

# Exercise 1 - SQL Fundamentals

## Database employees.db

1 Select Statement

Select \*

From employees

ID	First Name	Last Name	Department	Salary	Hire Date
1	John	Doe	IT	\$6000	2018-06-15
2	Jane	Smith	HR	\$48000	2019-07-20
3	Mike	Johnson	Finance	\$60000	2017-09-30
4	Sarah	Brown	IT	\$30000	2020-03-25
5	David	White	Marketing	\$20000	2016-04-10
6	Emily	Davis	IT	\$22000	2019-02-14
7	Robert	Wilson	Finance	\$9000	2019-10-01
8	Jessica	Moore	HR	\$10000	2018-05-22
9	Daniel	Clark	Marketing	\$3000	2022-06-01
10	Laura	Hall	IT	\$50000	2020-08-10

2 Select Distinct

Select distinct Department  
From employees;

Department

IT

HR

Finance

Marketing

### 3 Order by Statement

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	Doe	55000
Surem	Brown	53000
Daniel	Clark	53000
David	White	52000
Jessica	Moore	51000
Levya	Hall	50000
Jane	Smith	48000

### 4 Limit Statement

Select \* from

From employees

order by salary DESC

Limit 5

id	first-name	last-name	department	salary	hire_date	city
2	Emily	Davis	IT	62000	2015-02-14	Chicago
3	Mike	Johnson	Finance	60000	2017-09-30	Los Angeles
7	Robert	Wilson	Finance	59000	2019-10-01	Houston
1	John	Doe	IT	55000	2018-06-15	New York
9	Daniel	Clark	Marketing	53000	2022-06-01	Chicago

## 5 Where Statement

Select \*

From employees

Where department = 'IT';

	first_name	last_name	department	salary	hire_date	city
1	John	Doe	IT	55000	2018-06-15	New York
4	Sarah	Brown	IT	53000	2021-03-15	New York
6	Emily	Davis	IT	62000	2015-02-15	Chicago
10	Laura	Hall	IT	50000	2020-08-10	San Fran

## 6 And Statement

Select \*

From employees

Where department = 'Finance'

And salary > \$80000;

	first_name	last_name	department	salary	hire_date	city
3	Mike	Johnson	Finance	60000	2017-09-30	Los Angeles
7	Robert	Wilson	Finance	59000	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	48000	2019-07-20	San Francisco
5	David	White	Marketing	52000	2016-04-10	Boston
8	Jessica	Moore	HR	51000	2018-05-22	Los Angeles
9	Daniel	Clark	Marketing	53000	2022-06-01	Chicago

### Not Statement

Select First\_name,  
 Last\_name,  
 department  
 From employees  
 Where Not department = 'IT';

First_name	Last_name	Department
Jane	Smith	HR
Mike	Johnson	Finance
David	White	Marketing
Robert	Wilson	Finance
Jessica	Moore	HR
Daniel	Clark	Marketing

### IN Statement

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	ITP
Emily	Davis	IT
Robert	Wilson	Finance
Jessica	Moore	HR

## Combining conditions

Select first name,

last name,

department

salary,

city

From employees

Where department = 'IT'

And salary > 50 000

And city = 'New York';

first name	last name	department	salary	city
John	Doe	IT	55000	New York
Sarah	Brown	IT	53000	New York

Combining where, And, and order by

Select first\_name,

last\_name

department,

salary

From employees

where department = 'Finance' or department = 'Marketing'

And salary > \$2000

order by salary desc;

first_name	last_name	department	salary
Mike	Johnson	Finance	60000
Robert	Wilson	Finance	59000
Daniel	Clark	Marketing	53000

Combining Select distinct, where, and in

Select distinct city

From employees

Where department Not In ('IT', 'HR');

city
Los Angeles
San Francisco
Houston
Chicago

Select first\_name, last\_name  
department, salary  
hire\_date

From employees

Where department = 'Finance'

And salary > 50000

Order by hire\_date Asc

first_name	last_name	department	salary	hire_date
Emily	Davis	IT	62000	2015-02-14
David	White	Marketing	32000	2016-04-10
Jessica	Moore	HR	51000	2018-05-22
John	Doe	IT	55000	2018-06-18
Sarah	Brown	IT	53000	2021-03-28
David	Clark	Marketing	53000	2022-06-01

### Combining Where, Or, In, and Limit

Select first\_name, last\_name,

city, department

From employees

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

And department IN ('IT', 'Marketing')

Limit 3;

first_name	last_name	department	city
Emily	Davis	IT	Chicago
David	Clark	Marketing	Chicago
Sarah	Hein	IT	