```sql
--Question 1: List the department name, employee ID, and last name for all employees in the 'Sales' and 'IT' departments.

SELECT d.department_name, e.employee_id, e.last_name

FROM OEHR_EMPLOYEES e

JOIN OEHR_DEPARTMENTS d ON e.department_id = d.department_id

WHERE d.department_name IN ('Sales', 'IT')
```

110 %

Results | Messages

	department_name	employee_id	last_name
1	IT	103	Hunold
2	IT	104	Ernst
3	IT	105	Austin
4	IT	106	Pataballa
5	IT	107	Lorentz
6	Sales	145	Russell
7	Sales	146	Partners
8	Sales	147	Errazuriz
9	Sales	148	Cambrault
10	Sales	149	Zlotkey
11	Sales	150	Tucker
12	Sales	151	Bernstein
13	Sales	152	Hall
14	Sales	153	Olsen
15	Sales	154	Cambrault
16	Sales	155	Tuvault

Query executed successfully. | DESKTOP-GL1C7BC\SQLEXPRESS0... | DESKTOP-GL1C7BC\Dell (52) | HR_Data | 00:00:00 | 39 rows

```sql
--Question 2: Find the highest salary in the 'IT' department.


SELECT MAX(salary) AS highest_salary

FROM OEHR_EMPLOYEES e

JOIN OEHR_DEPARTMENTS d ON e.department_id = d.department_id

WHERE d.department_name = 'IT';
```

110 %

Results | Messages

	highest_salary
1	9000

Query executed successfully. | DESKTOP-GL1C7BC\SQLEXPRESS0... | DESKTOP-GL1C7BC\Dell (52) | HR_Data | 00:00:00 | 1 rows

```sql
--Question 3: Show the number of employees in each department, but only for departments with more than 3 employees.

SELECT d.department_name, COUNT(e.employee_id) AS num_employees

FROM OEHR_EMPLOYEES e

JOIN OEHR_DEPARTMENTS d ON e.department_id = d.department_id

GROUP BY d.department_name

HAVING COUNT(e.employee_id) > 3;
```

110 %

Results | Messages

	department_name	num_employees
1	Finance	6
2	IT	5
3	Purchasing	6
4	Sales	34
5	Shipping	45

Query executed successfully. DESKTOP-GL1C7BC\SQLEXPRESS0... | DESKTOP-GL1C7BC\Dell (52) | HR_Data | 00:00:00 | 5 rows

```sql
--Question 4: List all employees who were hired in 2005.

SELECT employee_id, last_name, hire_date

FROM OEHR_EMPLOYEES

WHERE hire_date BETWEEN '2005-01-01' AND '2005-12-31'

ORDER BY hire_date;
```

110 %

Results | Messages

employee_id	last_name	hire_date

Query executed successfully. DESKTOP-GL1C7BC\SQLEXPRESS0... | DESKTOP-GL1C7BC\Dell (52) | HR_Data | 00:00:00 | 0 rows

```sql
--Question 5: Display the average salary of each department, ordered by average salary in ascending order.

SELECT d.department_name, AVG(e.salary) AS avg_salary

FROM OEHR_EMPLOYEES e

JOIN OEHR_DEPARTMENTS d ON e.department_id = d.department_id

GROUP BY d.department_name

ORDER BY avg_salary;
```

110 %

Results | Messages

	department_name	avg_salary
1	Shipping	3475
2	Purchasing	4150
3	Administration	4400
4	IT	5760
5	Human Resources	6500
6	Finance	8600
7	Sales	8955
8	Marketing	9500
9	Public Relations	10000
10	Accounting	10150
11	Executive	19333

Query executed successfully. | DESKTOP-GL1C7BC\SQLEXPRESS0... | DESKTOP-GL1C7BC\Dell (52) | HR_Data | 00:00:00 | 11 rows

```sql
--Question 6: Identify the departments where the lowest salary is above $3000.

SELECT d.department_name

FROM OEHR_EMPLOYEES e

JOIN OEHR_DEPARTMENTS d ON e.department_id = d.department_id

GROUP BY d.department_name

HAVING MIN(e.salary) > 3000;
```

110 %

Results | Messages

	department_name
1	Accounting
2	Administration
3	Executive
4	Finance
5	Human Resources
6	IT
7	Marketing
8	Public Relations
9	Sales

