

## 1. Question: Table Name: sample

Find the second highest salary from the employees table.

Sample Table: employees

employee_id	name	salary
1	Alice	50000
2	Bob	60000
3	Charlie	70000
4	David	80000
5	Eve	90000

Expected Output

second_highest_salary
80000

## 2. Question: Table Name: employee

Retrieve all departments with more than 10 employees.

Sample Tables: employees and departments

employees

employee_id	name	department_id
1	Alice	1
2	Bob	1
3	Charlie	2
4	David	2
5	Eve	3
6	Frank	1
7	Grace	2
8	Hannah	2
9	Ian	3
10	Jack	1
11	Karen	2
12	Leo	3
13	Mike	1

departments

department_id	department_name
1	HR

2	Engineering
3	Sales

### Expected Output

department_id	department_name
1	HR
2	Engineering

### 3. Question: Table Name: employee

Get the employees who have the highest salary in each department.

Sample Tables: employees and departments

employees

employee_id	name	department_id	salary
1	Alice	1	50000
2	Bob	1	60000
3	Charlie	2	70000
4	David	2	80000
5	Eve	3	90000
6	Frank	1	65000
7	Grace	2	75000
8	Hannah	2	85000
9	Ian	3	95000
10	Jack	1	70000
11	Karen	2	82000
12	Leo	3	88000
13	Mike	1	75000

departments

department_id	department_name
1	HR
2	Engineering
3	Sales

### Expected Output

department_id	employee_id	name	salary
1	13	Mike	75000
2	8	Hannah	85000
3	9	Ian	95000

#### 4. Question: Table Name: sales

Calculate the cumulative sum of sales for each employee, ordered by date.

Sample Table: sales

sale_id	employee_id	sale_date	amount
1	1	1/1/2024	1000
2	1	1/5/2024	1500
3	2	1/1/2024	2000
4	2	1/7/2024	1000
5	1	1/10/2024	2000
6	2	1/15/2024	1500

Expected Output

employee_id	sale_date	amount	cumulative_sum
1	1/1/2024	1000	1000
1	1/5/2024	1500	2500
1	1/10/2024	2000	4500
2	1/1/2024	2000	2000
2	1/7/2024	1000	3000
2	1/15/2024	1500	4500

#### 5. Question: Table Name: orders

List all employees who have not placed any orders.

Sample Tables: employees and orders

employees

employee_id	name
1	Alice
2	Bob
3	Charlie
4	David

orders

order_id	employee_id	order_date
1	1	1/1/2024
2	2	1/5/2024
3	2	1/10/2024

Expected Output

employee_id	name
3	Charlie
4	David

## 6. Question: Table Name: sales

Identify the top three products by total sales.

Sample Tables: sales and products

sales

sale_id	product_id	amount
1	1	1000
2	2	1500
3	1	2000
4	3	1000
5	2	2000
6	3	1500
7	1	2500
8	3	2000
9	2	3000
10	1	4000

products

product_id	product_name
1	Product A
2	Product B
3	Product C

Expected Output

product_id	product_name	total_sales
1	Product A	9500
2	Product B	6500
3	Product C	4500

## 7. Question: Table Name: sales

Find the most popular product category in each region.

Sample Tables: sales, products, product\_categories, and regions

sales

sale_id	product_id	region_id	amount
1	1	1	1000
2	2	1	1500
3	1	2	2000
4	3	2	1000
5	2	3	2000
6	3	3	1500
7	1	1	2500
8	3	2	2000
9	2	1	3000
10	1	2	4000

products

product_id	product_name
1	Product A
2	Product B
3	Product C

product\_categories

product_id	category_id
1	1
2	2
3	1

regions

region_id	region_name
1	North
2	South
3	East

categories

category_id	category_name
1	Electronics
2	Furniture

Expected Output

region_id	region_name	category_name
1	North	Electronics
2	South	Electronics
3	East	Furniture

## 8. Question: Table Name: orders

Calculate the average order value per customer.

Sample Tables: orders and customers

orders

order_id	customer_id	order_date	amount
1	1	1/1/2024	1000
2	2	1/5/2024	1500
3	1	1/10/2024	2000
4	3	1/15/2024	1000
5	2	1/20/2024	2000
6	3	1/25/2024	1500
7	1	1/30/2024	2500

customers

customer_id	customer_name
1	Alice
2	Bob
3	Charlie

Expected Output

customer_id	customer_name	average_order_value
1	Alice	1833.33
2	Bob	1750
3	Charlie	1250

## 9. Question: Table Name: orders

List all orders that include more than five distinct products.

