

SQL (7) – Generated Values

Artificial values, surrogates, no semantic,
mostly as keys:

- Directly in the table definition:

```
create table dept (  
    deptno    serial primary key,  
    deptname  varchar(50) not null);
```

insert with:

```
insert into dept values(default, 'I3') or  
insert into dept values('I3');
```

SQL (7a) – Sequences to share

```
CREATE [ TEMPORARY | TEMP ] SEQUENCE name
      [ INCREMENT [ BY ] increment ]
      [ MINVALUE minvalue | NO MINVALUE ] [ MAXVALUE
        maxvalue | NO MAXVALUE ]
      [ START [ WITH ] start ] [ CACHE cache ]
      [ [ NO ] CYCLE ]
```

```
CREATE SEQUENCE artificial_key START 101;
```

```
CREATE TABLE Dept (deptno INT DEFAULT
nextval('artificial_key') NOT NULL,...)
```

```
INSERT INTO dept VALUES
(nextval('artificial_key'), 'I3');
```

```
CREATE TABLE Personal(  
  PNR integer not null,  
  PNAME varchar,  
  PBERUF varchar,  
  PANR integer not null,  
  PRIMARY KEY(PNR));
```

```
CREATE TABLE Abteilung(  
  ANR integer not null,  
  ANAME varchar,  
  AORT varchar,  
  AMNR integer,  
  PRIMARY KEY(ANR),  
  CONSTRAINT manager FOREIGN KEY(AMNR)  
  REFERENCES PERSONAL);
```

```
ALTER TABLE Personal ADD CONSTRAINT arbeitet_in  
  FOREIGN KEY(PANR) REFERENCES ABTEILUNG;
```

...