

# DBMS LAB (PCS 503)

## 1 Database Schema for a customer-sale scenario

Customer(Cust id : integer, cust\_name: string)

Item(item id: integer, item\_name: string, price: integer)

Sale(bill no: integer, bill\_date: date, cust\_id: integer, item\_id: integer, qty\_sold: integer)

For the above schema, perform the following—

- Create the tables with the appropriate integrity constraints
- Insert around 10 records in each of the tables
- List all the bills for the current date with the customer names and item numbers
- List the total Bill details with the quantity sold, price of the item and the final amount
- List the details of the customer who have bought a product which has a price>200
- Give a count of how many products have been bought by each customer
- Give a list of products bought by a customer having cust\_id as 5
- List the item details which are sold as of today

## 2 Database Schema for a Student Library scenario

Student(Stud no : integer, Stud\_name: string)

Membership(Mem no: integer, Stud\_no: integer)

Book(book no: integer, book\_name:string, author: string)

Iss\_rec(iss no:integer, iss\_date: date, Mem\_no: integer, book\_no: integer)

For the above schema, perform the following—

- Create the tables with the appropriate integrity constraints
- Insert around 10 records in each of the tables
- List all the student names with their membership numbers
- List all the issues for the current date with student and Book names
- List the details of students who borrowed book whose author is CJDAT
- Give a count of how many books have been bought by each student
- Give a list of books taken by student with stud\_no as 5
- List the book details which are issued as of today

## 3 Database Schema for a Employee-pay scenario

employee(emp id : integer, emp\_name: string)

department(dept id: integer, dept\_name:string)

paydetails(emp\_id : integer, dept\_id: integer, basic: integer, deductions: integer, additions: integer, DOJ: date)

payroll(emp\_id : integer, pay\_date: date)

For the above schema, perform the following—

- Create the tables with the appropriate integrity constraints
- Insert around 10 records in each of the tables
- List the employee details department wise
- List all the employee names who joined after particular date
- List the details of employees whose basic salary is between 10,000 and 20,000
- Give a count of how many employees are working in each department
- Give a names of the employees whose netsalary>10,000
- List the details for an employee\_id=5

#### 4 Database Schema for a Video Library scenario

Customer(cust\_no: integer, cust\_name: string)

Membership(**Mem\_no: integer, cust\_no: integer**)

Cassette(**cass\_no: integer**, cass\_name: string, Language: String)

Iss\_rec(**iss\_no: integer**, iss\_date: date, **mem\_no: integer, cass\_no: integer**)

For the above schema, perform the following—

- Create the tables with the appropriate integrity constraints
- Insert around 10 records in each of the tables
- List all the customer names with their membership numbers
- List all the issues for the current date with the customer names and cassette names
- List the details of the customer who has borrowed the cassette whose title is “The Legend”
- Give a count of how many cassettes have been borrowed by each customer
- Give a list of book which has been taken by the student with mem\_no as 5
- List the cassettes issues for today

#### 5 Database Schema for a student-Lab scenario

Student(stud\_no: integer, stud\_name: string, **class: string**)

Class(**class: string, descrip: string**)

Lab(**mach\_no: integer**, Lab\_no: integer, description: String)

Allotment(**Stud\_no: Integer, mach\_no: integer, dayof week: string**)

For the above schema, perform the following—

- Create the tables with the appropriate integrity constraints
- Insert around 10 records in each of the tables
- List all the machine allotments with the student names, lab and machine numbers
- List the total number of lab allotments day wise
- Give a count of how many machines have been allocated to the ‘CSIT’ class
- Give a machine allotment details of the stud\_no 5 with his personal and class details
- Count for how many machines have been allocated in **Lab\_no 1** for the day of the week as “Monday”
- How many students class wise have allocated machines in the labs

#### 6 Database Schema for a Employee-Detail

employee(**emp\_id**, emp\_name, dateofbirth, designation, department, salary, gender )

For the above schema, perform the following—

- Create the tables with the appropriate integrity constraints
- Insert around 10 records in each of the tables
- List the employee whose salary between 15000 to 35000.
- List the employee whose name is starting with J & T
- List the min, max, avg salaries of employee.
- Display the number of employees working in each department and their department name (Using group by).
- Who are the Male programmers earning below the average salary of female programmers ( Using group by).
- Who is the youngest programmer born in 1965( Using Nested query).

