DBMS Practical File

Name – Pawan Kumar
Roll Number – 24/SCA/BCA(AI&ML)/048

Q1) Create a table called Employee with the following structure.

Name	Type
Empno	Number
Ename	Varchar2(20)
Job	Varchar2(20)
Mgr	Number
Sal	Number

1. **Add a column commission with domain to the employee table.**
2. **Insert any five records into the table.**
3. **Update the column details of job.**
4. **Rename the column of Employ table using alter command.**
5. **Delete the employee whose Empno is 19.**

Input –

```sql
CREATE TABLE Employee (
    Empno NUMBER PRIMARY KEY,
    Ename VARCHAR2(20),
    Job VARCHAR2(20),
    Mgr NUMBER,
    Sal NUMBER
);
ALTER TABLE Employee
ADD commission NUMBER;
INSERT INTO Employee (Empno, Ename, Job, Mgr, Sal, commission) VALUES (1, 'John', 'Manager', NULL, 50000, 500);
INSERT INTO Employee (Empno, Ename, Job, Mgr, Sal, commission) VALUES (2, 'Jane', 'Clerk', 1, 30000, 300);
INSERT INTO Employee (Empno, Ename, Job, Mgr, Sal, commission) VALUES (3, 'Jim', 'Analyst', 1, 40000, 400);
INSERT INTO Employee (Empno, Ename, Job, Mgr, Sal, commission) VALUES (4, 'Jill', 'Sales', 1, 45000, 450);
INSERT INTO Employee (Empno, Ename, Job, Mgr, Sal, commission) VALUES (5, 'Jack', 'Engineer', 1, 35000, 350);
UPDATE Employee
SET Job = 'Senior Clerk'
WHERE Empno = 2;
ALTER TABLE Employee
RENAME COLUMN Ename TO Employee_Name;
DELETE FROM Employee
WHERE Empno = 19;
```

OutPut -

EMPNO	EMPLOYEE_NAME	JOB	MGR	SAL	COMMISSION
1	John	Manager	-	50000	500
2	Jane	Senior Clerk	1	30000	300
3	Jim	Analyst	1	40000	400
4	Jill	Sales	1	45000	450
5	Jack	Engineer	1	35000	350

Q2) Create department table with the following structure.

Name	Type
Deptno	Number
Deptname	Varchar2(20)
Location	Varchar2(20)

1. Add column designation to the department table.
2. Insert values into the table.
3. List the records of emp table grouped by deptno
4. Update the record where deptno is 9
5. Delete any column data from the table

Input -

```sql
CREATE TABLE Department (
    Deptno NUMBER PRIMARY KEY,
    Deptname VARCHAR2(20),
    location VARCHAR2(20)
);
ALTER TABLE Department
ADD designation VARCHAR2(20);
INSERT INTO Department (Deptno, Deptname, location, designation) VALUES (1, 'HR', 'New York', 'Manager');
INSERT INTO Department (Deptno, Deptname, location, designation) VALUES (2, 'Finance', 'Chicago', 'Analyst');
INSERT INTO Department (Deptno, Deptname, location, designation) VALUES (3, 'IT', 'San Francisco', 'Engineer');
INSERT INTO Department (Deptno, Deptname, location, designation) VALUES (4, 'Marketing', 'Los Angeles', 'Sales');
INSERT INTO Department (Deptno, Deptname, location, designation) VALUES (5, 'Support', 'Houston', 'Support');
SELECT Deptno, COUNT(*) AS Employee_Count
FROM Employee
GROUP BY Deptno;
UPDATE Department
SET Deptname = 'New Department', location = 'New Location'
WHERE Deptno = 9;
ALTER TABLE Department
DROP COLUMN designation;
```

OutPut -

DEPTNO	DEPTNAME	LOCATION
1	HR	New York
2	Finance	Chicago
3	IT	San Francisco
4	Marketing	Los Angeles
5	Support	Houston

Q3) Create a table called customer table

Name	Type
Cust name	Varchar2(20)
Cust Street	Varchar2(20)
Cust city	Varchar2(20)

1. Insert records into the table
2. Add salary column to the table.

3. Alter the table column domain.
4. Drop salary column of the customer table.
5. Delete the rows of customer table whose cust city is "hyd'.

