Marwadi University

Bachelor of Computer Application

Semester III

Subject Code: 05BC0305

Subject Name: Distributed Database Management System (DDBMS)(P)

Learning Objectives:
Distributed Systems are gaining popularity due to various advantages it offers. Database is also getting distributed. When database is distributed, the concepts of database need to be revisited, the student should be made aware of the concepts such as architecture, how to distribute database, database control, optimizing query, controlling replication, handling concurrency and deadlock. The learning objective of the course is to: 1. Understanding the Architecture & Design of DDBMS software tools 2. Applying Distributed database systems (DDBMS) concepts in real life application 3. Performing Query Processing & Optimization in real life applications 4. Managing Concurrency control & reliability issues in DDBMS 5. Administrating the DDBMS software tools

Sr. No.	List of Experiments
1	Installation and configuration of any DDBMS software tool like MSSQL or Oracle
2	Perform all the below operations on DDBS software: 1. Create a simple database. 2. Create multiple tables in a database. 3. Add column in a table. 4. Modify column size in a table. 5. Find 2nd MAX value from a table. 6. Drop a column in a table. 7. Drop a table from database. 8. Drop a database from SQL Server.
3	Perform all following inbuilt functions in Database software. 1. SQL avg() 2. SQL count() 3. SQL first() 4. SQL last() 5. SQL max() 6. SQL min() 7. SQL sum() 8. SQL Group By 9. SQL Having 10. SQL ucase() 11. SQL lcase() 12. SQL mid() 13. SQL len()

	14. SQL round() 15. SQL now() 16. SQL format()
4	Create two databases either on single DBMS and Design Database to fragment and share the fragments from both database and write single query for creating view.
5	Create two databases on two different computer systems and create database view to generate single DDB.
6	Create Stored Procedures for Transaction management (Insert, Update and Delete) in Database Software.
7	Create below joins on DDB tables. 1) Self Join 2) Inner Join 3) Outer Join (Left Outer Join, Right Outer Join, Full Outer Join). Create various views using any one of examples of database and Design various constraints.
8	Write and Implement algorithm for query processing using any of Example in any of the language C / C++ / Java.
9	Using any of example, write various Transaction statement and show the information about concurrency control [i.e. various lock's from dictionary] by executing multiple update and queries.
10	Using Transaction /commit rollback; show the transaction ACID properties.
11	Countrywide drug supplier chain operates from five different cities in the country and it maintains following database. • Shop(ds-id, ds-city, ds-contactno) • Medicine(med-id, med-name,manuf-id) • Manufacturer(manuf-id, manuf-name, manuf-city) • Order(med-id, ds-id,qty) Suggest fragmentation and allocation schema considering following frequent queries • List manufacturer names who belong to the same city in which the drug shop that has placed an order resides. • How many orders are generated from a city say "Ahmedabad"? Justify your design and mention assumptions if any clearly.
12	Consider relations EMP (eno,ename,title) and ASG (eno,pno, resp,dur). Write down suitable queries in SQL-like syntax and in relational algebra for finding the names of employees who are managers of any project. Is the query optimized? If not, optimize it.