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1.For the current maximum annual wage in the company SHOW the full name of an employee, department,

current position, for how long the current position is held, and total years of service in the company.USE common table expression this time

WITH empCTE AS

( SELECT MAX(salary)

FROM employees.salaries AS es1

WHERE CURDATE() BETWEEN es1.from\_date AND es1.to\_date)

SELECT CONCAT(ee.first\_name, ' ', ee.last\_name) AS Fullname, dept\_name AS 'Department name', et.title AS 'Currrent position', DATEDIFF(CURDATE(),et.from\_date) AS "TItle position time in days", ROUND(DATEDIFF(CURDATE(),ee.hire\_date)/365) AS '~YEARS work in company'

FROM employees.employees AS ee

INNER JOIN employees.dept\_emp AS ede ON (ee.emp\_no=ede.emp\_no)

INNER JOIN employees.departments AS ed ON (ede.dept\_no=ed.dept\_no)

INNER JOIN employees.titles AS et ON (ee.emp\_no=et.emp\_no)

INNER JOIN employees.salaries AS es ON (ee.emp\_no=es.emp\_no)

WHERE CURDATE() BETWEEN ede.from\_date AND ede.to\_date

AND CURDATE() BETWEEN et.from\_date AND et.to\_date

AND es.salary = (Select \* From empCTE)

;

3.Show all information about the employee, salary year, and the difference between salary and average salary in the company overall.

For the employee, whose salary was assigned latest from salaries that are closest to mean salary overall (doesn’t matter higher or lower).

Here you need to find the average salary overall and then find the smallest difference of someone’s salary with an average salary

SELECT \*, ABS(salary-(SELECT AVG(salary) as avgsal

FROM employees.salaries)) as diff

FROM employees.salaries

ORDER BY diff, from\_date DESC

LIMIT 1;

4.Select the details, title, and salary of the employee with the highest salary who is not employed in the company anymore.

SELECT ede.emp\_no, ede.dept\_no, ede.from\_date,ede.to\_date, es.salary, es.from\_date,es.to\_date, et.title,et.from\_date, et.to\_date

FROM employees.dept\_emp AS ede

INNER JOIN employees.salaries AS es ON (ede.emp\_no=es.emp\_no)

INNER JOIN employees.titles AS et ON (es.emp\_no =et.emp\_no)

LEFT JOIN employees.salaries AS es1 ON

(es.emp\_no = es1.emp\_no

AND NOW() BETWEEN es1.from\_date AND es1.to\_date)

WHERE es1.emp\_no IS NULl AND

es.salary = (SELECT MAX(es.salary) FROM employees.salaries AS es

LEFT JOIN employees.dept\_emp AS edm ON

(es.emp\_no = edm.emp\_no

AND NOW() BETWEEN edm.from\_date AND edm.to\_date)

WHERE edm.emp\_no IS NULL

)

;

5.Show Full Name, salary, and year of the salary for top 5 employees that have the highest one-time raise in salary (in absolute numbers).

Also, attach the top 5 employees that have the highest one-time raise in salary (in percent). One-time rise here means the biggest difference between

the two consecutive years

(

SELECT ABS(es1.salary-es.salary) AS DIF, CONCAT(ee.first\_name,' ', ee.last\_name) AS 'Fullname', YEAR(IF(es1.to\_date > CURDATE(), CURDATE(), es1.to\_date)) AS 'YEAR'

FROM employees.salaries AS es

LEFT JOIN employees.salaries AS es1 ON(es.emp\_no=es1.emp\_no AND es1.from\_date=es.to\_date)

INNER JOIN employees.employees AS ee ON (ee.emp\_no=es.emp\_no)

ORDER BY DIF DESC

LIMIT 5

)

UNION

(

SELECT ABS(ROUND(((es1.salary\*100/es.salary)-100),2)) AS DIF, CONCAT(ee.first\_name,' ', ee.last\_name) AS 'Fullname', YEAR(IF(es1.to\_date > CURDATE(), CURDATE(), es1.to\_date)) AS 'YEAR'

FROM employees.salaries AS es

LEFT JOIN employees.salaries AS es1 ON(es.emp\_no=es1.emp\_no AND es1.from\_date=es.to\_date)

INNER JOIN employees.employees AS ee ON (ee.emp\_no=es.emp\_no)

ORDER BY DIF DESC

LIMIT 5

)

;

6.Generate a sequence of square numbers till 9 (1^2, 2^2... 9^2)

WITH RECURSIVE recCTE

AS

(

SELECT 1 AS x, 1 AS 'rezult'

UNION

SELECT x+1 , POW(x+1,2)

FROM recCTE

WHERE x < 9

)

SELECT \*

FROM recCTE;