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--Allart Emilie--
-- 02/02/2015 --

-------------- Exercice 1 : --------------

a)
SELECT DISTINCT e.deptno,e.ename,e.sal,
      RANK() OVER(partition by e.deptno order by -e.sal) RANK
      FROM emp e
      WHERE e.deptno=10 or e.deptno=30
      ORDER BY e.deptno,-e.sal;

-- b) on enleve les trou en rajoutant dense_rank() a la place de rank()
SELECT DISTINCT e.deptno,e.ename,e.sal,
      DENSE_RANK() OVER(PARTITION BY e.deptno ORDER BY -e.sal) RANK
      FROM emp e
      WHERE e.deptno=10 OR e.deptno=30
      ORDER BY e.deptno,-e.sal;

--c)
SELECT DISTINCT e.deptno,e.sal,
      DENSE_RANK() OVER(PARTITION BY e.deptno ORDER BY -e.sal) RANK
      FROM emp e WHERE e.deptno=10 OR e.deptno=20
      ORDER BY e.deptno,-e.sal;

--d)group by
SELECT e.job,sum(e.sal) FROM emp e GROUP BY job;
-- partition by
SELECT DISTINCT  e.job,sum(e.sal) OVER(PARTITION BY job) FROM emp e  ;


--e) La difference entre Group By et Partition By : TODO

--f)
SELECT e.deptno,e.job,sum(e.sal)
      FROM emp e
      GROUP BY ROLLUP(e.deptno,e.job);


-------------- Exercice 2 : ------------------

--1)
SELECT
      t.annee,
      c.cl_r,
      p.category,
      avg(v.pu*v.qte) ca_moyen
      FROM ventes v, clients c, produits p, temps t
      WHERE v.tid = t.tid AND v.cid = c.cl_id AND v.pid = p.pid AND (t.annee =
2009 OR t.annee = 2010)
      GROUP BY ROLLUP(t.annee, c.cl_r, p.category);

--2)
SELECT
      t.annee,
      c.cl_r,
      p.category,
      avg(v.pu * v.qte) ca_moyen
      FROM ventes v, clients c, produits p, temps t
      WHERE v.tid = t.tid AND v.cid = c.cl_id AND v.pid = p.pid AND (t.annee =
2009 OR t.annee = 2010)
GROUP BY CUBE(t.annee, c.cl_r, p.category);
```

```sql
--3) not valid
--select
--    distinct rank() over (partition by t.annee, p.category order by v.qte)
rank,
--    t.annee,
--    p.category,
--    p.pname
--from ventes v, produits p, temps t
--where v.tid = t.tid and v.pid = p.pid;


SELECT DISTINCT RANK() OVER(PARTITION BY p.category ORDER BY -v.qte) RANK,
p.category, p.pname, v.qte
      FROM ventes v, produits p, temps t
      WHERE v.tid = t.tid AND v.pid = p.pid AND p.category = 'Viandes';

--4)
SELECT annee,category, CA
      FROM (
            SELECT t.annee, p.category, sum(v.pu*v.qte) CA, grouping_id(t.annee)
gc
                  FROM produits p, ventes v, temps t
                  WHERE (v.pid=p.pid AND v.tid=t.tid)
                  GROUP BY ROLLUP (t.annee,p.category))
      WHERE gc = 0;

--5)
SELECT annee, mois, CA_TOTAL
      FROM (
            SELECT annee, mois, CA_TOTAL,
                  RANK() OVER (
                        PARTITION BY annee ORDER BY -CA_TOTAL)
                  RANK
                  FROM (
                        SELECT t.annee, t.mois, sum(v.pu * v.qte) CA_TOTAL
                              FROM temps t, ventes v, produits p
                              WHERE (v.pid=p.pid AND v.tid=t.tid) AND
p.pname='Sirop d erable'
                              GROUP BY(t.annee, t.mois)))
      WHERE RANK = 1;

--6)
SELECT t.annee, c.cl_name, p.category, sum(v.pu * v.qte) CA_TOTAL
      FROM temps t, ventes v, produits p, clients c
      WHERE (v.pid = p.pid AND v.tid = t.tid AND v.cid = c.cl_id)
      GROUP BY GROUPING SETS((t.annee, c.cl_name), (t.annee, p.category));

--7)
SELECT category, QTE_VENDUE_2010,
      NTILE(3) OVER (ORDER BY QTE_VENDUE_2010 desc) tiers
      FROM (
            SELECT p.category, sum(v.qte) QTE_VENDUE_2010
                        FROM ventes v, produits p, temps t
                        WHERE (v.pid = p.pid AND v.tid = t.tid) AND t.annee =
2010
            GROUP BY(p.category));

--8)
SELECT p.category, t.mois, sum(v.qte)
      FROM ventes v, temps t, produits p
      WHERE (v.tid = t.tid AND v.pid = p.pid) AND t.annee = 2010 AND t.jour >= 1
AND t.jour <= 5
      GROUP BY(p.category, t.mois)
      ORDER BY t.mois, p.category;
```