

# Creatie en Ontwerp

[wim.bertels@ucll.be](mailto:wim.bertels@ucll.be)

Naamsvermelding-NietCommercieel-GelijkDelen 4.0 Unported  
Licentie

# INSERT

```
insert into recreanten (spelersnr, naam, plaats)
select  spelersnr, naam, plaats
from    spelers
where   bondsnr is null;
```

# UPDATE

```
update wedstrijden  
set      gewonnen = 0  
where    spelersnr in  
         (select  spelersnr  
          from    spelers  
          where   plaats = 'Den Haag');
```

# DELETE

```
delete  
from    spelers  
where   jaartoe >  
        (select  avg(jaartoe)  
        from     spelers);
```

# Tijdelijke tabellen

```
create temporary table SOMBOETES  
  (totaal decimal(10,2));
```

```
insert into somboetes  
  select  sum(bedrag)  
  from    boetes;
```

# Kopie tabel

```
create table teams_kopie as  
  (select  *  
   from    teams);
```

# Default waarden

```
create table boetes (  
    bnr      integer not null    primary key,  
    snr      integer not null,  
    datum   date      not null   default '1990-01-01',  
    bedrag  int        not null   default 50);
```

# Tabel beperkingen

```
[ CONSTRAINT constraint_name ]  
{ CHECK ( expression ) [ NO INHERIT ] |  
  UNIQUE [ NULLS [ NOT ] DISTINCT ] ( column_name [, ... ] ) index_parameters |  
  PRIMARY KEY ( column_name [, ... ] ) index_parameters |  
  EXCLUDE [ USING index_method ] ( exclude_element WITH operator [, ... ] ) index_parameters  
[ WHERE ( predicate ) ] |  
  FOREIGN KEY ( column_name [, ... ] ) REFERENCES reftable [ ( refcolumn [, ... ] ) ]  
    [ MATCH FULL | MATCH PARTIAL | MATCH SIMPLE ] [ ON DELETE referential_action ] [ ON  
UPDATE referential_action ] }  
[ DEFERRABLE | NOT DEFERRABLE ] [ INITIALLY DEFERRED | INITIALLY IMMEDIATE ]
```



# Kolom beperkingen

[ CONSTRAINT constraint\_name ]  
{ NOT NULL |  
NULL |  
CHECK ( expression ) [ NO INHERIT ] |  
DEFAULT default\_expr |  
GENERATED ALWAYS AS ( generation\_expr ) STORED |  
GENERATED { ALWAYS | BY DEFAULT } AS IDENTITY [ ( sequence\_options ) ] |  
UNIQUE [ NULLS [ NOT ] DISTINCT ] index\_parameters |  
PRIMARY KEY index\_parameters |  
REFERENCES reftable [ ( refcolumn ) ] [ MATCH FULL | MATCH PARTIAL | MATCH SIMPLE ]  
[ ON DELETE referential\_action ] [ ON UPDATE referential\_action ] }  
[ DEFERRABLE | NOT DEFERRABLE ] [ INITIALLY DEFERRED | INITIALLY IMMEDIATE ]

# Deferrable

`r..fk1 references t(pk1) deferrable..`

```
start transaction;  
set constraints all deferred;  
insert into r(fk1) values (1);  
insert into t(pk1) values (1);  
commit;
```

<https://www.postgresql.org/docs/current/sql-set-constraints.html>

# Referende actie

..fk1 references t(pk1) on delete set null..

Referentiële integriteit?:

- NO ACTION: default
- RESTRICT: =no action, niet uitstelbaar (deferrable)
- CASCADE: Waterval effect!
- SET NULL(fk1): optie om zinvolle selectie van verwijzende kolommen op te geven
- SET DEFAULT: als er een zinvolle default is (optie cf set null)

<https://www.postgresql.org/docs/current/sql-createtable.html>

# Catalogus

Meta en organisatie data over de databank in de databank zelf

- information\_schema
- pg\_catalog

Eg. `select * from information_schema.tables;`