**Temă 6 Lab SGBD 17.12.2024**

**Șerba Ioana Raluca grupa 241**

**Cerință:**  
Rezolvati ex E5 din Laborator PLSQL4.pdf

* Definiți un subprogram care obține pentru fiecare nume de departament ziua din săptămână în care au fost angajate cele mai multe persoane, lista cu numele acestora, vechimea și venitul lor lunar. Afișați mesaje corespunzătoare următoarelor cazuri:
* într-un departament nu lucrează niciun angajat;
* într-o zi din săptămână nu a fost nimeni angajat.

*Observații*:

* a. Numele departamentului și ziua apar o singură dată în rezultat.
* b. Rezolvați problema în două variante, după cum se ține cont sau nu de istoricul joburilor angajaților.
* **Cod sursă:**

*--pt fiecare nume de dept  
--ziua din sapt in care au fost maxim angajari  
--lista cu numele acestora, vechimea si venitul lunar  
--MESAJE CORESP: in dept nu lucreaza nimeni, intr o zi de sapt nu a fost nimeni angajat (?)  
  
--V1 CU SYSDATE HIRE\_DATE*CREATE OR REPLACE PROCEDURE zile\_sapt\_angj\_rs\_V1 IS  
 *--declaratii  
 --toate departamentele cursor* CURSOR DEPTC IS SELECT DEPARTMENT\_ID, DEPARTMENT\_NAME FROM DEPARTMENTS;  
   
 *--detalii angj per zi saptamana PER DEPT* CURSOR ANGJ(ZI\_SAPT VARCHAR2, VDEPT DEPARTMENTS.DEPARTMENT\_ID%TYPE) IS  
 SELECT FIRST\_NAME, LAST\_NAME,   
 FLOOR(MONTHS\_BETWEEN(SYSDATE,HIRE\_DATE)/12) || ' ani' AS VECHIME,  
 *--V1 - VECHIME LUATA DUPA HIRE\_DATE DIN EMPLOYEES* (NVL(SALARY\*COMMISSION\_PCT,SALARY)) AS INCOME  
 FROM EMPLOYEES E  
 WHERE TRIM(TO\_CHAR(HIRE\_DATE, 'DAY')) = upper(ZI\_SAPT)  
 AND E.DEPARTMENT\_ID = VDEPT;  
   
 TYPE T\_DAYS IS TABLE OF VARCHAR2(10) INDEX BY PLS\_INTEGER;  
 V\_DAYS T\_DAYS; *--sa tinem cont de toate zilele* ZI VARCHAR2(10);  
  
 *--ziua in care au fost angajati cei mai multi oameni + nu a fost nimeni angajat intr o zi de []* FUNCTION ZI\_MAXIMA (VDEPT IN DEPARTMENTS.DEPARTMENT\_ID%TYPE)  
 RETURN VARCHAR2 IS  
 ZI VARCHAR2(10);  
 VCOUNT NUMBER(3);  
 VMAXIM NUMBER(3) := 0;  
 BEGIN  
 FOR I IN 1..7 LOOP  
 VCOUNT := 0;  
 FOR ANG IN ANGJ(V\_DAYS(I), VDEPT) LOOP  
 VCOUNT := VCOUNT + 1;  
 END LOOP; *--NR PT FIECARE ZI  
   
 --MESAJ CORESP DACA NU A FOST ANGAJAT NIMENI IN ZIUA AIA* IF VCOUNT = 0 THEN  
 DBMS\_OUTPUT.PUT\_LINE('NOBODY GOT HIRED ON A ' || V\_DAYS(I));  
 DBMS\_OUTPUT.PUT\_LINE('----');  
 END IF;  
   
   
 IF VCOUNT > VMAXIM   
 THEN VMAXIM := VCOUNT;  
 ZI := V\_DAYS(I);  
 END IF;  
   
   
 END LOOP;  
 RETURN ZI;  
 END;  
   
