Python training - lab 16

Comments

```
/*
This is a
   multiline comment
*/

select * from employees; -- comment

-- this is a single line comment
```

Default values, (not) null

```
create table employee (
   id serial primary key,
   surname varchar(20) not null,
   first_name varchar(20) null,
   birth_date date default current_date,
   department varchar(15) default 'IT'
);
```

Aliases

```
select
   e.surname as "Nume familie",
   e.first_name as "Prenume"
from
   employee as e;
```

Distinct

```
select distinct department
from employee;
```

Functions

```
select
   concat(e.surname, ' ', e.first_name)
      as "Full name"
from
   employee e;


select
   date_part('year', birth_date)
from employee;

select count(*) from employee;

select current_user;
```

Constraints

```
create table employee (
   id serial,
   surname varchar(20) not null,
   first_name varchar(20) null,
   birth_date date default current_date,
   department varchar(15) default 'IT',
   constraint employee_pkey primary key (id)
);
```

Foreign keys

table department

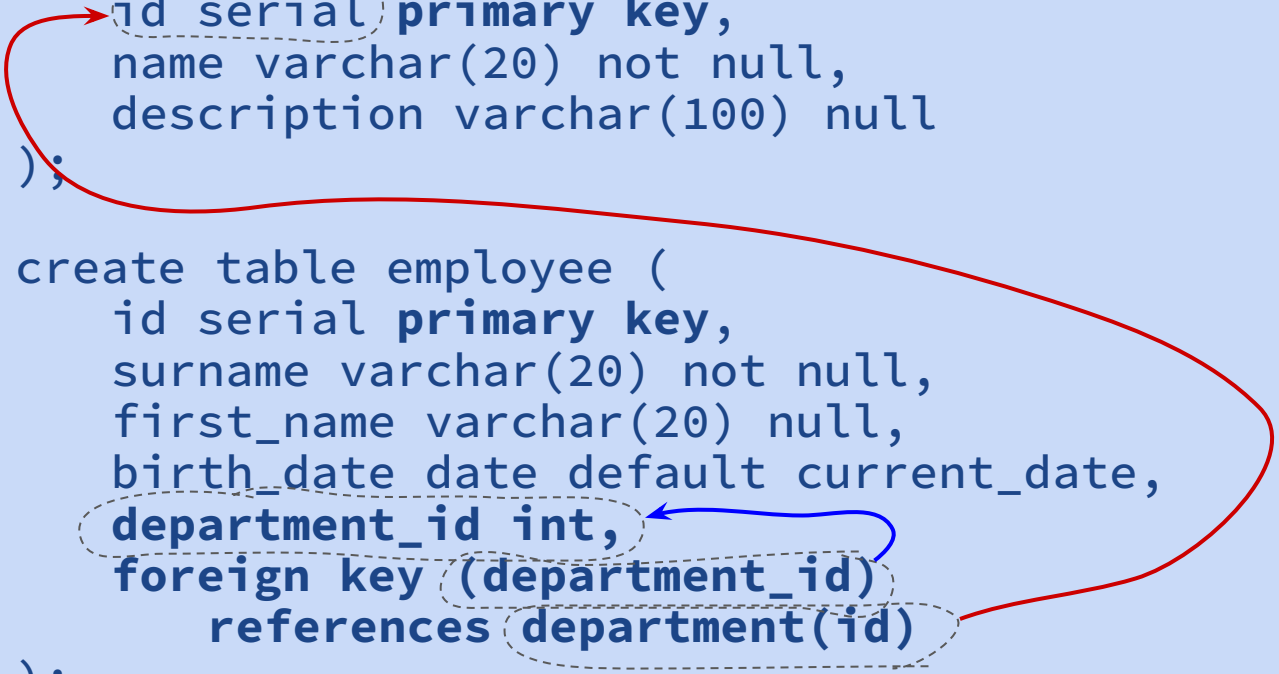
id	name	description
1	IT	Information Technology
2	HR	Human resources

table employee

id	surname	first_name	birt_date	department_id
1	Popescu	Elvira	1980-02-15	1
2	Ionescu	Geanina	1996-12-06	2
3	Muresan	Ionel	2001-05-12	1