Sample Tables: orders and order\_details

orders

order_id	customer_id	order_date
1	1	1/1/2024
2	2	1/5/2024
3	1	1/10/2024
4	3	1/15/2024
5	2	1/20/2024

### order\_details

order_detail_id	order_id	product_id
1	1	1
2	1	2
3	1	3
4	1	4
5	1	5
6	1	6
7	2	1
8	2	2
9	2	3
10	2	4
11	3	1
12	3	2
13	3	3
14	4	1
15	4	2
16	5	1
17	5	2

### Expected Output

order\_id

1

### 10. Question: Table Name: orders

Find customers who have placed orders every month for the last year.

Sample Tables: orders and customers

### orders

order_id	customer_id	order_date
1	1	1/1/2023
2	1	2/1/2023
3	1	3/1/2023
4	1	4/1/2023
5	1	5/1/2023
6	1	6/1/2023
7	1	7/1/2023
8	1	8/1/2023
9	1	9/1/2023
10	1	10/1/2023

11	1	11/1/2023
12	1	12/1/2023
13	2	1/1/2023
14	2	3/1/2023
15	2	5/1/2023
16	2	7/1/2023
17	2	9/1/2023
18	2	11/1/2023

customers

customer_id	customer_name
1	Alice
2	Bob

Expected Output

customer_id	customer_name
1	Alice

## 11. Question: Table Name: orders

Get the top three customers by total order value.

Sample Tables: orders and customers

orders

order_id	customer_id	order_date	amount
1	1	1/1/2024	1000
2	2	1/5/2024	1500
3	1	1/10/2024	2000
4	3	1/15/2024	1000
5	2	1/20/2024	2000
6	3	1/25/2024	1500
7	1	1/30/2024	2500
8	3	2/1/2024	2000
9	2	2/5/2024	3000
10	1	2/10/2024	4000

customers

customer_id	customer_name
1	Alice
2	Bob
3	Charlie



### Expected Output

customer_id	customer_name	total_order_value
1	Alice	9500
2	Bob	6500
3	Charlie	4500

### 12. Question: Table Name: orders

Retrieve the last order date for each customer.

Sample Tables: orders and customers

orders

order_id	customer_id	order_date
1	1	1/1/2024
2	2	1/5/2024
3	1	1/10/2024
4	3	1/15/2024
5	2	1/20/2024
6	3	1/25/2024
7	1	1/30/2024
8	3	2/1/2024
9	2	2/5/2024
10	1	2/10/2024

customers

customer_id	customer_name
1	Alice
2	Bob
3	Charlie

### Expected Output

customer_id	customer_name	last_order_date
1	Alice	2/10/2024
2	Bob	2/5/2024
3	Charlie	2/1/2024

### 13. Question: Table Name: products

Find products that were never ordered.

### Sample Tables: products and order\_details

#### products

product_id	product_name
1	Product A
2	Product B
3	Product C
4	Product D

#### order\_details

order_detail_id	order_id	product_id
1	1	1
2	1	2
3	1	3
4	2	1
5	2	2
6	3	1

#### Expected Output

product_id	product_name
4	Product D

### 14. Question: Table Name: employees

Identify employees who have not been assigned to any project.

#### Sample Tables: employees and projects

#### employees

employee_id	name
1	Alice
2	Bob
3	Charlie
4	David

#### projects

project_id	employee_id	project_name
1	1	Project A
2	2	Project B
3	1	Project C
4	3	Project D

### Expected Output

employee_id	name
4	David

### 15. Question: Table Name: employees

Find the highest-paid employee in each department.

Sample Tables: employees and departments

employees

employee_id	name	department_id	salary
1	Alice	1	50000
2	Bob	1	60000
3	Charlie	2	70000
4	David	2	80000
5	Eve	3	90000
6	Frank	1	65000
7	Grace	2	75000
8	Hannah	2	85000
9	Ian	3	95000
10	Jack	1	70000
11	Karen	2	82000
12	Leo	3	88000
13	Mike	1	75000

departments

department_id	department_name
1	HR
2	Engineering
3	Sales

### Expected Output

department_id	department_name	highest_paid_employee	salary
1	HR	Mike	75000
2	Engineering	Hannah	85000
3	Sales	Ian	95000

### 16. Question: Table Name: sales

Calculate the total sales for each product in each quarter.

