**Temă Curs SGBD – S14**

**Șerba Ioana-Raluca grupa 241**

* Dati exemplu de doi triggeri: un trigger pe un tablou imbricat si un trigger instead of. Lucrati pe copii ale tabelelor din schema Video sau adaugati voi la aceasta schema alte tabele daca aveti nevoie. Declansati fiecare trigger si comentati rezultatul.
* Cerinta 1: Pentru un tabel nou, numit Category, care contine id, nume si lista de id-uri de titluri continute in acea categorie. Definiti un trigger care sa se declanseze la insert sau update, daca lista de id-uri de titlu ori este goala, ori contine id-uri care nu exista.
* Cod Sursă:

*--un trigger pe un tablou imbricat  
--o sa creez un tabel nou - categorie, care are si un tablou  
--imbricat de id-uri de titlu*/  
CREATE TYPE T\_TITLE\_CATEG AS TABLE OF INT;*--TITLE.TITLE\_ID%TYPE;*/  
CREATE TABLE CATEGORY\_RS(  
 CATEGORY\_ID INT PRIMARY KEY,  
 NAME VARCHAR2(40),  
 TITLES\_CATEG T\_TITLE\_CATEG  
)NESTED TABLE TITLES\_CATEG STORE AS TITLE\_LIST;  
/  
*--verificam sa fie minim 1 si chiar sa exista acel titlu*CREATE OR REPLACE TRIGGER VERIF\_CATEG  
BEFORE INSERT OR UPDATE ON CATEGORY\_RS  
FOR EACH ROW  
DECLARE  
 VCOUNT NUMBER(2);  
BEGIN  
 IF :NEW.TITLES\_CATEG IS NOT NULL AND :NEW.TITLES\_CATEG.COUNT > 0 THEN  
 dbms\_output.put\_line(:NEW.TITLES\_CATEG.COUNT);  
 FOR I IN :NEW.TITLES\_CATEG.FIRST..:NEW.TITLES\_CATEG.LAST LOOP  
 SELECT COUNT(\*)  
 INTO VCOUNT  
 FROM TITLE  
 WHERE TITLE\_ID = :NEW.TITLES\_CATEG(I);   
 IF (VCOUNT) < 1  
 THEN RAISE\_APPLICATION\_ERROR(-20001,   
 'Nu exista titlu cu id-ul: '|| :NEW.TITLES\_CATEG(I));  
 END IF;  
 END LOOP;  
 ELSE RAISE\_APPLICATION\_ERROR(-20002,   
 'Lista nu poate fi goala');  
 END IF;  
END;  
/  
INSERT INTO CATEGORY\_RS VALUES(1,'Romance',T\_TITLE\_CATEG(92,93,1));  
INSERT INTO CATEGORY\_RS VALUES(1,'Romance',T\_TITLE\_CATEG(92,93,94));  
UPDATE CATEGORY\_RS   
SET TITLES\_CATEG = T\_TITLE\_CATEG()  
WHERE CATEGORY\_ID=1;

DROP TRIGGER VERIF\_CATEG;

* Printscreen:

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* Cerinta: Creati un trigger instead of pentru inserarea intr-un view care simuleaza interfata pentru client a introducerii de date in tabelul Rental
* Cod sursă

*--view care sa simuleze o interfata de client  
--pentru adaugaru de rentals*CREATE TABLE RENTAL\_RS AS SELECT *\** FROM RENTAL;  
CREATE OR REPLACE VIEW ADD\_RENTAL AS  
SELECT M.LAST\_NAME,M.FIRST\_NAME,  
 T.TITLE, TC.COPY\_ID AS COPY\_ID, BOOK\_DATE  
 FROM MEMBER M  
 JOIN RENTAL\_RS R ON M.MEMBER\_ID = R.MEMBER\_ID  
 JOIN TITLE\_COPY TC ON TC.COPY\_ID = R.COPY\_ID  
 JOIN TITLE T ON T.TITLE\_ID = R.TITLE\_ID;  
/  
  
CREATE OR REPLACE TRIGGER ADD\_RENTAL\_TRIG  
INSTEAD OF INSERT ON ADD\_RENTAL  
FOR EACH ROW  
DECLARE  
 VCOUNT NUMBER := 0;  
 T\_ID TITLE.TITLE\_ID%TYPE := 0;  
 M\_ID MEMBER.MEMBER\_ID%TYPE;  
BEGIN  
 *--titlul, membrul si copia ar trebui deja sa existe* SELECT *COUNT*(TITLE\_ID)  
 INTO VCOUNT  
 FROM TITLE  
 WHERE TITLE = :NEW.**TITLE**;  
   
 IF VCOUNT = 0 THEN  
 *RAISE\_APPLICATION\_ERROR*(-20001,'Nu exista acel titlu');  
 END IF;  
   
 SELECT TITLE\_ID  
 INTO T\_ID  
 FROM TITLE  
 WHERE TITLE = :NEW.**TITLE**;  
   
 SELECT *COUNT*(COPY\_ID)  
 INTO VCOUNT  
 FROM TITLE\_COPY  
 WHERE TITLE\_ID = T\_ID  
 AND COPY\_ID = :NEW.**COPY\_ID**;  
   
 IF VCOUNT = 0 THEN  
 *RAISE\_APPLICATION\_ERROR*(-20002,'Nu exista acea copie');  
 END IF;  
   
 SELECT *COUNT*( MEMBER\_ID)  
 INTO VCOUNT  
 FROM MEMBER  
 WHERE LAST\_NAME = :NEW.**LAST\_NAME** AND FIRST\_NAME = :NEW.**FIRST\_NAME**;  
   
 IF VCOUNT = 0 THEN  
 *RAISE\_APPLICATION\_ERROR*(-20002,'Nu exista acel membru');  
 END IF;  
   
 SELECT MEMBER\_ID  
 INTO M\_ID  
 FROM MEMBER  
 WHERE LAST\_NAME = :NEW.**LAST\_NAME** AND FIRST\_NAME = :NEW.**FIRST\_NAME**;  
   
 INSERT INTO RENTAL(BOOK\_DATE, COPY\_ID, MEMBER\_ID, TITLE\_ID)  
 VALUES(:NEW.BOOK\_DATE, :NEW.COPY\_ID, M\_ID, T\_ID);  
  
END;  
/  
  
INSERT INTO ADD\_RENTAL VALUES  
('Nu', 'Exist', 'Soda Gang', 1, *SYSDATE*);  
  
INSERT INTO ADD\_RENTAL VALUES  
('Biri', 'Ben', 'Soda Gang 2', 1, *SYSDATE*);  
  
INSERT INTO ADD\_RENTAL VALUES  
('Biri', 'Ben', 'Soda Gang', 10000, *SYSDATE*);  
  
DROP TRIGGER ADD\_RENTAL\_trig;

* Printscreen:

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