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| **EX.No.:1(a)** | **MANIPULATE A DATABASE BY CREATING, INSERTING, DELETING, UPDATING AND RETRIEVING TABLES** |

**AIM:**

To execute SQL commands for creating tables, retrieving the values, inserting, updating and deleting values from the table.

**PROCEDURE:**

##### 1. Creating a Database

Create is a DDL SQL command used to create a table or a database in relational database management system.

To create a database in RDBMS, **create** command is used.

##### Syntax:

##### CREATE DATABASE <DB\_NAME>;

**Example:**

CREATE DATABASE Test;

The above command will create a database named Test, which will be an empty schema without any table.

##### 2. Creating a Table

Create command can also be used to create tables. Now when we create a table, we have to specify the details of the columns of the tables too. We can specify the **names** and **data types** of various columns in the create command itself.

**Syntax:**

##### CREATE TABLE <TABLE\_NAME> (column\_name1 datatype1, column\_name2 datatype2, column\_name3 datatype3, column\_name4 datatype4);

**Example:**

CREATE TABLE Employee

(

EmployeeNo char(4),

EmployeeName varchar2(30),

EmployeeSal number(10,2),

EmployeeCity varchar2(30),

EmployeeDob date

);

The above command will create a table named emp.

##### 3.INSERT SQL 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, it can be rolled back.

**Syntax:**

##### INSERT INTO table\_name VALUES(data1, data2, ...)

**Example:**

##### INSERT INTO Employee(EmployeeNo, EmployeeName, EmployeeSal, EmployeeCity, EmployeeDob) Values(('1', 'Arvind', 5000, 'Mumbai','23-DEC-1992');

##### Other Options to insert records, using this technique all the table's columns are required.

##### INSERT INTO Employee values('2', 'Santosh', 5000, 'Delhi','23-DEC-1994');

##### 4.Select Command

The SQL SELECT statement is used to fetch the data from a database table which returns this data in the form of a result table. These result tables are called result-sets.

##### Syntax :

The basic syntax of the SELECT statement is as follows −

##### SELECT column1, column2, columnN FROM table\_name;

Here, column1, column2... are the fields of a table whose values you want to fetch. If you want to fetch all the fields available in the field, then you can use the following syntax.

##### SELECT \* FROM table\_name;

##### Example:

##### select \* from Employee

##### select EmployeeNo, EmployeeName, EmployeeSal,EmployeeCity,EmployeeDob from Employee

##### 5.UPDATE Command

UPDATE command is used to update any record of data in a table.

**Syntax:**

##### UPDATE table\_name SET column\_name = new\_value WHERE some\_condition;

WHERE is used to add a condition to any SQL query.

**Example:**

##### UPDATE Employee SET EmployeeName='KASHISH' WHERE EmployeeNo=1

##### 5.DELETE Command

DELETE command is used to delete data from a table.

**Syntax:**

##### DELETE FROM table\_name;

##### Example :

##### DELETE FROM EMPLOYEE WHERE employeeNo=1

**1(a).MANIPULATE A DATABASE BY CREATING, INSERTING, DELETING, UPDATING AND RETRIEVING TABLES.**

##### COMMANDS:

SQL> CREATE DATABASE Test;

##### Database Created

SQL> CREATE TABLE Employee(EmployeeNo char(4), EmployeeName varchar2(30),

EmployeeSal number(10,2), EmployeeCity varchar2(30), EmployeeDob date);

Table Created

##### SQL> INSERT INTO Employee values('2', 'Santosh', 5000, 'Delhi','23-DEC-1994');

1 row inserted

SQL>select \* from Employee;



##### SQL> UPDATE Employee SET EmployeeName='KASHISH' WHERE EmployeeNo=1;

##### SQL>SELECT \* from Employee;



##### SQL>DELETE \* from Employee;

##### 0 row(s) deleted

##### RESULT:

Thus, the SQL commands for creating tables, retrieving the values, inserting, updating and deleting values from the table is executed successfully.

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| **EX.No.:1(b)** | **IMPLEMENTATION OF DDL COMMANDS TO CREATE ,A LTER AND DROP TABLE** |

**AIM:**

To execute SQL commands for creating tables, altering and dropping the table from a database.

**PROCEDURE:**

##### 1. ALTER command

alter command is used for altering the table structure, such as,

1. to add a column to existing table
2. to rename any existing column
3. to change datatype of any column or to modify its size.
4. to drop a column from the table.

##### ALTER Command: Add a new Column

Using ALTER command, we can add a column to any existing table.

**Syntax:**

ALTER TABLE table\_name ADD(column\_name datatype);

**Example:**

**ALTER TABLE**

##### ALTER Command: Add multiple new Columns

Using ALTER command we can even add multiple new columns to any existing table.

**Syntax:**

ALTER TABLE table\_name ADD( column\_name1 datatype1,column-name2 datatype2, );

##### ALTER Command: Add Column with default value

ALTER command can add a new column to an existing table with a default value too. The default value is used when no value is inserted in the column.

**Syntax:**

ALTER TABLE table\_name ADD( column-name1 datatype1 DEFAULT some\_value);

##### ALTER Command: Modify an existing Column

ALTER command can also be used to modify data type of any existing column.

**Syntax:**

ALTER TABLE table\_name modify( column\_name datatype);

##### ALTER Command: Rename a Column

Using ALTER command you can rename an existing column.

**Syntax:**

ALTER TABLE table\_name RENAME old\_column\_name TO new\_column\_name;

**ALTER Command: Drop a Column**

ALTER command can also be used to drop or remove columns.

**Syntax:**

ALTER TABLE table\_name DROP(column\_name);

##### 2..TRUNCATE command

TRUNCATE command removes all the records from a table. But this command will not destroy the table's structure. When we use TRUNCATE command on a table its (auto-increment) primary key is also initialized.

**Syntax:**

TRUNCATE TABLE table\_name;

**Example:**

TRUNCATE TABLE EMPLOYEE;

##### 3.DROP command

DROP command completely removes a table from the database. This command will also destroy the table structure and the data stored in it.

**Syntax:**

DROP TABLE table\_name;

**Example:**

DROP TABLE EMPLOYEE;

##### 1(b).IMPLEMENTATION OF DDL COMMANDS TO CREATE ,A LTER AND DROP TABLE.

##### COMMANDS:

##### Consider the below table:

##### SQL> ALTER TABLE CUSTOMERS ADD SEX char(1);

##### SQL>SELECT \* FORM CUSTOMERS;

##### SQL> ALTER TABLE CUSTOMERS DROP SEX;

##### SQL>SELECT \* FORM CUSTOMERS;

##### 

##### SQL> TRUNCATE TABLE CUSTOMERS;

##### SQL>SELECT \* FORM CUSTOMERS;

##### Empty set (0.00 sec)

##### SQL> DROP TABLE CUSTOMERS;

##### Query OK, 0 rows affected (0.01 sec)

##### SQL> DESC CUSTOMERS;

##### ERROR 1146 (42S02): Table 'TEST.CUSTOMERS' doesn't exist

##### RESULT:

Thus, the SQL commands for creating tables, altering and dropping the table from a database was executed successfully.