### Sample Tables: sales and products

#### sales

sale_id	product_id	sale_date	amount
1	1	1/1/2024	1000
2	2	1/5/2024	1500
3	1	4/10/2024	2000
4	3	4/15/2024	1000
5	2	7/20/2024	2000
6	3	7/25/2024	1500
7	1	10/30/2024	2500

#### products

product_id	product_name
1	Product A
2	Product B
3	Product C

### Expected Output

product_id	product_name	quarter	total_sales
1	Product A	Q1	1000
1	Product A	Q2	2000
1	Product A	Q4	2500
2	Product B	Q1	1500
2	Product B	Q3	2000
3	Product C	Q2	1000
3	Product C	Q3	1500

## 17. Question: Table Name: orders

List all customers who have not placed any orders in the last six months.

### Sample Tables: orders and customers

#### orders

order_id	customer_id	order_date
1	1	1/1/2023
2	2	1/5/2023
3	1	1/10/2023
4	3	1/15/2023

5	2	1/20/2023
6	3	1/25/2023
7	1	1/30/2023

customers

customer_id	customer_name
1	Alice
2	Bob
3	Charlie

Expected Output

customer_id	customer_name
1	Alice
2	Bob
3	Charlie

## 18. Question: Table Name: orders

Find the total order value for each month.

Sample Tables: orders

orders

order_id	customer_id	order_date	amount
1	1	1/1/2024	1000
2	2	1/5/2024	1500
3	1	1/10/2024	2000
4	3	2/15/2024	1000
5	2	2/20/2024	2000
6	3	3/25/2024	1500
7	1	3/30/2024	2500

Expected Output

month	total_order_value
1	4500
2	3000
3	4000

## 19. Question: Table Name: orders

Retrieve customers with the highest total order value for each month.

## Sample Tables: orders and customers

### orders

order_id	customer_id	order_date	amount
1	1	1/1/2024	1000
2	2	1/5/2024	1500
3	1	1/10/2024	2000
4	3	2/15/2024	1000
5	2	2/20/2024	2000
6	3	3/25/2024	1500
7	1	3/30/2024	2500

### customers

customer_id	customer_name
1	Alice
2	Bob
3	Charlie

### Expected Output

month	customer_id	customer_name	total_order_value
1	1	Alice	3000
2	2	Bob	2000
3	1	Alice	2500

## 20. Question: Table Name: products

Find the most expensive product in each category.

### Sample Tables: products and product\_categories

#### products

product_id	product_name	category_id	price
1	Product A	1	1000
2	Product B	2	1500
3	Product C	1	2000
4	Product D	3	2500
5	Product E	2	3000
6	Product F	3	3500

#### product\_categories

category_id	category_name
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1	Electronics
2	Furniture
3	Clothing

### Expected Output

category_id	category_name	product_name	price
1	Electronics	Product C	2000
2	Furniture	Product E	3000
3	Clothing	Product F	3500

## 21. Question: Table Name: sales

Calculate the average sale value per product.

Sample Tables: sales and products

sales

sale_id	product_id	sale_date	amount
1	1	1/1/2024	1000
2	2	1/5/2024	1500
3	1	4/10/2024	2000
4	3	4/15/2024	1000
5	2	7/20/2024	2000
6	3	7/25/2024	1500
7	1	10/30/2024	2500

products

product_id	product_name
1	Product A
2	Product B
3	Product C

### Expected Output

product_id	product_name	average_sale_value
1	Product A	1833.33
2	Product B	1750
3	Product C	1250

## 22. Question: Table Name: employees

Identify employees with the longest tenure in each department.

## Sample Tables: employees and departments

### employees

employee_id	name	department_id	hire_date
1	Alice	1	42005
2	Bob	1	42370
3	Charlie	2	42736
4	David	2	43101
5	Eve	3	43466
6	Frank	1	42014
7	Grace	2	42887
8	Hannah	2	43160
9	Ian	3	43647
10	Jack	1	42491
11	Karen	2	43374
12	Leo	3	43770
13	Mike	1	42583

### departments

department_id	department_name
1	HR
2	Engineering
3	Sales

### Expected Output

department_id	department_name	employee_name	hire_date
1	HR	Alice	42005
2	Engineering	Charlie	42736
3	Sales	Eve	43466

## 23. Question: Table Name: sales

Calculate the monthly sales growth rate.

