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

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

```
15  •  INSERT INTO Employees (employee_id, first_name, last_name, designation, salary, birth_date, hire_date, department, city)
16     VALUES
17        (1, 'MUHAMMAD', 'KHAN', 'ENGINEER', 120000, '1989-11-20', '2010-08-20', 'ENGINEERING', 'HYDERABAD'),
18        (2, 'SHAISTA', 'BROHI', 'MARKETING_MANAGER', 20000, '1990-04-05', '2012-04-10', 'MARKETING', 'KARACHI'),
19        (3, 'ALI', 'SOOMRO', 'MANAGER', 30000, '2000-03-08', '2018-09-05', 'SALES', 'LAHORE'),
20        (4, 'AYAAN', 'SOLANGI', 'HST', 125000, '1999-01-23', '2013-12-15', 'TEACHING', 'ISLAMABAD'),
21        (5, 'FATIMA', 'DARS', 'HR_SPECIALIST', 210000, '2005-06-25', '2011-06-30', 'HUMAN_RESOURCES', 'GILGIT'),
22        (6, 'AMAN', 'KUMAR', 'DEVELOPER', 122300, '1969-07-19', '2018-02-28', 'ENGINEERING', 'SUKKUR'),
23        (7, 'ABDULLAH', 'SHAIKH', 'SENIOR_ACCOUNTANT', 32000, '1995-09-26', '2018-03-10', 'LOGISTICS', 'PESHAWAR'),
24        (8, 'UMAIR', 'BHATTI', 'SENIOR_ANALYST', 540000, '1998-10-28', '2019-07-15', 'CUSTOMER_SERVICE', 'QUETTA');
25
```
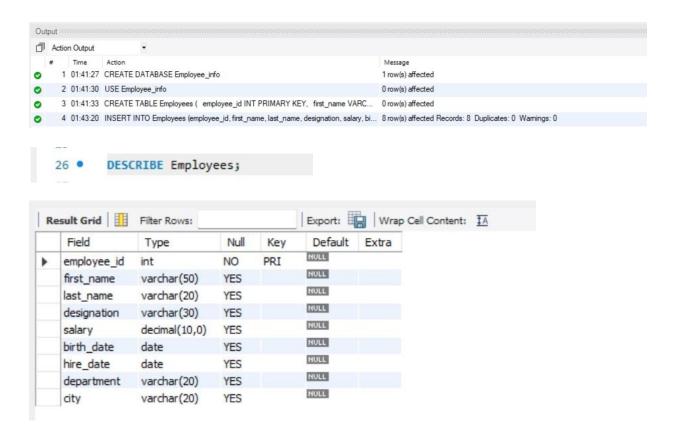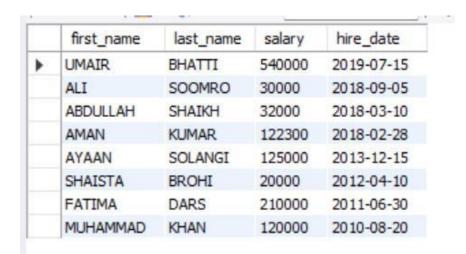
```
26 •    DESCRIBE Employees;
```

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

Field	Type	Null	Key	Default	Extra
employee_id	int	NO	PRI	NULL	
first_name	varchar(50)	YES		NULL	
last_name	varchar(20)	YES		NULL	
designation	varchar(30)	YES		NULL	
salary	decimal(10,0)	YES		NULL	
birth_date	date	YES		NULL	
hire_date	date	YES		NULL	
department	varchar(20)	YES		NULL	
city	varchar(20)	YES		NULL	

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

```
28 •  SELECT first_name, designation, department
29    FROM Employees;
```
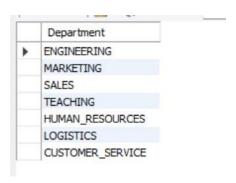
first_name	designation	department
MUHAMMAD	ENGINEER	ENGINEERING
SHAISTA	MARKETING_MANAGER	MARKETING
ALI	MANAGER	SALES
AYAAN	HST	TEACHING
FATIMA	HR_SPECIALIST	HUMAN_RESOURCES
AMAN	DEVELOPER	ENGINEERING
ABDULLAH	SENIOR_ACCOUNTANT	LOGISTICS
UMAIR	SENIOR_ANALYST	CUSTOMER_SERVICE

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

```sql
31 •   SELECT first_name, last_name, salary, hire_date
32     FROM Employees
33     ORDER BY hire_date DESC;
```

first_name	last_name	salary	hire_date
UMAIR	BHATTI	540000	2019-07-15
ALI	SOOMRO	30000	2018-09-05
ABDULLAH	SHAIKH	32000	2018-03-10
AMAN	KUMAR	122300	2018-02-28
AYAAN	SOLANGI	125000	2013-12-15
SHAISTA	BROHI	20000	2012-04-10
FATIMA	DARS	210000	2011-06-30
MUHAMMAD	KHAN	120000	2010-08-20

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

```sql
35 •   SELECT DISTINCT Department
36     FROM Employees;
```

