

Practical Workbook  
**CS-222**  
**Database Management Systems**



Name : \_\_\_\_\_  
Year : \_\_\_\_\_  
Batch : \_\_\_\_\_  
Roll No : \_\_\_\_\_  
Department: \_\_\_\_\_

**Department of Computer & Information Systems Engineering**  
**NED University of Engineering & Technology**

**Practical Workbook**  
**CS-222**  
**Database Management Systems**



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**Department of Computer & Information Systems Engineering**  
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# INTRODUCTION

This workbook has been compiled to assist the conduct of practical classes for CS-222 Database Management Systems. Practical work relevant to this course aims at teaching the basic concepts as well as advanced techniques in the management of databases of an organization. The creation and manipulation of database objects requires programming in Structured Query Language (SQL). SQL is a nonprocedural language with capabilities of creating and manipulating data in tables and views. SQL is referred to as a query language because it has wide range of facilities to retrieve data from a database.

The Course Profile of CS-222 Database Management Systems lays down the following Course Learning Outcome:

**“Demonstrate** the use of modern querying tools for database management (C3, PLO-5)”

All lab sessions of this workbook have been designed to assist the achievement of the above CLO. A rubric to evaluate student performance has been provided at the end of the workbook.

Lab sessions 1 & 2 gives an overview for a modern tool SQL developer. Lab session 3 covers the basic data retrieval operations in SQL. Lab session 4 covers the join operations in SQL. Lab session 5 demonstrates single and multiple row functions in SQL. Lab session 6 deals with sub queries and compound queries in SQL. Lab session 7 elaborates the basic data manipulation operations in SQL. Lab session 8 explains the creation and management of tables and views in SQL. Lab session 9 presents sequences, indexes, and synonyms. Lab session 10 covers basics of PL/SQL programming. Lab session 11 deals with control structures and exception handling in PL/SQL. Lab session 12 demonstrates trigger in database. Lab session 13 deals with stored procedures and functions in database. Lab session 14 discusses the complex engineering activity.

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