# MySQL Query Problem Statements

Based on the classicmodels database schema, here are various query problems you can solve. I'll provide the problem statements without solutions so you can practice writing the SQL queries yourself.

## Customers Table Queries

1. List all customers with their full contact names (first and last name combined).

2. Find all customers from a specific country (e.g., USA).

3. Identify customers with credit limits above $100,000.

4. Find customers who don't have a sales representative assigned.

5. Count how many customers are in each country.

6. List customers sorted by their credit limit in descending order.

7. Find customers from cities that start with 'San'.

8. Identify customers with NULL values in addressLine2.

9. List customers along with their sales representative's employee number.

10. Find customers whose names contain 'Gift'.

## Employees Table Queries

11. List all employees with their full names (first and last name combined).

12. Find employees who report to a specific manager (by employee number).

13. Count how many employees work in each office.

14. List employees sorted by their job title.

15. Find employees with email addresses ending in '@classicmodelcars.com'.

16. Identify employees who are sales representatives.

17. List employees along with their office location (city).

18. Find employees who don't have anyone reporting to them.

19. Count how many employees report to each manager.

20. List employees and their managers' names (self-join required).

## Offices Table Queries

21. List all offices with their full addresses.

22. Find offices in a specific territory (e.g., EMEA).

23. Count how many offices are in each country.

24. List offices sorted by their phone numbers.

25. Find offices that don't have a state/province specified.

## Products Table Queries

26. List all products with their product lines.

27. Find products with quantity in stock less than 1000.

28. Identify products with a buy price higher than the MSRP.

29. Count how many products are in each product line.

30. List products sorted by their MSRP in descending order.

31. Find products whose names contain 'Ford'.

32. Calculate the total value of inventory for each product line.

33. List products that have been discontinued.

34. Find products with scale between 1:10 and 1:20.

35. Identify products with no description available.

## Orders Table Queries

36. List all orders with their statuses.

37. Find orders placed in a specific year (e.g., 2005).

38. Count how many orders were placed each month.

39. List orders sorted by order date in descending order.

40. Find orders with comments.

41. Identify orders that were shipped late (shipped date > required date).

42. Calculate the total number of orders per customer.

43. List orders that haven't been shipped yet.

44. Find orders with specific statuses (e.g., 'Shipped', 'Cancelled').

45. Calculate the average days between order date and shipped date.

## OrderDetails Table Queries

46. List all order details with product information.

47. Calculate the total amount for each order.

48. Find order details where the quantity ordered is more than 50.

49. Identify orders where the price each is less than the product's MSRP.

50. Calculate the total revenue from all orders.

51. List the top 10 best-selling products by quantity.

52. Find orders where the total amount exceeds $10,000.

53. Calculate the average order value per customer.

54. Identify products that have never been ordered.

55. List orders with more than 5 different products.

## Cross-Table Queries

56. List customers along with their total order amounts.

57. Find the top 5 customers by total purchase amount.

58. List employees with their total sales amounts.

59. Find the best-performing sales representative by revenue.

60. List products with the number of times they've been ordered.

61. Find customers who haven't placed any orders.

62. List orders with customer and employee information.

63. Find products that are ordered most frequently in each product line.

64. Calculate the average order value by country.

65. List customers with their favorite product (most ordered product).

## Advanced Analytical Queries

66. Calculate monthly sales trends.

67. Find customers with increasing order amounts year over year.

68. Identify products with declining sales.

69. Calculate customer lifetime value (total spend over time).

70. Find the most profitable products (highest margin).

71. Calculate employee sales performance compared to quota.

72. Identify seasonal sales patterns.

73. Find customers who might be at risk of churning (no recent orders).

74. Calculate product cross-selling opportunities.

75. Identify potential upselling opportunities based on customer purchase history.

These problems range from basic to advanced and cover all the tables in the classicmodels database. You can use them to practice writing SQL queries with SELECT statements, JOINs, GROUP BY, HAVING, subqueries, and other SQL features.