--Laboratorul se desfasoara in B.D. Library

USE library

Go

--1. FOLOSIRE INSTRUCTIUNE INSERT (in B.D. LIBRARY)

--1.1 Inserare valori in tabela item

/\*

Inserati 2 linii in tabela item astfel:

**Nume coloana** **Valoare**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Isbn**(PK) | 10001 pt. cover HARDBACK

| 10101 pt. cover SOFTBACK

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

title\_no (FK) | 8

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

cover | HARDBACK si SOFTBACK

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

loanable | Y

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

translation | ENGLISH

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\*/

--Stergere prealabila carti

DELETE from copy WHERE isbn IN(10001,10101) --stergere din tabela copy, pt. a nu viola FK (vezi diagrama)

GO

DELETE from item WHERE isbn IN(10001,10101) --stergere din tabela parinte

GO

--Inserare ceruta

INSERT item(isbn, title\_no, cover, loanable, translation)

VALUES (10001, 8, 'HARDBACK', 'Y', 'ENGLISH')

--si

INSERT item(isbn, title\_no, cover, loanable, translation)

VALUES (10101, 8, 'SOFTBACK', 'Y', 'ENGLISH')

--Verificare adaugare:

SELECT \* from item WHERE isbn IN(10001,10101)

***--***Rezultatul este:

***isbn*** ***title\_no*** ***translation*** ***cover*** ***loanable***

10001 8 ENGLISH HARDBACK Y

10101 8 ENGLISH SOFTBACK Y

--1.2 Inserare valori in tabela copy

-- se insereaza linii in tabela **copy** pt. a reprezenta o carte in colectia

-- bibliotecii LIBRARY (pt. cea cu coperta SOFTBACK)

**Nume coloana Valoare**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**isbn**(PK, FK) | 10101

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**copy\_no**(PK) | 1

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

title\_no(FK) | 8

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

on\_loan | N

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

--Obs.: Tilul cartii este The Cherry Orchard

SELECT \* FROM title WHERE title\_no = 8

***--***Rezultatul este:

***title\_no*** ***title*** ***author*** ***synopsis***

8 The Cherry Orchard Anton Checkov NULL

INSERT copy(isbn, copy\_no, title\_no, on\_loan)

VALUES (10101, 1, 8, 'N')

GO

--1.3 Determinare limbaj de traducere pt. un item

SELECT translation

FROM item

WHERE isbn = 10001

GO

***--***Rezultatul este:

***translation***

ENGLISH

--2. Folosire instr. INSERT cu cuvantul cheie DEFAULT

/\*

Se adauga 2 linii in **tabela title** si se dau date partiale pt. coloane care

permit valori NULL sau au valori DEFAULT

2.1 Se determina coloanele care permit valori NULL

Nu trebuie date valori pt. coloanele care permit

valori NULL/valori DEFAULT/au proprietatea IDENTITY

\*/

EXEC sp\_help title

--Printre alte informatii afisate, retinem:

***Column\_name*** ***Type*** ***Computed*** ***Length***  ***Prec*** ***Scale*** ***Nullable***

title\_no title\_no no 4 10 0 no

title longstring no 63 no

author normstring no 31 no

synopsis text no 16 yes

--si

***Identity*** ***Seed*** ***Increment*** ***Not For Replication***

title\_no 1 1 0

--2.2 Inserare valori in tabela title

--Se insereaza cartea: The Art of Lawn Tennis, by William T. Tilden

--Folositi DEFAULT pt. coloanele cu valori NULL/ au valori DEFAULT

--Nu se da valoare pt. coloana **title\_no** pt. ca are proprietatea IDENTITY

--Stergere prealabila (daca exista)

IF EXISTS(SELECT \* FROM title where title='The Art of Lawn Tennis' )

DELETE FROM title where title='The Art of Lawn Tennis'

GO

INSERT title(title, author, synopsis)

VALUES('The Art of Lawn Tennis', 'William T. Tilden', DEFAULT)

--2.3 Determinare valoare IDENTITY (ultima)inserata la 2.2

SELECT @@IDENTITY

--Valoarea afisata la mine:

***(No column name)***

66

--2.4 Extragere ultima linie inserata in tabela title (vezi 2.3)

SELECT \* FROM title

WHERE title\_no = @@IDENTITY

--Rezultatul afisarii:

***title\_no*** ***title*** ***author*** ***synopsis***

66 The Art of Lawn Tennis William T. Tilden NULL

-- Obs. Vezi valoare camp synopsis (va fi NULL)

--2.5 Inserare inreg. in **tabela title** ignorand cp. Synopsis (de tip NULL)

--Stergere prealabila (daca exista)

IF EXISTS(SELECT \* FROM title where title='Rascoala' )

DELETE FROM title where title='Rascoala'

GO

INSERT title(title, author)

VALUES('Rascoala', 'Liviu Rebreanu')

-- Verificare:

SELECT \* FROM title

WHERE title LIKE 'Rascoala%'

--Rezultatul afisarii:

***title\_no*** ***title*** ***author*** ***synopsis***

67 Rascoala Liviu Rebreanu NULL

-- Obs. Vezi valoare camp synopsis (va fi NULL)

--3. Folosire instructiune INSERT cu optiunea DEFAULT VALUES

-- se adauga linii unei tabele, fara a da valori

--3.1 Se creaza tabela Client

Nume coloana Tip Proprietatea IDENTITY Allow NULL?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ID\_client Int Yes (100,5) NO

