

Bhushan
Asstt
Roll No S3

DBMS

Page No.

Date: / /

Assignment No :- 03

Aim :- study of SQL DML statement like insert, select, update, delete with operators functions, and set operators And study of constraints and clauses on tables.

Title:- Design at least 10 SQL queries for suitable database application using SQL DML statement insert, select, update, Delete with operators and set operator.

objective:- To learn and understand DML statement in MySQL.

Hardware requirement:-

- 1) Any CPU with Pentium processor or similar, 256 MB RAM or more & 1 GB HDD.

Software requirement:-

- 1) Ubuntu 20.14 LTS OS, MySQL.

Theory:-

DML command:- Data manipulation Language (DML) statements are used for managing data in database. DML commands are not auto-committed. It means changes made by DML command are not permanent to database if can be rolled back.

Teacher's Signature

1> Insert Command :- Insert Command is used to insert data into a table. Following is its general syntax:

INSERT into table-name value (data1, data2, ...)

2> UPDATE command :- Update Command is used to update a row of a table. Following is its general syntax.

UPDATE table-name SET column-name = value
[where-condition];

3> Delete command :- Delete Command is used to delete data from a table. Delete Command can also be used with condition to delete a particular row. Following is its general syntax.

DELETE from table-name;

* SQL Function *

- SQL provide many built-in function to perform operation on data. These function are useful while performing mathematical calculation, string concatenations, sub-string etc.

Function are divided into two categories,

- Aggregate Function
- Scalar Function.

* Aggregate Function :-

These function return a single value after calculating from a group of values. Following are some frequently used Aggregate Functions.

1) Avg() :- Average returns average value after calculating from a numeric column. Its General syntax is

SELECT AVG(Column-name) From table-name;

2) Count() :- Count returns the number of rows present in the tables either based on some condition or without a condition. Its General Syntax is

SELECT COUNT(Column-name) From table-name;

3) First() :- First function return first value of a selected column. Syntax for First function is SELECT FIRST(Column-name) From table-name.

↳ **Last()** :- LAST return the last value from selected column. Syntax of LAST function is:

`SELECT LAST(column-name) FROM table-name`

↳ **MAX()** :- MAX function return maximum value from selected column of the table. Syntax of MAX function is:

`SELECT MAX(column-name) FROM table-name`

↳ **MIN()** :- MIN function return minimum value from a selected column of the table.

Syntax for min function is

`SELECT MIN(column-name) FROM table-name`

↳ **SUM()** :- SUM function return total sum of a selected columns numeric values. Syntax for SUM is

`SELECT SUM(column-name) FROM table-name`

* Scalar Function *

- Scalar function return a single value from an input value. Following are some frequently used scalar function

1) UCASE(): - UCASE function is used to convert value of string column to uppercase character.

Syntax of UCASE():

SELECT UCASE(column-name) FROM table-name

2) LCASE(): - LCASE function is used to convert value of string column to lowercase character.

Syntax:- SELECT UCASE(column-name) FROM table-name

3) MID(): - MID function is used to extract substring from column value of string type.

Syntax:- SELECT MID(column-name, start, length) FROM table-name

4) round() :- Round function is used to round a numeric field to number of nearest integer. If it is used on decimal point values. Syntax :-

SELECT ROUND (column-name.decimal)
From table-name

* set operations *

- SQL support few set operations to be performed on table data. These are used to get meaningful result from data, under different special condition.

1) Union :- Union is used to combine the result of two or more select statement. However it will eliminate duplicate row from its result set. In case of Union number of columns, and datatype must be same in both the tables.

Syntax :-
SELECT * From first
UNION
SELECT * From second

Teacher's Signature

2> Union all : → This operation is similar to union. But it also shows the duplicate rows.

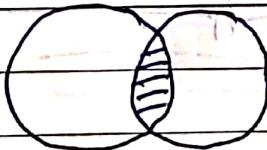
Syntax : → Union all query will be like,

Select * from tablename

UNION ALL

SELECT * from table-name

3> Intersect : → Intersect operation is used to combine two SELECT statement but it only returns the records which are common from both SELECT statements. In case of intersect the number of columns and datatype must be same. MySQL does not support INTERSECT operator.



Syntax : - Select * from tablename
INTERSECT
Select * from tablename

~~SQL~~) minus :- minus operation combines result of two select statement and return only those result which belongs to first set of result. ~~say~~

Syntax :-

select * from table-name1 minus

select * from table-name2

Result :-

Table 1 :- T03152

Table 2 :- T03152

Result :- select * from table-name1 minus

Result :- minus out common of both

Result :- select * from table-name1

Result :- T03152 (had more rows)

Result :- T03152 (had more rows)

Conclusion :- we are performing minus operation successfully.

Result :- T03152 - XISTYK2

T03152

Result :- T03152