**Questions On Group By**

**Q1. Find the total salary paid in each department.**

Select sum(salary) from employees group by department\_id;

**If we also need Department name then ?**

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) [sum](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/aggregate-functions.html%23function_sum)(salary),d.department\_name FROM `employees` e Inner Join departments d ON d.department\_id = e.department\_id group by d.department\_name;

**Q2. Count how many employees work in each city.**

[Select](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) city,[count](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/aggregate-functions.html%23function_count)(name) from employees GROUP BY city;

**Q3. Find the average salary per department.**

[Select](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) d.department\_name,[avg](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/aggregate-functions.html%23function_avg)(salary) from employees e Inner Join departments d ON d.department\_id = e.department\_id GROUP BY d.department\_id;

**Q4.** **List departments with more than 3 employees.**

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) d.department\_name, [COUNT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/aggregate-functions.html%23function_count)(e.name) AS employee\_count FROM employees e INNER JOIN departments d ON d.department\_id = e.department\_id GROUP BY d.department\_name HAVING [COUNT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/aggregate-functions.html%23function_count)(e.name) > 3;

**Q5. Find the maximum salary in each city.**

Select city, max(salary) from employees group by city;

**Q6. Get the total number of orders placed by each customer.**

[select](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) customer\_id,[count](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/aggregate-functions.html%23function_count)(order\_id) from orders GROUP BY customer\_id;

**Q7. Find the total order amount per city.**

[Select](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) city, [SUM](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/aggregate-functions.html%23function_sum)(total\_amount) from orders GROUP BY city;

**Q8. List customers who have placed more than 5 orders.**

SELECT customer\_id, count(order\_id) FROM `orders` GROUP BY customer\_id HAVING count(order\_id) > 5;

**Q9. Find the earliest hire date for employees in each department.**

[Select](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) e.name,d.department\_name,[MIN](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/aggregate-functions.html%23function_min)(hire\_date) from employees e Inner Join departments d ON d.department\_id = e.department\_id Group By e.department\_id;

**Q10. Count the number of employees hired each year.**

[Select](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) [count](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/aggregate-functions.html%23function_count)(employee\_id),year(hire\_date) y from employees GROUP BY year(hire\_date);

**Q11. Find the total sales amount for each month in 2023.**

[Select](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) order\_date,[SUM](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/aggregate-functions.html%23function_sum)(total\_amount) from orders Where year(order\_date) = '2023' GROUP BY year(order\_date), Month(order\_date);

**Q12. List the number of employees per department and city.**

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) city,department\_id,[COUNT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/aggregate-functions.html%23function_count)(employee\_id) from employees Group By department\_id, city;

**Q13. Find the average order total per customer.**

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) customer\_id,[AVG](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/aggregate-functions.html%23function_avg)(total\_amount) from orders GROUP BY customer\_id;

**Q14. Count how many distinct cities employees work in.** [Select](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) DISTINCT city from employees;

**Q15. Find the department with the highest average salary.**

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/select.html) d.department\_name, [AVG](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/aggregate-functions.html%23function_avg)(e.salary) from employees e Inner Join departments d ON d.department\_id = e.department\_id GROUP BY d.department\_id Order by [AVG](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/8.0/en/aggregate-functions.html%23function_avg)(e.salary) desc limit 1;

**Q16. Get the total orders per day for the last 7 days.**

**Q17.** **Find customers who have orders in more than one city.**

SELECT customer\_id,order\_id, COUNT(DISTINCT city) AS city\_count

FROM orders

GROUP BY customer\_id

HAVING COUNT(DISTINCT city) > 1;