SQL BASICS PRACTICAL QUESTIONS WITH QUERIES

30 QUESTIONS

BY RITIKA SINGH

TABLES

BONUS TABLE

	WORKER_REF_ID	BONUS_AMOUNT	BONUS_DATE
1	1	5000	2023-02-20 00:00:00.000
2	2	3000	2011-06-23 00:00:00.000
3	3	4000	2023-02-20 00:00:00.000
4	1	4500	2023-02-20 00:00:00.000
5	2	3500	2011-06-23 00:00:00.000

TITLE TABLE

	WORKER_REF_ID	WORKER_TITLE	AFFECTED_FROM
1	1	Manager	2023-02-20 00:00:00.000
2	2	Executive	2023-06-11 00:00:00.000
3	8	Executive	2023-06-11 00:00:00.000
4	5	Manager	2023-06-11 00:00:00.000
5	4	Asst. Manager	2023-06-11 00:00:00.000
6	7	Executive	2023-06-11 00:00:00.000
7	6	Lead	2023-06-11 00:00:00.000
8	3	Lead	2023-06-11 00:00:00.000

WORKER TABLE

	WORKER_ID	FIRST_NAME	LAST_NAME	SALARY	JOINING_DATE	DEPARTMENT
1	1	Monika	Arora	100000	2021-02-20 09:00:00.000	HR
2	2	Niharika	Verma	80000	2021-06-11 09:00:00.000	Admin
3	3	Vishal	Singhal	300000	2021-02-20 09:00:00.000	HR
4	4	Amitabh	Singh	500000	2021-02-20 09:00:00.000	Admin
5	5	Vivek	Bhati	500000	2021-06-11 09:00:00.000	Admin
6	6	Vipul	Diwan	200000	2021-06-11 09:00:00.000	Account
7	7	Satish	Kumar	75000	2021-01-20 09:00:00.000	Account
8	8	Geetika	Chauhan	90000	2021-04-11 09:00:00.000	Admin

Q-1. Write an SQL query to fetch “FIRST_NAME” from the Worker table using the alias name <WORKER_NAME>.

```
SELECT FIRST_NAME FROM Worker;
```

	FIRST_NAME
1	Monika
2	Niharika
3	Vishal
4	Amitabh
5	Vivek
6	Vipul
7	Satish
8	Geetika

Q-2. Write an SQL query to fetch “FIRST_NAME” from the Worker table in upper case.

```
SELECT upper(FIRST_NAME) AS FIRST_NAME FROM Worker;
```

	FIRST_NAME
1	MONIKA
2	NIHARIKA
3	VISHAL
4	AMITABH
5	VIVEK
6	VIPUL
7	SATISH
8	GEETIKA

Q-3. Write an SQL query to fetch unique values of DEPARTMENT from the Worker table.

```
SELECT DISTINCT(DEPARTMENT) AS DEPARTMENTS FROM Worker;
```

	DEPARTMENTS
1	Account
2	Admin
3	HR

Q-4. Write an SQL query to print the first three characters of FIRST_NAME from the Worker table.

```
SELECT LEFT(FIRST_NAME, 3) FROM Worker;

SELECT SUBSTRING(FIRST_NAME, 1, 3) AS FIRST_NAME FROM Worker;
```

	FIRST_NAME
1	Mon
2	Nih
3	Vis
4	Ami
5	Viv
6	Vip
7	Sat
8	Gee

Q-5. Write an SQL query to find the position of the alphabet (‘a’) in the first name column ‘Amitabh’ from the Worker table.

```
SELECT CHARINDEX('a', FIRST_NAME) AS POSITION_A from Worker
WHERE FIRST_NAME = 'Amitabh';
```

	POSITION_A
1	1

Q-6. Write an SQL query to print the FIRST_NAME from the Worker table after removing white spaces from the right side.

```
-- RTRIM - used to remove trailing (right-side) spaces from a string

SELECT RTRIM(FIRST_NAME) AS FIRST_NAME_WITHOUT_RIGHT_WHITESPACES FROM Worker;
```

	FIRST_NAME_WITHOUT_RIGHT_WHITESPACES
1	Monika
2	Niharika
3	Vishal
4	Amitabh
5	Vivek
6	Vipul
7	Satish
8	Geetika

Q-7. Write an SQL query to print the DEPARTMENT from the Worker table after removing white spaces from the left side.

```
SELECT LTRIM(FIRST_NAME) AS FIRST_NAME_WITHOUT_LEFT_WHITESPACES FROM Worker;
```

