Lab4 - Constraints & Triggers

### Exercice 1 - Constraints with a primary key

**With check :**

R(A,B)

DML insert, update

CREATE table R(

A int check (not in (SELECT A FROM R)),

B int

) ;

**With Trigger:**

Delimiter $$

CREATE trigger Prim\_Key

BEFORE INSERT ON R

REFERENCING NEW ROW AS NewTuple

FOR EACH ROW

BEGIN

IF (NewTuple.A NOT IN (SELECT A FROM R)) THEN

INSERT INTO R values(NewTuple. A, NewTuple.B);

END IF

END $$

Delimiter;

### Exercice 2 - Constraints with a foreign key

Reject : insert & update

Set null & cascade & default : update & delete

Create table R (;

A int,

B check ( B in (select B from S))

);

Create Table S (

B int primary key,

C int

);

R

|  |  |
| --- | --- |
| A | #B |
| 0 | 1 |
| 0 | 1 |
| 0 | 3 |

S

|  |  |
| --- | --- |
| B | C |
| 1 | 0 |
| 2 | 0 |
| 3 | 0 |

Create trigger s\_update

after update of B on S

referencing old row as old\_tuple

referencing new row as new\_tuple

for each row

when ( old\_tuple.B is (select B from R) and old\_tuple.B != new\_tuple.B

update R set B = null when B = old\_tuple.B

Create triggers\_delete

after delete on S

referencing old row as old\_tuple

referencing new row as new\_tuple

for each row

when (old\_tuple B in (select B from R))

update R set B = null when B = old\_tuple.B