

A.Y. 2023-24
Class: SE-ITA/B, Semester: III

Subject: **Structured Query Lab**

Experiment – 11: Design and implementation of a full-fledged database with front-end using JDBC for the real life application.

1. **Aim:** To Design and implementation of a full-fledged database with front-end using JDBC for the real life application.
2. **Objective:**
 - After performing the experiment, the students will be able to learn to use JDBC for database connectivity
 - Use JDBC to design any application and various forms
3. **Outcome:** L303.1: To Construct problem definition statements for real life applications and implement a database for the same.
4. **Prerequisite:** Understanding of JDBC concepts and SQL queries
5. **Requirements:** PC, MySQL(Xampp Server), Microsoft Visual Studio/ PHP NetOracle 11g/SQL Server 2008 R2, Microsoft Word, Internet.
6. **Pre-Experiment Exercise:**
Brief Theory :(To be hand written)
 1. Front-end that would be used.
 2. Explain JDBC drivers.
 3. Steps to build a JDBC connection.
 4. Explain step by step procedure to connect the database with front –end.
7. **Laboratory Exercise**
A. Procedure:
 - i) Open Xampp server
 - ii) Start MySQL services and Apache from Admin panel
 - iii) Open Netbeans
 - iv) Create a new project -> create Form-> Drag and drop required components for Login form

- v) Construct Java Code
- vi) Construct tables for
- vii) Execute code Through entering data in forms

B. Result/Observation/Program code: Attach all executed code with proper output and screen shots

8. Post Experimental Exercise-

A. Questions:

1. What is a connection?
2. What is a ResultSet?
3. What are the different types of JDBC Statements? Etc.

B. Conclusion:

1. Write what was performed in the experiment
2. Mention few applications of what was studied.
3. Write the significance of the studied topic

C. References:

- [1] Elmasri and Navathe, “Fundamentals of Database Systems”, 5th Edition, PEARSON Education.
- [2] Korth, Silberchatz, Sudarshan, “Database System Concepts”, 6th Edition, McGraw – Hill
- [3] https://www.w3schools.com/sql/sql_default.asp