Database Creation and Management

DATA MANIPULATION LANGUAGES

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Outline

- DML (Data Manipulation Language)
- DML commands (Insert, Delete, Update)
- Insert
- Delete
- Update

INSERT Database

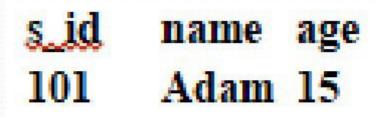
- Insert command is used to insert data into a table.
- Syntax:

INSERT INTO table_name VALUES(data1, data2, ...)

Consider a table student with the following fields.
 s_idname age

INSERT INTO student VALUES(101, 'Adam', 15);

 The above command will insert a new record into student table.



Insert value into only specific columns

- We can use the INSERT command to insert values for only some specific columns of a row. We can specify the column names along with the values to be inserted like this,
- INSERT INTO student(id, name) values(102, 'Alex');
- The above SQL query will only insert id and name values in the newly inserted record.

Insert NULL value to a column

- Both the statements below will insert NULL value into age column of the student table.
- INSERT INTO student(id, name) values(102, 'Alex');
- Or, this statement can be written aslo:
- INSERT INTO Student VALUES(102, 'Alex', null);
- The above command will insert only two column values and the other column is set to null.

S_id	S_Name	age
101	Adam	15
102	Alex	
Insert	Default value	to a column

UPDATE SQL command

- The UPDATE command can be used to change or modify the data values in a table.
- It can be used to update either all rows or a set of rows from a table.
- The SET clause specifies which column data to modify.
- An expression can be a constant value, a variable, or some expression and it specifies the new value for related columns.
- You can update specific rows by the WHERE clause, and displays message regarding how many rows have been updated.

Cont...

Syntax:

update tablename set column1=expression1,column2=expression2 where condition;

Let's take a sample table student,		le student,		After Update:		
student_id	name	age	UPDATE student SET age=18	S_id	S_Name	age
101	Adam	15	WHERE student_id=102;	101	Adam	15
102	Alex			102	Alex	18
103	chris	14		103	chris	14

Updating Multiple Columns

 We can also update values of multiple columns using a single UPDATE statement.

UPDATE student SET name='Abhi', age=17 where s_id=103;

 The above command will update two columns of the record which has s_id 103.

s_id	name	age
101	Adam	15
102	Alex	18
103	Abhi	17

DELETE command

- DELETE command is used to delete data from a table.
- Following is its general syntax,

DELETE FROM table_name;

Delete all Records from a Table

- DELETE FROM student;
- The above command will delete all the records from the table student.

Delete a particular Record from a Table

 In our student table if we want to delete a single record, we can use the WHERE clause to provide a condition in our DELETE statement.

DELETE FROM student WHERE s_id=103;

This will delete the record where s_id is 103 from the

table student.

Let's take a sample table student:

s_id	name	age
101	Adam	15
102	Alex	18
103	Abhi	17

S_id	S_Name	age
101	Adam	15
102	Alex	18

SELECT COLUMNS, ALL ROWS

- This Statement retrieves only selected columns as specified with SELECT clause.
- This Statement retrieves all the row of the table.
- Syntax :

select column1, column2, ..., columnN from tablename;

Example: Select enroll_no,name from student;

ENROLL_NO	NAME	
7512	parimal	
7503	preet	

SELECT ROWS, ALL COLUMNS

- This Statement retrieves all the columns of the table and retrieves only specific rows that specify the condition given with WHERE clause.
- Syntax :

select * from tablename WHERE condition;

• Example:

Select * from student where enroll_no=7503;

ENROLL_NO	NAME	DEPT
7503	preet	computer

SELECT ROWS and COLUMNS

- This Statement retrieves only Selected columns as specified with SELECT clause.
- Also, retrieves only specific rows that specify the condition given with WHERE clause.
- Syntax : select column1, column2, ..., columnN from tablename WHERE condition;
- Example: Select name from student where dept='computer';

NAME
parimal
preet