,"Volvo Model Replicas, Co"
24. Dan,Lewis,Gift Ideas Corp.
25. Daniel,Da Silva,Lyon Souvenirs
26. Daniel ,Tonini,Auto Associés & Cie.
27. Dean,Cassidy,"Clover Collections, Co."
28. Diane,Murphy,Employee
29. Diego ,Freyre,Euro+ Shopping Channel
30. Dominique,Perrier,Auto Canal+ Petit
31. Dorothy,Young,Online Diecast Creations Co.
32. Ed,Harrison,BG&E Collectables
33. Eduardo ,Saavedra,Enaco Distributors
34. Elizabeth,Devon,"UK Collectables, Ltd."
35. Elizabeth ,Lincoln,"Royal Canadian Collectables, Ltd."
36. Eric,Natividad,"Dragon Souvenirs, Ltd."
37. Foon Yue,Tseng,Employee
38. Francisca,Cervantes,"Classic Gift Ideas, Inc"
39. Franco,Ricotti,Frau da Collezione
40. Frédérique ,Citeaux,Mini Caravy
41. Georg ,Pipps,Salzburg Collectables
42. George,Vanauf,Employee
43. Gerard,Bondur,Employee
44. Gerard,Hernandez,Employee
45. Giovanni ,Rovelli,Rovelli Gifts

46. Hanna ,Moos,Mit Vergnügen & Co.
47. Helen ,Bennett,giftsbymail.co.uk
48. Henriette ,Pfalzheim,"Toms Spezialitäten, Ltd"
49. Horst ,Kloss,Natürlich Autos
50. Isabel ,de Castro,Porto Imports Co.
51. Jan,Klaeboe,"Norway Gifts By Mail, Co."
52. Janine ,Labrune,La Rochelle Gifts
53. Jean,King,Signal Gift Stores
54. Jean ,Fresnière,Québec Home Shopping Network
55. Jeff,Firrelli,Employee
56. Jeff,Young,Muscle Machine Inc
57. Jerry,Tseng,Cambridge Collectables Co.
58. Jesus,Fernandez,CAF Imports
59. Jonas ,Bergulfsen,Baane Mini Imports
60. José Pedro ,Roel,"Iberia Gift Imports, Corp."
61. Julie,Brown,Corporate Gift Ideas Co.
62. Julie,Firrelli,Employee
63. Julie,King,Gift Depot Inc.
64. Julie,Murphy,Mini Wheels Co.
65. Julie,Young,Toys4GrownUps.com
66. Juri,Hashimoto,Technics Stores Inc.
67. Juri,Yoshido,Gifts4AllAges.com
68. Jytte ,Petersen,Danish Wholesale Imports
69. Kalle,Suominen,Suominen Souvenirs
70. Karin,Josephs,Kommission Auto
71. Keith,Franco,American Souvenirs Inc
72. Kelvin,Leong,Diecast Classics Inc.
73. Kwai,Lee,Land of Toys Inc.
74. Larry,Bott,Employee
75. Laurence ,Lebihan,Marseille Mini Autos
76. Leslie,Jennings,Employee
77. Leslie,Murphy,Super Scale Inc.
78. Leslie,Taylor,Auto-Moto Classics Inc.
79. Leslie,Thompson,Employee
80. Lino ,Rodriguez,"Lisboa Souvenirs, Inc"
81. Loui,Bondur,Employee
82. Mami,Nishi,Employee

83. Maria,Hernandez,Classic Legends Inc.
84. Marie,Bertrand,"La Corne D'abondance, Co."
85. Marta,Hernandez,Marta's Replicas Co.
86. Martha,Larsson,Scandinavian Gift Ideas
87. Martin,Gerard,Employee
88. Martín ,Sommer,"Corrida Auto Replicas, Ltd"
89. Martine ,Rancé,Daedalus Designs Imports
90. Mary,Patterson,Employee
91. Mary,Young,Boards & Toys Co.
92. Mary ,Saveley,"Saveley & Henriot, Co."
93. Matti,Karttunen,"Toys of Finland, Co."
94. Maurizio ,Moroni,L'ordine Souveniers
95. Mel,Andersen,Der Hund Imports
96. Michael,Donnermeyer,"Bavarian Collectables Imports, Co."
97. Michael,Frick,Vitachrome Inc.
98. Miguel,Barajas,Online Mini Collectables
99. Mihael,Holz,"Vida Sport, Ltd"
100. Mike,Gao,"King Kong Collectables, Co."
101. Mike,Graham,"Down Under Souveniers, Inc"
102. Mory,Kentary,Osaka Souveniers Co.
103. Palle,Ibsen,Heintze Collectables
104. Pamela,Castillo,Employee
105. Paolo ,Accorti,Amica Models & Co.
106. Pascale ,Cartrain,Royale Belge
107. Patricia ,McKenna,"Asian Treasures, Inc."
108. Paul ,Henriot,Reims Collectables
109. Peter,Ferguson,"Australian Collectors, Co."
110. Peter,Marsh,Employee
111. Peter ,Franken,"Franken Gifts, Co"
112. Philip ,Cramer,"Cramer Spezialitäten, Ltd"
113. Pirkko,Koskitalo,"Oulu Toy Supplies, Inc."
114. Raanan,"Altagar,G M","Raanan Stores, Inc"
115. Rachel,Ashworth,"AV Stores, Co."
116. Renate ,Messner,Messner Shopping Network
117. Rita ,Müller,Stuttgart Collectable Exchange
118. Roland,Keitel,"Blauer See Auto, Co."
119. Roland ,Mendel,Mini Auto Werke

