**MY SQL TEST**

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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)

);

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

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

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

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

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

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

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

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

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

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

);

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

(1, 5000, '2016-02-20'),

(2, 3000, '2016-06-11'),

(3, 4000, '2016-02-20'),

(1, 4500, '2016-02-20'),

(2, 3500, '2016-06-11');

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

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

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

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

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

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

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

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

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

**Question 1. Fetch unique department names**

SELECT DISTINCT DEPARTMENT

FROM Worker;

**Question 2. All worker details ordered by first name ASC, department DESC**

SELECT \*

FROM Worker

ORDER BY FIRST\_NAME ASC, DEPARTMENT DESC;

**Question 3. Workers whose first name contains 'a'**

SELECT \*

FROM Worker

WHERE FIRST\_NAME LIKE '%a%';

**Question 4. Workers whose first name ends with 'h' and has exactly 6 letters**

SELECT \*

FROM Worker

WHERE FIRST\_NAME LIKE '\_\_\_\_\_h';

**Question 5. Workers with salary between 100000 and 500000**

SELECT \*

FROM Worker

WHERE SALARY BETWEEN 100000 AND 500000;

**Question 6. Workers who joined in February 2014**

SELECT \*

FROM Worker

WHERE MONTH(JOINING\_DATE) = 2

AND YEAR(JOINING\_DATE) = 2014;

**Question 7. Count of employees in 'Admin' department**

SELECT COUNT(\*) AS Admin\_Employee\_Count

FROM Worker

WHERE DEPARTMENT = 'Admin';

**Question 8. Worker names with salary between 50000 and 100000**

SELECT FIRST\_NAME, LAST\_NAME

FROM Worker

WHERE SALARY BETWEEN 50000 AND 100000;

**Question 9. Number of workers per department, descending**

SELECT DEPARTMENT, COUNT(\*) AS Worker\_Count

FROM Worker

GROUP BY DEPARTMENT

ORDER BY Worker\_Count DESC;

**Question 10. Details of workers who are Managers**

SELECT w.\*

FROM Worker AS w

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

WHERE t.WORKER\_TITLE = 'Manager';

**Question 11. Second lowest salary**

SELECT MIN(SALARY) AS Second\_Lowest\_Salary

FROM Worker

WHERE SALARY > (

SELECT MIN(SALARY) FROM Worker

);

**Question 12. Employees with duplicate salaries**

SELECT \*

FROM Worker

WHERE SALARY IN (

SELECT SALARY

FROM Worker

GROUP BY SALARY

HAVING COUNT(\*) > 1

);

**Question 13. Second highest salary**

SELECT MAX(SALARY) AS Second\_Highest\_Salary

FROM Worker

WHERE SALARY < (

SELECT MAX(SALARY) FROM Worker

);

**Question 14. Show the row for WORKER\_ID = 1 twice**

SELECT \* FROM Worker WHERE WORKER\_ID = 1

UNION ALL

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

**Question 15. First 50% of records by WORKER\_ID**

SELECT \*

FROM (

SELECT

\*,

ROW\_NUMBER() OVER (ORDER BY WORKER\_ID) AS rn,

COUNT(\*) OVER () AS total\_rows

FROM Worker

) AS sub

WHERE rn <= total\_rows / 2;

**Question 16. Departments with fewer than 3 employees**

SELECT DEPARTMENT

FROM Worker

GROUP BY DEPARTMENT

HAVING COUNT(\*) < 3;

**Question 17. Departments with their worker counts**

SELECT DEPARTMENT, COUNT(\*) AS Number\_Of\_Workers

FROM Worker

GROUP BY DEPARTMENT;

**Question 18. Last five records**

SELECT \*

FROM Worker

ORDER BY WORKER\_ID DESC

LIMIT 5;

**Question 19. Employees with highest salary per department**

SELECT w.FIRST\_NAME,

w.LAST\_NAME,

w.DEPARTMENT,

w.SALARY

FROM Worker AS w

JOIN (

SELECT DEPARTMENT,

MAX(SALARY) AS Max\_Salary

FROM Worker

GROUP BY DEPARTMENT

) AS dept\_max

ON w.DEPARTMENT = dept\_max.DEPARTMENT

AND w.SALARY = dept\_max.Max\_Salary;

**Question 20. Top three distinct salaries**

SELECT DISTINCT SALARY

FROM Worker

ORDER BY SALARY DESC

LIMIT 3;

**Question 21. Lowest salary in 'Account' and 'Admin' departments**

SELECT w.FIRST\_NAME,

w.LAST\_NAME,

w.DEPARTMENT,

w.SALARY

FROM Worker AS w

JOIN (

SELECT DEPARTMENT,

MIN(SALARY) AS Min\_Salary

FROM Worker

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

GROUP BY DEPARTMENT

) AS dept\_min

ON w.DEPARTMENT = dept\_min.DEPARTMENT

AND w.SALARY = dept\_min.Min\_Salary;