```
DELIMITER //

CREATE PROCEDURE
CalculateTotalPricePerCustomer()
BEGIN
   SELECT C.C_ID, C.C_NAME, SUM
(O.TOTAL) AS Total_Price
   FROM C
   JOIN P ON C.C_ID = P.C_ID
   JOIN O ON P.O_ID = O.O_ID
   GROUP BY C.C_ID, C.C_NAME;
END //

DELIMITER ;
```

```
SELECT C.C_NAME  FROM C  JOIN (
   SELECT C_ID, COUNT(O_ID) AS order_count  FROM P
   GROUP BY C_ID
   ORDER BY order_count DESC
   LIMIT 1
) AS max_orders ON C.C_ID = max_orders.C_ID;
```

DMSL Practical Exam Question Bank

1	**Create Order Management System with at least 3 entities using MySQL and Implement Following Statements** 1. Display the name of customers who have maximum orders. 2. Display the Mob No of customers who have highest Buying Total. 3. Display how many customers are there in customer collection. 4. Using collection of customer, and $exists, tell me how many customers belongs from pune city. 5. Find the customer who purchased shoes and cloth product. 6. Find the top 10 buyers. 7. Display all the orders where total amount is >1000. 8. Display all the customers with corresponding buying price. 9. Write a PROCEDURE which will return the Total Price per Customer.
2	Design the MySQL Database with following entities, dept (dept-no, dname, LOC) emp (emp-no, ename, designation,sal) project (proj-no, proj-name, status) dept and emp are related as 1 to many. project and emp are related as 1 to many. Write relational or sq1 expressions for the following : i) List all employees of 'INVENTORY' department of 'PUNE' location. ii) Give the names of employees who are working on 'Blood Bank' project. iii) Give the name of managers from 'MARKETING' department. iv) Give all the employees working under status 'INCOMPLETE' projects. v) Write a Procedure block that updates the salaries of the employees as per the following rules. • If the designation is CLERK and deptno is 10 then increase the salary by 20% • If the designation is MANAGER and deptno is 20 then increase the salary by 5%
3	Design the MySQL Database Schema for 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:- a) List all the customer names with their membership numbers b) List all the issues for the current date with the customer names and cassette names c) List the details of the customer who has borrowed the cassette whose title is " The Legend" d) Give a count of how many cassettes have been borrowed by each customer e) Write a trigger to delete a Customer record

4	Design the MySQL Database with following entities, • SAILORS (SID: INTEGER, SNAME:STRING, RATING:INTEGER(Must be in between 1 to 10), AGE:REAL) • BOATS (BID: INTEGER, BNAME: STRING, COLOR: STRING) • RESERVES (SID: INTEGER, BID: INTEGER, DAY: DATE) Make appropriate tables and add required data for the above database. **Frame and execute the SQL queries for the following:** 1. Find the names of sailors who have reserved boat number 123. 2. Find names of the sailors who have reserved at least one boat. 3. Find average age of Expert sailors. 4. Write the following queries on Expert Sailor View. 4.1 Find the Sailors with age > 25 and rating equal to 10. 4.2 Find the total number of Sailors in Expert Sailor view. 4.3 Find the number of Sailors at each rating level (8, 9, 10). 5. Write appropriate procedure to update rating of sailors by 2 if rating is less than 5, by 1 if rating is >5 and doesn't change the rating if it is equal to 10.
5	Design the MySQL Database with following entities, Customer(**Cust id : integer,** cust_name: string) Item(**item_id: integer,**item_name: string, price: integer) Sale(**bill_no: integer,** bill_data: date, **cust_id: integer, item_id: integer**, qty_sold: integer) For the above schema, perform the following— a) Create the tables with the appropriate integrity constraints. b) Insert around 10 records in each of the tables c) List all the bills for the current date with the customer names and item numbers d) List the total Bill details with the quantity sold, price of the item and the final amount. e) List the details of the customer who have bought a product which has a price>200. f) List the item details and count which are sold as of today. g) Write a procedure to Give a list of products bought by a customer having cust_id as 5

