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Assignment 3

Title: Design at least 10 SQL queries for suitable database application using SQL.

Problem Statement: Design at least 10 SQL queries for suitable database application using SQL DML statements: Insert, Select, Update, Delete with operators, functions and set operators

Learning Objective:
- To understand & implement the various DML Commands.
- To understand database concepts like functions and set operators.

Learning Outcome: The students will be able to
- Implement the various DML Commands with options.
- Implement database concepts like functions and set operators.

Software packages and hardware apparatus used:
- MySQL
- 64-bit Linux based open source OS
- 8 GB RAM

Concept related theory:

DML is short name of Data Manipulation Language which deals with data manipulation, and includes most common SQL statements such Select, Insert, Update, Delete, etc, and it is used to store, modify, retrieve, delete and update data in database.

Following are the DML commands

SELECT: MySQL Select statement is used to fetch data from a database

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Syntax: Select column_name(s) FROM table_name

INSERT: MySQL Query statement Insert is used to insert new records in a table
Syntax: Insert into table_name (column, column1, column2, column3, ...)values (value, value1, value2, value3 ...)

UPDATE: The Update statement is used to modify data in a table.
Syntax: Update table_name set column=value, column1=value1,... where someColumn=someValue

DELETE: The Delete From statement is used to delete data from a database table.
Syntax: Delete From tableName Where someColumn = someValue

SET Operations
UNION: It returns a union of two select statements. It is returning unique (distinct) values of them.
Syntax: Select * from table1 Union Select * from table2

UNIONALL: Similar to Union but also returns duplicated values
Syntax: Select * from table1 Unionall select * from table2

MINUS: It returns the difference between the 1st and 2nd select statement
Syntax: Select * from table1 Minus Select * from table2

INTERSECT: It returns the results that are common in both statements
Syntax: Select * from table1 Intersect Select * from table2

Orderby clause: Ordered the selected rows based on one or more attributes

Count: Counts the number of rows with non-null values for columns

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Max: Returns the maximum value in given column

Conclusion:

Through this practical, I have implemented DML commands on tables