	FIRST_NAME_WITHOUT_LEFT_WHITESPACES
1	Monika
2	Niharika
3	Vishal
4	Amitabh
5	Vivek
6	Vipul
7	Satish
8	Geetika

Q-8. Write an SQL query that fetches the unique values of DEPARTMENT from the Worker table and prints its length.

```
SELECT DISTINCT len(DEPARTMENT) FROM Worker;
```

	LEN_DEPARTMENTS
1	2
2	5
3	7

Q-9. Write an SQL query to print the FIRST_NAME from the Worker table after replacing ‘a’ with ‘A’.

```
SELECT REPLACE(FIRST_NAME, 'a', 'A') FROM Worker;
```

	FIRST_NAME
1	MonikA
2	NihArikA
3	VishAl
4	AmitAbh
5	Vivek
6	Vipul
7	SAtish
8	GeetikA

Q-10. Write an SQL query to print the FIRST_NAME and LAST_NAME from the Worker table into a single column COMPLETE_NAME. A space char should separate them.

```
SELECT CONCAT(FIRST_NAME, ' ', LAST_NAME) AS COMPLETE_NAME FROM Worker;
```

	COMPLETE_NAME
1	Monika Arora
2	Niharika Verma
3	Vishal Singhal
4	Amitabh Singh
5	Vivek Bhati
6	Vipul Diwan
7	Satish Kumar
8	Geetika Chauhan

Q-11. Write an SQL query to print all Worker details from t he Worker table order by FIRST_NAME Ascending.

```
SELECT * FROM Worker
ORDER BY FIRST_NAME ASC;
```

	WORKER_ID	FIRST_NAME	LAST_NAME	SALARY	JOINING_DATE	DEPARTMENT
1	4	Amitabh	Singh	500000	2021-02-20 09:00:00.000	Admin
2	8	Geetika	Chauhan	90000	2021-04-11 09:00:00.000	Admin
3	1	Monika	Arora	100000	2021-02-20 09:00:00.000	HR
4	2	Niharika	Verma	80000	2021-06-11 09:00:00.000	Admin
5	7	Satish	Kumar	75000	2021-01-20 09:00:00.000	Account
6	6	Vipul	Diwan	200000	2021-06-11 09:00:00.000	Account
7	3	Vishal	Singhal	300000	2021-02-20 09:00:00.000	HR
8	5	Vivek	Bhati	500000	2021-06-11 09:00:00.000	Admin

Q-12. Write an SQL query to print all Worker details from the Worker table order by FIRST_NAME Ascending and DEPARTMENT Descending.

```
SELECT * FROM Worker
ORDER BY FIRST_NAME ASC, DEPARTMENT DESC;
```

	WORKER_ID	FIRST_NAME	LAST_NAME	SALARY	JOINING_DATE	DEPARTMENT
1	4	Amitabh	Singh	500000	2021-02-20 09:00:00.000	Admin
2	8	Geetika	Chauhan	90000	2021-04-11 09:00:00.000	Admin
3	1	Monika	Arora	100000	2021-02-20 09:00:00.000	HR
4	2	Niharika	Verma	80000	2021-06-11 09:00:00.000	Admin
5	7	Satish	Kumar	75000	2021-01-20 09:00:00.000	Account
6	6	Vipul	Diwan	200000	2021-06-11 09:00:00.000	Account
7	3	Vishal	Singhal	300000	2021-02-20 09:00:00.000	HR
8	5	Vivek	Bhati	500000	2021-06-11 09:00:00.000	Admin

Q-13. Write an SQL query to print details for Workers with the first names “Vipul” and “Satish” from the Worker table.

```
SELECT * FROM Worker
WHERE FIRST_NAME IN ('Vipul','Satish');
```

	WORKER_ID	FIRST_NAME	LAST_NAME	SALARY	JOINING_DATE	DEPARTMENT
1	6	Vipul	Diwan	200000	2021-06-11 09:00:00.000	Account
2	7	Satish	Kumar	75000	2021-01-20 09:00:00.000	Account

Q-14. Write an SQL query to print details of workers excluding first names, “Vipul” and “Satish” from the Worker table.

```
SELECT * FROM Worker
WHERE FIRST_NAME NOT IN ('Vipul','Satish');
```

	WORKER_ID	FIRST_NAME	LAST_NAME	SALARY	JOINING_DATE	DEPARTMENT
1	1	Monika	Arora	100000	2021-02-20 09:00:00.000	HR
2	2	Niharika	Verma	80000	2021-06-11 09:00:00.000	Admin
3	3	Vishal	Singhal	300000	2021-02-20 09:00:00.000	HR
4	4	Amitabh	Singh	500000	2021-02-20 09:00:00.000	Admin
5	5	Vivek	Bhati	500000	2021-06-11 09:00:00.000	Admin
6	8	Geetika	Chauhan	90000	2021-04-11 09:00:00.000	Admin