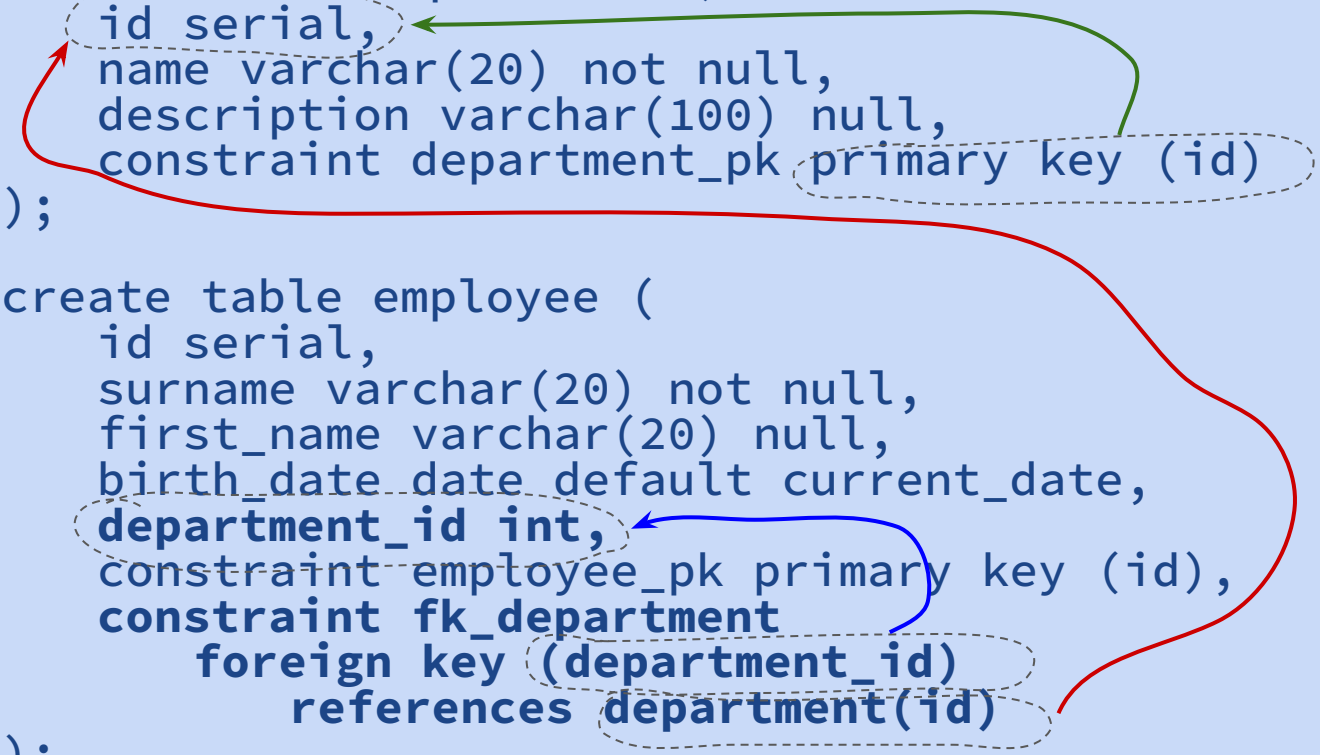
Foreign keys constraints - simple specification

```
-- PostgreSQL will set some default names for constraints
create table department (
    id serial primary key,
    name varchar(20) not null,
    description varchar(100) null
);

create table employee (
    id serial primary key,
    surname varchar(20) not null,
    first_name varchar(20) null,
    birth_date date default current_date,
    department_id int,
    foreign key (department_id)
        references department(id)
);
```



Foreign keys constraints - full specification

```
create table department (
    id serial,
    name varchar(20) not null,
    description varchar(100) null,
    constraint department_pk primary key (id)
);

create table employee (
    id serial,
    surname varchar(20) not null,
    first_name varchar(20) null,
    birth_date date default current_date,
    department_id int,
    constraint employee_pk primary key (id),
    constraint fk_department
        foreign key (department_id)
            references department(id)
);
```



Join between two tables

```
select
   concat(e.surname, ' ', e.first_name)
      as "Full name",
   d.name as "Department"
from
   employee e
join
   department d on e.department_id = d.id
where
   e.birth_date is not null;
```

Join between two tables - alternative

```
select
   concat(e.surname, ' ', e.first_name)
   as "Full name",
   d.name as "Department"
from
   employee e, department d
where
   e.department_id = d.id
   and e.birth_date is not null;
```