2) Use DDL and DML Commands a) Create a Products table with columns for ProductID, ProductName, Price, and StockQuantity using DDL commands. b) Insert five product records and display all products using a SELECT query. c) Update the price of a product with ProductID = 3 and check the changes using a SELECT statement. d) Delete a product from the table and verify whether the changes are reflected. e) Alter the table to add a new column Discount and set a default value of 5%.

Which recent tool or technology have you studied for database management, and can you briefly explain its key features and why it is used in the industry?

CREATE TABLE Products (

ProductID INT PRIMARY KEY,

ProductName VARCHAR(50),

Price DECIMAL(10, 2),

StockQuantity INT

);

INSERT INTO Products (ProductID, ProductName, Price, StockQuantity) VALUES

(1, 'Laptop', 50000.00, 10),

(2, 'Smartphone', 25000.00, 20),

(3, 'Tablet', 15000.00, 15),

(4, 'Headphones', 3000.00, 50),

(5, 'Smartwatch', 8000.00, 25);

SELECT \* FROM Products;

UPDATE Products

SET Price = 17000.00

WHERE ProductID = 3;

SELECT \* FROM Products

WHERE ProductID = 3;

DELETE FROM Products

WHERE ProductID = 5;

SELECT \* FROM Products;

ALTER TABLE Products

ADD Discount DECIMAL(5,2) DEFAULT 5.00;

SELECT \* FROM Products;

**📚 Recently Studied Database Management Tool: MongoDB Atlas**

✅ **Key Features:**

* **Fully Managed Cloud Database:** Automates scaling, backups, and monitoring.
* **NoSQL Database:** Stores data in flexible, JSON-like documents instead of rigid tables.
* **Multi-Cloud Support:** You can deploy across AWS, Azure, and GCP.
* **Auto-Sharding:** Splits data automatically for scalability.
* **Global Clusters:** Serve low-latency reads and writes anywhere in the world.
* **Security:** Built-in encryption, access controls, and auditing features.

✅ **Why it’s used in Industry:**

* Ideal for applications that need **high flexibility** (e.g., e-commerce, IoT, real-time analytics).
* Faster development cycles because schema can evolve easily.
* Powerful for handling **big data** and **high transaction workloads**.