120. Rosa,Salazar,Motor Mint Distributors Inc.
 121. Sarah,McRoy,"Extreme Desk Decorations, Ltd"
 122. Sean,Clenahan,"Australian Collectables, Ltd"
 123. Steve,Frick,Mini Classics
 124. Steve,Patterson,Employee
 125. Steve,Thompson,West Coast Collectables Co.
 126. Sue,Frick,The Sharp Gifts Warehouse
 127. Sue,Taylor,Signal Collectibles Ltd.
 128. Susan,Nelson,Mini Gifts Distributors Ltd.
 129. Sven ,Ottlieb,Warburg Exchange
 130. Thomas ,Smith,"Double Decker Gift Stores, Ltd"
 131. Tom,King,Employee
 132. Tony,Snowden,Kelly's Gift Shop
 133. Valarie,Franco,Diecast Collectables
 134. Valarie,Thompson,Collectable Mini Designs Co.
 135. Veysel,Oeztan,Herkku Gifts
 136. Violeta,Benitez,FunGiftIdeas.com
 137. Wales,Mackinlay,GiftsForHim.com
 138. Wendy,Victorino,Handji Gifts& Co
 139. William,Brown,Tekni Collectables Inc.
 140. William,Patterson,Employee
 141. Wing,Huang,Mini Creations Ltd.
 142. Yoshi ,Tamuri,Canadian Gift Exchange Network
 143. Yoshimi,Kato,Employee
 144. Yu,Choi,Microscale Inc.
 145. Zbyszek ,Piestrzeniewicz,Havel & Zbyszek Co
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39) List the last name, first name, and employee number of all the employees who do not have any customers. Order by last name first, then the first name. (8).

```
SELECT e.lastname, e.firstname, e.employee_number FROM employees e
EXCEPT
SELECT e.lastname, e.firstname, e.employee_number FROM employees e
JOIN customers c ON e.employee_number = c.salesrep_employee_number
ORDER BY lastname, firstname;
```

Output:

1. Bondur, Gerard, 1102
 2. Bow, Anthony, 1143
 3. Firrelli, Jeff, 1076
 4. Kato, Yoshimi, 1625
 5. King, Tom, 1619
 6. Murphy, Diane, 1002
 7. Patterson, Mary, 1056
 8. Patterson, William, 1088
-

40) List the states and the country that the state is part of that have customers but not offices, offices but not customers, or both one or more customers and one or more offices all in one query. Designate which state is which with the string 'Customer', 'Office', or 'Both'. If a state falls into the "Both" category, do not list it as a Customer or an Office state. Order by the country, then the state. Give the category column (where you list 'Customer', 'Office', or 'Both') a header of "Category" and exclude any entries in which the state is null. (19)

```
SELECT state, country, 'Customer' AS Category FROM customers
WHERE state IS NOT NULL AND state NOT IN (SELECT state FROM offices WHERE
state IS NOT NULL)
UNION
SELECT state, country, 'Office' AS Category FROM offices
WHERE state IS NOT NULL AND state NOT IN (SELECT state FROM customers WHERE
state IS NOT NULL)
UNION
SELECT c.state, c.country, 'Both' AS Category FROM customers c
JOIN offices o ON c.state = o.state AND c.country = o.country WHERE c.state
IS NOT NULL
ORDER BY country, state;
```

Output:

1. NSW Australia Customer
2. Queensland Australia Customer
3. Victoria Australia Customer
4. BC Canada Customer
5. Québec Canada Customer
6. Co. Cork Ireland Customer
7. Chiyoda-Ku Japan Office
8. Osaka Japan Customer

