CODE NO: 11402

Department of Informatics,OU

Name of Program/Course: MCA 2 YEARS COURSE II SEM

Paper Title: DBMS LAB Question Bank.

1. Create 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_data: date, cust_id: integer, item_id: integer, qty_sold: integer)
For the above schema, perform the following
A) List all the bills for the current date with the customer names and item Numbers
B) List the total Bill details with the quantity sold, price of the item and the final amount
C) List the details of the customer who have bought a product which has a price>200.

2. Create 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—

A) Create the tables with the appropriate integrity constraints
B) List all the student names with their membership numbers
C) List all the issues for the current date with student and Book names
D) Give a count of how many books have been bought by each student

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—

a) Create the tables with the appropriate integrity constraints
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.

4. Create the following tables :

Student(roll-no, name, date-of-birth, course-id)
Course (Course-id, name, fee, duration)

(a) Create a form to accept the data from the user with appropriate validation checks.

(b) Generate queries to do the following :

(i) List all those students who are greater than 18 years of age and have opted for MCA course.

(ii) List all those courses whose fee is greater than that of MCA course.

5. Create the following table :

Student (roll-no, name, subject-opted)

Subject –rank (subject-code, subject-name, faculty-code)

Faculty (faculty-code, faculty-name, specialization)

(a) Create a form to accept the data from the user with appropriate validation checks.

(b) Generate queries to do the following:

(i) Find the number of students who have enrolled for the subject "DBMS".

(ii) Find all those faculty members who have not offered any subject.

6. Create the following table :

Item (item-code, item-name, qty-in-stock, reorder-level)

Supplier (supplier-code, supplier-name, address)

Can-supply(supplier-code, item-code)

(a) Create a form to accept the data from the user with appropriate validation checks.

(b) Generate queries to do the following :

(i) List all those suppliers who can supply the given item.

(ii) List all those items which cannot be supplied by given company.

7. Create the following tables:

Student (roll-no, name, category, district, state)

Student-rank(roll-no, marks, rank)

(a) Create a form to accept the data from the user with appropriate validation checks.

(b) Generate queries to do the following :

(i) List all those students who have come from Tamilnadu state and secured a rank above 100.

(ii) List all those students who come from Andhra Pradesh state and belong t to given category who have secured a rank above 100.

8. Create the following tables :

Branch (branch-id, branch-name, branch-city)

Customer (customer-id, customer-name, customer-city, branch-id)

(a) Create a form to accept the data from the user with appropriate validation checks.

(b) Generate queries to do the following :

(i) List all those customers who live in the same city as the branch in which they have account.

(ii) List all those customers who have an account in a given branch city.

9. Create the following tables :

Branch (branch-id, branch-name, branch-city)

Customer (customer-id, customer-name, customer-city, branch-id)

(a) Create a form to accept the data from the user with appropriate validation checks.

(b) Generate queries to do the following :

(i) List all those customers who live in the same city as the branch in which they have account.

(ii) List all those customers who have an account in more than one branch.

10. Create the following tables :

Branch (branch-id, branch-name, branch-city)

Customer (customer-id, customer-name, customer-city, branch-id)

(a) Create a form to accept the data from the user with appropriate validation checks.

(b) Generate queries to do the following :

(i) List all those Branches who have more than 5 customer.

(ii) List all those customers who have an account in more than one branch

11. Create the following tables :

Student(roll-no, name, date-of-birth, course-id)

Course (Course-id, name, fee, duration)

(a) Create a form to accept the data from the user with appropriate validation checks.

(b) Generate queries to do the following :

(i) List all those students who are between 18-19 years of age and have opted for MCA course.

(iii)List all those courses in which number of students are less than 10.

12. Create the following tables :

Student (roll-no, name, subject-opted)

Subject –rank (subject-code, subject-name, faculty-code)

Faculty (faculty-code, faculty-name, specialization)

(a) Create a form to accept the data from the user with appropriate validation checks.

(b) Generate queries to do the following :

(i) Find the number of students who have enrolled for the subject "DBMS"

(ii) Find all those subjects which are not offered by any faculty members.

(iii) Find all those subjects which are offered by more than one faculty member.

13. Create the following tables :

Student (roll-no, name, subject-opted)

Subject –rank (subject-code, subject-name, faculty-code)

Faculty (faculty-code, faculty-name, specialization)

(a) Create a form to accept the data from the user with appropriate validation checks.

(b) Generate queries to do the following :

(i) Find the number of students who have enrolled for the subject "OS"

(ii) Find all those students who opted for more than 5 subjects.

