COMP23111

Exercise number: EX04

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SQL> -- sends everything to <EX04-10406141.log>
SQL> set lin 120
SQL> col picture for A25
SQL> -- [body]
SQL>
SQL> --(a)
SQL> create or replace view customer_with_carts
  2  (
  3     firstname,
  4     lastname
  5  )
  6  as (
  7     select distinct firstname, lastname
  8     from customerinfo, ordercartinfo, lineitems
  9     where customerinfo.loginname = ordercartinfo.customerid
 10     and ordercartinfo.ordercartid = lineitems.ordercartid
 11     and lineitems.qtyordered > 0
 12  );

View created.

SQL> select * from customer_with_carts;

FIRSTNAME            LASTNAME
-------------------- --------------------
Ophelia              Elsinore
Mary                 Folio
Percy                Byron

SQL>
SQL> --(b)
SQL> create or replace view need_record
  2  (
  3     code,
  4     itemnum,
  5     categoryid,
  6     quantityinstock
  7  )
  8  as(
  9     select distinct code, itemtype.itemnum, belongsto, qtyinstock
 10     from itemtype, inventoryitem
 11     where itemtype.itemnum = inventoryitem.itemnum
 12     and inventoryitem.qtyinstock < 25
 13  );

View created.

SQL> select * from need_record;

CODE                 ITEMNUM    CATEGORYID QUANTITYINSTOCK
-------------------- ---------- ---------- ---------------
ebk                  A0         P                       15
hbk                  C2         H                       20

SQL>
SQL> --(c)
SQL> create or replace view order_price
  2  (
  3     loginname,
  4     firstname,
```

```
  5      lastname,
  6      ordercartid,
  7      price
  8  )
  9  as(
 10      select loginname, firstname, lastname, ordercartinfo.ordercartid,
sum(orderprice * qtyordered)
 11      from customerinfo, ordercartinfo, lineitems
 12      where customerinfo.loginname = ordercartinfo.customerid
 13      and ordercartinfo.ordercartid = lineitems.ordercartid
 14      group by ordercartinfo.ordercartid, loginname, firstname, lastname
 15  );

View created.

SQL> select * from order_price;

LOGINNAME  FIRSTNAME            LASTNAME             ORDERCARTI      PRICE
---------- -------------------- -------------------- ---------- ----------
shkeandco  Mary                 Folio                5                2.99
astrab     Percy                Byron                4               14.97
shkeandco  Mary                 Folio                1                8.97
dramab     Ophelia              Elsinore             2               11.97
astrab     Percy                Byron                8                7.98
astrab     Percy                Byron                3               73.83
shkeandco  Mary                 Folio                6               13.98
dramab     Ophelia              Elsinore             7                1.99

8 rows selected.

SQL>
SQL> --(d)
SQL> create or replace view order_total
  2  (
  3      loginname,
  4      firstname,
  5      lastname,
  6      total
  7  )
  8  as(
  9      select loginname, firstname, lastname, sum(orderprice * qtyordered)
 10      from customerinfo, ordercartinfo, lineitems
 11      where customerinfo.loginname = ordercartinfo.customerid
 12      and ordercartinfo.ordercartid = lineitems.ordercartid
 13      group by customerid, loginname, firstname, lastname
 14  );

View created.

SQL> select * from order_total;

LOGINNAME  FIRSTNAME            LASTNAME                  TOTAL
---------- -------------------- -------------------- ----------
dramab     Ophelia              Elsinore                  13.96
astrab     Percy                Byron                     96.78
shkeandco  Mary                 Folio                     25.94

SQL>
SQL> --(e)
SQL> create or replace view carts_num
  2  (
  3      customerid,
  4      cartnum
  5  )
```

```
    6  as(
    7      select loginname, count(ordercartid) as cart_num
    8      from customerinfo
    9      left join ordercartinfo on customerinfo.loginname =
ordercartinfo.customerid
   10      group by loginname
   11  );

View created.

SQL> select customerid,
    2      case
    3          when cartnum < 3
    4          then 'BR-1 satisfied'
    5          else 'BR-1 violated'
    6      end as outcome
    7  from carts_num;

CUSTOMERID OUTCOME
---------- --------------
choizeznyc BR-1 satisfied
dramab     BR-1 satisfied
shkeandco  BR-1 violated
astrab     BR-1 violated

SQL>
SQL> --(f)
SQL> --Q2:
SQL> select itemnum, itemsize, itemcolor, count(itemnum) as cnt_item
    2  from inventoryitem
    3  group by itemcolor, itemsize, itemnum;

ITEMNUM       ITEMSIZE ITEMCOLOR         CNT_ITEM
---------- ---------- --------------- ----------
A3                  2 black                    1
A0                  4 green                    2
A2                  3 green                    1
A0                  3 black                    1
B1                  4 white                    1
C1                  4 black                    1
C2                  3 black                    2

7 rows selected.