CURDATE() --> GIVES US THE CURRENT DATE
DATE(S.BILL_DATE) = CURDATE() --> FOR VALIDATION YOU CAN USE THIS

6	Design the MySQL Database Schema for 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— a) Create the tables with the appropriate integrity constraints b) Insert around 10 records in each of the tables c) List all the student names with their membership numbers d) List all the issues for the current date with student and Book names e) List the details of students who borrowed book whose author is CJDATE f) Create a view which lists out the iss_no, iss _date, stud_name, book name
7	Design the MySQL 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— a) List the employee details department wise b) List all the employee names who joined after particular date c) List the details of employees whose basic salary is between 10,000 and 20,000 d) Give a count of how many employees are working in each department e) Give a names of the employees whose netsalary>10,000 f) Write a procedure to List the pay details for all employee.
8	**Consider the relational database** Supplier (sid, sname, address) Parts (pid, pname, color) Catalog (sid, pid, cost) **Write SQL queries for the following:** i) Find names of suppliers who supply some red parts. ii) Find names of all parts whose cost is more than Rs. 25 iii) Find name of all parts whose color is green. iv) Find name of supplier and parts with its color and cost. v) Write a trigger which will keep backup of updating part cost
10	**Design the MySQL Database Schema for student-Lab scenario** Student (**stud_no: integer**, stud_name: string, **class: string**) Class (**class: string,descrip: string**) Lab (**machi_no: integer**, Lab_no: integer, description: String) Allotment (**Stud_no: Integer, mach_no: integer, dayof week: string)** For the above schema, perform the following—

Paydetails.DOJ > DATE(2023-11-10)
date format 'YYYY-MM-DD' is used to compare dates in MySQL.
YOU CAN DO ..
Paydetails.DOJ > '2023-11-10'

a) List all the machine allotments with the student names, lab and machine numbers
b) List the total number of lab allotments day wise
c) Give a count of how many machines have been allocated to the 'CSIT' class
d) Give a machine allotment etails of the stud_no 5 with his personal and class details
e) Count for how many machines have been allocated in **Lab_no 1** for the day of the week as "Monday"
f) Create a view which lists the machine allotment details for "Thursday".

11 **Bank Database:**

A bank database keeps record of the details of customers, accounts, loans and transactions such as deposits or withdraws. Customer record should include customer id, customer name, address, age, contact number, email id etc., accounts details involves account number, account type(fixed account, savings account, monthly account etc), date of creation of the account, balance. Transaction detail keeps information about amount deposited or withdrawn to/from a particular account and the date of transaction. The database should also store record of loans which include loan amount, loan date and the account number to which the loan is granted.

Make appropriate tables for the above database and try to find out the following queries: (Apply appropriate triggers whenever required)

a) List the details of account holders who have a 'savings' account.
b) List the Name and address of account holders with loan amount more than 50,000.

UPDATE table_name
ALTER TABLE table_name

c) Change the name of the customer to 'ABC' whose account number is 'TU001'
d) List the account number with total deposit more than 80,000.
e) List the number of fixed deposit accounts in the bank.
f) Display the detailed transactions on 28th Aug, 2008.
h) Display the total amount deposited and withdrawn on 29th Aug, 2008.
i) List the details of customers who have a loan.
j) Write a procedure to display Savings and Loan information of all customers.

ALL THE CUSTOMER WHO HAVE OR NOT HAVE LOAN BUT WE DISPLAY THE INFORMATION OF THIS
SO WE TAKE LEFT OUTER JOIN HERE

13 **Employees** (Employee_id,first_name , last_name , email, ph_no , hire_date, Job_id ,Salary, department_id)
Works(Employee_id,manager_id)
Departments (Department_id,dept_name , location_id)
Locations (Location_id , street, city, state , country)
Jobs (Job_id, job_title ,min_salary , max_salary)
Job_history(Employee_id , hire_date, leaving_date, salary, job_id, department_id)
1] Display all the employees in descending order of their salary.
2] Display employee_id, full name and salary of all employees who have joined in year 2006 according to their seniority.

