**Laborator 10**

1. Sa se afiseze salariul maxim al angajatilor.

select max(salary)

from employees;

1. Sa se afiseze salariu maxim pe fiecare departament.

select department\_id, max(salary)

from employees

group by department\_id;

1. Cine e angajatul cu acest salariu maxim?

Varianta 1

select employee\_id, last\_name , department\_id, salary

from employees

where (department\_id, salary) in (select department\_id, max(salary)

from employees

group by department\_id)

order by department\_id;

Varianta 2

select e.employee\_id, e.last\_name , e.department\_id, e.salary

from employees e --linie candidat

where e.salary = (select max(salary)

from employees b

where b.department\_id = e.department\_id)

order by department\_id;

Varianta 3

select employee\_id, last\_name , department\_id, salary

from employees e, (select department\_id dept\_id, max(salary) sal\_max

from employees

group by department\_id) dept\_sal

where e.department\_id = dept\_sal.dept\_id and e.salary = dept\_sal.sal\_max

order by department\_id;

1. Cati angajati se gasesc in firma?

select count(\*)

from employees;

1. Cati salariati sunt angajati in fiecare departament?

select count(\*), department\_id

from employees

group by department\_id;

-- am obs ca avem un ang fara dep

select department\_id, employee\_id, last\_name

from employees

where department\_id is null;

select count(department\_id), department\_id

from employees

group by department\_id;

-- nu ia in considerare valoarea null.

-- pentru departamentul null ne da 0.

select count(employee\_id), department\_id

from employees

group by department\_id;

-- in acest caz il numara

-- pentru departamentul null ne da 1

1. Care este valoarea medie a comisionului in firma?

select avg(commission\_pct) as medie, count(commission\_pct)

from employees;

-- nu ia in considerare valorile null

SELECT SUM(commission\_pct)/COUNT(commission\_pct) as "MEDIE", COUNT(commission\_pct)

FROM employees;

-- 0,2228571428571428571428571428571428571429 , 35

SELECT SUM(commission\_pct)/COUNT(\*) as "MEDIE GRESITA", count(\*)

FROM employees;

-- 0,072897196261682242990654205607476635514 , 107

1. Afisati maxim salariu, minim salariu, suma salarii, medie salarii.

select max(salary) as maxim, min(salary) as minim, sum(salary) as suma, round(avg(salary)) as media

from employees;

1. Aceeasi cerinta ca mai sus grupata dupa fiecare job.

select job\_id, max(salary) as maxim, min(salary) as minim, sum(salary) as suma, round(avg(salary)) as media, count(employee\_id) numar\_angajati

from employees

group by job\_id;

1. Afisati si titlul jobului pentru cerinta de mai sus.

-- pentru ca fiecarui job\_id ii corespunde un job\_title putem pune si group by job\_title

select e.job\_id, job\_title, max(salary) as maxim, min(salary) as minim, sum(salary) as suma, round(avg(salary)) as media, count(employee\_id) numar\_angajati

from employees e, jobs j

where e.job\_id = j.job\_id

group by e.job\_id, job\_title;

1. Sa se afiseze numarul de angajati pentru fiecare job.

Varianta dupa titlu

select job\_title, count(employee\_id)

from employees e, jobs j

where e.job\_id = j.job\_id

group by job\_title;

Varianta dupa id

select job\_id, count(employee\_id)

from employees

group by job\_id;

1. Cati sefi avem in firma? Avem 18 sefi.

select distinct manager\_id

from employees

where manager\_id is not null

order by manager\_id;

select count(distinct manager\_id)

from employees;

-- nu ia in considerare valorile de null (18 sefi)

select count(distinct manager\_id)

from employees

where manager\_id is not null

1. Calculati diferenta dintre cel mai mare si cel mai mic salariu mediu pe departamente .

select max(salary) - min(salary), department\_id, count(\*)

from employees

group by department\_id;

-- unde avem diferenta 0 ---> avem un singur angajat

1. Scrieţi o cerere pentru a se afişa numele departamentului, locaţia, numărul de angajaţi şi salariul mediu pentru angajaţii din acel departament. Coloanele vor fi etichetate corespunzător.

