

# SISTec GandhiNagar, Bhopal

## Department of Computer Science

### DBMS LAB-4

Title: MIN, MAX, COUNT, AVG

Problem statement: SQL query based on Aggregated Functions

Theory:

#### 1. COUNT() Function

The COUNT() function returns the number of rows that match a specified condition. It is commonly used to count records in a table.

**SYNTAX:**

```
SELECT COUNT(column_name) FROM table_name WHERE condition;
```

#### 2. SUM() Function

The SUM() function calculates the total sum of a numeric column.

**SYNTAX:**

```
SELECT SUM(column_name) FROM table_name WHERE condition;
```

#### 3. AVG() Function

The AVG() function calculates the average value of a numeric column.

**SYNTAX:**

```
SELECT AVG(column_name) FROM table_name WHERE condition;
```

#### 4. MAX() and MIN() Functions

- MAX() returns the highest value in a column.
- MIN() returns the lowest value in a column.

**SYNTAX:**

```
SELECT MAX(column_name), MIN(column_name) FROM table_name WHERE condition;
```

## Solution:-

1. Display average salary of employees in each department who have commission percentage.

```
select avg(salary), department_id
from employees
where commission_pct is not null
group by department_id
```

Results	Explain	Describe	Saved SQL	History
AVG(SALARY)		DEPARTMENT_ID		
7000		-		
8955.88235294117647058823529411764705882		80		

2 rows returned in 0.00 seconds [CSV Export](#)

2. Display job title and average salary of employees

```
select avg(salary), job_id
from employees
group by job_id
```

AVG(SALARY)	JOB_ID
5760	IT_PROG
12000	AC_MGR
8300	AC_ACCOUNT
7280	ST_MAN
11000	PU_MAN
4400	AD_ASST
17000	AD_VP
3215	SH_CLERK
7920	FI_ACCOUNT
12000	FI_MGR
2780	PU_CLERK
12200	SA_MAN
13000	MK_MAN
10000	PR_REP
24000	AD PRES
8350	SA_REP
6000	MK_REP
2785	ST_CLERK
6500	HR_REP

19 rows returned in 0.02 seconds

3. Display details of jobs where the minimum salary is greater than 10000.

```
select job_id ,min(salary)
from employees
group by job_id
having min(salary) > 10000
```

JOB_ID	MIN(SALARY)
AC_MGR	12000
PU_MAN	11000
AD_VP	17000
FI_MGR	12000
SA_MAN	10500
MK_MAN	13000
AD_PRES	24000

7 rows returned in 0.00 seconds

4. Display how many employees joined in each month of the current year..

```
select to_char(hire_date, 'Month') as month,
count(employee_id) AS total_employees
from employees
where to_char(hire_date, 'YY') = 99
group by to_char(hire_date, 'Month');
```

MONTH	TOTAL_EMPLOYEES
December	3
January	1
June	2
February	3
November	2
April	1
May	1
August	1
October	1
March	3

10 rows returned in 0.00 seconds

5. Display number of employees joined after 15th of the month.

```
select to_char(hire_date, 'month') as month,
count(employee_id) as total_employees
from employees
where to_char(hire_date, 'dd') > 15
group by to_char(hire_date, 'month');
```

MONTH	TOTAL_EMPLOYEES
august	6
march	9
may	4
february	6
december	2
july	3
june	5
april	4
september	5
october	3
november	2
january	8

12 rows returned in 0.02 seconds