

Tema 3-4

Exercițiul 1

```
SELECT e.last_name AS Nume_AP, e.first_name AS Prenume_AP, e.department_id AS
Departament_ID_AP, e.salary AS Salariu_AP, j.job_title AS Job_AP
FROM employees e, jobs j
WHERE e.job_id = j.job_id
AND (salary, nvl(commission_pct, -1)) IN (SELECT e1.salary, nvl(e1.commission_pct, -1)
FROM employees e1, departments d, locations l
WHERE e1.department_id = d.department_id
AND l.location_id = d.location_id
AND lower(l.city)=lower('Oxford'));
```

Comentariu:

Se va afisa numele si prenumele angajatilor care au comisionul si salariul egal cu cele ale unui angajat din Oxford, departamentul din care acestia fac parte cat si salariul si numele job-ului acestora. Pentru a realiza acest lucru se va crea un tabel cu salariul si comisionul tuturor angajatilor din Oxford. Acest tabel va fi folosit pentru gasi, din toti angajatii existenti, angajatii care au perechea (salary, commission) egala cu cel putin o pereche din tabelul creat. Atat la crearea tabelului, cat si la gasirea acestor angajati, se va folosi nvl(commission, -1) pentru a ne asigura ca comisionul nu este null.

The screenshot displays the Oracle SQL Developer interface. The main window shows a query in the SQL Worksheet:

```
--1. Sa se afiseze numele, departamentul, salariul și job-ul tuturor angajaților al caror salariu si
--comision coincide cu salariul si comisionul unui angajat din Oxford. (no case-sensitive)

SELECT e.last_name AS Nume_AP, e.first_name AS Prenume_AP, e.department_id AS Departament_ID_AP, e.salary AS Salariu_AP, j.job_title
FROM employees e, jobs j
WHERE e.job_id = j.job_id
AND (salary, nvl(commission_pct, -1)) IN (SELECT e1.salary, nvl(e1.commission_pct, -1)
FROM employees e1, departments d, locations l
WHERE e1.department_id = d.department_id
AND l.location_id = d.location_id
AND lower(l.city)=lower('Oxford'));
```

The query result is displayed in the Query Result window, showing 35 rows of data. The columns are: Nume_AP, Prenume_AP, DEPARTAMENT_ID_AP, SALARIU_AP, and JOB_AP. The results list employees from the Sales department located in Oxford, including their names, salaries, and job titles.

| Nume_AP | Prenume_AP | DEPARTAMENT_ID_AP | SALARIU_AP | JOB_AP |
|------------|------------|-------------------|------------|----------------------|
| McEwen | Allan | 80 | 3000 | Sales Representative |
| Smith | Lindsey | 80 | 8000 | Sales Representative |
| Doran | Louise | 80 | 7500 | Sales Representative |
| Sewall | Sarath | 80 | 7000 | Sales Representative |
| Vishney | Clara | 80 | 10500 | Sales Representative |
| Greene | Danielle | 80 | 9500 | Sales Representative |
| Harvins | Mattea | 80 | 7200 | Sales Representative |
| Lee | David | 80 | 6800 | Sales Representative |
| Ande | Sundar | 80 | 6400 | Sales Representative |
| Johnson | Charles | 80 | 6200 | Sales Representative |
| Banda | Amit | 80 | 6200 | Sales Representative |
| Ozer | Lisa | 80 | 11500 | Sales Representative |
| Bloom | Harrison | 80 | 10000 | Sales Representative |
| Fox | Taylor | 80 | 9600 | Sales Representative |
| Smith | William | 80 | 7400 | Sales Representative |
| Bates | Elizabeth | 80 | 7300 | Sales Representative |
| Kumar | Sundita | 80 | 6100 | Sales Representative |
| Button | Alyssa | 80 | 8900 | Sales Representative |
| Taylor | Jonathon | 80 | 8600 | Sales Representative |
| Livingston | Jack | 80 | 8400 | Sales Representative |

Exercițiul 2

```
SELECT e.last_name AS Nume_AP, e.first_name AS Prenume_AP, e.salary AS Salariu_AP,  
e.department_id AS Departament_ID_AP  
FROM employees e  
WHERE salary > (SELECT MIN(AVG(e1.salary))  
                FROM employees e1  
                GROUP BY e1.job_id);
```

Comentariu:

Se va afisa numele si prenumele angajatilor care castiga mai bine decat cea mai mica medie reala a salariilor pe job-uri, cat si salariul si ID-ul departamentului acestora. Pentru a realiza acest lucru, se afla minimul mediei reale a salariilor pe fiecare job si se compara cu fiecare angajat din tabelul angajatilor.