SQL> --Q1:
SQL> select itemnum, itemsize, itemcolor,
    2      case
    3          when cnt_item < 2
    4          then 'BR-2 satisfied'
    5          else 'BR-2 violated'
    6      end as outcome
    7  from (select itemnum, itemsize, itemcolor, count(itemnum) as cnt_item
    8  from inventoryitem
    9  group by itemcolor, itemsize, itemnum);

ITEMNUM       ITEMSIZE ITEMCOLOR         OUTCOME
---------- ---------- --------------- --------------
A3                  2 black           BR-2 satisfied
A0                  4 green           BR-2 violated
A2                  3 green           BR-2 satisfied
A0                  3 black           BR-2 satisfied
B1                  4 white           BR-2 satisfied
C1                  4 black           BR-2 satisfied
C2                  3 black           BR-2 violated
```

```
7 rows selected.

SQL> --Final:
SQL> select itemnum, itemcolor, itemsize, outcome
  2  from (select itemnum, itemsize, itemcolor,
  3      case
  4          when cnt_item < 2
  5          then 'BR-2 satisfied'
  6          else 'BR-2 violated'
  7      end as outcome
  8  from (select itemnum, itemsize, itemcolor, count(itemnum) as cnt_item
  9  from inventoryitem
 10  group by itemcolor, itemsize, itemnum))
 11  where outcome = 'BR-2 violated';

ITEMNUM    ITEMCOLOR        ITEMSIZE OUTCOME
---------- --------------- ---------- --------------
A0         green                   4 BR-2 violated
C2         black                   3 BR-2 violated

SQL>
SQL> --(g)
SQL> create or replace trigger PriceIsTooHigh
  2  before insert or update of price on itemtype
  3  for each row
  4  declare minimum float(126);
  5  PRAGMA AUTONOMOUS_TRANSACTION;
  6  begin
  7      select 4*min(price) into minimum from itemtype;
  8      if :new.price > minimum then
  9      raise_application_error(-20005, 'price of the item is too high');
 10      end if;
 11  end;
 12  /

Trigger created.

SQL> --test for insert
SQL> select * from itemtype;

ITEMNUM    NAME                 PICTURE                       PRICE BELONGSTO
---------- -------------------- ------------------------- ---------- ----------
A0         The Anarchy of Mask  ***                           10.99 P
A1         The Butler Did       ---                           11.99 C
A2         The Abolished Man    ===                           15.99 SF
A3         Lyrical Bullets      +-+-                          20.99 P
B1         The Postlude         =\=\=                         34.99 P
C1         The August of Guns   **--                          10.99 H
C2         The Expectant Mirror ^-^                           12.99 H

7 rows selected.

SQL> insert into itemtype(itemnum, name, picture, price, belongsto)
  2  values('C4', 'invalid insert', null, 50, 'UN');
insert into itemtype(itemnum, name, picture, price, belongsto)
            *
ERROR at line 1:
ORA-20005: price of the item is too high
ORA-06512: at "P87934WL.PRICEISTOOHIGH", line 6
ORA-04088: error during execution of trigger 'P87934WL.PRICEISTOOHIGH'


SQL> select * from itemtype;
```

```
ITEMNUM    NAME                 PICTURE                   PRICE BELONGSTO
---------- -------------------- ------------------------ ---------- ----------
A0         The Anarchy of Mask  ***                          10.99 P
A1         The Butler Did       ---                          11.99 C
A2         The Abolished Man    ===                          15.99 SF
A3         Lyrical Bullets      +-+-                         20.99 P
B1         The Postlude         =\=\=                        34.99 P
C1         The August of Guns   **--                         10.99 H
C2         The Expectant Mirror ^-^                          12.99 H

7 rows selected.

SQL> select * from itemtype;

ITEMNUM    NAME                 PICTURE                   PRICE BELONGSTO
---------- -------------------- ------------------------ ---------- ----------
A0         The Anarchy of Mask  ***                          10.99 P
A1         The Butler Did       ---                          11.99 C
A2         The Abolished Man    ===                          15.99 SF
A3         Lyrical Bullets      +-+-                         20.99 P
B1         The Postlude         =\=\=                        34.99 P
C1         The August of Guns   **--                         10.99 H
C2         The Expectant Mirror ^-^                          12.99 H

7 rows selected.

SQL> --test for update
SQL> update itemtype
  2  set price = 50.99
  3  where itemnum = 'A1';
update itemtype
       *
ERROR at line 1:
ORA-20005: price of the item is too high
ORA-06512: at "P87934WL.PRICEISTOOHIGH", line 6
ORA-04088: error during execution of trigger 'P87934WL.PRICEISTOOHIGH'


SQL> select * from itemtype;

ITEMNUM    NAME                 PICTURE                   PRICE BELONGSTO
---------- -------------------- ------------------------ ---------- ----------
A0         The Anarchy of Mask  ***                          10.99 P
A1         The Butler Did       ---                          11.99 C
A2         The Abolished Man    ===                          15.99 SF
A3         Lyrical Bullets      +-+-                         20.99 P
B1         The Postlude         =\=\=                        34.99 P
C1         The August of Guns   **--                         10.99 H
C2         The Expectant Mirror ^-^                          12.99 H

7 rows selected.

SQL> -- [close]
SQL> SPOOL OFF
```