BEGIN  
 *--zilele saptamanii* V\_DAYS(1) := 'MONDAY';  
 V\_DAYS(2) := 'TUESDAY';  
 V\_DAYS(3) := 'WEDNESDAY';  
 V\_DAYS(4) := 'THURSDAY';  
 V\_DAYS(5) := 'FRIDAY';  
 V\_DAYS(6) := 'SATURDAY';  
 V\_DAYS(7) := 'SUNDAY';  
   
 *--ITERAM PRIN TOATE DEPARTAMENTELE* FOR VDEPT IN DEPTC LOOP  
 *--AFISAM NUMELE* DBMS\_OUTPUT.PUT\_LINE(VDEPT.DEPARTMENT\_NAME);  
 DBMS\_OUTPUT.PUT\_LINE('------------------------------------');  
 ZI := ZI\_MAXIMA(VDEPT.DEPARTMENT\_ID); *-- CA SA NU SE REPETE AFISAREA DIN FUNCTIE* IF ZI IS NULL *--AFISAM ZIUA CU NR MAXIM DE ANGAJARI* THEN *--DACA AM AJUNS AICI INSEAMNA CA NU LUCREAZA ANGAJATI IN DEPT* DBMS\_OUTPUT.PUT\_LINE('NO EMPLOYEES IN THIS DEPARTMENT');  
 ELSE  
 DBMS\_OUTPUT.PUT\_LINE(  
 'THE DAY WITH MAXIMUM NUMBER OF HIRES: ' || ZI);  
 *--SI AFISAM SI ANGAJATII* FOR ANG IN ANGJ(ZI, VDEPT.DEPARTMENT\_ID) LOOP  
 DBMS\_OUTPUT.PUT\_LINE(ANG.FIRST\_NAME || ' | ' || ANG.LAST\_NAME || ' | ' ||  
 ANG.VECHIME || ' | ' ||ANG.INCOME);  
 END LOOP;  
 END IF;  
 DBMS\_OUTPUT.NEW\_LINE;  
 END LOOP;  
END;   
/  
  
begin  
 ZILE\_SAPT\_ANGJ\_RS\_V1;  
end;  
/  
  
*--v2 VECHIME DUPA JOBURI MAI VECHI  
---------------*/  
*--V2 CU SYSDATE HIRE\_DATE*CREATE OR REPLACE PROCEDURE zile\_sapt\_angj\_rs\_V2 IS  
 *--declaratii  
 --toate departamentele cursor* CURSOR DEPTC IS SELECT DEPARTMENT\_ID, DEPARTMENT\_NAME FROM DEPARTMENTS;  
   
 *--detalii angj per zi saptamana PER DEPT* CURSOR ANGJ(ZI\_SAPT VARCHAR2, VDEPT DEPARTMENTS.DEPARTMENT\_ID%TYPE) IS  
 SELECT EMPLOYEE\_ID, FIRST\_NAME, LAST\_NAME,   
 (NVL(SALARY\*COMMISSION\_PCT,SALARY)) AS INCOME  
 FROM EMPLOYEES E  
 WHERE TRIM(TO\_CHAR(HIRE\_DATE, 'DAY')) = upper(ZI\_SAPT)  
 AND E.DEPARTMENT\_ID = VDEPT;  
   
 TYPE T\_DAYS IS TABLE OF VARCHAR2(10) INDEX BY PLS\_INTEGER;  
 V\_DAYS T\_DAYS; *--sa tinem cont de toate zilele* ZI VARCHAR2(10);  
 MINDATE DATE;  
 FDATE DATE;  
  
 *--ziua in care au fost angajati cei mai multi oameni + nu a fost nimeni angajat intr o zi de []* FUNCTION ZI\_MAXIMA (VDEPT IN DEPARTMENTS.DEPARTMENT\_ID%TYPE)  
 RETURN VARCHAR2 IS  
 ZI VARCHAR2(10);  
 VCOUNT NUMBER(3);  
 VMAXIM NUMBER(3) := 0;  
 BEGIN  
 FOR I IN 1..7 LOOP  
 VCOUNT := 0;  
 FOR ANG IN ANGJ(V\_DAYS(I), VDEPT) LOOP  
 VCOUNT := VCOUNT + 1;  
 END LOOP; *--NR PT FIECARE ZI  
   
