- MOOC/NPTEL Courses
- Any other innovative initiatives with respect to the Course contents

LIST OF EXPERIMENTS

Sl. No.	Description
	Part-A
1	Consider the following schema for Bank Database: **BRANCH(bid: varchar, bname:string, branch-city:string, assets:integer)** **ACCOUNT(accno:int, branch-name:string, balance:integer)** **DEPOSITOR(customer-name:string, accno:int)** **CUSTOMER(Cid:varchar, customer-name:string, customer-street:string, customer-city:string)** **LOAN(loan-number:int, branch-name:string, amount:integer, cid:varchar)** Write SQL queries to 1. Find all the customers who have at least one account at the "Mangaluru" branch. 2. Find all the customers who have an account at all the branches located in a specific city. 3. Retrieve the Customer name and loan amount of a customer who borrowed a loan more than 5,00,000. 4. Retrieve the details of bank branch with maximum assets.

5.Demonstrate how you delete all account tuples at every branch located in a specific city

Consider the following schema for a Library Database:

BOOK(Book_id:varchar, Title:string, Publisher_Name:string, Pub_Year:integer)

BOOK_AUTHORS(Book_id:varchar, Author_Name:string)

PUBLISHER(Name:string, Address:string, Phone:integer)

BOOK_COPIES(Book_id:varchar, Programme_id:varchar, No-of_Copies:integer)

BOOK_LENDING(Book_id:varchar, Programme_id:varchar, Card_No:varchar, Date_Out:date, Due_Date:date)

LIBRARY_PROGRAMME(Programme_id:varchar, Programme_Name:string, Address:string)

2 Write SQL queries to

1. Retrieve details of all books in the library – id, title, name of publisher, authors, number of copies in each Programme, etc.
2. Get the particulars of borrowers who have borrowed more than 3 books, but from Jan 2023 to Jun 2023.
3. Delete a book in BOOK table. Update the contents of other tables to reflect this data manipulation operation.
4. Partition the BOOK table based on year of publication. Demonstrate its working with a simple query.

Create a view of all books and its number of copies that are currently available in the Library

Consider the schema for College Database:

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

SEMSEC(SSID, Sem, Sec)

CLASS(USN, SSID)

COURSE(Subcode, Title, Sem, Credits)

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

Write SQL queries to

3

1. List all the student details studying in fourth semester „C" section.
2. Compute the total number of male and female students in each semester and in each section.
3. Create a view of Test1 marks of student USN "4SF20CD001" in all Courses.
4. Calculate the FinalIA (average of three test marks) and update the corresponding table for all students.
5. Categorize students based on the following criterion:

   If FinalIA = 45 to 50 then CAT = "Outstanding"

   If FinalIA= 40 to 45 then CAT= "Good"

   If FinalIA = 30 to 40 then CAT = "Average"

   If FinalIA< 30 then CAT = "Weak"

Give these details only for 8th semester A, B, and C section students.

4	Consider the schema for Company Database:

EMPLOYEE (Eid:varchar, Name:string, Address: string, Gender:string, Salary: integer, SuperEid: varchar, Dno: varchar)

DEPARTMENT (Dnum: varchar, Dname: string, DMgr_id:varchar, Mgr_start_date: date)

DLOCATION (Dno: varchar, Dlocation:string)

PROJECT (Pnum:varchar, Pname: string, Plocation:string, Dno:varchar)

WORKS_ON (Eid: varchar, Pno: varchar, Hours: integer)

DEPENDENT (Empid: varchar, Dep_name:string, Gender:string, Bdate:date, Relationship:String)

Write SQL queries to

1. Make a list of all project numbers for projects that involve an employee whose name is "Rahul", either as a worker or as a manager of the department that controls the project.
2. Show the resulting salaries if every employee working on the "IoT" project is given a 10 percent raise.
3. Find the sum of the salaries of all employees of the "Accounts" department, as well as the maximum salary, the minimum salary, and the average salary in this department.
4. Retrieve the name of each employee who works on all the projects controlled by department number 5 (use NOT EXISTS operator).

Create a view Dept_info that gives details of department name, Number of employees and total salary of each department.

Consider the schema for Airline Database:

Flights (fno: varchar, from: string, to: string, distance: integer, departs: time, arrives: time, price: integer)

Aircraft (aid: varchar, aname: string, cruisingrange: integer)

Certified (eid: varchar, aid: varchar)

Employees (eid: varchar, ename: string, salary: integer)

Note: The Employees relation describes pilots and other kinds of employees as well; Every pilot is certified for some aircraft, and only pilots are certified to fly.

5 Write SQL queries to

1. Find the names of aircraft such that all pilots certified to operate them have salaries more than Rs.80, 000.
2. For each pilot who is certified for more than three aircrafts, find the eid and the maximum cruisingrange of the aircraft for which she or he is certified.
3. Find the names of pilots whose salary is less than the price of the cheapest route from Bengaluru to Mumbai.
4. Find the aids of all aircraft that can be used on routes from Bengaluru to New Delhi.

Find the employee name and salary earning second highest salary.