The screenshot shows the Oracle SQL Developer interface. The main window displays a query in the SQL Worksheet:

```
--2. Afisati informatii despre salariatii care castiga mai bine decat cea mai mica medie reala a salariilor pe job-uri.  
  
SELECT e.last_name AS Nume_AP, e.first_name AS Prenume_AP, e.salary AS Salariu_AP, e.department_id AS Departament_ID_AP  
FROM employees e  
WHERE salary > (SELECT MIN(AVG(e1.salary))  
                FROM employees e1  
                GROUP BY e1.job_id);  
  
--50 de rezultate
```

The Results window shows the output of the query, displaying 50 rows of employee data. The columns are NAME_AP, PRENUME_AP, SALARIU_AP, and DEPARTAMENT_ID_AP. The data is sorted by salary in descending order.

| NAME_AP | PRENUME_AP | SALARIU_AP | DEPARTAMENT_ID_AP |
|-----------|------------|------------|-------------------|
| Sarcana | Nandita | 4200 | 50 |
| Bull | Alexis | 4100 | 50 |
| Deilinger | Julia | 3400 | 50 |
| Cabrio | Anthony | 3000 | 50 |
| Chung | Kelly | 3800 | 50 |
| Dilly | Jennifer | 3600 | 50 |
| Gates | Timothy | 2900 | 50 |
| Bell | Sarah | 4000 | 50 |
| Everett | Britney | 3900 | 50 |
| McCain | Samuel | 3200 | 50 |
| Jones | Vance | 2800 | 50 |
| Walsh | Alana | 3100 | 50 |
| Feeney | Kevin | 3000 | 50 |
| Whalen | Jennifer | 4400 | 10 |
| Bartstein | Michael | 13000 | 20 |
| Fay | Pat | 6000 | 20 |
| Mavris | Susan | 6500 | 40 |
| Baer | Hermann | 10000 | 70 |
| Higgins | Shelley | 12000 | 110 |
| Gietz | William | 8300 | 110 |

Exercițiul 3

```
SELECT e.last_name AS Nume_AP, e.first_name AS Prenume_AP, e.salary AS Salariu_AP,
e.department_id AS Departament_ID_AP
FROM employees e, (SELECT e1.job_id, AVG(e1.salary) media
                    FROM employees e1
                    GROUP BY job_id) aux
WHERE e.job_id=aux.job_id
AND e.salary > aux.media;
```

Comentariu:

Se va afișa numele și prenumele angajaților care câștigă mai bine decât cea mai mică medie reală a salariilor pe job-ul lor, cât și salariul și ID-ul departamentului acestora. Pentru a realiza acest lucru, se face un tabel cu ID-ul jobului și media reală a salariilor asociate celui job, după care se compară, pentru fiecare angajat, salariul cu media salariilor pentru job-ul angajatului (folosind condiția de egalitate a job-id-ului pentru a ne asigura că media cu care este comparat salariul angajatului este cea pentru job-ul respectiv).

The screenshot shows the Oracle SQL Developer interface. The main window displays a query in the SQL Worksheet:

```
--3. Pentru fiecare job, afișati care sunt salariații plătiți mai bine decât media reală a salariilor
--cu care sunt plătiți salariații angajați pe respectivul job.

SELECT e.last_name AS Nume_AP, e.first_name AS Prenume_AP, e.salary AS Salariu_AP, e.department_id AS Departament_ID_AP
FROM employees e, (SELECT e1.job_id, AVG(e1.salary) media
                  FROM employees e1
                  GROUP BY job_id) aux
WHERE e.job_id=aux.job_id
AND e.salary > aux.media;
```

The query results are displayed in the lower pane, showing 43 rows of data. The columns are Nume_AP, Prenume_AP, Salariu_AP, and Departament_ID_AP. The results are as follows:

| Nume_AP | Prenume_AP | SALARIU_AP | DEPARTAMENT_ID_AP | |
|---------|------------|------------|-------------------|----|
| 1811 | PETER | 9000 | 80 | |
| 25 | King | Janette | 10000 | 80 |
| 26 | Sully | Patrick | 5000 | 80 |
| 27 | McEwen | Allan | 9000 | 80 |
| 28 | Vishney | Clara | 10500 | 80 |
| 29 | Greene | Danielle | 9500 | 80 |
| 30 | Ozer | Lisa | 11500 | 80 |
| 31 | Bloom | Harrison | 10000 | 80 |
| 32 | Fox | Taylor | 9600 | 80 |
| 33 | Abel | Ellen | 11000 | 80 |
| 34 | Ruton | Alyssa | 8800 | 80 |
| 35 | Taylor | Jonathon | 8600 | 80 |
| 36 | Livingston | Jack | 8400 | 80 |
| 37 | Sarchand | Nandita | 4200 | 50 |
| 38 | Bull | Alexis | 4100 | 50 |
| 39 | DeLinger | Julia | 3400 | 50 |
| 40 | Chung | Kelly | 3800 | 50 |
| 41 | Dilly | Jennifer | 3600 | 50 |
| 42 | Bell | Sarah | 4000 | 50 |
| 43 | Everett | Britney | 3900 | 50 |