Experiment 1

Consider Dept table and insert 10 records.

DEPTNO	DNAME	LOC

Perform the following:

1. Rename the table dept as department

2. Add a new column PINCODE with not null constraints to the existing table DEPT

3. Rename the column DNAME to DEPT_NAME in dept table

4. Change the data type of column loc as CHAR with size 10

5. Delete table

Experiment 2

Design an ER model for a social media platform. The platform needs to manage users, posts, and comments. Users can create multiple posts, and each post can have multiple comments.

Experiment 3

Consider Employee table

EMPNO	EMP_NAME	DEPT	SALARY	DOJ	BRANCH
E101	Amit	roduction	45000	12-Mar-00	Bangalore
E102	Amit	HR	70000	03-Jul-02	Bangalore
E103	sunita	lanagemer	120000	11-Jan-01	mysore
E105	sunita	IT	67000	01-Aug-01	mysore
E106	mahesh	Civil	145000	20-Sep-03	Mumbai

Perform the following

1. Display all the fields of employee table

2. Retrieve employee number and their salary

3. Retrieve average salary of all employee

4. Retrieve number of employee

5. Retrieve distinct number of employee

6. Display details of employee whose name is AMIT and salary greater than 50000;

Experiment 4

Create an ER model for an online shopping platform. The system needs to store information about customers, products, and orders. Customers can place multiple orders, and each order can contain multiple products.

Experiment 5

Consider the MOVIE DATABASE

Movies

title	director	myear	rating
Fargo	Coen	1996	8.2
Raising Arizona	Coen	1987	7.6
Spiderman	Raimi	2002	7.4
Wonder Boys	Hanson	2000	7.6

Actors

actor	ayear
Cage	1964
Hanks	1956
Maguire	1975
McDormand	1957

Acts

actor	title
Cage	Raising Arizona
Maguire	Spiderman
Maguire	Wonder Boys
McDormand	Fargo
McDormand	Raising Arizona
McDormand	Wonder Boys

Directors

director	dyear
Coen	1954
Hanson	1945
Raimi	1959

Perform the Following.

1. Find movies made after 1997
2. Find movies made by Hanson after 1997
3. Find all movies and their ratings
4. Find all actors who are before 1964.
5. Find the average rating of the movies.

Experiment 6

Consider the following data into their respective tables

Data for CLIENT_MASTER table

ClientNo	Name	City	Pincode	State	BalDue
C00001	Ivan	Mumbai	400054	Maharashtra	15000
C00002	Ashwini	Chennai	780001	TamilNadu	0
C00003	Joshi	Mangalore	560001	Karnataka	5000
C00004	Deepak	Chennai	780001	TamilNadu	0
C00005	Sharma	Mumbai	400054	Maharashtra	2000

Product No	Description	Profitpercent	unitmeasure	qtyonhand	sellprice	Cost price
P00001	Tshirt	5	piece	200	350	250
P00065	Shirt	6	piece	150	500	350
P00032	Jeans	5	piece	100	600	450
P00324	Skirts	4	piece	120	750	500
P02345	CottonJeans	3	piece	80	850	550

2. Data for PRODUCT_MASTER table

1. Find out the names of all clients
2. Retrieve the entire contents of the Client _master table
3. Retrieve the list of names, city and the state of all the clients
4. List the various products available from the Product _Master table
5. List all the items got more profit.
6. List the items of highest selling price.

Experiment 7

Create a table to store information about customers in a retail store. The table should include fields for customer ID, first name, last name, email address, and date of birth.

1. Insert at least 5 records
2. Update the email address of customer ID 1001 with new email id
3. Retrieve the first name and last name of all customers born after the year 2000.
4. Delete the record of the customer with customer ID 1001
5. Count the number of customers in the table.

Experiment 8

Create a table for below schema

A company wants to keep track of its employees' attendance. Create a table to store employee attendance records, including fields for employee ID, date, and whether the employee was present (represented as a boolean value).

1. Insert at least 5 records
2. Insert a new attendance record for employee ID 1001 for the date '2023-07-17' with the employee marked as present
3. Retrieve the attendance records for employee ID 1003 for the month of July 2023.
4. Calculate the total number of days present for employee ID 1004 in the year 2023.
5. Delete all attendance records for the employees who have left the company.

Experiment 9

Create a table for below schema

A university needs to maintain a table to record student course registrations. Create a table to store this information, including fields for student ID, course ID, semester, and grade.

1. Insert at least 5 records
2. Insert a new registration for a student with ID 1001 for the course with ID 2001 in the Fall semester with a grade of 'A'.
3. Update the grade of student with ID 1002 for the course with ID 2002 in the Spring semester to 'B+'.
4. Retrieve all the courses that student with ID 1003 has registered for in the current academic year
5. Calculate the average grade of student with ID 1004 across all courses they have taken.

Experiment 10

Create a table for below schema

A library wants to manage its book collection efficiently. Create a table to store book details, including book ID, title, author, publication year, and the number of available copies.

1. Insert at least 5 records
2. Update the number of available copies for book ID 1002. The library received new copies, so the count increased by 3.
3. Retrieve the title, author, and publication year of all books published after the year 2000.
4. Delete the record of the book with book ID 1003 as it has been permanently removed from the library's collection.
5. Calculate the total number of available copies for all books in the library.

Experiment 11

Create a table for below schema

An online e-commerce platform needs to track product inventory. Create a table to store product information, including product ID, name, description, price, and quantity in stock**.**

1. Insert at least 5 records
2. Update the price of the product with ID 2002. The price has been changed to $29.99.
3. Retrieve the names and quantities in stock for all products with prices greater than $100.
4. Calculate the total value of the inventory by summing up the price multiplied by the quantity in stock for all products.
5. Delete the record of the product with ID 3003 as it is no longer available for sale.

Experiment 12

Design an ER model for a university system. The system needs to keep track of students, courses, and faculty members. Students can enroll in multiple courses, and each course can have multiple students. Faculty members can teach multiple courses.

Experiment 13

Consider the schema for College Database and insert 5 records for each.

STUDENT (USN, SName, Address, Phone, Gender)

SEMSEC (SSID, Sem, Sec)

CLASS (USN, SSID)

SUBJECT (Subcode, Title, Sem, Credits)

IAMARKS (USN, Subcode, SSID, Test1, Test2, Test3, FinalIA)

Answer the following

1. List all the student details studying in fourth semester ‘C’ section.
2. List the subjects of highest credits.
3. Which subject got maximum marks.
4. List the average marks of test1.