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REG NO: CS231052

CLASS: 4-B

ASSIGNMENT NO : 2

1. Create a table of Employees with the following fields: employee_id, first_name, last_name, designation, salary, birth_date, hire_date, department, and city.

```
4      -- q1
5 • create table employees(
6      employee_id int primary key auto_increment,
7      first_name varchar(50),
8      last_name varchar(50),
9      designation varchar(50),
10     salary int,
11     birth_date date ,
12     hire_date date ,
13     department varchar(50),
14     city varchar(50)
15 );
```

2. Add at least 8 unique employees' records (insert relevant data). Also, show the structure of the table.

```
10
17      -- q2
18 • insert into employees
19      (first_name, last_name, designation, salary, birth_date, hire_date, department, city)
20      VALUES
21      ('Alice', 'Johnson', 'Software Engineer', 75000, '1992-05-14', '2020-06-01', 'IT', 'New York'),
22      ('Bob', 'Smith', 'Marketing Manager', 68000, '1988-11-22', '2018-03-15', 'Marketing', 'Chicago'),
23      ('Carol', 'Williams', 'HR Executive', 52000, '1990-07-19', '2019-09-10', 'Human Resources', 'Los Angeles'),
24      ('David', 'Brown', 'Project Lead', 85000, '1985-04-02', '2017-01-05', 'IT', 'San Francisco'),
25      ('Eva', 'Davis', 'Sales Representative', 60000, '1993-02-28', '2021-05-20', 'Sales', 'Houston'),
26      ('Frank', 'Miller', 'Accountant', 58000, '1989-08-12', '2016-07-11', 'Finance', 'Dallas'),
27      ('Grace', 'Wilson', 'UI/UX Designer', 72000, '1991-03-30', '2022-02-14', 'Design', 'Seattle'),
28      ('Henry', 'Taylor', 'System Administrator', 69000, '1987-10-06', '2015-10-25', 'IT', 'Boston');
29
30 • describe employees ;
```

```
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```

Field	Type	Null	Key	Default	Extra
employee_id	int	NO	PRI	NULL	auto_increment
first_name	varchar(50)	YES		NULL	
last_name	varchar(50)	YES		NULL	
designation	varchar(50)	YES		NULL	
salary	int	YES		NULL	
birth_date	date	YES		NULL	
hire_date	date	YES		NULL	

3. Display the names of all the employees along with their designation and department.

```
32 -- q3
33 • select first_name, last_name, designation, department from employees;
```

first_name	last_name	designation	department
Alice	Johnson	Software Engineer	IT
Bob	Smith	Marketing Manager	Marketing
Carol	Williams	HR Executive	Human Resources
David	Brown	Project Lead	IT
Eva	Davis	Sales Representative	Sales
Frank	Miller	Accountant	Finance
Grace	Wilson	UI/UX Designer	Design

4. Display the name, salary, and date of hiring of all the employees sorted by the date of hiring in descending order.

```
35 -- Q4
36 • select first_name, last_name, salary from employees order by hire_date desc ;
```

first_name	last_name	salary
Grace	Wilson	72000
Eva	Davis	60000
Alice	Johnson	75000
Carol	Williams	52000
Bob	Smith	68000
David	Brown	85000
Frank	Miller	58000

5. Display a list of all the departments in the organization (without any repetitions).

```

38      -- q5
39      • select distinct department from employees;

```

Result Grid | | Filter Rows: | Export: | Wrap Cell Content:

department
IT
Marketing
Human Resources
Sales
Finance
Design

6. List all employees having a salary of less than 40,000 and hired in 2021.

```

41      -- q6
42      • select salary from employees where salary < 40000 and hire_date = 2021;

```

Result Grid | | Filter Rows: | Export: | Wrap Cell Content:

salary

7. List all cities having the letter 'r' or 'i' in their name.

```

--
44      -- q7
45      • SELECT DISTINCT city FROM employees WHERE city LIKE '%r%' OR city LIKE '%i%';

```

Result Grid | | Filter Rows: | Export: | Wrap Cell Content:

city
New York
Chicago
San Francisco

8. List all the departments with employees who have joined between February 2019 and October 2021 sorted by their date of hiring in descending order. For employees having the same hiring dates, sort records by salary in ascending order.

```

47  -- q8
48  • SELECT department
49  FROM employees
50  WHERE hire_date BETWEEN '2019-02-01' AND '2021-10-31'
51  ORDER BY hire_date DESC, salary ASC;

```

Result Grid

department
Sales
IT
Human Resources

9. List all the employees who are Managers in Lahore.

```

53  -- q9
54  • select designation from employees where designation = 'MANAGER' or city = 'lahore';

```

Result Grid

designation

10. Display the names of all Managers and Auditors along with their salaries. Also, show a 20% increment on their salaries under two new aliased fields, "Bonus" and "New Salary".

```

56  -- q10
57  • SELECT
58  first_name,
59  last_name,
60  designation,
61  salary,
62  salary * 0.20 AS Bonus,
63  salary + (salary * 0.20) AS `New Salary`
64  FROM employees
65  WHERE designation = 'Manager' OR designation = 'Auditor';

```

Result Grid

first_name	last_name	designation	salary	Bonus	New Salary
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