MySQL - Distinct Clause

MySQL DISTINCT clause

The DISTINCT clause in MySQL is used with a SELECT statement to return the distinct values (unique values) from a single or multiple of columns in a table. It ignores all the duplicates values present in the particular column(s) and returns only the distinct values.

We can use this clause in various scenarios, such as identifying unique customer names, unique customer id's, etc. It can be combined with other clauses such as WHERE, ORDER BY, and GROUP BY to filter the data further.

Syntax

Following is the syntax of the DISTINCT clause in MySQL –

```
SELECT DISTINCT column1, column2, ..., columnN
FROM table_name
WHERE conditions // optional
```

- **(column1, column2,...,columnN) are the columns from which we want the distinct (unique) values.**
- **table_name is the name of the table from which we want to select data.**
- **WHERE conditions is optional. These are used to filter the data.**

Example

Firstly, let us create a create a table named **CUSTOMERS** using the following INSERT query –

```
        CREATE TABLE CUSTOMERS (
          ID INT NOT NULL,
          NAME VARCHAR (20) NOT NULL,
          AGE INT NOT NULL,
          ADDRESS CHAR (25),
          SALARY DECIMAL (18, 2),
          PRIMARY KEY (ID)
 );
```

```
INSERT INTO CUSTOMERS(ID, NAME, AGE, ADDRESS, SALARY) VALUES
(1, 'Ramesh', 32, 'Hyderabad', NULL),
(2, 'Khilan', 25, 'Delhi', 1500.00),
(3, 'Kaushik', 23, 'Hyderabad', 2000.00),
(4, 'Chaital', 25, 'Mumbai', NULL),
(5, 'Hardik', 27, 'Vishakapatnam', 8500.00),
(6, 'Komal', 22, 'Vishakapatnam', 4500.00),
(7, 'Muffy', 24, 'Indore', 10000.00);
```

```
SELECT * FROM CUSTOMERS;
```

Now, let us retrieve the ADDRESS column from CUSTOMERS table without using the **DISTINCT** clause.

```
SELECT ADDRESS FROM CUSTOMERS;
```

```
SELECT DISTINCT ADDRESS FROM CUSTOMERS;
```

DISTINCT Clause with COUNT() Function

The MySQL count() function allows us to count the number of distinct values present in one or more columns of a table. Let us understand with the example below

Example

In the following query, we are using the MySQL **COUNT()** function to count the DISTINCT records in ADDRESS column of CUSTOMERS table –

```
SELECT COUNT(DISTINCT ADDRESS) FROM CUSTOMERS;
```

Example

In this query, we are retrieving unique SALARY records from the CUSTOMERS table where the ADDRESS is "Hyderabad".

```
SELECT DISTINCT SALARY FROM CUSTOMERS WHERE ADDRESS = "HYDERABAD";
```

DISTINCT on Multiple Columns

We can use the MySQL DISTINCT keyword on multiple columns of a table to return all the unique combinations of values across those columns, i.e. removing redundant records in a table.

Example

In the following query, we are retrieving the distinct combinations of ADDRESS and SALARY columns from the CUSTOMERS table and orders the result set by the ADDRESS column in ascending order.

```
SELECT DISTINCT ADDRESS, SALARY FROM CUSTOMERS ORDER BY ADDRESS;
```

DISTINCT with NULL values

If there are NULL values present in a specific column, the MySQL DISTINCT will treat them as unique values and includes them in the result set.

Example

Here, we are returning the distinct salary of the customers using the following query –

```
SELECT DISTINCT SALARY FROM CUSTOMERS ORDER BY SALARY;
```