Database Systems LAB – BSDSF23
(Morning and Afternoon)
Lab 03 – 14-03-2025

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

Create a database named La11.db

1. **Create the following table using create table SQL statement, later using several insert SQL statements add data in the table.**

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

2. **Create the following table using create table SQL statement, later using several insert SQL statements add data in the table. Do not add any data in the comm column. At first, add row of Badshah as its mgr is null. Later using update SQL statement set the comm column data even it is ZERO (which is not null).**

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

3. **Create the following table using create table SQL statement, later using several insert SQL statements add data in the table.**

dept Table

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

4. **Write SQL statements for the following tasks.**
   a. Write an SQL query to find the names of employees that end with 'AD' and belong to departments 20 or 30.
   b. Write an SQL query to find employees whose name does not contain the letter 'A' anywhere, have a salary between 10,000 and 30,000, and sort the results by salary in descending order.
   c. Write an SQL query to find employees whose name does not start with 'W' OR who do not work as a SALESMAN, and at the same time, their salary is either between 15,000 and 35,000 OR they belong to department 10. Display their name employee number, salary, department number, and job title.
   d. Each employee in the emp table should have an email address. The format of the email should be: first letter of ename + last letter of ename + empno @ job.com. Everything should be converted to lowercase, and there should be no spaces in the email.
   e. Create an initial password for each employee in the emp table. The password should follow this format: First letter of ename (lowercase), last letter of ename (lowercase), first letter of job (lowercase) , last letter of job (lowercase) + number of letters in ename, number of letters in job, mgr with no spaces.
   f. Write an SQL query to determine the position of the first occurrence of 'A' in the names of all employees, whether or not they contain 'A'. Display this position along with their name, employee number, salary, and job title, and sort the results based on job title (ascending) and first occurrence position (ascending).

****