 --MESAJ CORESP DACA NU A FOST ANGAJAT NIMENI IN ZIUA AIA* IF VCOUNT = 0 THEN  
 DBMS\_OUTPUT.PUT\_LINE('NOBODY GOT HIRED ON A ' || V\_DAYS(I));  
 DBMS\_OUTPUT.PUT\_LINE('----');  
 END IF;  
   
   
 IF VCOUNT > VMAXIM   
 THEN VMAXIM := VCOUNT;  
 ZI := V\_DAYS(I);  
 END IF;  
   
   
 END LOOP;  
 RETURN ZI;  
 END;  
   
BEGIN  
 *--zilele saptamanii* V\_DAYS(1) := 'MONDAY';  
 V\_DAYS(2) := 'TUESDAY';  
 V\_DAYS(3) := 'WEDNESDAY';  
 V\_DAYS(4) := 'THURSDAY';  
 V\_DAYS(5) := 'FRIDAY';  
 V\_DAYS(6) := 'SATURDAY';  
 V\_DAYS(7) := 'SUNDAY';  
   
 *--ITERAM PRIN TOATE DEPARTAMENTELE* FOR VDEPT IN DEPTC LOOP  
 *--AFISAM NUMELE* DBMS\_OUTPUT.PUT\_LINE(VDEPT.DEPARTMENT\_NAME);  
 DBMS\_OUTPUT.PUT\_LINE('------------------------------------');  
 ZI := ZI\_MAXIMA(VDEPT.DEPARTMENT\_ID); *-- CA SA NU SE REPETE AFISAREA DIN FUNCTIE* IF ZI IS NULL *--AFISAM ZIUA CU NR MAXIM DE ANGAJARI* THEN *--DACA AM AJUNS AICI INSEAMNA CA NU LUCREAZA ANGAJATI IN DEPT* DBMS\_OUTPUT.PUT\_LINE('NO EMPLOYEES IN THIS DEPARTMENT');  
 ELSE  
 DBMS\_OUTPUT.PUT\_LINE(  
 'THE DAY WITH MAXIMUM NUMBER OF HIRES: ' || ZI);  
 *--SI AFISAM SI ANGAJATII* FOR ANG IN ANGJ(ZI, VDEPT.DEPARTMENT\_ID) LOOP  
 *--aflu aici vechimea angajatului  
 --cea mai mica data angajat din job\_history* SELECT MIN(START\_DATE)  
 INTO MINDATE  
 FROM EMPLOYEES E  
 LEFT OUTER JOIN JOB\_HISTORY J ON J.EMPLOYEE\_ID = E.EMPLOYEE\_ID  
 WHERE E.EMPLOYEE\_ID = ANG.EMPLOYEE\_ID  
 GROUP BY E.EMPLOYEE\_ID;  
   
 *--DATA FINALA FATA DE HIRE\_DATE SI CELE DIN JOB\_HISTORY* SELECT (CASE  
 WHEN MINDATE < HIRE\_DATE  
 THEN MINDATE  
 ELSE HIRE\_DATE END) INTO FDATE  
 FROM EMPLOYEES E  
 WHERE E.EMPLOYEE\_ID = ANG.EMPLOYEE\_ID;  
   
 DBMS\_OUTPUT.PUT\_LINE(ANG.FIRST\_NAME || ' | ' || ANG.LAST\_NAME || ' | ' ||  
 FLOOR(MONTHS\_BETWEEN(SYSDATE,FDATE)/12) || ' ani' || ' | ' ||ANG.INCOME);  
 END LOOP;  
 END IF;  
 DBMS\_OUTPUT.NEW\_LINE;  
 END LOOP;  
END;   
/  
  
begin  
 ZILE\_SAPT\_ANGJ\_RS\_V2;  
end;  
/

* **Printscreen:**

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