### Sample Tables: sales

#### sales

sale_id	product_id	sale_date	amount
1	1	1/1/2024	1000
2	2	1/5/2024	1500
3	1	2/10/2024	2000
4	3	2/15/2024	1000



5	2	3/20/2024	2000
6	3	3/25/2024	1500
7	1	4/30/2024	2500

### Expected Output

month	growth_rate
2	66.67%
3	20.00%
4	25.00%

## 24. Question: Table Name: customers

Find customers who have placed the highest number of orders.

Sample Tables: customers and orders

customers

customer_id	customer_name
1	Alice
2	Bob
3	Charlie

orders

order_id	customer_id	order_date
1	1	1/1/2024
2	2	1/5/2024
3	1	1/10/2024
4	3	1/15/2024
5	2	1/20/2024
6	3	1/25/2024
7	1	1/30/2024
8	3	2/1/2024
9	2	2/5/2024
10	1	2/10/2024

### Expected Output

customer_id	customer_name	order_count
1	Alice	4
3	Charlie	3
2	Bob	3

## 25. Question: Table Name: products

List products with the highest sales value.

Sample Tables: products and sales

products

product_id	product_name
1	Product A
2	Product B
3	Product C

sales

sale_id	product_id	sale_date	amount
1	1	1/1/2024	1000
2	2	1/5/2024	1500
3	1	4/10/2024	2000
4	3	4/15/2024	1000
5	2	7/20/2024	2000
6	3	7/25/2024	1500
7	1	10/30/2024	2500

Expected Output

product_id	product_name	total_sales
1	Product A	5500
2	Product B	3500
3	Product C	2500

## 26. Question: Table Name: employees

Find employees with the highest number of projects.

Sample Tables: employees and projects

employees

employee_id	name
1	Alice
2	Bob
3	Charlie
4	David

projects

project_id	employee_id	project_name
1	1	Project A
2	2	Project B
3	1	Project C
4	3	Project D
5	1	Project E
6	2	Project F
7	4	Project G
8	4	Project H
9	1	Project I
10	3	Project J

### Expected Output

employee_id	name	project_count
1	Alice	4
4	David	2
2	Bob	2
3	Charlie	2

## 27. Question: Table Name: sales

Calculate the total sales value for each product in each year.

### Sample Tables: sales and products

#### sales

sale_id	product_id	sale_date	amount
1	1	1/1/2023	1000
2	2	1/5/2023	1500
3	1	4/10/2023	2000
4	3	4/15/2023	1000
5	2	7/20/2024	2000
6	3	7/25/2024	1500
7	1	10/30/2024	2500

#### products

product_id	product_name
1	Product A
2	Product B
3	Product C

### Expected Output

product_id	product_name	year	total_sales
1	Product A	2023	3000
2	Product B	2023	1500
3	Product C	2023	1000
1	Product A	2024	2500
2	Product B	2024	2000
3	Product C	2024	1500

## 28. Question: Table Name: employees

Retrieve employees who joined in the last year.

Sample Tables: employees

employees

employee_id	name	hire_date
1	Alice	1/1/2023
2	Bob	1/1/2023
3	Charlie	1/1/2023
4	David	1/1/2023
5	Eve	1/1/2023
6	Frank	1/10/2023
7	Grace	1/10/2023
8	Hannah	1/10/2023
9	Ian	1/10/2023
10	Jack	1/10/2023
11	Karen	1/10/2023
12	Leo	1/10/2023
13	Mike	1/10/2023
14	Nancy	2/15/2023
15	Oscar	2/15/2023
16	Paul	2/15/2023
17	Quincy	2/15/2023
18	Rachel	2/15/2023
19	Sam	2/15/2023
20	Tom	2/15/2023
21	Uma	2/15/2023
22	Victor	2/15/2023
23	Wendy	2/15/2023
24	Xavier	2/15/2023
25	Yvonne	2/15/2023
26	Zack	2/15/2023

Expected Output

employee_id	name
1	Alice
2	Bob
3	Charlie
4	David
5	Eve
6	Frank
7	Grace
8	Hannah
9	Ian
10	Jack
11	Karen
12	Leo
13	Mike
14	Nancy
15	Oscar
16	Paul
17	Quincy
18	Rachel
19	Sam
20	Tom
21	Uma
22	Victor
23	Wendy
24	Xavier
25	Yvonne
26	Zack

## 29. Question: Table Name: orders

Calculate the average order value for each customer.

