MARIS STELLA COLLEGE (AUTONOMOUS), VIJAYAWADA- 8 (Affiliated to Krishna University, Machilipatnam) SYLLABUS

Subject: Computer Science Semester: III

Course Title: Database Management Course Code: 20CSP3DB32

Systems - Practical

No of hours: 30 LTP: 002 Credits: 2

Objectives

To master the basics of SQL and construct queries using SQL.

• To analyze the relational database design principles.

Course Outcomes

CO1: Understand the basics of SQL and create database tables and to establish relationships between tables.

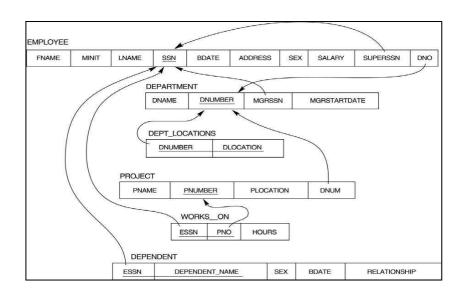
CO2: Design and create relational database systems.

CO3: Formulate queries using SQL DML/DDL/DCL commands.

List of practicals

- 1. Draw ER diagram for hospital administration
- 2. Creation of college database and establish relationships between tables
- 3. Relational database schema of a company is given in the following figure.

Relational Database Schema - COMPANY



Questions to be performed on above schema

- 1. Create above tables with relevant *Primary Key, Foreign Key* and other constraints
- 2. Populate the tables with data
- 3. Display all the details of all employees working in the company.
- 4. Display ssn, Iname, fname, address of employees who work in department no 7.
- 5. Retrieve the *Birthdate and Address* of the employee whose name is 'Franklin T. Wong'
- 6. Retrieve the name and salary of every employee
- 7. Retrieve all distinct salary values
- 8. Retrieve all employee names whose address is in 'Bellaire'
- 9. Retrieve all employees who were born during the 1950s
- 10. Retrieve all employees in department 5 whose salary is between 50,000 and 60,000(inclusive)
- 11. Retrieve the names of all employees who do not have supervisors
- 12. Retrieve SSN and department name for all employees
- 13. Retrieve the name and address of all employees who work for the 'Research' department
- 14. For every project located in 'Stafford', list the project number, the controlling department number, and the department manager's last name, address, and birth date.
- 15. For each employee, retrieve the employee's name, and the name of his or her immediate supervisor.
- 16. Retrieve all combinations of Employee Name and Department Name
- 17. Make a list of all project numbers for projects that involve an employee whose last name is 'Narayan' either as a worker or as a manager of the department that controls the project.
- 18. Increase the salary of all employees working on the 'Product X' project by 15%. Retrieve employee name and increased salary of these employees.
- 19. Retrieve a list of employees and the project name each works in, ordered by the employee's department, and within each department ordered alphabetically by employee first name.
- 20. Select the names of employees whose salary does not match with salary of any employee in department 10.

- 21. Retrieve the employee numbers of all employees who work on project located in Bellaire, Houston, or Stafford.
- 22. Find the sum of the salaries of all employees, the maximum salary, the minimum salary, and the average salary. Display with proper headings.
- 23. Find the sum of the salaries and number of employees of all employees of the 'Marketing' department, as well as the maximum salary, the minimum salary, and the average salary in this department.
- 24. Select the names of employees whose salary is greater than the average salary of all employees in department 10.
- 25. Delete all dependents of employee whose ssn is '123456789'.
- 26. Perform a query using alter command to drop/add field and a constraint in Employee table.

MARIS STELLA COLLEGE (AUTONOMOUS), VIJAYAWADA-8 (Affiliated to Krishna University, Machilipatnam) Practical-Scheme of Valuation

Time: 3 Hrs. Max. Marks: 50

Practical	Marks
Program Writing	15 M
Program Execution	15 M
Viva	10 M
Practical Record	10 M
Total	50 M