

BRIGHTLIGHT TUTORIALS

EXERCISE 1: SQL FUNDAMENTALS

11 MARCH 2025.

1. SELECT * FROM employees;

ANSWER - whole table would return as is.

2. SELECT DISTINCT department.
FROM employees.

DEPARTMENT
IT
HR
FINANCE
MARKETING

3. SELECT first_name,
last_name

FROM employees

ORDER BY salary DESC

First_name	Last_name	Salary
Emily	Davis	62 000
Mike	Johnson	60 000
Robert	Wilson	59 000
John	Doe	55 000
Sarah	Brown	58 000
Daniel	Clark	53 000
David	White	52 000
Jessica	Moore	51 000
Laura	Hall	50 000
Jane	Smith	48 000

4. LIMIT Statement.

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

first_name	last_name	Salary
Emily	Davis	62 000
Mike	Johnson	60 000
Robert	Wilson	59 000
John	Doe	55 000
Sarah	Brown	53 000

5. WHERE Statement.

```
SELECT * from employees  
WHERE department = 'IT'
```

```
SELECT  
  first_name,  
  last_name,  
  department.
```

first_name	last_name	department
John	Doe	IT
Sarah	Brown	IT
Emily	Davis	IT
Laura	Hall	IT

6. AND statement .

SELECT *

FROM employees

WHERE department = 'Finance'

AND salary > 58 000

id	first_name	last_name	department	salary	hire_date	city
3	Mike	Johnson	finance	60 000	2017-09-30	Los Angeles
7	Robert	Wilson	finance	59 000	2019-10-01	Houston

7. OR statement .

SELECT *

FROM employees

WHERE department = 'HR' OR department = 'Marketing'

id	first_name	last_name	department	salary	hire_date	city
2	Jane	Smith	HR	48 000	2019-07-20	Chicago
5	David	White	Marketing	52 000	2016-04-10	San Francisco
8	Jessica	Moore	HR	51 000	2018-05-22	Los Angeles
9	Daniel	Clark	Marketing	53 000	2020-06-01	Chicago

8. NOT statement

SELECT *

FROM employees

WHERE NOT department = 'IT'

id	first_name	last_name	department	salary	hire_date	city
2	Jane	Smith	HR	48 000	2019-07-20	Chicago
3	Mike	Johnson	Finance	60 000	2017-09-30	Los Angeles
5	David	White	Marketing	52 000	2016-04-10	San Francisco
7	Robert	Wilson	Finance	59 000	2019-10-01	Houston

9. IN Statement.

SELECT

first_name,

last_name,

department

FROM employees

WHERE department IN ('HR', 'Marketing', 'Finance')

first_name	last_name	department
Jane	Smith	HR
Mike	Johnson	Finance
David	White	Marketing
Robert	Wilson	Finance
Jessica	Moore	Finance
Daniel	Clark	Marketing

10. COMBINING CONDITIONS.

SELECT

first_name,

last_name,

department.

FROM employees

WHERE salary > 50 000;

AND city = 'New York'

WHERE department IN 'IT'

first_name	last_name	department	Salary	city
John	Doe	IT	55 00	New York
Sarah	Brown	IT	53 00	New York

11. COMBINING WHERE, AND, and ORDER BY

SELECT

first_name,
last_name,

FROM employees

WHERE department = 'Finance' OR department = 'Marketing'

AND salary > 52 000

ORDER BY salary DESC

first_name	last_name	department	salary
Mike	Johnson	Finance	60 000
Robert	Wilson	Finance	59 000
Daniel	Clark	Marketing	58 000

12. COMBINING SELECT DISTINCT, WHERE and IN.

SELECT DISTINCT city

FROM employees

WHERE NOT department = 'IT' AND department = 'HR'

city
Los Angeles
San Francisco
Houston
Chicago

13. Combining WHERE, NOT, AND, and ORDER BY
SELECT *

FROM employees

WHERE NOT department = 'IT' AND salary > 52 000

ORDER BY hire-date ASC

id	first_name	last_name	department	salary	hire-date	city
6	Emily	Davis	IT	62 000	2015-02-04	Chicago
5	Daniel	White	Marketing	52 000	2016-04-10	San Francisco
8	Jessica	Moore	HR	51 000	2018-05-22	Los Angeles
1	John	Doe	IT	55 000	2018-06-15	New York
4	Sarah	Brown	IT	53 000	2021-08-23	New York
9	Daniel	Clark	Marketing	53 000	2022-06-01	San Francisco

14. Combining WHERE, OR, IN and LIMIT
SELECT

first_name,
last_name,
city,
department

FROM employees

WHERE city IN ('Chicago' OR city = 'Los Angeles')

WHERE department = 'IT' OR department = 'Marketing';

LIMIT 3;