



Topic: SQL, Database Schema

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Important Notes:

All queries should be submitted in a sql file with the query number as the file name. set prefix as 3-2 to differentiate the query file for the day.

The query definition should be in this file.

Case 1

Create a table called "customers" with the following columns: id (integer, primary key), name (text), email (text), and created_at (timestamp).

Insert the following data into the "customers" table:

```
-----  
id    name email      created_at  
1     John Smith    johnsmith@gmail.com 2022-01-01 10:00:00  
2     Jane Doe     janedoe@yahoo.com   2022-01-02 11:00:00  
3     Bob Johnson   bobjohnson@hotmail.com 2022-01-03 12:00:00  
4     Sarah Lee    sarahlee@gmail.com   2022-01-04 13:00:00  
5     David Kim     davidkim@yahoo.com   2022-01-05 14:00:00  
-----
```

1. Write a query that selects all customers whose email address ends with "@gmail.com".
2. Write a query that selects the customer with the earliest created_at date.
3. Write a query that selects the name and email of customers who were created on or after January 3, 2022.
4. Write a query that updates the email address of the customer with id=5 to "davidkim@gmail.com".
5. Write a query that deletes the customer with id=2.
6. Write a query that calculates the total number of customers in the "customers" table.

Case 2

Consider the following table structure for a store's inventory:

```
CREATE TABLE inventory (  
    id INT PRIMARY KEY,  
    name VARCHAR(255),  
    quantity INT,  
    price DECIMAL(10,2),  
    category VARCHAR(50)  
);
```

Write a query to retrieve the name and price of all items in the inventory where the quantity is greater than 0 and the category is 'electronics', sorted in descending order by price.

Case 3

Consider the following table structure for a sales database:

```
CREATE TABLE sales (  
    id INT PRIMARY KEY,  
    date DATE,  
    customer_id INT,  
    product_id INT,  
    quantity INT,  
    total_price DECIMAL(10,2)  
);
```

Write a query to retrieve the total sales for each month in the year 2021, sorted in ascending order by month.