Varianta 1

select department\_name, city, count(employee\_id), round(avg(salary))

from employees e, departments d, locations l

where d.department\_id = e.department\_id

and d.location\_id= l.location\_id

group by e.department\_id, department\_name, city;

--fiecare departament are un singur nume si o singura locatie in care se gaseste

Varianta 2

Folosim SELECT folosit in clauza de FROM.

select department\_name, city, nr\_ang, sal\_mediu

from locations l, departments d,

(select department\_id dept\_id, count(\*) nr\_ang, round(avg(salary)) sal\_mediu

from employees

group by department\_id) aux

where l.location\_id = d.location\_id

and aux.dept\_id = d.department\_id;

1. Afisati codul si numele angajatilor care castiga mai mult decat salariul mediu din firma (in ordine descrescatoare).

Varianta 1

select employee\_id, last\_name,first\_name, salary

from employees

where salary > (select avg(salary) from employees)

order by salary desc;

Varianta 2

select employee\_id, first\_name || ' ' || last\_name, salary,aux.sal

from employees,(select avg(salary) sal

from employees) aux

where salary>aux.sal

order by 3 desc;

1. Afisati codul si numele angajatilor care castiga mai mult decat salariul mediu din departamentul in care lucreaza (in ordine descrescatoare).

Varianta 1

select employee\_id, first\_name || ' ' || last\_name, salary,aux.sal

from employees e, (select department\_id,avg(salary) sal

from employees

group by department\_id) aux

where e.department\_id=aux.department\_id and salary>aux.sal

order by 3 desc;

Varianta 2

select ee.department\_id, ee.employee\_id, ee.last\_name,ee.first\_name, ee.salary

from employees ee

where salary > (select avg(e.salary) from employees e where e.department\_id = ee.department\_id)

order by salary desc;

1. Pentru fiecare sef sa se afiseze codul sau si salariul celui mai putin platit subordonat al sau. Se vor exclude cei pentru acre codul managerului nu este cunoscut. Se vor exclude si grupurile in care salariul minim este mai mic de 4000. Sortati rezultatul in ordine descrescatoare a salariilor.

select e.manager\_id, min(e.salary)

from employees e

where e.manager\_id is not null --Se vor exclude cei pentru care codul managerului nu este cunoscut

group by e.manager\_id -- Pentru fiecare sef

having min(salary) >4000 --se vor exclude grupurile în care salariul minim este mai mic de 4000$.

order by 2; --12 rez

**IN WHERE NU AVEM VOIE SA AVEM FUNCTII DE GRUPARE !! FILTRAM GRUPAREA CU HAVING !**

1. Ca la exercitiul 16, dar sa se afiseze si care este salariatul care are acel salariu minim.

Varianta 0

select e.manager\_id, e.employee\_id, e.salary

from employees e

where (e.manager\_id, e.salary) in (select b.manager\_id, min(b.salary)

from employees b

group by b.manager\_id)

and e.salary > 4000;

Varianta 1 - cerere necorelata

select a.manager\_id Managerul, a.employee\_id Angajatul, a.salary Salariul\_angajatului

from employees a

where (a.manager\_id, a.salary) in (select e.manager\_id, min(e.salary)

from employees e

where e.manager\_id is not null

group by e.manager\_id

having min(salary) > 4000);

Varianta 2 - select in from

select a.manager\_id Managerul, a.employee\_id Angajatul, a.salary Salariul\_angajatului

from employees a, (select e.manager\_id, min(e.salary) sal\_min

from employees e

where e.manager\_id is not null

group by e.manager\_id

having min(salary) > 4000) aux

where a.manager\_id = aux.manager\_id

and a.salary = aux.sal\_min;

Varianta 3 - cerere corelata

select a.manager\_id Managerul, a.employee\_id Angajatul, a.salary Salariul\_angajatului

from employees a

where a.salary = (select min(e.salary)

from employees e

where e.manager\_id is not null

and a.manager\_id = e.manager\_id

having min(salary) > 4000); --12 rez