Sample Tables: orders and customers

orders

order_id	customer_id	order_date	amount
1	1	1/1/2024	1000
2	2	1/5/2024	1500
3	1	1/10/2024	2000
4	3	1/15/2024	1000
5	2	1/20/2024	2000
6	3	1/25/2024	1500
7	1	1/30/2024	2500
8	3	2/1/2024	2000
9	2	2/5/2024	2500

10	1	2/10/2024	3000
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customers

customer_id	customer_name
1	Alice
2	Bob
3	Charlie

Expected Output

customer_id	customer_name	average_order_value
1	Alice	2125
2	Bob	2000
3	Charlie	1500

### 30. Question: Table Name: products

Find the total number of products in each category.

Sample Tables: products and product\_categories

products

product_id	product_name	category_id
1	Product A	1
2	Product B	2
3	Product C	1
4	Product D	3
5	Product E	2
6	Product F	3

product\_categories

category_id	category_name
1	Electronics
2	Furniture
3	Clothing

Expected Output

category_id	category_name	product_count
1	Electronics	2
2	Furniture	2
3	Clothing	2

complete remaining  
ChatGPT

Certainly! Here are the remaining SQL questions formatted similarly:

### 31. Question: Table Name: employees

List employees who have not been assigned to any projects.

Sample Tables: employees and projects

employees

employee_id	name
1	Alice
2	Bob
3	Charlie
4	David
5	Eve

projects

project_id	employee_id	project_name
1	1	Project A
2	2	Project B
3	4	Project C
4	5	Project D

Expected Output

employee_id	name
3	Charlie

### 32. Question: Table Name: orders

Find orders where the order value is greater than the average order value across all orders.

Sample Tables: orders

orders

order_id	customer_id	order_date	amount
1	1	1/1/2024	1000
2	2	1/5/2024	1500
3	1	1/10/2024	2000
4	3	1/15/2024	1000

5	2	1/20/2024	2000
6	3	1/25/2024	1500
7	1	1/30/2024	2500
8	3	2/1/2024	2000
9	2	2/5/2024	2500
10	1	2/10/2024	3000

#### Expected Output

order_id	customer_id	order_date	amount
7	1	1/30/2024	2500
8	3	2/1/2024	2000
9	2	2/5/2024	2500
10	1	2/10/2024	3000

### 33. Question: Table Name: employees

Retrieve employees who have the same name as their department.

Sample Tables: employees and departments

employees

employee_id	name	department_id
1	HR	1
2	Bob	1
3	Charlie	2
4	David	2
5	Eve	3

departments

department_id	department_name
1	HR
2	Engineering
3	Sales

#### Expected Output

employee_id	name	department_name
1	HR	HR
3	Charlie	Engineering
5	Eve	Sales

### 34. Question: Table Name: sales



Find products with decreasing sales trend over the past three months.

Sample Tables: sales

sales

sale_id	product_id	sale_date	amount
1	1	1/1/2024	1000
2	2	1/5/2024	1500
3	1	2/10/2024	2000
4	3	2/15/2024	1000
5	2	3/20/2024	2000
6	3	3/25/2024	1500
7	1	4/30/2024	2500

Expected Output

product_id	product_name
1	Product A

### 35. Question: Table Name: customers

Find customers who have not placed any orders.

Sample Tables: customers and orders

customers

customer_id	customer_name
1	Alice
2	Bob
3	Charlie
4	David

orders

order_id	customer_id	order_date
1	1	1/1/2024
2	2	1/5/2024
3	1	1/10/2024
4	3	1/15/2024
5	2	1/20/2024
6	3	1/25/2024
7	1	1/30/2024
8	3	2/1/2024
9	2	2/5/2024

10	1	2/10/2024
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#### Expected Output

customer_id	customer_name
4	David

### 36. Question: Table Name: employees

Find employees who have worked on multiple projects in different departments.

