RegId:23BCE9489

Name:Shaik Arshad

-- Create database and tables

CREATE DATABASE ORG123;

USE ORG123;

CREATE TABLE Worker (

WORKER\_ID INT NOT NULL PRIMARY KEY AUTO\_INCREMENT,

FIRST\_NAME CHAR(25),

LAST\_NAME CHAR(25),

SALARY INT(15),

JOINING\_DATE DATETIME,

DEPARTMENT CHAR(25)

);

CREATE TABLE Bonus (

WORKER\_REF\_ID INT,

BONUS\_AMOUNT INT(10),

BONUS\_DATE DATETIME,

FOREIGN KEY (WORKER\_REF\_ID)

REFERENCES Worker(WORKER\_ID)

ON DELETE CASCADE

);

CREATE TABLE Title (

WORKER\_REF\_ID INT,

WORKER\_TITLE CHAR(25),

AFFECTED\_FROM DATETIME,

FOREIGN KEY (WORKER\_REF\_ID)

REFERENCES Worker(WORKER\_ID)

ON DELETE CASCADE

);

-- Insert data

INSERT INTO Worker (WORKER\_ID, FIRST\_NAME, LAST\_NAME, SALARY, JOINING\_DATE, DEPARTMENT)

VALUES

(001, 'Monika', 'Arora', 100000, '2014-02-20 09:00:00', 'HR'),

(002, 'Niharika', 'Verma', 80000, '2014-06-11 09:00:00', 'Admin'),

(003, 'Vishal', 'Singhal', 300000, '2014-02-20 09:00:00', 'HR'),

(004, 'Amitabh', 'Singh', 500000, '2014-02-20 09:00:00', 'Admin'),

(005, 'Vivek', 'Bhati', 500000, '2014-06-11 09:00:00', 'Admin'),

(006, 'Vipul', 'Diwan', 200000, '2014-06-11 09:00:00', 'Account'),

(007, 'Satish', 'Kumar', 75000, '2014-01-20 09:00:00', 'Account'),

(008, 'Geetika', 'Chauhan', 90000, '2014-04-11 09:00:00', 'Admin');

INSERT INTO Bonus (WORKER\_REF\_ID, BONUS\_AMOUNT, BONUS\_DATE)

VALUES

(001, 5000, '2016-02-20 00:00:00'),

(002, 3000, '2016-06-11 00:00:00'),

(003, 4000, '2016-02-20 00:00:00'),

(001, 4500, '2016-02-20 00:00:00'),

(002, 3500, '2016-06-11 00:00:00');

INSERT INTO Title (WORKER\_REF\_ID, WORKER\_TITLE, AFFECTED\_FROM)

VALUES

(001, 'Manager', '2016-02-20 00:00:00'),

(002, 'Executive', '2016-06-11 00:00:00'),

(008, 'Executive', '2016-06-11 00:00:00'),

(005, 'Manager', '2016-06-11 00:00:00'),

(004, 'Asst. Manager', '2016-06-11 00:00:00'),

(007, 'Executive', '2016-06-11 00:00:00'),

(006, 'Lead', '2016-06-11 00:00:00'),

(003, 'Lead', '2016-06-11 00:00:00');

-- Verification queries

SELECT \* FROM Worker;

SELECT \* FROM Bonus;

SELECT \* FROM Title;

-- Question 1: Unique DEPARTMENT values

SELECT DISTINCT DEPARTMENT FROM Worker;

-- Question 2: Worker details ordered by FIRST\_NAME ASC, DEPARTMENT DESC

SELECT \* FROM Worker ORDER BY FIRST\_NAME ASC, DEPARTMENT DESC;

-- Question 3: FIRST\_NAME contains 'a'

SELECT \* FROM Worker WHERE FIRST\_NAME LIKE '%a%';

-- Question 4: FIRST\_NAME ends with 'h' (6 alphabets)

SELECT \* FROM Worker WHERE FIRST\_NAME LIKE '\_\_\_\_\_h';

-- Question 5: SALARY between 100000 and 500000

SELECT \* FROM Worker WHERE SALARY BETWEEN 100000 AND 500000;

-- Question 6: Joined in Feb 2014

SELECT \* FROM Worker

WHERE YEAR(JOINING\_DATE) = 2014 AND MONTH(JOINING\_DATE) = 2;

-- Question 7: Count of Admin employees

SELECT COUNT(\*) FROM Worker WHERE DEPARTMENT = 'Admin';

-- Question 8: Names with salaries between 50k-100k

SELECT FIRST\_NAME, LAST\_NAME

FROM Worker

WHERE SALARY BETWEEN 50000 AND 100000;

-- Question 9: Worker count per department (descending)

SELECT DEPARTMENT, COUNT(\*) AS WorkerCount

FROM Worker

GROUP BY DEPARTMENT

ORDER BY WorkerCount DESC;

-- Question 10: Workers who are Managers

SELECT w.\*

FROM Worker w

JOIN Title t ON w.WORKER\_ID = t.WORKER\_REF\_ID

WHERE t.WORKER\_TITLE = 'Manager';

-- Question 11: 2nd lowest salary (without TOP/LIMIT)

SELECT MIN(SALARY) AS SecondLowestSalary

FROM Worker

WHERE SALARY > (SELECT MIN(SALARY) FROM Worker);

-- Question 12: Employees with same salary

SELECT w1.\*

FROM Worker w1

JOIN Worker w2 ON w1.SALARY = w2.SALARY

AND w1.WORKER\_ID != w2.WORKER\_ID

ORDER BY w1.SALARY;

-- Question 13: 2nd highest salary

SELECT MAX(SALARY) AS SecondHighestSalary

FROM Worker

WHERE SALARY < (SELECT MAX(SALARY) FROM Worker);

-- Question 14: Show one row twice

SELECT \* FROM Worker WHERE WORKER\_ID = 1

UNION ALL

SELECT \* FROM Worker WHERE WORKER\_ID = 1;

-- Question 15: First 50% records

SET @row\_num = 0;

SELECT \* FROM (

SELECT \*, (@row\_num := @row\_num + 1) AS rn

FROM Worker

) AS temp

WHERE rn <= (SELECT CEIL(COUNT(\*)/2) FROM Worker);

-- Question 16: Departments with < 3 people

SELECT DEPARTMENT

FROM Worker

GROUP BY DEPARTMENT

HAVING COUNT(\*) < 3;

-- Question 17: Department headcounts

SELECT DEPARTMENT, COUNT(\*) AS EmployeeCount

FROM Worker

GROUP BY DEPARTMENT;

-- Question 18: Last 5 records

SELECT \* FROM Worker

ORDER BY WORKER\_ID DESC

LIMIT 5;

-- Question 19: Highest salary per department

SELECT w.DEPARTMENT, w.FIRST\_NAME, w.LAST\_NAME, w.SALARY

FROM Worker w

WHERE w.SALARY = (

SELECT MAX(SALARY)

FROM Worker

WHERE DEPARTMENT = w.DEPARTMENT

);

-- Question 20: Top 3 salaries

SELECT DISTINCT SALARY

FROM Worker

ORDER BY SALARY DESC

LIMIT 3;

-- Question 21: Lowest salary in Account/Admin

SELECT w.\*

FROM Worker w

WHERE w.DEPARTMENT IN ('Account', 'Admin')

AND w.SALARY = (

SELECT MIN(SALARY)

FROM Worker

WHERE DEPARTMENT = w.DEPARTMENT

);