	3] List name of all departments in location 20,30 and 50 **4]** Display the full name of all employees whose first_name or last_name contains 'a'. 5] Write a procedure that accepts deptno value from a user, selects the maximum salary and minimum salary paid in the department, from the EMP table
14	Create following tables in mysql Emp(eno, ename, sal, contact_no, addr, dno) project(pno, pname) dept(dno, dname, loc) assigned_to(eno, pno) Write the SQL queries: 1. Gather details of employees working on project 353 and 354. 2. Obtains the details of employees working on the database project. 3. Find the employee nos of employees who work on at least one project that employee 107 works on. 4. Find the employee no of employees who work on all of the projects that employee 107 works on. 5. Find the project with minimum no of employees. 6. Create view to store pno, pname and no of employees working on the project. 7. Write a procedure to display details of the employees working on particular project. Use cursor.
15	You need to create a movie database. Create three tables, one for actors(AID, name), movies(MID, title) and actor_role(MID, AID, rolename). Use appropriate data types for each of the attributes, and add appropriate primary/foreign key constraints. 1. Insert data to the above tables (approx 3 to 6 rows in each table), including data for actor "Charlie Chaplin", and for yourself (using your roll number as ID). 2. Write a query to list all movies in which actor "Charlie Chaplin" has acted, along with the number of roles he had in that movie. 3. Write a query to list all actors who have not acted in any movie 4. List names of actors, along with titles of movies they have acted in. If they have not acted in any movie, show the movie title as null. (Do not use SQL outer join syntax here, write it from scratch.)

```
SELECT eno
FROM assigned_to
WHERE pno IN (
    SELECT pno
    FROM assigned_to
    WHERE eno = 107
)
GROUP BY eno
HAVING COUNT(DISTINCT pno) = (
    SELECT COUNT(DISTINCT pno)
    FROM assigned_to
    WHERE eno = 107
);
```

```
SELECT a.name AS ActorName, IFNULL(m.title, 'Null')
AS MovieTitle
FROM actors a, actor_role ar, movies m
WHERE a.AID = ar.AID
AND ar.MID = m.MID
UNION
SELECT a.name AS ActorName, 'Null' AS MovieTitle
FROM actors a
WHERE NOT EXISTS (
    SELECT 1
    FROM actor_role ar
    WHERE ar.AID = a.AID
);
```

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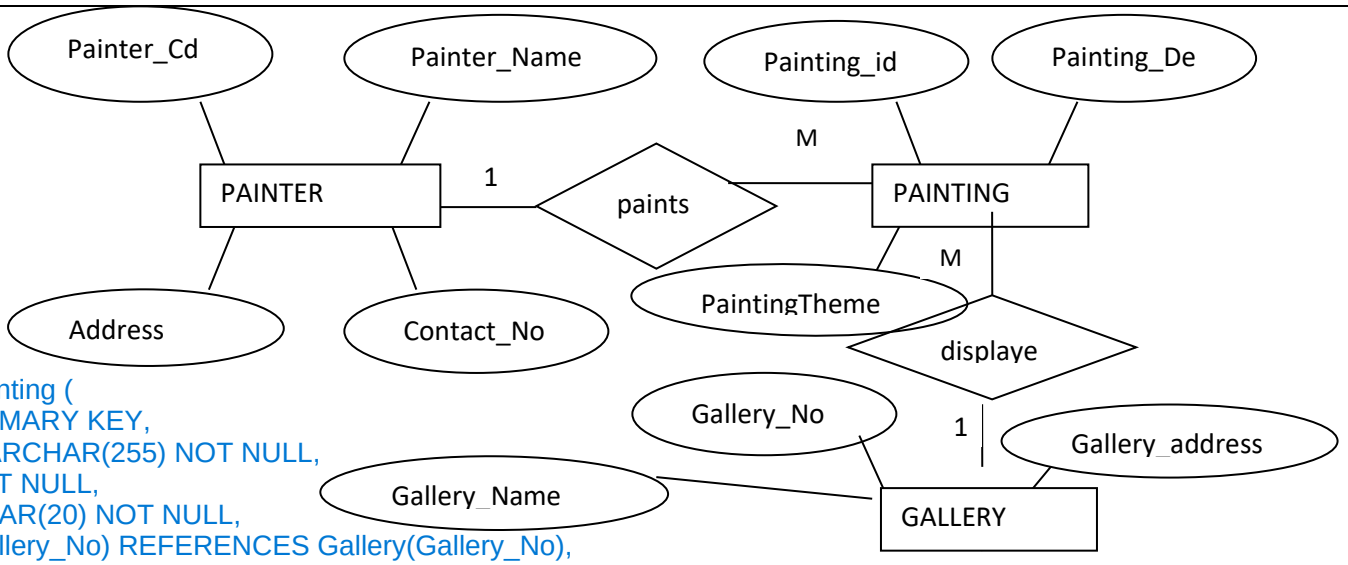


```
CREATE TABLE Painting (
  Painting_id INT PRIMARY KEY,
  Painting_Theme VARCHAR(255) NOT NULL,
  Gallery_No INT NOT NULL,
  Painter_Cd VARCHAR(20) NOT NULL,
  FOREIGN KEY (Gallery_No) REFERENCES Gallery(Gallery_No),
  FOREIGN KEY (Painter_Cd) REFERENCES Painter(Painter_Cd)
);
```

Convert the above ER diagrams into Relational Models and Write Any 5 DQL Statement for the same

18

Consider the following Relations.