Department
ENGINEERING
MARKETING
SALES
TEACHING
HUMAN_RESOURCES
LOGISTICS
CUSTOMER_SERVICE

6. List all employees having a salary less than 40,000 and hired in 2018.

```
38 •  SELECT * FROM Employees
39     WHERE Salary<40000 AND YEAR(hire_date) = 2018;
```

employee_id	first_name	last_name	designation	salary	birth_date	hire_date	department	city
3	ALI	SOOMRO	MANAGER	30000	2000-03-08	2018-09-05	SALES	LAHORE
7	ABDULLAH	SHAIKH	SENIOR_ACCOUNTANT	32000	1995-09-26	2018-03-10	LOGISTICS	PESHAWAR
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

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

```
41 •  SELECT DISTINCT city
42     FROM Employees
43     WHERE city LIKE '%r%' OR city LIKE '%i%';
```

city
HYDERABAD
KARACHI
LAHORE
ISLAMABAD
GILGIT
SUKKUR
PESHAWAR

8. List all the departments with employees who have joined between February 2016 and October 2018 sorted by their date of hiring in descending order. For employees having the same hiring dates, sort records by salary in ascending order.

```
45 •  SELECT DEPARTMENT, FIRST_NAME, LAST_NAME, HIRE_DATE, SALARY
46     FROM Employees
47     WHERE HIRE_DATE BETWEEN '2016-02-01' AND '2018-10-31'
48     ORDER BY HIRE_DATE DESC, SALARY ASC;
```

DEPARTMENT	FIRST_NAME	LAST_NAME	HIRE_DATE	SALARY
SALES	ALI	SOOMRO	2018-09-05	30000
LOGISTICS	ABDULLAH	SHAIKH	2018-03-10	32000
ENGINEERING	AMAN	KUMAR	2018-02-28	122300

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

```
50 •   SELECT FIRST_NAME, LAST_NAME, SALARY, DEPARTMENT
51     FROM Employees
52     WHERE DESIGNATION LIKE '%MANAGER%' AND CITY = 'LAHORE';
```

FIRST_NAME	LAST_NAME	SALARY	DEPARTMENT
ALI	SOOMRO	30000	SALES

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".

```
54 •   SELECT |
55         FIRST_NAME,
56         LAST_NAME,
57         SALARY,
58         DESIGNATION,
59         SALARY * 0.20 AS Bonus,
60         SALARY * 1.20 AS "New Salary"
61     FROM Employees
62     WHERE DESIGNATION LIKE '%MANAGER%' OR DESIGNATION LIKE '%AUDITOR%';
```

FIRST_NAME	LAST_NAME	SALARY	DESIGNATION	Bonus	New Salary
SHAISTA	BROHI	20000	MARKETING_MANAGER	4000.00	24000.00
ALI	SOOMRO	30000	MANAGER	6000.00	36000.00

OUTPUTS:

Output

Action Output ▾

#	Time	Action	Message	Duration / Fetch
✓	1 01:41:27	CREATE DATABASE Employee_info	1 row(s) affected	0.016 sec
✓	2 01:41:30	USE Employee_info	0 row(s) affected	0.000 sec
✓	3 01:41:33	CREATE TABLE Employees (employee_id INT PRIMARY KEY, first_name VARC...	0 row(s) affected	0.047 sec
✓	4 01:43:20	INSERT INTO Employees (employee_id, first_name, last_name, designation, salary, b...	8 row(s) affected Records: 8 Duplicates: 0 Warnings: 0	0.000 sec
✓	5 01:43:24	DESCRIBE Employees	9 row(s) returned	0.000 sec / 0.000 sec
✓	6 01:45:50	DESCRIBE Employees	9 row(s) returned	0.000 sec / 0.000 sec
✓	7 01:46:49	SELECT first_name, designation, department FROM Employees LIMIT 0, 1000	8 row(s) returned	0.000 sec / 0.000 sec
✓	8 01:48:25	SELECT first_name, last_name, salary, hire_date FROM Employees ORDER BY hire_...	8 row(s) returned	0.000 sec / 0.000 sec
✓	9 01:48:56	SELECT DISTINCT Department FROM Employees LIMIT 0, 1000	7 row(s) returned	0.000 sec / 0.000 sec
✓	10 01:49:50	SELECT * FROM Employees WHERE Salary<40000 AND YEAR(hire_date) = 2018 L...	2 row(s) returned	0.000 sec / 0.000 sec
✓	11 01:50:52	SELECT DISTINCT city FROM Employees WHERE city LIKE "%r%" OR city LIKE "%i...	7 row(s) returned	0.000 sec / 0.000 sec
✓	12 01:51:45	SELECT DEPARTMENT, FIRST_NAME, LAST_NAME, HIRE_DATE, SALARY FR...	3 row(s) returned	0.000 sec / 0.000 sec
✓	13 01:53:14	SELECT FIRST_NAME, LAST_NAME, SALARY, DEPARTMENT FROM Employees ...	1 row(s) returned	0.000 sec / 0.000 sec
✓	14 01:53:59	SELECT FIRST_NAME, LAST_NAME, SALARY, DESIGNATION, S...	2 row(s) returned	0.000 sec / 0.000 sec