

$$1) R_1 = \pi_{A0, \text{ autore}, M, \text{ citta}} (A0 \bowtie O \bowtie S \bowtie M)$$

$A0.opera = O.ed$      $O.sala = S.ed$      $S.musico = M.ed$

$$R_1 \div \left( \int_{\text{citta} \leftarrow ed} (\pi_{ed}(c)) \right)$$

$$2) R_1 = \pi_{\text{musico}, \text{ citta}, S.ed, S.num-opera} (S \bowtie M)$$

$S.musico = M.ed$

$$R_2 = R_1$$

$$R_3 = \pi_{R2.musico, R1.citta, R2.ed} (R_1 \bowtie R_2)$$

$R1.musico = R2.musico$   
 $\wedge$   
 $R1.citta = R2.citta$   
 $\wedge$   
 $R1.num-opera > R2.num-opera$

$$(\pi_{R1.musico, R1.citta, R1.ed} (R_1)) \setminus R_3$$

SQL

1) Create VIEW *NumeroSpedimenticittadinverse* AS

( Select *sp.opera* , *count(\*)* AS *numspedimentati*

From *Spedimento* SP, *Sale* S1, *Musei* M1, *Sale* S2, *Musei* M2

Where

*S1.museo* = *M1.id* AND

*S2.museo* = *M2.id* AND

*SP.sala da* = *S1.id* AND

*SP.sala per* = *S2.id* AND

AND *m1.citta* > *m2.citta*

Group by *SP.opera* )

Select \*

From *NumeroSpedimenticittadinverse* NSCD

Where *numspedimentati* = ( Select *max* (*numspedimentati*)

From *NumeroSpedimenticittadinverse* )

create VIEW numerospostamenti AS

( Select s.museo, sp.opera, count (\*) num.postamenti

From Spostamenti sp, Sale s

Where sp.sala-da = s.ad

Group by s.museo, sp.opera )

create VIEW numerospostamentimedio AS

( Select s.museo, AVG (num.postamenti) medio

From numerospostamenti

Group by museo )

Create TRIGGER Limitaspostamenti

after insert on spostamenti

for each ROW

DECLARE ms, num INTEGER

BEGIN

Select num-postamenti into ms

From numerospostamenti

Where opera = NEW.opera ;

Select media into mm

From mures de postament medic NSM, Sala s

Where NSM mures = S. mures

AND S. ed = NEW. sala - da ;

IF (ms > mm) THEN

DE LETE FROM SPOSTAMENTI

Where sala - da = NEW. sala - da

AND sala - per = NEW. sala - per

AND ofen = NEW. ofen

AND murec = NEW. murec

AND fine = NEW. fine ;

END IF

END