

# Exercise 1 SQL Fundamentals

① SELECT \*

FROM employees;

Id	first-name	last-name	Department	Salary	hire-date	city
1	John	Dee	IT	55000	2018-06-15	New York
2	Jane	Smith	HR	48000	2019-07-20	Chicago
3	Mike	Johnson	Finance	60000	2017-09-30	Los Angeles
4	Sarah	Brown	IT	53000	2021-03-25	New York
5	David	White	Marketing	52000	2016-04-10	San Francisco
6	Emily	Davis	IT	62000	2015-02-14	Chicago
7	Robert	Wilson	Finance	59000	2019-10-01	Houston
8	Jessica	Moore	HR	51000	2018-05-22	Los Angeles
9	Daniel	Clark	Marketing	53000	2022-06-01	Chicago
10	Laura	Hall	IT	50000	2020-08-10	San Francisco

② SELECT DISTINCT department

FROM employees;

DEPARTMENT
IT
HR
Finance
Marketing

③ SELECT first-name,  
last-name,  
salary  
FROM employees  
ORDER BY salary DESC;

First-name	Last-name	Salary
Emily	Davis	62000
Mike	Johnson	60000
Robert	Wilson	59000
John	Dee	55000
Sarah	Brown	53000
Daniel	Clark	53000
David	White	52000
Jessica	Moore	51000
Laura	Hall	50000
Jane	Smith	48000

④ SELECT first-name,  
last-name,  
salary  
FROM employees  
ORDER BY salary DESC  
LIMIT 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,  
last-name,  
department  
FROM employees  
WHERE department = 'IT';

First-name	Last-name	Department
John	Doe	IT
Sarah	Brown	IT
Emily	Davis	IT
Laura	Hall	IT

⑥ SELECT first-name,  
last-name,  
department,  
salary  
FROM employees  
WHERE department = 'Finance' AND salary > 58000;

First-name	Last-name	Department	Salary
Mike	Johnson	Finance	60000
Robert	Wilson	Finance	59000

⑦ SELECT first-name,  
last-name,  
department  
FROM employees  
WHERE department = 'HR' OR 'Marketing';

First-name	Last-name	Department
Jane	Smith	HR
David	White	Marketing
Jessica	Mare	HR
Daniel	Clark	Marketing

⑧ SELECT first-name,  
last-name,  
department  
FROM employees  
WHERE department NOT IN ('IT');

First-name	Last-name	Department
Jane	Smith	HR
Mike	Johnson	Finance
David	White	Marketing
Robert	Wilson	Finance
Jessica	Mare	HR
Daniel	Clark	Marketing

⑨ SELECT first-name,  
last-name,  
department

FROM employees

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

First-name	Last-name	Department
John	Doe	IT
Jane	Smith	HR
Mike	Johnson	Finance
Sarah	Brown	IT
Emily	Davis	IT
Robert	Wilson	Finance
Jessica	Morre	HR
Laura	Hall	IT

⑩ SELECT first-name,  
last-name,  
department,  
salary,  
city

first-name	last-name	Department	Salary	City
John	Doe	IT	55000	New York
Sarah	Brown	IT	53000	New York

FROM employees

WHERE department = 'IT'

AND salary > 50000

AND city IN ('New York'),

⑪ SELECT first-name,  
last-name,  
department,  
salary

first-name	last-name	Department	Salary
Mike	Johnson	Finance	60000
Robert	Wilson	Finance	59000
Daniel	Clark	Marketing	52000
<del>David</del>	<del>White</del>	<del>Marketing</del>	<del>52000</del>

FROM employees

WHERE department = 'Finance' or department = 'Marketing'

AND salary > 52000

ORDER BY salary DESC;

MSZ

② SELECT DISTINCT city  
FROM employees  
WHERE department NOT IN ('IT', 'HR');

city
Los Angeles
San Francisco
Houston
Chicago

⑬ SELECT first-name,  
last-name,  
department,  
salary,  
hire-date

FROM employees

WHERE department < 'Finance' / WHERE department NOT IN ('Finance')  
AND salary > 50000

ORDER BY hire-date ASC

first-name	last-name	Department	Salary	hire-date
Jessica	Moore	HR	51000	2018-05-22
David	White	Marketing	52000	2018-04-10
Sarah	Brown	IT	53000	2021-03-25
John	Doe	IT	55000	2018-06-15
Emily	Davis	IT	62000	2015-02-14

⑭ SELECT first-name,  
last-name,  
department,  
city

FROM employees

WHERE city IN ('Chicago', 'Los Angeles')

AND department IN ('IT', 'Marketing') / WHERE department = 'IT' OR department = 'Marketing'

LIMIT 3;

first-name	Last-name	Department	City
Emily	Davis	IT	Chicago
Daniel	Clark	Marketing	Chicago