LABORATORY HANDOUT

Database Lab (BCAMJ-406)

BCA (Hons.)- 4TH SEMESTER

ACADEMIC YEAR (2024-25)

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Course Code	Course Name	Course Type	Cd	L	T	P	Marks		
							Sessional	Final Exam	Total
BCAMJ-406	Database Lab	Major	1	0	0	4	25	-	25

COURSE OUTCOMES

At the end of the course the student will be able to:	
CO1	Create, modify, and manage database structures and data.
CO2	Create tables with constraints to enforce data rules and relationships.
CO3	Group data and apply clauses to filter aggregated results.
CO4	Create SQL views to simplify data management and enhance query efficiency.
CO5	Efficiently query and combine data from multiple tables.

LIST OF EXPERIMENTS

S.No.	Title
1	To execute the DDL commands • CREATE • ALTER • DROP • RENAME • TRUNCATE
2	To execute DML commands • INSERT • UPDATE • DELETE • SELECT
3	Creating tables with constraints: • NOT NULL • UNIQUE • PRIMARY KEY • FOREIGN KEY
4	Implementation of Number function-abs (), min (), max (), ceiling (), floor (), round (), mod (), pow ()
5	Implementation of Aggregate Function-count (), sum (), avg (), min (), max ()
6	Implementation of Conversion Function-cast (), convert (), TO_CHAR (), TO_DATE (), TO_NUMBER ()
7	Implementation of Character Function-length (), INITCAP (), LOWER (), UPPER (), TRIM (), CONCAT ()
8	Implementation of Date Function
9	Implementation of Group By & having clause
10	Implementation of Order by clause
11	Implementation of Views • Create Views • Insert data in views • Selecting a data from views • Filtering Data from a View

	• Updating Data of Views
12	Implementation of different types of Joins • Inner Join • Outer Join • Natural Join

ADDITIONAL WEB RESOURCES

1.	https://www.coursera.org/learn/intro-sql
2.	https://vsit.edu.in/vlab.html
3.	https://www.youtube.com/watch?v=64szTfLNu3o

LAB REPORT INSTRUCTIONS

- Provide specific title of the lab experiment.
- Theory: Provide a concise abstract (typically 100-200 words) that summarizes the purpose, methods, key findings, and significance of the experiment.
- Materials/ Equipment: List all materials, components, and equipment used in the experiment. Include specifications when applicable.
- Software/Simulation Tools:
- Experimental Procedure: Describe the step-by-step procedure for conducting the experiment. Be detailed and clear in your instructions. Include diagrams or schematics to illustrate the setup, connections, and component placement. Explain any variations or adjustments made to the standard procedure.
- Observation & Calculations/Analysis: Detail the data you collected during the experiment. Include descriptions of measurements and any calculations made. Use tables, charts, or graphs to present data clearly. Discuss any trends, patterns, or significant observations. Interpret the data in the context of the experiment's objectives. Ensure that all figures, tables, and equations are correctly labeled.
- Results: Summarize the key findings of the experiment. Present results in a clear and organized manner using tables and graphs. Include units of measurement and labels for data points.
- Conclusion: Provide a concise summary of the experiment's key points and outcomes.

GRADING AND ASSESSMENT

- **Program writing**: 5 marks
- **Program Implementation:** 5 marks
- **File Maintenance:** 5 marks
- **Viva**: 5 marks
- **Attendance**: 5 marks
- **Lab Overall Marks**: 25 marks

COURSE POLICIES

- **Attendance**: Minimum 75% attendance is mandatory to appear in the final examination of the course.
- **Late Submissions**: Manuals and projects must be submitted by the specified timelines.

FACULTY INFORMATION

- **Office Hours**

  Monday (12:55 PM - 1:45 PM)
  Friday (12:55 PM - 1:45 PM)

- **Contact Information**

  archana.bca@mietjammu.in

RUBRICS FOR LAB CONTINUOUS EVALUATION

Parameters	Performance			
	Low	**Medium**	**High**	**Marks**
Execution of the Experiment	Student was not able to setup and conduct the Experiment completely	Student was able to setup and conduct the experiment but measurement/results/observations were not correct	Students was able to set and conduct the experiment and the measurement/results/observations were not correct	10
	0-2 Marks	3-6 Marks	7-10 Marks	
Record	Student was not able to describe the detailed procedure and could not record the measurement.	Student was able to describe the detailed procedure partially or with some inaccuracy.	Student was able to describe the detailed procedure accurately and record all measurements correctly.	5
	0-2 Marks	3-6 Marks	7-10 Marks	
Viva Voice	Students could not demonstrate sufficient knowledge of foundation, functional or applied aspects related to the experiment during viva.	Students demonstrated sufficient knowledge of foundation, functional or applied aspects related to the experiment during viva.	Students demonstrate strong knowledge of foundation, functional or applied aspects related to the experiment during viva	5
	0-2 Marks	**3-6 Marks**	**7-10 Marks**	
Total Marks				**20**