



# SQL | Distinct Clause

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The distinct keyword is used in conjunction with the select keyword. It is helpful when there is a need to avoid duplicate values present in any specific columns/table. When we use distinct keywords only the **unique values** are fetched.

## Syntax :

```
SELECT DISTINCT column1, column2  
  
FROM table_name
```

AD

1. **column1, column2:** Names of the fields of the table.
2. **Table\_name:** Table from where we want to fetch the records.

This query will return all the unique combinations of rows in the table with fields column1, and column2.

**NOTE:** If a distinct keyword is used with multiple columns, the distinct combination is displayed in the result set.

## Distinct Operations

### Query:

```
CREATE TABLE students (  
    ROLL_NO INT,  
    NAME VARCHAR(50),  
    ADDRESS VARCHAR(100),
```

```
PHONE VARCHAR(20),  
AGE INT  
);
```

Inserting some random data to perform distinct operations.

```
INSERT INTO students (ROLL_NO, NAME, ADDRESS, PHONE, AGE)  
VALUES  
(1, 'Shubham Kumar', '123 Main Street, Bangalore', '9876543210', 23),  
(2, 'Shreya Gupta', '456 Park Road, Mumbai', '9876543211', 23),  
(3, 'Naveen Singh', '789 Market Lane, Delhi', '9876543212', 26),  
(4, 'Aman Chopra', '246 Forest Avenue, Kolkata', '9876543213', 22),  
(5, 'Aditya Patel', '7898 Ocean Drive, Chennai', '9876543214', 27),  
(6, 'Avdeep Desai', '34 River View, Hyderabad', '9876543215', 24);
```

**Output:**

ROLL_NO	NAME	ADDRESS	PHONE	AGE
1	Shubham Kumar	123 Main Street, Bangalore	9876543210	23
2	Shreya Gupta	456 Park Road, Mumbai	9876543211	23
3	Naveen Singh	789 Market Lane, Delhi	9876543212	26
4	Aman Chopra	246 Forest Avenue, Kolkata	9876543213	22
5	Aditya Patel	7898 Ocean Drive, Chennai	9876543214	27
6	Avdeep Desai	34 River View, Hyderabad	9876543215	24

Now, to fetch unique names from the NAME field.

**Query:**

```
SELECT DISTINCT NAME FROM Student;
```

**Output :**

NAME
Shubham Kumar
Shreya Gupta
Naveen Singh
Aman Chopra
Aditya Patel
Avdeep Desai

Now, to fetch a unique combination of rows from the whole table.

**Syntax:**

```
SELECT DISTINCT * FROM Table_name;
```

Query:

```
SELECT DISTINCT * FROM students;
```

Output :

ROLL_NO	NAME	ADDRESS	PHONE	AGE
1	Shubham Kumar	123 Main Street, Bangalore	9876543210	23
2	Shreya Gupta	456 Park Road, Mumbai	9876543211	23
3	Naveen Singh	789 Market Lane, Delhi	9876543212	26
4	Aman Chopra	246 Forest Avenue, Kolkata	9876543213	22
5	Aditya Patel	7898 Ocean Drive, Chennai	9876543214	27
6	Avdeep Desai	34 River View, Hyderabad	9876543215	24

## Using Distinct Clause with Order By

Here, we will check the order by clause with a Distinct clause which will filter out the data on the basis of the order by clause.

Query:

```
SELECT DISTINCT ROLL_NO FROM Students ORDER BY AGE;
```

Output:

ROLL_NO
4
1
2
6
3
5

## How the DISTINCT Clause Handles NULL Values?

Finally, does the DISTINCT clause considers a NULL to be a unique value in SQL? The answer is yes.

CREATE TABLE:

```
CREATE TABLE students (  
    ROLL_NO INT,
```

```
NAME VARCHAR(50),
ADDRESS VARCHAR(100),
PHONE VARCHAR(20),
AGE INT
);
INSERT INTO students (ROLL_NO, NAME, ADDRESS, PHONE, AGE)
VALUES
(1, 'Shubham Kumar', '123 Main Street, Bangalore', '9876543210', 23),
(2, 'Shreya Gupta', '456 Park Road, Mumbai', '9876543211', 23),
(3, 'Naveen Singh', '789 Market Lane, Delhi', '9876543212', 26),
(4, 'Aman Chopra', '246 Forest Avenue, Kolkata', '9876543213', 22),
(5, 'Aditya Patel', '7898 Ocean Drive, Chennai', '9876543214', 27),
(6, 'Avdeep Desai', '34 River View, Hyderabad', '9876543215', NULL);
```

### Output:

ROLL_NO	NAME	ADDRESS	PHONE	AGE
1	Shubham Kumar	123 Main Street, Bangalore	9876543210	23
2	Shreya Gupta	456 Park Road, Mumbai	9876543211	23
3	Naveen Singh	789 Market Lane, Delhi	9876543212	26
4	Aman Chopra	246 Forest Avenue, Kolkata	9876543213	22
5	Aditya Patel	7898 Ocean Drive, Chennai	9876543214	27
6	Avdeep Desai	34 River View, Hyderabad	9876543215	

### Query:

```
SELECT DISTINCT AGE
FROM students;
```

AGE
22
23
26
27

**Note:** Without the keyword distinct in both the above examples 6 records would have been fetched instead of 4, since in the original table there are 6 records with the duplicate values.

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