

SQL Practice Questions and Activities

1. Basic SQL Queries

- 1.1. Write a query to select all records from the 'sales' table.
- 1.2. Write a query to select only the 'CustomerName' and 'OrderDate' columns.
- 1.3. Write a query to select unique 'ProductName' values.
- 1.4. Write a query to filter records where 'Region' is 'North'.
- 1.5. Write a query to sort the results by 'OrderDate' in descending order.

2. Aggregation Functions

- 2.1. Write a query to calculate the total sales ('TotalAmount') for each region.
- 2.2. Write a query to find the average 'Price' of products sold.
- 2.3. Write a query to count the number of orders made by each customer.
- 2.4. Write a query to find the maximum and minimum 'TotalAmount' for all orders.
- 2.5. Write a query to sum the 'Quantity' of all products sold.

3. Joining Tables

- 3.1. Write a query to join the 'sales' table with a 'customers' table on 'CustomerID'.
- 3.2. Write a query to perform an inner join between 'sales' and 'products' tables on 'ProductID'.
- 3.3. Write a query to perform a left join between 'sales' and 'regions' tables.
- 3.4. Write a query to join multiple tables: 'sales', 'customers', and 'products'.
- 3.5. Write a query to find orders that have no matching 'CustomerID' in the 'customers' table.

4. Subqueries

- 4.1. Write a query to find all customers who have placed orders worth more than the average 'TotalAmount'.

- 4.2. Write a query to select products whose price is higher than the average price of all products.
- 4.3. Write a query to find the second-highest 'TotalAmount' in the sales records.
- 4.4. Write a query to list customers who have placed the most orders.
- 4.5. Write a query to find the total sales in the region with the highest total sales.

5. Advanced SQL Queries

- 5.1. Write a query to calculate the cumulative total sales over time.
- 5.2. Write a query to rank customers based on the total amount they spent.
- 5.3. Write a query to find the percentage contribution of each product to the total sales.
- 5.4. Write a query to pivot the data by 'Region' and 'ProductName' to show total sales.
- 5.5. Write a query to update the 'Price' of all products by a 10% increase.