

## **Syllabus : 5CS7 DATABASE LAB**

**Faculty Name:- Neeraj Choudhary**

**Class: V Sem. B.Tech.**

**Evaluation Branch: Computer Engg.**

**Schedule per Week Practical Hrs : 3**

**Examination Time = Four (4) Hours**

**Maximum Marks = 100 [Sessional/Mid-term (60) & End-term (40)]**

**Objectives: At the end of the semester, the students should have clearly understood and implemented the following:**

- 1. Stating a database design & application problem.**
- 2. Preparing ER diagram**
- 3. Finding the data fields to be used in the database.**
- 4. Selecting fields for keys.**
- 5. Normalizing the database including analysis of functional dependencies.**
- 6. Installing and configuring the database server and the front end tools.**
- 7. Designing database and writing applications for manipulation of data for a standalone and shared data base including concepts like concurrency control, transaction roll back, logging, report generation etc.**
- 8. Get acquainted with SQL.**

**In order to achieve the above objectives, it is expected that each students will chose one problem. The implementation shall being with the statement of the objectives to be achieved, preparing ER diagram, designing of database, normalization and finally manipulation of the database including generation of reports, views etc. The problem may first be implemented for a standalone system to be used by a single user. All the above steps may then be followed for development of a database application to be used by multiple users**

in a client server environment with access control. The application shall NOT use web techniques.

One exercise may be assigned on creation of table, manipulation of data and report generation using SQL.

**Suggested Tool:**

For standalone environment, Visual FoxPro or any similar database having both the database and manipulation language may be used. For multi-user application, MySQL is suggested. However, any other database may also be used. For front end, VB.Net, Java, VB Script or any other convenient but currently used by industry may be chosen.

**Indicative List of exercise:**

1. Student information system for your college.
2. Student grievance registration and redressal system.
3. video library management system for a shop.
4. Inventory management system for a hardware/ sanitary item shop.
5. Inventory management system for your college.
6. Guarantee management system for the equipments in your college.

## **Syllabus Covered**

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**Class: V Sem. B.Tech CS-II**

**Schedule per Week Practical: 3**

**In the practical classes students prepare ER-Diagram, solve Relational Queries(Using Relational Algebra, Tuple Relational Calculus and Domain Relational Calculus) and also perform SQL queries using command line SQL. And solve case studies as mentioned in syllabus break up.**