

Task : 3-2

Aggregate functions (Multi Row operation)

1818125.

Aim :

To study and implement aggregate function (COUNT(), SUM(), AVG(), MIN(), MAX()) on a sample database.

Procedure.

1. Create a table named students.
2. Insert sample records
3. Write queries using aggregate function
4. Observe and record the output.

COMMANDS with EXPLANATION:

Example Table : patients.

patient ID	patient name	Dept	Bill Amount
101	Arun	Cardiology	2000
102	Sneha	Nurology	3500
103	Karan	Orthopedics	1500
104	Neena	Pediatrics	4000
105	Rohan	Dermatology	

- 1) Count the total number of patient.

SQL :

```
SELECT COUNT(*) AS Total_patients  
FROM patients;
```

output :

Total - patients .

5 .

2) Find the highest bill amount .

SQL :

```
SELECT MAX (Bill Amount) AS highest_bill  
FROM patients ;
```

output :

Highest - Bill

4000

3) Find the average bill amount of patients

SQL :

```
SELECT Avg (Bill amount) AS Average_bill  
FROM patients .
```

output :

Average - Bill

2700

4) Find the minimum bill amount among patients in Neurology department .

SQL :

```
SELECT Min (Bill Amount) AS min_neuro_bill
```

output :

Min - Neuro - Bill

3500

5. Find the total bill amount by each department.

SQl:

```
SELECT Department , SUM(BillAmount) AS  
Total-Bill  
FROM Patients .  
GROUP BY Department ;
```

Output :

Department	Total-Bill
Cardiology	2000
Nurology	3500
Orthopedics	1500
Pediatrics	4000.
Dermatology	

6. Find the average bill per department, ordered by average descending.

SQl:

```
SELECT Department , AVG(BillAmount) AS  
Avg Bill .  
FROM Patients  
GROUP - BY Department  
ORDER By Avg - Bill DESC ;
```

Output :

Department	Avg-Bill
Pediatrics	4000
Neurology	3500
Dermatology	2500
Orthopedics	1500
Cardiology	2000

Result :

VLSI TECH - CSE	
PERF NO.	3.2
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	4
RECORD (5)	—
TOTAL (20)	14
SIGN WITH DATE	8/07/23

The implementation of Aggregate functions are executed successfully.