Input -

```sql
CREATE TABLE Customer (
    Cust_name VARCHAR2(20),
    Cust_street VARCHAR2(20),
    Cust_city VARCHAR2(20)
);
INSERT INTO Customer (Cust_name, Cust_street, Cust_city) VALUES ('Alice', 'Maple Street', 'NYC');
INSERT INTO Customer (Cust_name, Cust_street, Cust_city) VALUES ('Bob', 'Pine Avenue', 'LA');
INSERT INTO Customer (Cust_name, Cust_street, Cust_city) VALUES ('Charlie', 'Oak Road', 'Houston');
INSERT INTO Customer (Cust_name, Cust_street, Cust_city) VALUES ('Dave', 'Cedar Street', 'Hyd');
INSERT INTO Customer (Cust_name, Cust_street, Cust_city) VALUES ('Eve', 'Birch Lane', 'Hyd');
ALTER TABLE Customer
ADD salary NUMBER;
ALTER TABLE Customer
MODIFY Cust_name VARCHAR2(30);
ALTER TABLE Customer
DROP COLUMN salary;
DELETE FROM Customer
WHERE LOWER(Cust_city) = 'hyd';
```

OutPut -

CUST_NAME	CUST_STREET	CUST_CITY
Alice	Maple Street	NYC
Bob	Pine Avenue	LA
Charlie	Oak Road	Houston

Q4) Create a table called branch table

Name	Type
Branch name	Varchar2(20)
Branch city	Varchar2(20)
asserts	Number

1. Increase the size of data type for asserts to the branch.
2. Add and drop a column to the branch table
3. Insert values to the table
4. Update the branch name column
5. Delete any two columns from the table

Input -

```
CREATE TABLE Branch (
    Branch_name VARCHAR2(20),
    Branch_city VARCHAR2(20),
    assets NUMBER
);
ALTER TABLE Branch
MODIFY assets NUMBER(10, 2);
ALTER TABLE Branch
ADD Branch_code VARCHAR2(10);

ALTER TABLE Branch
DROP COLUMN Branch_code;
INSERT INTO Branch (Branch_name, Branch_city, assets) VALUES ('Main', 'NYC', 100000);
INSERT INTO Branch (Branch_name, Branch_city, assets) VALUES ('East', 'LA', 75000);
INSERT INTO Branch (Branch_name, Branch_city, assets) VALUES ('West', 'Houston', 50000);
INSERT INTO Branch (Branch_name, Branch_city, assets) VALUES ('South', 'Chicago', 45000);
INSERT INTO Branch (Branch_name, Branch_city, assets) VALUES ('North', 'Miami', 30000);
UPDATE Branch
SET Branch_name = 'Central'
WHERE Branch_name = 'Main';
ALTER TABLE Branch
DROP COLUMN Branch_city;

ALTER TABLE Branch
DROP COLUMN assets;
select * from Branch;
```

OutPut -

Q5) Create a table called sailor table

NAME	TYPE
sID	Number
Sname	Varchar2(20)
rating	Varchar2(20)

1. Add column age to the sailor table.
2. Insert values into the sailor table.
3. Delete the row with rating >8.
4. Update the column details of sailor.
5. Insert null values into the table.

Input -

```sql
CREATE TABLE sailor (
    Sid NUMBER,
    Sname VARCHAR2(20),
    rating VARCHAR2(20)
);
ALTER TABLE sailor
ADD age NUMBER;
INSERT INTO sailor (Sid, Sname, rating, age)
VALUES (1, 'John Doe', '7', 25);

INSERT INTO sailor (Sid, Sname, rating, age)
VALUES (2, 'Jane Smith', '9', 30);
DELETE FROM sailor
WHERE TO_NUMBER(rating) > 8;
UPDATE sailor
SET Sname = 'New Name', rating = '6', age = 28
WHERE Sid = 1;
INSERT INTO sailor (Sid, Sname, rating, age)
VALUES (3, NULL, NULL, NULL);
```

OutPut -

SID	SNAME	RATING	AGE
1	New Name	6	28
3	-	-	-

Q6) Create a table called reserves table

NAME	TYPE
Boat id	Integer
sid	Integer
day	Integer

1. Insert values into the reserves table.

2. Add column time to the reserves table.
3. Alter the column day data type to date.
4. Drop the column time in the table.
5. Delete the row of the table with some condition.

Input -

```sql
CREATE TABLE reserves (
    "Boat id" INTEGER,
    sid INTEGER,
    day INTEGER
);
INSERT INTO reserves ("Boat id", sid, day)
VALUES (101, 1, 20220101);

INSERT INTO reserves ("Boat id", sid, day)
VALUES (102, 2, 20220102);
ALTER TABLE reserves
ADD time VARCHAR2(10);
ALTER TABLE reserves
MODIFY day DATE;
ALTER TABLE reserves
DROP COLUMN time;
DELETE FROM reserves
WHERE sid = 1;
```

OutPut -

Boat id	SID	DAY
102	2	20220102