BRIGHTLEARN TUTORIALS

DATA ANALYTICS

EXERCISE 2 : AGGREGATE FUNCTIONS & GROUPING

Table : employees

1. SQL query to find total number of employees

Syntax :

```
SELECT COUNT (*) AS total_employees
FROM employees;
```

Output :

total_employees
10

2. SQL query to find total salaries paid to IT department

Syntax :

```
SELECT sum (salary) AS total_it_salary
FROM employees
WHERE department = 'IT';
```

Output :

total_it_salary
220 000

3. SQL query to calculate average salary for employees in HR

Syntax :

```
SELECT AVG (salary) AS average_HR_salary
FROM employees
```

```
WHERE department = 'HR';
```

Output :

average_HR_salary	49 500

4. SQL query to find highest and lowest paid

Syntax :

```
SELECT MIN(salary) AS lowest_salary,
       MAX(salary) AS highest_salary
FROM employees;
```

Output :

lowest_salary	48 000
highest_salary	62 000

5. SQL query to group employees by department and total salary by department

Syntax :

```
SELECT department,
SUM(salary) AS total_dept_salary
FROM employees
GROUP BY department;
```

Output :

department	total_dept_salary
IT	220 000
HR	99 000
Finance	119 000
Marketing	105 000

6. SQL query to count how many employees work in each city

Syntax:

```
SELECT city,
COUNT (*) AS employee_count
FROM employees
GROUP BY city;
```

OUTPUT;

city	employee_count
Chicago	3
Los Angeles	2
New York	2
San Francisco	2

7. SQL query to group employees by department, calculate average salary in each department and order the results in descending order of the average salary

Syntax:

```
SELECT department,
AVG (salary) AS avg_salary
FROM employees
GROUP BY department
ORDER BY avg_salary DESC;
```

Output:

department	avg_salary
Finance	59 500
IT	55 000

Marketing	52500
HR	49500

8. SQL query to find departments where total salary paid exceeds 100 000

Syntax:

```
SELECT department,
Sum (salary) AS total_salary
FROM employees
GROUP BY department
HAVING sum (salary) > 100 000 ;
```

Output:

department	total_salary
Finance	119 000
IT	220 000
Marketing	105 000

9. SQL query to list cities where more than one employee works, ordered by the number of employees in descending order.

Syntax:

```
SELECT city,
COUNT (*) AS employee_count
FROM employees
GROUP BY city
HAVING COUNT (*) > 1
ORDER BY employee_count DESC;
```

Output :

City	employee-count
Chicago	3
Houston	
Los Angeles	2
New York	2
San Francisco	2
Houston	1

10. SQL query to find the department with the highest average salary

Syntax :

```
SELECT department
FROM employees
GROUP BY department
ORDER BY AVG(salary) DESC;
```

Output :

department	salary
Finance	59500