Branch (B_No, B_name, B_city, asset),

Customer (C_No,C_Name, C_city street)

Loan (Loan_no, B_name, amount),

Borrower (C_No, Loan_No),

```
SELECT DISTINCT c1.C_Name AS Customer1, c2.C_Name AS Customer2
FROM Customer c1
JOIN Customer c2 ON c1.street = c2.street AND c1.C_city = c2.C_city
JOIN Borrower b1 ON c1.C_No = b1.C_No
JOIN Borrower b2 ON c2.C_No = b2.C_No
JOIN Loan l1 ON b1.Loan_No = l1.Loan_no
JOIN Loan l2 ON b2.Loan_No = l2.Loan_no
WHERE l1.B_name <> l2.B_name AND c1.C_No <> c2.C_No;
```

Write SQL query for the following:

1) Find the names and address of customers who have a loan.

2) Find loan data, ordered by decreasing amounts, then increasing loan numbers.

3) Find the pairs of names of different customers who live at the same address but have loan at different branches.

4)Write a procedure that calculate total loan amount for a particular branch

5) Write a trigger which keeps track of updated amount of loan .

21

Consider the following relational schema. An employee can work in more than one department.

Emp(*eid:* integer, *ename:* string, *salary:* real)

Works(*eid:* integer, *did:* integer)

Dept(*did:* integer, *dname:* string, *managerid:* integer, *floornum:* integer)

Write the following Queries:

1. Print the names of all employees who work on the 10th floor and make less than Rs. 50,000.
2. Print the names of all managers who manage three or more departments on the same floor.
3. Write a procedure to Give every employee who works in the toy department a 10 percent raise.
4. Print the names and salaries of employees who work in both the toy department and the Music department.
5. Print the names of employees who earn a salary that is either less than Rs. 10,000 or more than Rs. 100,000.

	6. Print all of the attributes for employees who work in some department that employee Abhishek also works in. 7. Write a Procedure to print the names of all employees who work on the floor(s) where Amar Arora works.

```
DELIMITER //

CREATE PROCEDURE GetEmployeesOnSameFloor(IN empName VARCHAR(100))
BEGIN
    DECLARE empFloor INT;

    -- Get the floor number where the specified employee works
    SELECT FLOOR_NO INTO empFloor
    FROM WORKS W
    JOIN EMPLOYEE E ON W.E_ID = E.E_ID
    WHERE E.ENAME = empName;

    -- Select names of employees who work on the same floor
    SELECT E.ENAME
    FROM WORKS W
    JOIN EMPLOYEE E ON W.E_ID = E.E_ID
    WHERE W.FLOOR_NO = empFloor;

END //

DELIMITER ;
```

```
SELECT E.*
FROM EMP E
WHERE E.E_ID IN (SELECT W.E_ID
        FROM WORKS W
        JOIN EMP E ON W.E_ID = E.E_ID
        WHERE E.ENAME = 'RAM'
        GROUP BY W.D_ID);
```

```
2 )SELECT ename
FROM Emp
WHERE eid IN (
    SELECT managerid
    FROM Dept
    WHERE floornum IN (
        SELECT floornum
        FROM Dept
        GROUP BY floornum
        HAVING COUNT(DISTINCT did) >= 3
    )
);
```

```
DELIMITER //
CREATE PROCEDURE PrintEmployeesOnAmarFloor()
BEGIN
    SELECT ename
    FROM Emp
    JOIN Works ON Emp.eid = Works.eid
    JOIN Dept ON Works.did = Dept.did
    WHERE Dept.floornum IN (
        SELECT floornum
        FROM Works
        JOIN Emp ON Works.eid = Emp.eid
        WHERE Emp.ename = 'Amar Arora'
    );
END //
DELIMITER ;
```