

Module End Lab Exam (DBT)

Course Name:	PG – DAC	Batch :	Mar 2024
Module Name:	Database Technologies	Date:	18 / 03/ 2024
Max. Marks:	40	Duration :	2:00 Hours

Instructions :

1. Create **new workspace (folder)** by the name **DBT_12 digit PRN** in your home directory.
2. Create **new text document** with name **DBT_12 digit PRN_Solution** and save it in above folder.
3. Copy queries and output in text document.
4. After evaluation, first compress/zip your folder (named DBT_12 digit PRN) and upload it on EMIS.

Sr. No.	Points to cover	Max Marks	Marks by Evaluator
1.	MySQL Queries	20	
2.	MySQL Program (<i>Stored Procedure</i>)	7	
3.	MySQL Program (<i>Triggers</i>)	8	
4.	MongoDB	5	
		Total: 40	_____

Signature of Student

Signature of Evaluator

Section I: (Use HR, SALES db)**(20 marks)**

1. Write a query to get the names (first_name, last_name), salary & PF (PF of all the employees is calculated as 15% of salary).
2. Display customer name, salespeople name, onum and amt
3. Display the first name and salary for all employees who earn more than employee number 103 (*Employees table*).
4. Write a query to get department wise average salaries of employees.
5. List of first and last names of employees where first names start with 'P' and last name ends with 'Y'.
6. Find the employee who has the third highest salary.
7. Display department id, department name, employee id and employee name (first name and last name should be in one column of output). (*using joins*)
8. Display the department number and department name for all departments whose location number is equal to the location number of department number 90 (*Departments table*).
9. Write such query that will return only three rows from fourth row of employees table and sort by salary in descending order.
10. Write a query to get department name, manager's full name (first and last name) and salary of the manager whose experience is more than 5 years. (*Output of your query should have 3 columns 1. department_name, 2. manager_name(with first and last name), 3. Salary*)

Section II: MySQL Program**(15 marks)**

1. Write a procedure using case-when to check class of given employee id. **(07 marks)**
(*Use employees table*)

Store the result in status table having columns (salary, e_status)

If salary < 5000, **lower class**.If salary >= 5000 and salary < 15000, **middle class**.If salary >= 15000, **higher class**.

2. Create two tables named, **accounts** (*id PK & Auto Increment, type, balance*) and **transactions** (*id PK & Auto Increment, accid, type, amount, txtime*) **(08 marks)**

Table 1 accounts (parent table)**Table 2 transactions (child table)**

id	Type	Balance
1	Savings	5000
2	Current	10000

id	accid	type	amount	txtime
1	1	Deposit	5000	2024-02-10 21:30:10
2	2	Deposit	10000	2024-03-15 22:35:15

Write trigger with any name to perform following operations:

- Whenever new record is added in parent table, a record should be added in child table i.e. transactions (as shown in table-2).

Section III: MongoDB**(05 marks)**

1. Create and use a database
2. Create a collection called "books" as per following structure & insert 5 documents

id	name	author	subject	price
1001	Pointers in C	Yashwant Kanetkar	C Programming	123.456
1002	Exploring C	Yashwant Kanetkar	C Programming	371.019
1003	ANSI C Programming	E Balaguruswami	C Programming	334.215
1004	ANSI C Programming	Dennis Ritchie	C Programming	140.121
2001	C++ Complete Reference	Herbert Schildt	C++ Programming	417.764

3. Delete the document-holding name as "Exploring C"
4. Find all books whose author name ends with 'r' and price is less than 200.
5. Find no. of books of each author & sort output by name.