USE & GENERATING DESIGNS OF OTHER TRADITIONAL DATABASE MODEL

4/2/25

Aim :

The aim of generating to design transitional database models for conversing real world data into structured formats for efficient storage, retrieval, and management.

1. DATA Definition LANGUAGE (DDL):

The data definition language (DDL) is used to create and destroy data bases and database objects. These commands will primarily be used by database administrators during the setup and removal of a database project, let's take a look at the structure and usage of four basic DDL commands.

I. DDL COMMANDS (Data Definition language)

Definition:- DDL commands are used to define, modify, or delete the structure of database objects such as tables.

1. CREATE TABLE

Definition :- used to create a new table in the database

Query :

```
SQl
CReate TABLE Employee (
empID INT,
EMPName VARCHAR(100),
Department VARCHAR(50),
Salary INT
);
SQl
CREATE TABLE Department (
   DEPTID INT,
Dept Name VARCHAR(50),
   Location VARCHAR(50)
```

(4)

output :-

Tables employee and department created successfully.

2. DESCRIBE or DESC

Definition; Displays the structure of a table. (column names and data types)

Query;

```
SQl
DESC Employee;
```

3. DROP TABLE

Definition;

Deletes the entire table structure and all its data,

Query;

```
SQl
DROP TABLE Employee;
```

4. ALTER TABLE

Definition;

Deletes the entire table structure and all its data,

used to add, delete, or modify columns in an existing table.

II DML COMMANDS (Data Manipulation Language)

Definition; DML Commands are used to manage and manipulate data inside database tables.

1. INSERT INTO

Definition; inserts new rows into a table,

Query;

```
SQl
INSERT INTO Employee (EMPID, EMPName, Department, Salary)
 VALUES(1, 'Alice', HR, 50000);
INSERT INTO Employee (EMPID, EMPName, Department, Salary)
 VALUES (3, 'Charlie', 'finance', 60000);
INSERT INTO Employee (EMPID, EMPName, Department,
 Salary) VALUES (3, 'Charlie', 'finance', 60000);
```

2. SELECT

Definition;

② DESCRIBE or DESC
Output :-

Field	Type
EMPID	INT
EMPNAME	VARCHAR(100)
Department	VARCHAR(50)
Salary	INT

③.
Output
TAble Employee dropped Successfully.

④ Output
Column Joining Data added to Employee.

III DML Commands (Data manipulation language.

1. output;
3 rows ingested into Employee table.

2. output

EmPID	EMPName	Department	Salary
1.	Alice	HR	50000
2.	Bob	IT	70000
3.	charlie	finance	60000

(4)

Output

1 row updated.

After update;

SQL

SELECT * from employee;

EMPID	EMPName	Department	Salary
1.	Alice	HR	50000
2.	Bob	IT	75000.
3.	Charlie	Finance	60000

(4)

output:-

1 row deleted.

After Delete;

SQL> /

SELECT * FROM Employee;

EMPID	EMPName	Department	Salary
2	Bob	IT	75000
3	charlie	finance	60000

(5)

Out Put :-

EMPID	EMName	Department	Salary
2	Bob	IT	75000

Query:

SQL

SELECT * FROM Employee;

3. UPDATE

Definition: Modifies existing data in a table.

Query:

SQL

UPDATE Employee SET Salary = 75000 WHERE EMPNAME = 'Bob';

4. DELETE:

Definition: Deletes one or more rows from a table.

Query:

SQL

DELETE FROM Employee WHERE EMPID = 1;

5. SELECT with WHERE clause

Definition: Retrieves specific records that satisfy the condition.

Query:

SQL

SELECT * FROM Employee WHARE Department = 'IT';

VEL TECH	
EX No.	2.1
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	—
TOTAL (25)	15
SIGN WITH DATE	

11/03/25

Result: The task to create, delete and alter the table are executed successfully.

Aim:

To use DDL (Data definition language) and DML (Data manipulation language) commands with constraints for creating, modifying, and managing database structures, while ensuring data integrity and consistency.

1. DDL Commands for hospital management system

1.1 CREATE TABLE

```
CREATE TABLE Patient (
PatientID INT PRIMARY KEY,
PatientName VARCHAR(50) NOT NULL,
Gender CHAR(1) CHECK (Gender IN ('M', 'F')),
Age INT CHECK (Age > 0),
ContactNumber VARCHAR(15) UNIQUE,
Address VARCHAR(100)
);
CREATE TABLE Doctor(
DoctorID INT PRIMARY KEY,
DoctorName VARCHAR(50) NOT NULL,
Specialization VARCHAR(50),
Phone numbers VARCHAR(15) UNIQUE
);
CREATE TABLE Appointment(
AppointmentID INT PRIMARY KEY,
PatientID INT NOT NULL,
DoctorID INT NOT NULL,
AppointmentDate DATE DEFAULT CURRENT_DATE,
Diagnosis VARCHAR(200),
FOREIGN KEY (PatientID) REFERENCES Patient(PatientID),
```

* Select * from DEPARTMENT Before Performing Alter

STU ID		
1	101	CSE
2	102	ECE
3	103	IT

* Select * from Student --- after Performing that

STNo	STU ID	STU Name	STU DEP	STU Phno	STU Email
1.	1	chandu	102	Male	Null
2.	2	Nishile	103	female	Null

1.2 ALTER TABLE:

ALTER TABLE APPatient ADD email VARCHAR(50);

ALTER TABLE Patient MODIFY contact_number VARCHAR(20);

1.3 TRUNCATE TABLE:

TRUNCATE TABLE APPointment;

Result:-

All rows removed from APPointment table, structure remains;

1.4 RENAME TABLE

RENAME TABLE Patient TO Patients;

2. DML Commands for Hospital Management System

2.1 INSERT Data

INSERT INTO Patients (PatientID, Patient_name, Gender, Age, Contact_number, Address, Email)

VALUES (1, 'John Doe', 'M', 35, '9876543210', 'New Delhi', 'John@gmail.com);

INSERT INTO Doctors (DoctorID, Doctors_name, Specialization, Phone number)

VALUES (101, 'Dr. Meera Sharma', 'Cardiologist', 9123456789);

INSERT INTO APPointment (APPointment_ID, PatientID, DoctorID, APPointment Date, Diagnosis)

VALUES (1001, 1, 101, '2025-08-15', 'Mild chest pain');

Result:-

Records inserted successfully

UPDATE Data

UPDATE Patient

SET Age = 36, Address = 'Mumbai'

WHERE PatientID = 1;

Result:-

John Doe's age updated to 36 and address changed to mumbai

DELETE DATA:

DELETE FROM APPointment

Select * from STUDENTS - After inserting values

STU-NAME	STU-DEPT	STU-SEPARTMENT	STU-PHNO	STU-EMAIL
RAVI	102	MALE	9876543210	NULL
ANITA	101	FEMALE	8977120090	velteeh@gmail
sharesa	101	FEMALE	9398630535	velteeh@gmail

WHERE Appointment ID = 101;

Result :- Appointment with ID 101 deleted

SELECT DATA

SELECT P.Patient Name, d.Doctors Name, a.Appointment Date, Diagnosis FROM Appointment,

DEPTID	DeptName
101	CSE
102	ECE
103	IT

Result :-

Thus, DDL and DML Commands in SQL along with UPDATE, DEL and SELECT is implemented successfully.