



INTERVIEW PREPARATION SQL - 2025



SQL QUERIES FOR JAVA INTERVIEWS





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SQL Types of Statements and Their Uses

1. DQL (Data Query Language):

- Used to fetch data from the database.
- Example: SELECT

2. DML (Data Manipulation Language):

- Used to modify data in tables (Insert, Update, Delete).
- Examples: INSERT, UPDATE, DELETE

3. DDL (Data Definition Language):

- Used to define or modify database structures (Create, Alter, Drop).
- Examples: CREATE, ALTER, DROP

4. DCL (Data Control Language):

- Used to control database permissions.
- Examples: GRANT, REVOKE

5. TCL (Transaction Control Language):

- Used to manage transactions in the database.
- Examples: COMMIT, ROLLBACK



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1. SELECT Statement

- **Type of Statement:** DQL (Data Query Language)
- **Definition:** Used to retrieve specific data from a table.

Syntax:

```
sql
```

 Copy

```
-- Syntax
SELECT <column_names>
FROM <table_name>
WHERE <condition>;
```

Example:

```
sql
```

 Copy

```
-- Example
SELECT name, salary
FROM employee
WHERE department = 'HR';
```



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2. INSERT Statement

- **Type of Statement:** DML (Data Manipulation Language)
- **Definition:** Used to add new data into a table.

Syntax:

```
sql Copy  
-- Syntax  
INSERT INTO <table_name> (<column_names>)  
VALUES (<values>);
```

Example:

```
sql Copy  
-- Example  
INSERT INTO employee (id, name, department, salary)  
VALUES (101, 'Rajesh', 'Finance', 50000);
```



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3. UPDATE Statement

- **Type of Statement:** DML (Data Manipulation Language)
- **Definition:** Used to modify existing data in a table.

Syntax:

```
sql
```

 Copy

```
-- Syntax
UPDATE <table_name>
SET <column_name> = <value>
WHERE <condition>;
```

Example:

```
sql
```

 Copy

```
-- Example
UPDATE employee
SET salary = 60000
WHERE id = 101;
```



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4. DELETE Statement

- **Type of Statement:** DML (Data Manipulation Language)
- **Definition:** Used to remove data from a table.

Syntax:

```
sql
```

Copy

```
-- Syntax  
DELETE FROM <table_name>  
WHERE <condition>;
```

Example:

```
sql
```

Copy

```
-- Example  
DELETE FROM employee  
WHERE id = 101;
```





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5. CREATE Statement

- **Type of Statement:** DDL (Data Definition Language)
- **Definition:** Used to create a new table or database object.

Syntax:

```
sql
```

 Copy

```
-- Syntax
CREATE TABLE <table_name> (
    <column_name> <data_type>,
    ...
);
```

Example:

```
sql
```

 Copy

```
-- Example
CREATE TABLE employee (
    id INT PRIMARY KEY,
    name VARCHAR(50),
    department VARCHAR(50),
    salary DECIMAL(10, 2)
);
```



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6. ALTER Statement

- **Type of Statement:** DDL (Data Definition Language)
- **Definition:** Used to modify the structure of an existing table.

Syntax:

```
sql Copy  
--- Syntax  
ALTER TABLE <table_name>  
ADD <column_name> <data_type>;
```

Example:

```
sql Copy  
--- Example  
ALTER TABLE employee  
ADD phone_number VARCHAR(15);
```



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7. DROP Statement

- **Type of Statement:** DDL (Data Definition Language)
- **Definition:** Used to delete an entire table or database object.

Syntax:

```
sql
```

 Copy

```
-- Syntax  
DROP TABLE <table_name>;
```

Example:

```
sql
```

 Copy

```
-- Example  
DROP TABLE employee;
```



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8. GRANT Statement

- **Type of Statement:** DCL (Data Control Language)
- **Definition:** Used to give user-specific access rights to a database.

Syntax:

```
sql
```

Copy

```
-- Syntax  
GRANT <permissions>  
ON <table_name>  
TO <user>;
```

Example:

```
sql
```

Copy

```
-- Example  
GRANT SELECT, INSERT  
ON employee  
TO 'Rahul';
```





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9. COMMIT Statement

- **Type of Statement:** TCL (Transaction Control Language)
- **Definition:** Used to save changes made in a transaction.

Syntax:

```
sql
```

 Copy

```
-- Syntax  
COMMIT;
```

Example:

```
sql
```

 Copy

```
-- Example  
BEGIN TRANSACTION;  
UPDATE employee  
SET salary = 70000  
WHERE id = 101;  
COMMIT;
```



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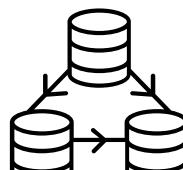
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DQL



DML



DDL



DCL