9. Tokyo Japan Customer
 10. Pretoria South Africa Customer
 11. Isle of Wight UK Customer
 12. CA USA Both
 13. CT USA Customer
 14. MA USA Both
 15. NH USA Customer
 16. NJ USA Customer
 17. NV USA Customer
 18. NY USA Both
 19. PA USA Customer
-

42) List the customer's name of any customer who ordered any products from either of the two product lines 'Trains' or 'Trucks and Buses'. Do not use an "or". Instead perform a union. Order by the customer's name. (61)

```
SELECT c.customername FROM customers c
JOIN orders o ON c.customernumber = o.customernumber
JOIN orderdetails od ON o.ordernumber = od.ordernumber
JOIN products p ON od.productcode = p.productcode WHERE p.productline =
'Trains'
UNION
SELECT c.customername FROM customers c
JOIN orders o ON c.customernumber = o.customernumber
JOIN orderdetails od ON o.ordernumber = od.ordernumber
JOIN products p ON od.productcode = p.productcode WHERE p.productline =
'Trucks and Buses'
ORDER BY customername;
```

Output:

1. Amica Models & Co.
2. Anna's Decorations, Ltd
3. Australian Collectors, Co.
4. Australian Gift Network, Co
5. Auto Associés & Cie.
6. AV Stores, Co.
7. Baane Mini Imports
8. Blauer See Auto, Co.

9. CAF Imports
10. Cambridge Collectables Co.
11. Canadian Gift Exchange Network
12. Classic Gift Ideas, Inc
13. Classic Legends Inc.
14. Clover Collections, Co.
15. Corporate Gift Ideas Co.
16. Corrida Auto Replicas, Ltd
17. Danish Wholesale Imports
18. Diecast Classics Inc.
19. Diecast Collectables
20. Down Under Souvenirs, Inc
21. Dragon Souvenirs, Ltd.
22. Euro+ Shopping Channel
23. Frau da Collezione
24. Gift Depot Inc.
25. Gifts4AllAges.com
26. giftsbymail.co.uk
27. GiftsForHim.com
28. Handji Gifts& Co
29. Heintze Collectables
30. Iberia Gift Imports, Corp.
31. Kelly's Gift Shop
32. L'ordine Souvenirs
33. La Corne D'abondance, Co.
34. La Rochelle Gifts
35. Land of Toys Inc.
36. Lyon Souvenirs
37. Marta's Replicas Co.
38. Mini Auto Werke
39. Mini Classics
40. Mini Creations Ltd.
41. Mini Gifts Distributors Ltd.
42. Mini Wheels Co.
43. Muscle Machine Inc
44. Online Diecast Creations Co.
45. Oulu Toy Supplies, Inc.

46. Petit Auto
 47. Québec Home Shopping Network
 48. Reims Collectables
 49. Royale Belge
 50. Saveley & Henriot, Co.
 51. Scandinavian Gift Ideas
 52. Signal Collectibles Ltd.
 53. Souvenirs And Things Co.
 54. Stylish Desk Decors, Co.
 55. Suominen Souvenirs
 56. Super Scale Inc.
 57. Technics Stores Inc.
 58. Tokyo Collectables, Ltd
 59. Vitachrome Inc.
 60. Volvo Model Replicas, Co
 61. West Coast Collectables Co.
-

43) List the name of all customers, their state, and country who do not live in the same state and country with any other customer. Do not use a count for this exercise. Order by the customer name. This returns 18 if you convert the null states to something like 'N/A' and it returns 10 if you exclude all customers with no state value at all.

(I choose to exclude all customers with no state value at all)

```
SELECT c1.customername, c1.state, c1.country FROM customers c1
WHERE c1.state IS NOT NULL
EXCEPT
SELECT c1.customername, c1.state, c1.country FROM customers c1
JOIN customers c2 ON c1.state = c2.state AND c1.country = c2.country AND
c1.customernumber <> c2.customernumber
WHERE c1.state IS NOT NULL
ORDER BY customername;
```

Output:

1. Asian Treasures, Inc. Co. Cork Ireland
2. Australian Gift Network, Co Queensland Australia
3. giftsbymail.co.uk Isle of Wight UK
4. Online Diecast Creations Co. NH USA

5. Osaka Souvenirs Co. Osaka Japan
6. Québec Home Shopping Network Québec Canada
7. SAR Distributors, Co Pretoria South Africa
8. Signal Gift Stores NV USA
9. Tekni Collectables Inc. NJ USA
10. Tokyo Collectables, Ltd Tokyo Japan