# 20CS21P1 - DATABASE MANAGEMENT SYSTEMS LABORATORY

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| Course Category: | Program Core | Credits: | 1.5 |
| Course Type: | Practical | Lecture-Tutorial-Practical: | 0-0-3 |
| Prerequisite: | Basic knowledge in mathematical formulae and preliminary fundamentals of databases. | Sessional Evaluation:Univ. Exam Evaluation:Total Marks: | 4060100 |
| Objectives: | * To study various database design models for building applications.
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| Course Outcomes | At the end of this lab session, the students will be able to identify various Database concepts to develop applications using SQL |
| Course Content | 1. Creating and inserting rows into a table.
2. Updating, Deleting and dropping of tables,Queriesusing SELECT command. (use constraints while creating tables)
3. Queries along with sub-Queries using ANY, ALL, IN, EXISTS, NOTEXISTS, UNION, INTERSECT Constraints.
4. Queries using Aggregate functions (COUNT, SUM, AVG, MAX and MIN) GROUP BY, HAVING,Creation and dropping of Views.
5. Queries using Conversion functions (to\_char, to\_number and to\_date), string functions (Concatenation, lpad, rpad, ltrim, rtrim, lower, upper, initcap, length, substr and instr), date functions (Sysdate, next\_day, add\_months, last\_day, months\_between, least, greatest, trunc, round, to\_char, to\_date).
6. Queries using Views, joins on Tables
7. Queries using Access Control based on Granting and Revoking Privileges
8. Creation of simple PL/SQL program which Insert data into student table and use COMMIT, ROLLBACK and SAVEPOINT in PL/SQL block.
9. Develop a program that includes the features NESTED IF, CASE and CASE expression.
10. Develop a program using WHILE LOOP, numeric FOR LOOPS, nested loops using BUILT–IN Exception.
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| Text Books &ReferencesBooks | **TEXT BOOKS:**1. RamezElmasri, and Shamkant B Navathe, Database Systems, 6th edition, Pearson Education

**REFERENCE BOOKS:**1. ORACLE DATA BASE LOG PL/SQL Programming SCOTT URMAN, Tata Mc- Graw Hill.
2. Oracle Database 12C Hands-on SQL and PL/SQL Paperback – Import, 29 Feb 2016 by SatishAsnani.
3. Oracle Pl/SqlProgramming:A Developer's Workbook, Steven Feuerstein , Andrew Odewahn.
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| E-Resources | 1. <https://nptel.ac.in/courses>
2. <https://freevideolectures.com/university/iitm>
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**CO-PO Mapping:** 3-High Mapping, 2-Moderate Mapping, 1-Low Mapping, - -Not Mapping

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|   | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** | **PO11** | **PO12** |
| **CO1** | - | 3 | 3 | 3 | - | - | - | - | - | - | - | 2 |