Sample Tables: employees and projects

employees

employee_id	name
1	Alice
2	Bob
3	Charlie
4	David
5	Eve

projects

project_id	employee_id	department_id
1	1	1
2	2	1
3	3	2
4	4	3
5	5	1
6	1	2
7	2	3

#### Expected Output

employee_id	name
1	Alice
2	Bob

### 37. Question: Table Name: orders

Find customers who have placed orders on all weekdays (Monday to Friday).

Sample Tables: orders

orders

order_id	customer_id	order_date
1	1	7/15/2024
2	2	7/16/2024
3	1	7/17/2024
4	3	7/18/2024
5	2	7/19/2024
6	3	7/20/2024
7	1	7/21/2024
8	3	7/22/2024

Expected Output

customer_id
1

38. Question: Table Name: products

Find products that have never been sold.

Sample Tables: products and sales

products

product_id	product_name
1	Product A
2	Product B
3	Product C
4	Product D

sales

sale_id	product_id	sale_date
1	1	7/15/2024
2	2	7/16/2024
3	3	7/17/2024
4	1	7/18/2024
5	2	7/19/2024
6	3	7/20/2024
7	1	7/21/2024
8	3	7/22/2024

Expected Output

product_id	product_name
4	Product D

### 39. Question: Table Name: employees

Find employees who have been assigned to projects in all departments.

Sample Tables: employees and projects

employees

employee_id	name
1	Alice
2	Bob
3	Charlie
4	David
5	Eve

projects

project_id	employee_id	department_id
1	1	1
2	2	2
3	3	3
4	4	1
5	5	2
6	1	3

Expected Output

employee_id	name
1	Alice

### 40. Question: Table Name: orders

Find orders where the order date is the same as the customer's registration date.

Sample Tables: orders and customers

orders

order_id	customer_id	order_date
1	1	7/15/2024
2	2	7/16/2024
3	1	7/17/2024
4	3	7/18/2024
5	2	7/19/2024
6	3	7/20/2024

7	1	7/21/2024
8	3	7/22/2024

customers

customer_id	registration_date
1	7/15/2024
2	7/16/2024
3	7/20/2024

Expected Output

order_id	customer_id	order_date
1	1	7/15/2024
2	2	7/16/2024
6	3	7/20/2024

These questions should provide a comprehensive set of SQL challenges covering various scenarios. L

3.5

complete remaining  
ChatGPT

Certainly! Here are the remaining SQL questions formatted similarly:

**41. Question: Table Name: employees**

Find employees who have joined before any project started.

Sample Tables: employees and projects

employees

employee_id	name	hire_date
1	Alice	1/1/2023
2	Bob	2/1/2023
3	Charlie	3/1/2023
4	David	4/1/2023

projects

project_id	project_name	start_date
1	Project A	2/15/2023
2	Project B	4/1/2023
3	Project C	5/1/2023

### Expected Output

employee_id	name	hire_date
1	Alice	1/1/2023

### 42. Question: Table Name: sales

Find the top 3 products by sales amount in each year.

Sample Tables: sales and products

sales

sale_id	product_id	sale_date	amount
1	1	1/1/2023	1000
2	2	1/5/2023	1500
3	1	4/10/2023	2000
4	3	4/15/2023	1000
5	2	7/20/2024	2000
6	3	7/25/2024	1500
7	1	10/30/2024	2500

products

product_id	product_name
1	Product A
2	Product B
3	Product C

### Expected Output

product_id	product_name	year	total_sales
1	Product A	2023	3000
3	Product C	2023	2000
2	Product B	2023	1500
1	Product A	2024	2500
2	Product B	2024	2000
3	Product C	2024	1500

### 43. Question: Table Name: orders

Find customers who placed orders for the first time in 2024.

Sample Tables: orders and customers

orders

order_id	customer_id	order_date	amount
1	1	12/31/2023	1000
2	2	12/31/2023	1500
3	1	1/1/2024	2000
4	3	1/2/2024	1000
5	2	1/3/2024	2000
6	3	1/4/2024	1500
7	1	1/5/2024	2500
8	3	1/6/2024	2000
9	2	1/7/2024	2500
10	1	1/8/2024	3000

customers

customer_id	customer_name	registration_date
1	Alice	12/30/2023
2	Bob	12/31/2023
3	Charlie	1/1/2024

Expected Output

customer_id	customer_name
3	Charlie

#### 44. Question: Table Name: products

Find products that have been ordered by all customers.

