Operator

- Operators are symbols or keywords used to perform operations.

Arithmetic Operator

- It is used in number and date data type columns.

Operator	Meaning
+	Addition
-	Subtraction
*	Multiplication
/	Division

Create Table

```
CREATE TABLE employee (
   employee_id INT,
   name VARCHAR(50),
   department VARCHAR(50),
   salary DECIMAL(10, 2),
   hire_date DATE
);
```

Insert Records

```
INSERT INTO employee VALUES
   (1,'Raj', 'IT', 30000.00, '2023-01-15'),
   (2,'Ram', 'HR', 40000.00, '2023-05-20'),
   (3,'Rajesh', 'Finance', 60000.00, '2021-10-10'),
   (4,'Rahul', 'IT', 45000.00, '2021-02-28'),
   (5,'Deepak',  'HR', 32000.00, '2024-07-12');
```

Example#1

Write a query to display employee_id, name, salary, annual salary from employee table.

```
SELECT employee_id AS 'Empl Id', name as 'Name', salary as 'Salary', salary*12 as 'Annual Salry'
FROM employee;
```

Relational Operator

- These operators are used to compare two values.

Operator	Meaning
<	less than
<=	less than or equal to
>	greater than
>=	greater than or equal to
=	equal to
!= or <>	not equal to

Example#2

Write a query to display employees whose salary is less than 40000.

```
select * from employee where salary<40000;
```

Example#3

Write a query to display employees whose salary is less than or equal to 40000.

```
select * from employee where salary<=40000;
```

Example#4

Write a query to display employees whose annual salary is less than 400000.

```
select * from employee where salary*12<=400000;
```

Example#5

Write a query to display employees whose salary is greater than 40000.

```
select * from employee where salary>40000;
```

Example#6

Write a query to display employees whose salary is greater than or equal to 40000.

```
select * from employee where salary>=40000;
```

Example#7

Write a query to display employees whose salary is 40000.

```
select * from employee where salary=40000;
```

Example#8

Write a query to display employees whose salary is not 40000.

select * from employee where salary!=40000;

select * from employee where salary<>40000;

Logical Operator

- Logical operators are allowed to use in where clause only.
- If we want to specify more than one in where clause then we are going to use logical operator.
- These operators are used to compare 2 conditions.

Operator	Meaning
AND	return true when both conditios are satisfied.
OR	returns true if atleast one condition satisfied.
NOT	False when condition is satisfied. return true condition is not satisfied.

AND

SELECT * FROM <table_name> WHERE condition1 AND condition2;

condition1 and condition2 are both true - true otherwise false

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OR

SELECT * FROM <table_name> WHERE condition1 OR condition2;

If atleast one condition is true - true otherwise false

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F F - F

Example#1

Display employee who belongs to IT department and Salary is more than 32000.

SELECT * FROM employee WHERE department='IT' and SALARY>32000;

SELECT * FROM employee WHERE and SALARY>32000 and department='IT';

2. Write a query to display all employee whose hiring is 2023.

SELECT * FROM employee WHERE date_format(hire_date,'%Y') = '2023';

3. Write a query to diplay employee details whose name is 'Raj'and belong IT.

SELECT * FROM employee WHERE name='Raj' and department='IT';

4. WAQ to display hire date where name is Rahul and department is IT.

SELECT hire_date FROM employee WHERE name='Rahul' and department='IT';

5. WAQ to display employee whose salary is more than 30000 and less than 60000.

SELECT * FROM employee where salary>30000 and salary < 60000;

6. WAQ to display employee who have completed 1 year in the organizationSELECT * FROM employee where DATEDIFF(CURDATE(), hire_date) >= 365;

7. WAQ to display employee who joined on Jan.

SELECT * FROM employee WHERE DATE_FORMAT(hire_date,'%m') = '01';

8. WAQ to display the name , hiring date (only year) of the employee.

SELECT name, date_format(hire_date,'%Y') as 'Year' from employee;

Assignment#1

Write a query to display employees who either work in the IT department or have a salary greater than or equal to 40000 but are not hired in the year 2021.

```
SELECT * from Employee where (department='IT' OR salary >= 40000) AND (date_format(hire_date,'%Y')!=2021);
```