

# MySQL Query Questions

## 1. Basic Questions

1. Retrieve all records from the CarSales table.
2. Retrieve Make, Model, and SalePrice for all cars.
3. Retrieve all records where CountryName is 'United Kingdom'.
4. Retrieve all records where CountryName is 'United Kingdom' and SalePrice is greater than 90000.
5. Retrieve all records where Make is 'Rolls Royce' or Make is 'Aston Martin'.
6. Retrieve all records and order them by SalePrice in descending order.
7. Retrieve distinct Make values from the CarSales table.
8. Retrieve all records where Model starts with 'Silver'.
9. Retrieve all records where Region is either 'East Midlands' or 'Greater London Authority'.
10. Retrieve all records where SalePrice is between 80000 and 100000.
11. Retrieve all records where IsDealer is NULL.
12. Retrieve all records where TotalDiscount is NOT NULL.
13. Retrieve Make, Model, and the difference between SalePrice and CostPrice as Profit.
14. Retrieve the total SalePrice for all cars.
15. Retrieve the average SalePrice of cars.
16. Retrieve the count of cars sold per Make.
17. Retrieve the makes where the average SalePrice is greater than 90000.
18. Retrieve Make, Model, and the same for another car in the same CountryName.
19. Retrieve Make, Model, and the total number of cars sold for each Make.
20. Retrieve all records where SalePrice is greater than the average SalePrice of all cars.

## 2. Intermediate Questions

1. Retrieve all records where SalePrice is greater than CostPrice.

2. Retrieve all records where CountryName is 'United Kingdom' and SalePrice is greater than 80000.
3. Retrieve all records where Make is 'Rolls Royce' or Color is 'Red'.
4. Retrieve all records and order them by CountryName and SalePrice in descending order.
5. Retrieve distinct Color values from the CarSales table.
6. Retrieve all records where Make contains 'Royce'.
7. Retrieve all records where Make is either 'Aston Martin' or 'Rolls Royce'.
8. Retrieve all records where InvoiceDate is between '2012-01-01' and '2012-12-31'.
9. Retrieve all records where IsDealer is NULL.
10. Retrieve all records where TotalDiscount is NOT NULL.
11. Retrieve Make, Model, and the sum of SalePrice and DeliveryCharge as TotalCost.
12. Retrieve the top 10 most expensive cars based on SalePrice.
13. Retrieve all records where Model ends with 'Ghost'.
14. Retrieve all records where the length of Region is greater than 10 characters.
15. Retrieve all records where the difference between SalePrice and CostPrice is greater than 10000.
16. Retrieve all records where CountryName is not 'United Kingdom'.
17. Retrieve Make, Model, and calculate the profit (SalePrice - CostPrice) as Profit.
18. Retrieve all records where the year of InvoiceDate is 2012.
19. Retrieve all records where CountryName is 'United Kingdom' and (SalePrice > 80000 or Color = 'Red').
20. Retrieve Make and Model with all characters in uppercase.

### **3. Advanced Level Questions**

1. Retrieve all records where the SalePrice is greater than CostPrice and the TotalDiscount is greater than 500, but only if the Color is not 'Red'.
2. Retrieve all records where either the Make is 'Rolls Royce' and the SalePrice is greater than

90000, or the Make is 'Aston Martin' and the SalePrice is less than 100000.

3. Retrieve Make, Model, and SalePrice, but only for records where the difference between SalePrice and CostPrice is at least 20000, and TotalDiscount is less than or equal to 1000.

4. Retrieve Make, Model, and Color where the Model starts with 'Silver' and the Color is in uppercase.

5. Retrieve all records where the InvoiceDate is within the year 2012, and the DeliveryCharge is between 500 and 1500.

6. Retrieve all records and order them by CountryName, Make, and SalePrice in descending order.

7. Retrieve Make, Model, and a new column PriceCategory that categorizes cars as 'High' if SalePrice is above 100000, 'Medium' if between 50000 and 100000, and 'Low' if below 50000.

8. Retrieve all records where the length of Make is greater than 5 and Color contains the substring 'Yellow'.

9. Retrieve Make, Model, and calculate a new column NetProfit as  $(\text{SalePrice} - \text{CostPrice} - \text{DeliveryCharge})$ , but only for records where NetProfit is positive.

10. Retrieve all records where Make is not 'Rolls Royce' and SalePrice is not between 80000 and 100000.

11. Retrieve all records where IsDealer is NULL and the SalePrice minus TotalDiscount is greater than 85000.

12. Retrieve Make, Model, and the rounded value of SalePrice to the nearest thousand.

13. Retrieve Make and Model with Model converted to lowercase and concatenated with the string '\_model'.

14. Retrieve all records where InvoiceNumber contains exactly one digit followed by a letter.

15. Retrieve all records where SalePrice is greater than CostPrice and (Make is 'Aston Martin' or Make is 'Rolls Royce'), but exclude records where Color is 'Blue'.

16. Retrieve all records where the sum of SalePrice and DeliveryCharge is less than 100000, and CountryName is 'United Kingdom'.

17. Retrieve all records where SalePrice falls into different categories using CASE: 'Expensive' if

above 90000, 'Affordable' if between 50000 and 90000, and 'Cheap' if below 50000.

18. Retrieve all records where the month of InvoiceDate is January, and Model contains the letter 'S'.

19. Retrieve all records and order them by a custom order: SalePrice descending for 'Aston Martin' and ascending for 'Rolls Royce'.

20. Retrieve Make, Model, and a new column DiscountedPrice which is SalePrice minus TotalDiscount, but if TotalDiscount is NULL, treat it as 0.