Sample Tables: products, orders, and customers

products

product_id	product_name
1	Product A
2	Product B
3	Product C

orders

order_id	customer_id	order_date
1	1	7/15/2024
2	2	7/16/2024
3	1	7/17/2024
4	3	7/18/2024
5	2	7/19/2024

6	3	7/20/2024
7	1	7/21/2024
8	3	7/22/2024

customers

customer_id	customer_name
1	Alice
2	Bob
3	Charlie

Expected Output

product_id	product_name
No products	

#### 45. Question: Table Name: employees

Find employees who have worked on projects in all departments they are eligible for.

Sample Tables: employees, projects, and departments

employees

employee_id	name	department_id
1	Alice	1
2	Bob	2
3	Charlie	1
4	David	3
5	Eve	2

projects

project_id	employee_id	department_id
1	1	1
2	2	2
3	3	1
4	4	3
5	5	2
6	1	3

departments

department_id	department_name
1	HR
2	Engineering



3	Sales
---	-------

### Expected Output

employee_id	name	department_id
1	Alice	1

These SQL questions cover a range of scenarios and should provide ample practice for your SQL skill

3.5

complete remaining  
ChatGPT

Certainly! Here are the remaining SQL questions formatted similarly:

### 46. Question: Table Name: employees

Find employees who have not worked on any projects yet.

Sample Tables: employees and projects

employees

employee_id	name
1	Alice
2	Bob
3	Charlie
4	David
5	Eve

projects

project_id	employee_id	project_name
1	1	Project A
2	2	Project B
3	4	Project C
4	5	Project D

### Expected Output

employee_id	name
3	Charlie
4	David
5	Eve

### 47. Question: Table Name: orders

Find customers who have placed at least one order every month in the year 2024.

Sample Tables: orders

orders

order_id	customer_id	order_date	amount
1	1	1/1/2024	1000
2	2	1/5/2024	1500
3	1	2/10/2024	2000
4	3	2/15/2024	1000
5	2	3/20/2024	2000
6	3	3/25/2024	1500
7	1	4/30/2024	2500
8	3	5/1/2024	2000
9	2	6/5/2024	2500
10	1	6/10/2024	3000
11	2	7/15/2024	3500
12	3	7/20/2024	4000
13	1	8/25/2024	4500
14	2	8/30/2024	5000
15	3	9/5/2024	5500
16	1	9/10/2024	6000
17	2	10/15/2024	6500
18	3	10/20/2024	7000
19	1	11/25/2024	7500
20	2	11/30/2024	8000
21	3	12/5/2024	8500
22	1	12/10/2024	9000

Expected Output

customer_id
1
2
3

48. Question: Table Name: products

Find products that have been ordered by more than one customer.

Sample Tables: products, orders

products

product_id	product_name
1	Product A
2	Product B
3	Product C
4	Product D

orders

order_id	customer_id	product_id
1	1	1
2	2	2
3	1	3
4	3	1
5	2	2
6	3	3
7	1	1
8	3	2
9	2	3
10	1	1

Expected Output

product_id	product_name
1	Product A
2	Product B
3	Product C

#### 49. Question: Table Name: employees

Find employees who have worked on projects in all departments except one.

Sample Tables: employees, projects, departments

employees

employee_id	name
1	Alice
2	Bob
3	Charlie
4	David
5	Eve

projects

project_id	employee_id	department_id
1	1	1

2	2	2
3	3	1
4	4	3
5	5	2
6	1	3

**departments**

department_id	department_name
1	HR
2	Engineering
3	Sales

**Expected Output**

employee_id	name
1	Alice
2	Bob
5	Eve

## 50. Question: Table Name: employees

Find employees who have worked on projects in all departments they are eligible for, and their to

**Sample Tables: employees, projects, departments**

**employees**

employee_id	name
1	Alice
2	Bob
3	Charlie
4	David
5	Eve

**projects**

project_id	employee_id	department_id
1	1	1
2	2	2
3	3	1
4	4	3
5	5	2
6	1	3
7	1	2
8	2	3

9	3	2
10	4	1
11	5	3

departments

department_id	department_name
1	HR
2	Engineering
3	Sales

Expected Output

employee_id	name
1	Alice