B.TECH. COMPUTER SCIENCE AND ENGINEERING – July - Dec, 2024

CSLR51 – Database Management Systems Laboratory

#Session: 11 || Date: 24/10/2024

Viva Due: Q. No. 1 (24/10/2024)
Moodle Due: 30/10/2024 at 11 PM

1. **Extensible Markup Language (XML)**
   a. Create an XML file which acts as a database with the following nodes and execute the given queries.

      <EmployeeDetails> as the root element
      Create <Employee> element with the following Child Nodes for at least 5 employee details.
      EmpNo
      EName
      Job
      working Hours
      Dept
      DeptNo
      Salary

      i. Create a xquery to list the salary > 30000.
      ii. Get employee numbers of employees whose last name starts with "S".
      iii. Get the names of employees in the "Research" department.
      iv. Get all those employees who work for more than 8 hours.
      v. Display the salary from highest to lowest.
      vi. Display the employee's name in the alphabetical order.

   b. Create an XML file which acts as a database with the following nodes and execute the given queries.

      <Flight Details> as the root element
      Create <Flight> element with the following Child Nodes for at least 5 employee details.
      FlNo
      FlName
      PilotName
      From
      To
      Date
      Departs Time
      Arrives Time
      Price

      i. Create a xquery to list the price of journey < 5000.
      ii. Create a xquery to find the departing time of a particular flight on a particular date from a particular city.
      iii. Create a xquery to find the flight names handled by a particular pilot.
      iv. Create a xquery to find out the number of flight journeys of a particular flight on a particular date.
      v. Create a xquery to find the arrival time of a particular flight on a particular date from a particular city.

2. **Procedures and Functions** (Use the Employee Schema from Session 03)

a. Create a procedure to display the details of an employee from the employee table for a given employee id.

b. Create a procedure to add details of a new employee into the employee table.

c. Write a procedure raise_sal which increases the salary of an employee. It accepts an employee id and the hike amount. It shall use the employee id to find the current salary from the EMPLOYEE table and updates the salary.

d. Create a procedure to delete a record from the employee table for a given employee name.

e. Write a procedure which takes a dept_no and lists the names of all employees belonging to that department.

f. Write a procedure that lists the highest salary drawn by an employee in each of the departments. It should make use of a named procedure dept_highest which finds the highest salary drawn by an employee for the given department.

g. Write a function to display the minimum salary of employees from the employee table.

h. Write a function to display the number of employees working in the organization.

i. Write a function to display salary of an employee with the given employee id.

j. Write a function which takes dept_no and returns the average salary received by the employees in that department.

k. Write a function that will display the number of employees with salary more than 30000.

l. Write a function that will display the count of the employees working in Tiruchirappalli.

3. **Commit, Rollback, Save point and Cascade**

For the employee schema created, update any one attribute and subsequently show the result of the following transaction operations. These statements provide control over the use of transactions:

- START TRANSACTION or BEGIN - start a new transaction.
- COMMIT - commits the current transaction, making its changes permanent.
- ROLLBACK - rolls back the current transaction, cancelling its changes.
- SET - autocommit disables or enables the default autocommit mode for the current session.

By default, MySQL runs with autocommit mode enabled. To force MySQL not to commit changes automatically, you can use the following statement:

```
SET autocommit = 0;
```

To disable autocommit mode implicitly for a single series of statements, use the START TRANSACTION statement.

---THE END---