14. Create a table to represent sb-account of a bank consisting of account-no, customer-name, balance-amount.

Write a PL/SQL block to implement deposit and withdraw. Withdraws should not be allowed if the balance goes below Rs.1000.

15. Create the following tables :

Student(roll-no, name, date-of-birth, course-id)

Course (Course-id, name, fee, duration, status)

(a) Create a form to accept the data from the user with appropriate validation checks.

(b) Write PL/SQL procedure to do the following :

Set the status of course to "not offered" in which the number of candidates is less than 5.

16. Consider the schema for CompanyDatabase:

EMPLOYEE (SSN, Name, Address, Sex, Salary, SuperSSN, DNo)

DEPARTMENT (DNo, DName, MgrSSN, MgrStartDate)

DLOCATION (DNo,DLoc)

PROJECT (PNo, PName, PLocation, DNo)

WORKS_ON (SSN, PNo, Hours)

Write SQL queries to

1. Make a list of all project numbers for projects that involve an employee whose last name is 'Scott', 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

17. Create the following tables :

Student(roll-no, name, date-of-birth, course-id)

Course (Course-id, name, fee, duration, status)

(a)Create a form to accept the data from the user wIth appropriate validation checks.

(b)Write PL/SQL procedure to do the following :

Set the status of course to "offered" in which the number of candidates is at least 10 otherwise set it to "not offered".

18. Create the following table :

Item (item-code, item-name, qty-in-stock, reorder-level)

Supplier (supplier-code, supplier-name, address, status)

Can-supply(supplier-code, item-code)

(a) Create a form to accept the data from the user with appropriate validation checks.

(b) Write PL/SQL procedure to do the following :
Set the status of the supplier to "important" if the supplier can supply More than five items.

19. Create the following tables :
Student (roll-no, name, subject-opted)
Subject –rank (subject-code, subject-name, faculty-code, specialization)
Faculty (faculty-code, faculty-name, specialization)
(a) Create a form to accept the data from the user with appropriate validation checks.
(b) Write PL/SQL procedure to the following :
Set the status of the subject to "not offered" if the subject is not offered by any of the faculty members.

20. Create the following tables :
Student (roll-no, name, category, district, state)
Student –rank (roll-no, marks, rank)
(a) Create a form to accept the data from the user with appropriate validation checks.
(b) Write PL/SQL procedure to the following :
Generate a report to list of those districts from which the first hundred rankers come from.

21. Create the following table
Customer (customer-id, customer-name, customer-Age, Address,Salary)
creates a row-level trigger for the customers table that would fire for INSERT or UPDATE or DELETE operations performed on the CUSTOMERS table. This trigger will display the salary difference between the old values and new values.

22. A) Write PL/SQL code to find Largest of three numbers
B) Write PL/SQL code to find Factorial of a given number

23. Write PL/SQL code to accept the text and reverse the text and test whether the given character is Palandrome or not

24. A) Write PL/SQL code in Procedure to find Reverse number
B) Write a Procedure to check the given number is prime or not by using call procedure.

25. A) Write PL/SQL code to UPDATE values in created tables by using Implicit Cursors
B) Write PL/SQL code to display Employee details using Explicit Cursors.

26. A) Write pl/sql code in Trigger not to accept the existing Empno (Unique no) in Emp table
B) Write pl/sql code using Trigger to inform if the new salary of an emp is less than old salary.

27. Create the following tables for Library Information System :
Book : (accession-no, title, publisher, author,year,status)
Status column info could be issued, present in the library, sent for binding, and cannot be

issued.

Write a trigger which sets the status of a book to "cannot be issued", if it is published 20 years back.

28. Create the following tables :

Book(accession-no, title, publisher, year, date-of-purchase, status)

Member(member-id, name, number-of-books-issued, max-limit,status)

Book-issue(accession-no, member-id, date-of-issue)

(a) Create a form to accept the data from the user with appropriate validation checks.

29. Create the following tables :

Book(accession-no, title, publisher, year, date-of-purchase, status)

Member(member-id, name, number-of-books-issued, max-limit,status)

Book-issue(accession-no, member-id, date-of-issue)

(A) Write a PL/SQL procedure to issue the book.

Write a trigger to set the status of students to "back listed" if they have taken book but not returned even after one year.

30. A) Write a PL/SQL block to handle the BUILT-IN EXCEPTIONS.

B) Write pl/sql code to demonstrate If Statement in Trigger.