**Database Systems Laboratory**

**B.Tech. 6thSemester**



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**Ramaiah University of Applied Sciences**

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| Faculty | Engineering & Technology |
| Programme | B. Tech. in Computer Science and Engineering |
| Year/Semester | 3rd Year / 6th Semester |
| Name of the Laboratory | Database Systems Laboratory |
| Laboratory Code | CSC313A |

List of Experiments

1. DDL and DML commands
2. Requirement analysis and data modelling
3. Data model to relational model
4. Data constraints and built in functions
5. Java database programming
6. Interface to the system
7. Nested queries and Join queries
8. Procedure in MySQL
9. Multidimensional data modelling

# Index Sheet

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | **No.** |  |  |  |  | | **Lab Experiment** | **(a)**  **Performing the experiment**  **(20)** | **(b)**  **Document**  **(10)** | **(c)**  **Viva**  **(10)** |
| 1 | DDL and DML commands |  |  |  |
| 2 | Requirement analysis and data modelling |  |  |  |
| 3 | Data model to relational model |  |  |  |
| 4 | Data constraints and built in functions |  |  |  |
| 5 | Java database programming |  |  |  |
| 6 | Interface to the system |  |  |  |
| 7 | Nested queries and Join queries |  |  |  |
| 8 | Procedure in MySQL |  |  |  |
| 9 | Multidimensional data modelling |  |  |  |
|  | **Total Marks (Average of 9 labs)** |  |  |  |
|  | **(d) Lab Internal Test conducted along the lines of SEE, valued for 50 Marks and reduced to 10 Marks** | | |  |
|  | **Lab Internal Marks (50)**  **(a+b+c+d)** | | |  |
|  | **Lab Internal Marks (25)** | | |  |

**Signature of the Staff In-charge**

# Laboratory 1

Title of the Laboratory Exercise: DDL and DML commands

1. Introduction and Purpose of Experiment

Structured Query Language (SQL) is used to pass the query to retrieve and manipulate the information from database. Depending upon the nature of query, SQL is divided into different components such as Data Definition Language (DDL) and Data Manipulation Language (DML). DDL statements create the database, maintain the structure of the database and remove database objects such as tables, indexes, and users. DML statements are used for managing data in database such as insert tuples into, delete tuples from, and modify tuples in the database. By doing this lab, students will be able to execute DDL and DML commands

1. Aim and Objectives

Aim

* To execute Data Definition Language (DDL) and Data Management Language (DML) commands

Objectives

At the end of this lab, the student will be able to

* Create a database and populate it with data using SQL commands
* Execute DDL and DML commands for the given database

1. Experimental Procedure
   * 1. Analyse the problem statement
     2. Execute DDL and DML commands
     3. Create a database for the given schema
     4. Design SQL commands using DDL and DML commands
     5. Test the executed commands
     6. Analyse and discuss the outcomes of your experiment
     7. Document the work
2. Questions
3. Practice DDL and DML commands
4. Consider the following relational schema that keeps track of the students in a college. Enter at least five tuples for the relation. Assume appropriate domain and data type for each field.

STUDENT (StudId, StudName, StudAddress)

Execute the following queries based on the above schema

* 1. Display the details of all the students
  2. Display the name and address of the student with id=101
  3. Insert a new student <105, ‘John’, ‘Bangalore’>
  4. Change the address of the student John to ‘Delhi’
  5. Delete the details of a student with student id=105
  6. Add a column to the schema Student with appropriate data type

1. Presentation of Results
2. Conclusions
3. Comments

1. Limitations of Experiments

2. Limitations of Results

3. Learning happened

4. Recommendations