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Nume Char(30) NO YES

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

--daca exista deja, se sterge mai intai

IF EXISTS(SELECT \* from sys.objects WHERE name = 'Client')

DROP TABLE Client

GO

CREATE TABLE Client

(ID\_client int NOT NULL IDENTITY (100,5),

Nume char(30) NULL)

GO

--3.2 Inserare linie cu valori DEFAULT in tabela Client

-- (fara a specifica numele coloanelor)

INSERT Client

DEFAULT VALUES

GO

--3.3 Verificare valori inserate la 3.2

SELECT \* FROM Client

-- Se va afisa:

***ID\_client*** ***Nume***

100 NULL

--4. Instructiunea DELETE

--4.1 Vizualizare item cu isbn = 10101

SELECT \* FROM item

WHERE isbn = 10001

-- Se va afisa:

***isbn*** ***title\_no*** ***translation*** ***cover*** ***loanable***

10001 8 ENGLISH HARDBACK Y

--4.2 Stergeti cartea de la 4.1

DELETE FROM item

WHERE isbn = 10001

--5. Instructiunea UPDATE

--5.1 Extragere linie din **tabela member** cu val. cp. **member\_no** = 507

SELECT \* FROM member

WHERE member\_no = 507

-- Se va afisa:

***member\_no*** ***lastname*** ***firstname*** ***middleinitial*** ***photograph***

507 Albrecht Katie R NULL

--5.2 Actualizare cp. **lastname** pt. membrul 507:

UPDATE member

SET lastname = 'Ionescu'

WHERE member\_no = 507

--Verificare actualizare:

SELECT \* FROM member

WHERE member\_no = 507

--Rezultatul afisarii:

***member\_no*** ***lastname*** ***firstname*** ***middleinitial*** ***photograph***

507 Ionescu Katie R NULL

--6. Modificare tabele bazat pe alte tabele

--6.1 Adaugare nou membru copil (juvenil) la B.D.

-- Deoarece procesul adaugarii unui nou copil cere 2 i-ni INSERT,

-- actiunea se va trata ca o tranzactie

--Se va sterge, daca exista deja din tabelele afectate (vezi diagrama)

DELETE FROM juvenile WHERE member\_no = 16101 --tabela copil cu FK member\_no

DELETE FROM adult WHERE member\_no = 16101--tabela copil cu FK member\_no

DELETE FROM member WHERE member\_no = 16101

GO

BEGIN TRANSACTION

SET IDENTITY\_INSERT member ON --pt. a adauga valori de tip IDENTITY

INSERT member(member\_no, lastname, firstname, middleinitial)

VALUES(16101, 'Popa','George', 'A')

SET IDENTITY\_INSERT member OFF

SELECT \* FROM member WHERE member\_no = 16101

--Se va afisa:

***member\_no*** ***lastname*** ***firstname*** ***middleinitial*** ***photograph***

16101 Popa George A NULL

INSERT juvenile(member\_no, adult\_member\_no, birth\_date)

VALUES (16101, 1, DATEADD(yy,-18, DATEADD(dd, -1, GETDATE())))

SELECT \* FROM juvenile WHERE member\_no=16101

--Se va afisa (acum era 22.04.2021):

***member\_no*** ***adult\_member\_no*** ***birth\_date***

16101 1 2003-04-21

COMMIT TRANSACTION

--6.2 Inserare inregistrari in **tabela adult**, din **tabela juvenil**, pt.

-- copilul de la 6.1, Popa George, care-a depasit 18 ani

INSERT adult (member\_no, street, city, state, zip, phone\_no, expr\_date)

SELECT j.member\_no, a.street, a.city, a. state, a.zip, a.phone\_no, DATEADD(yy, 1, GETDATE())

FROM juvenile j JOIN adult a

ON a.member\_no = j.adult\_member\_no

WHERE DATEADD (yy, 18, j.birth\_date) < GETDATE() AND j.member\_no=16101

-- verificare ca s-a inserat o linie in tabela adult

SELECT \* FROM adult WHERE member\_no = 16101

--Se va afisa:

***member\_no*** ***street*** ***city*** ***state*** ***zip*** ***phone\_no*** ***expr\_date***

16101 Bowery Estates Montgomery AL 36100 NULL 2022-04-22

--6.3 Determinare linie ce trebuie stearsa din

-- **tabela juvenile**, dupa ce membrul copil de la 6.2 a devenit adult

SELECT j.member\_no, j.adult\_member\_no, j.birth\_date FROM juvenile j JOIN adult a

ON a.member\_no = j.member\_no

AND j.member\_no=16101

--Se va afisa:

***member\_no*** ***adult\_member\_no*** ***birth\_date***

16101 1 2003-04-21

--6.4 Stergere linie din **tabela juvenile** care se regaseste si in **tabela adult** , pentru copilul devenit adult (cod 16101)

DELETE juvenile FROM juvenile JOIN adult

ON adult.member\_no = juvenile.member\_no AND juvenile.member\_no=16101

--6.5 Verificare stergere copil din tabela juvenile (care-a devenit adult)

SELECT \* FROM juvenile WHERE member\_no = 16101

--Obs. Acest tanar a disparut

--Se va afisa mesajul:

(0 rows affected)