Exercise 1 : SQL Fundamentals

Datapath : employees_db . employee_data . employees

1. SELECT *

   From employees_db . employee_data . employees ;

Output table:

id	first_name	last_name	department	salary	hire_date	city
1	John	Doe	IT	55 000	2018-06-15	New York
2	Jane	Smith	HR	48 000	2019-07-20	Chicago
3	Mike	Johnson	Finance	60 000	2017-09-30	Los Angeles
4	Sarah	Brown	IT	53 000	2021-03-25	New York
5	David	White	Marketing	52 000	2016-04-10	San Francisco
6	Emily	Davis	IT	62 000	2020-02-14	Chicago
7	Robert	Wilson	Finance	54 000	2019-10-01	Houston
8	Jessica	Moore	HR	51 000	2018-05-22	Los Angeles
9	David	Clark	Marketing	53 000	2022-06-01	Chicago
10	Laura	Hall	IT	50 000	2020-08-10	San Francisco

2. SELECT DISTINCT department
   From employees_db . employee_data . employees ;

Output table:

department
IT
HR
Finance
Marketing

3. SELECT first_name , last_name ~~, salary~~
   FROM employees_db . employee_data . employees
   ORDER BY salary DESC ;

first_name	last_name	salary
Emily	Davis	62000
Mike	Johnson	60000
Robert	Wilson	59000
John	Doe	55000
Sarah	Brown	53000
David	Clark	52000
Jessica	White	51000
Joe	Moore	48000
Laura	Smith	50000
	Hall	

4.

```
SELECT first_name, last_name, salary
FROM employees_db.employee_data.employees
ORDER BY salary DESC
LIMIT 5;
```

limits the rows. Here we are limiting to 5

first_name	last_name	salary
Emily	Davis	62000
Mike	Johnson	60000
Robert	Wilson	59000
John	Doe	55000
Sarah	Brown	53000

5.

```
SELECT first_name
FROM employees_db.employee_data.employees
WHERE department = 'IT';
```

first_name
John
Sarah
Emily
Laura

Partly sunny

6. SELECT first_name, department, salary
FROM employees_db.employee_data.employees
WHERE department = 'finance' AND salary > 58000;

integer
word

first_name	department	salary
Mike	Finance	60000
Robert	finance	59000

7. SELECT first_name, department
FROM employees_db.employee_data.employees
WHERE department = 'HR' OR department = 'Marketing';

Alternate: WHERE department IN('HR', 'Marketing');

first_name	department
Jane	HR
Jessica	HR
David	Marketing
Daniel	Marketing

8. SELECT first_name, department
FROM employees_db.employee_data.employees
WHERE department != 'IT';

Alternate: WHERE department NOT IN('IT');

first_name	department
Jane	HR
Mike	Finance
David	Marketing
Robert	Finance
Jessica	HR
Daniel	Marketing

9. SELECT first_name, department
FROM employees_db.employee_data.employees
WHERE department IN ('HR', 'IT', 'finance');

aggregate function | CASE statement

first_name	department
John	IT
Jane	HR
Mike	Finance
Sarah	IT
Emily	IT
Robert	Finance
Jessica	HR

10.

```
SELECT first_name, department, salary
FROM employees_db.employee_data.employees
WHERE department = 'IT' AND salary > 50 000
    AND city = 'New York';
```

first_name	department	salary
John	IT	55 000
Sarah	IT	53 000

11.

```
SELECT first_name, last_name
FROM employees_db.employee_data.employees
WHERE department = 'Finance' OR department = 'Marketing'
    AND salary > 52000
ORDER BY salary DESC;
```

first_name	last_name
Mike	Johnson
Robert	Wilson
Daniel	Clark

12. SELECT ~~first_name, city~~ DISTINCT city
From employees_db.employee_data.employees
where ~~city~~ department != ('IT') AND != ('HR');

City
Los Angeles
San Francisco
Houston
Chicago

✓ 13. SELECT first_name, department, salary
From employees_db.employee_data.employees
where department NOT IN ('Finance')
AND salary > 50 000
ORDER BY hire_date ASC;

first_name	department	salary
Emily	IT	62 000
David	Marketing	5200
John	IT	55 000
Sarah	IT	53000
Daniel	'marketing	53000

✓ 14. SELECT first_name, city, department
From employees_db.employee_data.employees
WHERE city IN ('chicago', 'Los Angeles')
AND department IN ('IT', 'Marketing')
LIMIT 3;

first_name	city	department
Emily	Chicago	IT
Daniel	Chicago	Marketing