Q-15. Write an SQL query to print details of Workers with DEPARTMENT name as “Admin”.

```
SELECT * FROM Worker
WHERE DEPARTMENT IN ('Admin');

SELECT * FROM Worker WHERE DEPARTMENT LIKE 'Admin%';
```

	WORKER_ID	FIRST_NAME	LAST_NAME	SALARY	JOINING_DATE	DEPARTMENT
1	2	Niharika	Verma	80000	2021-06-11 09:00:00.000	Admin
2	4	Amitabh	Singh	500000	2021-02-20 09:00:00.000	Admin
3	5	Vivek	Bhati	500000	2021-06-11 09:00:00.000	Admin
4	8	Geetika	Chauhan	90000	2021-04-11 09:00:00.000	Admin

Q-16. Write an SQL query to print details of the Workers whose FIRST_NAME contains ‘a’.

```
SELECT * FROM Worker
WHERE FIRST_NAME LIKE '%a%';
```

	WORKER_ID	FIRST_NAME	LAST_NAME	SALARY	JOINING_DATE	DEPARTMENT
1	1	Monika	Arora	100000	2021-02-20 09:00:00.000	HR
2	2	Niharika	Verma	80000	2021-06-11 09:00:00.000	Admin
3	3	Vishal	Singhal	300000	2021-02-20 09:00:00.000	HR
4	4	Amitabh	Singh	500000	2021-02-20 09:00:00.000	Admin
5	7	Satish	Kumar	75000	2021-01-20 09:00:00.000	Account
6	8	Geetika	Chauhan	90000	2021-04-11 09:00:00.000	Admin

Q-17. Write an SQL query to print details of the Workers whose FIRST_NAME ends with ‘a’.

```
SELECT * FROM Worker
WHERE FIRST_NAME LIKE '%a';
```

	WORKER_ID	FIRST_NAME	LAST_NAME	SALARY	JOINING_DATE	DEPARTMENT
1	1	Monika	Arora	100000	2021-02-20 09:00:00.000	HR
2	2	Niharika	Verma	80000	2021-06-11 09:00:00.000	Admin
3	8	Geetika	Chauhan	90000	2021-04-11 09:00:00.000	Admin

Q-18. Write an SQL query to print details of the Workers whose FIRST_NAME ends with ‘h’ and contains six alphabets.

```
SELECT * FROM Worker
WHERE FIRST_NAME LIKE '_____h';
```

	WORKER_ID	FIRST_NAME	LAST_NAME	SALARY	JOINING_DATE	DEPARTMENT
1	7	Satish	Kumar	75000	2021-01-20 09:00:00.000	Account

Q-19. Write an SQL query to print details of the Workers whose SALARY lies between 100000 and 500000.

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

	WORKER_ID	FIRST_NAME	LAST_NAME	SALARY	JOINING_DATE	DEPARTMENT
1	1	Monika	Arora	100000	2021-02-20 09:00:00.000	HR
2	3	Vishal	Singhal	300000	2021-02-20 09:00:00.000	HR
3	4	Amitabh	Singh	500000	2021-02-20 09:00:00.000	Admin
4	5	Vivek	Bhati	500000	2021-06-11 09:00:00.000	Admin
5	6	Vipul	Diwan	200000	2021-06-11 09:00:00.000	Account

Q-20. Write an SQL query to print details of the Workers who joined in Feb 2021.

```
SELECT * FROM Worker
WHERE YEAR(JOINING_DATE) = 2021 AND MONTH(JOINING_DATE)= 2;
```

	WORKER_ID	FIRST_NAME	LAST_NAME	SALARY	JOINING_DATE	DEPARTMENT
1	1	Monika	Arora	100000	2021-02-20 09:00:00.000	HR
2	3	Vishal	Singhal	300000	2021-02-20 09:00:00.000	HR
3	4	Amitabh	Singh	500000	2021-02-20 09:00:00.000	Admin

Q-21. Write an SQL query to fetch the count of employees working in the department ‘Admin’.

```
SELECT COUNT(*) AS COUNT_ADMIN FROM Worker
WHERE DEPARTMENT = 'Admin';
```

	COUNT_ADMIN
1	4

Q-22. Write an SQL query to fetch worker names with salaries >= 50000 and <= 100000.

```
SELECT CONCAT(FIRST_NAME, ' ', LAST_NAME) AS WORKER_NAME, SALARY FROM Worker
WHERE SALARY BETWEEN 50000 AND 100000;
```

