

# Database Systems LAB – BSDSF23

(Morning and Afternoon)

## Lab 04 – 21-03-2025

**Copy the portable DB Browser for SQLite from server (\\printsrv) and start it.**

**OBJECTIVE :** This lab focuses on implementing **SQL Joins** (INNER, LEFT, RIGHT) to retrieve and manipulate data across multiple tables while applying essential SQL functions for filtering, sorting, and transformation.

### salgrade Table

grade	losal	hisal
1	7000.00	12000.00
2	12001.00	14000.00
4	20001.00	30000.00
5	30001.00	100000.00
3	100001.00	200000.00

### emp Table

empno	ename	job	mgr	hiredate	sal	comm	deptno
7369	WAHID	CLERK	7902	1993-06-13	8000.00		20
7499	AHMAD	SALESMAN	7698	1998-08-15	16000.00	3000.00	30
7521	WAJID	SALESMAN	7698	1996-03-26	12500.00	5000.00	30
7566	JAMEEL	MANAGER	7839	1995-10-31	29750.00		20
7698	BABAR	MANAGER	7839	1992-06-11	28500.00		30
7782	CRISTOFAR	MANAGER	7839	1993-05-14	24500.00		10
7788	SMEEA	ANALYST	7566	1996-03-05	30000.00		20
7839	BADSHAH	CHAIRPERSON		1990-06-09	50000.00		10
7844	TANVEER	SALESMAN	7698	1995-06-04	15000.00	0.00	30
7876	ADNAN	CLERK	7788	1999-06-04	11000.00		20
7900	JAFFER	CLERK	7698	2000-06-23	9500.00		30
7934	MEENA	CLERK	7782	2000-01-21	13000.00		10
7902	FOWAD	ANALYST	7566	1997-12-05	30000.00		20
7654	MAJID	SALESMAN	7698	1998-12-05	12500.00	14000.00	30

### dept Table

deptno	dname	location
10	Accounting	Sargodha
20	Research	Karachi
30	Sales	Multan
40	Operations	Vehari

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Use the above tables (salgrade, emp and dept) and write SQL statements for the following tasks.

- a. Retrieve employee names in **lowercase**, their jobs, and the department names they belong to.
- b. Display employee name, department name and location for all the employees who **have “AH” in their names and salaries between 10,000 and 20,000**, order by salary.
- c. Retrieve employee names, salaries (**rounded to nearest thousand**), manager number and their salary grades for all **employees having mgr 7698**.
- d. Retrieve employee names, jobs, department names and manager number for **all the employees**, order by manager number in ascending order.
- e. Display the employee names, job and location for all the employees **working as Clerks in Multan**.
- f. Retrieve **employee names, jobs, salaries, and salary grades** for all the employees working in the **Sales department**.
- g. Give all the employees **hired before 1996 a commission of 20% on their salaries** and then display their names, salary+commission as New Salary and their grade.
- h. Generate a **custom email** for every employee in the following format : first letter of employee name followed by first three letters of department name, last three letters of location (all uppercase) and their grade **e.g consider emp 7369, the custom email should be WACCDHA1@gmail.com**
- i. Display the name, job, department name and grade for all the employees **who have “MAN” in their jobs and are not working in the operations department**, order by grade in descending order.
- j. Retrieve all employees having **“EE” in their names** as ename <is a grade> grade <employee who has been working in> dname <since> hiredate.

**NOTE :** Make sure to fulfill all the requirements to get full credit.