Query executed successfully. | DESKTOP-GL1C7BC\SQLEXPRESS0... | DESKTOP-GL1C7BC\Dell (52) | HR_Data | 00:00:00 | 9 rows

```sql
--Question 7: List the job title and the difference between the highest and lowest salaries for that job.

SELECT j.job_title, MAX(e.salary) - MIN(e.salary) AS salary_diff

FROM OEHR_EMPLOYEES e

JOIN OEHR_JOBS j ON e.job_id = j.job_id

GROUP BY j.job_title;
```

110 %

Results | Messages

	job_title	salary_diff
1	Accountant	2100
2	Accounting Manager	0
3	Administration Assistant	0
4	Administration Vice President	0
5	Finance Manager	0
6	Human Resources Representative	0
7	Marketing Manager	0
8	Marketing Representative	0
9	President	0
10	Programmer	4800
11	Public Accountant	0
12	Public Relations Representative	0
13	Purchasing Clerk	600
14	Purchasing Manager	0
15	Sales Manager	3500
16	Sales Representative	5400
17	Shipping Clerk	1700

Query executed successfully. | DESKTOP-GL1C7BC\SQLEXPRESS0... | DESKTOP-GL1C7BC\Dell (52) | HR_Data | 00:00:00 | 19 rows

```sql
--Question 8: Find all employees whose last name starts with 'S' and sort them by hire date in descending order.

SELECT last_name, hire_date

FROM OEHR_EMPLOYEES

WHERE last_name LIKE 'S%'

ORDER BY hire_date DESC;
```

110 %

Results | Messages

	last_name	hire_date
1	Sullivan	2019-12-11
2	Smith	2019-08-15
3	Sewall	2019-04-25
4	Seo	2018-08-04
5	Stiles	2018-04-17
6	Sciarra	2018-03-22
7	Smith	2017-08-30
8	Sully	2016-08-24
9	Sarchand	2016-07-18

Query executed successfully. | DESKTOP-GL1C7BC\SQLEXPRESS0... | DESKTOP-GL1C7BC\Dell (52) | HR_Data | 00:00:00 | 9 rows

```sql
--Question 9: Show each department's name along with the count of employees who earn more than $5000, only for departments with such employees.

SELECT d.department_name, COUNT(*) AS high_earners

FROM OEHR_EMPLOYEES e

JOIN OEHR_DEPARTMENTS d ON e.department_id = d.department_id

WHERE e.salary > 5000

GROUP BY d.department_name

HAVING COUNT(*) > 0;
```

110 %

Results | Messages

	department_name	high_earners
1	Accounting	2
2	Executive	3
3	Finance	6
4	Human Resources	1
5	IT	2
6	Marketing	2
7	Public Relations	1
8	Purchasing	1
9	Sales	34
10	Shipping	5

Query executed successfully. | DESKTOP-GL1C7BC\SQLEXPRESS0... | DESKTOP-GL1C7BC\Dell (52) | HR_Data | 00:00:00 | 10 rows

```sql
--Question 10: For every employee, display their ID, last name, and a case statement that shows 'High Earner' if their salary is above 5000. Otherwise 'L

SELECT e.employee_id, e.last_name,

    CASE

        WHEN e.salary > 5000 THEN 'High Earner'

        ELSE 'Low Earner'

    END AS earning_status

FROM OEHR_EMPLOYEES e;
```

110 %

Results | Messages

	employee_id	last_name	earning_status
1	100	King	High Earner
2	101	Kochhar	High Earner
3	102	De Haan	High Earner
4	103	Hunold	High Earner
5	104	Ernst	High Earner
6	105	Austin	Low Earner
7	106	Pataballa	Low Earner
8	107	Lorentz	Low Earner
9	108	Greenberg	High Earner
10	109	Faviet	High Earner
11	110	Chen	High Earner
12	111	Sciarra	High Earner
13	112	Urman	High Earner
14	113	Popp	High Earner
15	114	Raphaely	High Earner
16	115	Khoo	Low Earner

Query executed successfully. | DESKTOP-GL1C7BC\SQLEXPRESS0... | DESKTOP-GL1C7BC\Dell (52) | HR_Data | 00:00:00 | 107 rows