	WORKER_NAME	SALARY
1	Monika Arora	100000
2	Niharika Verma	80000
3	Satish Kumar	75000
4	Geetika Chauhan	90000

Q-23. Write an SQL query to fetch the number of workers for each department in descending order.

```
SELECT DEPARTMENT, COUNT(WORKER_ID) AS NO_OF_WORKERS FROM Worker
GROUP BY DEPARTMENT
ORDER BY NO_OF_WORKERS DESC;
```

	DEPARTMENT	NO_OF_WORKERS
1	Admin	4
2	HR	2
3	Account	2

Q-24. Write an SQL query to print details of the Workers who are also Managers.

```
SELECT Worker.FIRST_NAME, Title.WORKER_TITLE FROM Worker
INNER JOIN Title ON Worker.WORKER_ID = Title.WORKER_REF_ID
WHERE Title.WORKER_TITLE = 'Manager';
```

	FIRST_NAME	WORKER_TITLE
1	Monika	Manager
2	Vivek	Manager

Q-25. Write an SQL query to fetch duplicate records having matching data in some fields of a table.

```
SELECT WORKER_TITLE, AFFECTED_FROM FROM Title
GROUP BY WORKER_TITLE, AFFECTED_FROM
HAVING COUNT(*) > 1;
```

	WORKER_TITLE	AFFECTED_FROM
1	Executive	2023-06-11 00:00:00.000
2	Lead	2023-06-11 00:00:00.000

Q-26. Write an SQL query to clone a new table from another table.

```
SELECT * INTO WorkerClone FROM Worker;
```

- dbo.Bonus
- dbo.Title
- dbo.Worker
- dbo.WorkerClone

Q-27. Write an SQL query to fetch intersecting records of two tables.

```
SELECT * FROM Worker
INTERSECT
SELECT * FROM WorkerClone;
```

	WORKER_ID	FIRST_NAME	LAST_NAME	SALARY	JOINING_DATE	DEPARTMENT
1	1	Monika	Arora	100000	2021-02-20 09:00:00.000	HR
2	2	Niharika	Verma	80000	2021-06-11 09:00:00.000	Admin
3	3	Vishal	Singhal	300000	2021-02-20 09:00:00.000	HR
4	4	Amitabh	Singh	500000	2021-02-20 09:00:00.000	Admin
5	5	Vivek	Bhati	500000	2021-06-11 09:00:00.000	Admin
6	6	Vipul	Diwan	200000	2021-06-11 09:00:00.000	Account
7	7	Satish	Kumar	75000	2021-01-20 09:00:00.000	Account
8	8	Geetika	Chauhan	90000	2021-04-11 09:00:00.000	Admin

Q-28. Write an SQL query to show the current date and time.

```
SELECT GETDATE();
```

	TODAY_DATETIME
1	2024-02-24 00:05:08.977

Q-29. Write an SQL query to show the top n (say 10) records of a table.

```
SELECT TOP 10 * FROM Worker
ORDER BY Salary DESC;
```

	WORKER_ID	FIRST_NAME	LAST_NAME	SALARY	JOINING_DATE	DEPARTMENT
1	5	Vivek	Bhati	500000	2021-06-11 09:00:00.000	Admin
2	4	Amitabh	Singh	500000	2021-02-20 09:00:00.000	Admin
3	3	Vishal	Singhal	300000	2021-02-20 09:00:00.000	HR
4	6	Vipul	Diwan	200000	2021-06-11 09:00:00.000	Account
5	1	Monika	Arora	100000	2021-02-20 09:00:00.000	HR
6	8	Geetika	Chauhan	90000	2021-04-11 09:00:00.000	Admin
7	2	Niharika	Verma	80000	2021-06-11 09:00:00.000	Admin
8	7	Satish	Kumar	75000	2021-01-20 09:00:00.000	Account

Q-30. Write an SQL query to print the names of employees having the highest salary in each department.

```
SELECT t.DEPARTMENT,t.FIRST_NAME,t.Salary FROM(SELECT MAX(Salary)
AS TotalSalary,DEPARTMENT FROM Worker
GROUP BY DEPARTMENT) AS TempNew
Inner Join Worker t ON TempNew.DEPARTMENT=t.DEPARTMENT
 and TempNew.TotalSalary=t.Salary;
```

	DEPARTMENT	FIRST_NAME	Salary
1	HR	Vishal	300000
2	Admin	Amitabh	500000
3	Admin	Vivek	500000
4	Account	Vipul	200000

THANK YOU !!!

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