Lab #6-7 – Group By – 3H

GROUP BY - Having
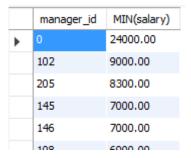
1. Write a query to get the number of employees by job id.

job_id	COUNT(*)
AC_ACCOUNT	1
AC_MGR	1
AD_ASST	1
AD_PRES	1
AD_VP	2
FI_ACCOUNT	5

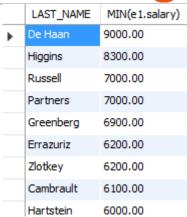2. Write a query to get the job titles where the number of employees is greater than 4, ordered by descending order

job_title	COUNT(*)
Sales Representative	30
Stock Clerk	20
Shipping Clerk	20
Programmer	5
Sales Manager	5
Stock Manager	5
Accountant	5
Purchasing Clerk	5

3. Write a query to find the manager ID and the salary of the lowest-paid employee for that manager.

manager_id	MIN(salary)
0	24000.00
102	9000.00
205	8300.00
145	7000.00
146	7000.00
108	6000.00

4. Same question as above but with the managers' lastnames

LAST_NAME	MIN(e1.salary)
De Haan	9000.00
Higgins	8300.00
Russell	7000.00
Partners	7000.00
Greenberg	6900.00
Errazuriz	6200.00
Zlotkey	6200.00
Cambrault	6100.00
Hartstein	6000.00

5. Write a query to get the months in which more than 10 employees joined.

month	count
August	31
July	31
June	14
September	30

6. Write a query to get the average salary for each job having more than 5 employees, ordered by the number of employees, in decreasing order.

job_title	AVG(salary)	number
Sales Representative	8350.000000	30
Stock Clerk	2785.000000	20
Shipping Clerk	3215.000000	20

7. Write a query to get the average salary for all departments employing more than 10 employees.

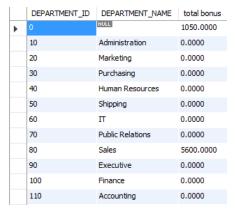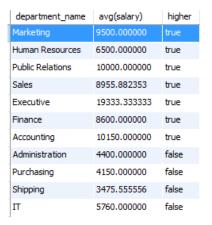| department_id	AVG(salary)	COUNT(*)
50	3475.555556	45
80	8955.882353	34

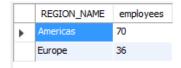8. Write a query to find the departments having an average salary higher than the company-wide average salary

	department_name	avg(salary)
▶	Executive	19333.333333
	Accounting	10150.000000
	Public Relations	10000.000000
	Marketing	9500.000000
	Sales	8955.882353
	Finance	8600.000000
	Human Resources	6500.000000

9. Write a query to return the total bonus (commission times salary) by department

	DEPARTMENT_ID	DEPARTMENT_NAME	total bonus
▶	0	NULL	1050.0000
	10	Administration	0.0000
	20	Marketing	0.0000
	30	Purchasing	0.0000
	40	Human Resources	0.0000
	50	Shipping	0.0000
	60	IT	0.0000
	70	Public Relations	0.0000
	80	Sales	5600.0000
	90	Executive	0.0000
	100	Finance	0.0000
	110	Accounting	0.0000

10. Extend the query 8 to get the average salaries for each department, the column « higher » indicates wether this average is larger than the average company one. Hint : use UNION.

department_name	avg(salary)	higher
Marketing	9500.000000	true
Human Resources	6500.000000	true
Public Relations	10000.000000	true
Sales	8955.882353	true
Executive	19333.333333	true
Finance	8600.000000	true
Accounting	10150.000000	true
Administration	4400.000000	false
Purchasing	4150.000000	false
Shipping	3475.555556	false
IT	5760.000000	false

11. Write a to find the number of employees per region

	REGION_NAME	employees
▶	Americas	70
	Europe	36

12. Write a query to return the number of people with the same job, ordered in descending order

job_id	JOB_TITLE	people
SA_REP	Sales Representative	30
ST_CLERK	Stock Clerk	20
SH_CLERK	Shipping Clerk	20
PU_CLERK	Purchasing Clerk	5
IT_PROG	Programmer	5
SA_MAN	Sales Manager	5
ST_MAN	Stock Manager	5
FI_ACCOUNT	Accountant	5

13. Write a query to find the number of job positions occupied by more than one employee, as well as the total number of employees in these positions.

positions	employees
9	97

14. The commission of an employee is equal to its salary multiplied by its percentage. Write a query to find the total commissions spent by department, sorted by decreasing total spent.

DEPARTMENT_ID	DEPARTMENT_NAME	commission
80	Sales	72640.0000
0	NULL	1050.0000
40	Human Resources	0.0000
90	Executive	0.0000

15. Write a query to find the average salary by job for people working in Seattle, display also the department for each job.

JOB_TITLE	DEPARTMENT_NAME	AVG(SALARY)
Public Accountant	Accounting	8300.000000
Accounting Manager	Accounting	12000.000000
Administration Assistant	Administration	4400.000000
President	Executive	24000.000000
Administration Vice President	Executive	17000.000000
Accountant	Finance	7920.000000
Finance Manager	Finance	12000.000000
Purchasing Clerk	Purchasing	2780.000000
Purchasing Manager	Purchasing	11000.000000