Question 2: Given the following table employees with columns id, name, department, salary, and hire_date, write a query to retrieve all employees who are either in the 'Sales'

department with a salary greater than 50000 or in the 'HR' department hired after January 1, 2020.

```sql
SELECT *
FROM employees
WHERE (department = 'Sales' AND salary > 50000)
   OR (department = 'HR' AND hire_date > '2020-01-01');
```

Question 3: What is the output of the following query? SELECT name, salary FROM employees WHERE salary > 50000 AND (department = 'Sales' OR department = 'HR') ORDER BY department DESC, salary ASC;

salary > 50000 and in 'Sales' or 'HR' department:

- Alice (Sales, 60000)
- Eve (Sales, 55000)
- Mia (Sales, 62000)
- Sam (HR, 62000)

So required output is

name	salary
Sam	62000
Eve	55000
Alice	60000
Mia	62000

Question 4: Write a query to retrieve all employees with salaries between 40000 and 60000, excluding those in the 'Marketing' department, and order the result by hire_date descending and salary ascending.

```sql
SELECT *
FROM employees
WHERE salary BETWEEN 40000 AND 60000
```

```
  AND department != 'Marketing'
ORDER BY hire_date DESC, salary ASC;
```

Question 5: Write a query to find employees who are either not in the 'Finance' department or have a salary less than 30000, and then order the results first by department in ascending order and then by name in descending order.

```
SELECT *
FROM employees
WHERE department != 'Finance' OR salary < 30000
ORDER BY department ASC, name DESC;
```

Question 6: Write a query to retrieve employees whose name starts with 'A', have been hired after January 1, 2015, and order the results by their name in ascending order.

```
SELECT *
FROM employees
WHERE name LIKE 'A%' AND hire_date > '2015-01-01'
ORDER BY name ASC;
```

Question 7: Write a query to find employees who are in either the 'Engineering' department with a salary less than 70000 or the 'Design' department with a salary greater than 60000, and order the results by salary descending.

```sql
SELECT *
FROM employees
WHERE (department = 'Engineering' AND salary < 70000)
   OR (department = 'Design' AND salary > 60000)
ORDER BY salary DESC;
```

Question 8: What will be the result of the following query if the employees table has columns name, salary, and hire_date?

Question 9: Given the following table projects with columns project_id, project_name, start_date, and end_date, write a query to retrieve all projects that started before January 1, 2022, or ended after December 31, 2022, and order the result by project_name in descending order.

```sql
SELECT *
FROM projects
WHERE start_date < '2022-01-01' OR end_date > '2022-12-31'
ORDER BY project_name DESC;
```

Question 10: Write a query to find employees with a name ending with 'son', not in the 'IT' department, and order the results first by salary in descending order and then by hire_date in ascending order.

```sql
SELECT *
FROM employees
WHERE name LIKE '%son' AND department != 'IT'
ORDER BY salary DESC, hire_date ASC;
```

Question 11: Write a query to retrieve employees who were hired in the year 2021 and have a salary greater than the average salary of all employees, and order the results by name in ascending order.

```sql
SELECT *
FROM employees
WHERE YEAR(hire_date) = 2021
  AND salary > (SELECT AVG(salary) FROM employees)
ORDER BY name ASC;
```