CREATE DATABASE personnel\_management;

**create** **table** departments(

department\_id SERIAL **primary** **key**,

department\_name **VARCHAR**(50) **not** **null**,

abbreviation **VARCHAR**(10),

department\_head **VARCHAR**(50)

);

**create** **table** employees(

employee\_id SERIAL **primary** **key**,

last\_name **VARCHAR**(30) **not** **null**,

first\_name **VARCHAR**(30) **not** **null**,

middle\_name **VARCHAR**(30),

passport **VARCHAR**(30) **unique** **not** **null**,

birth\_date **DATE** **not** **null**,

birth\_place **VARCHAR**(30),

address **VARCHAR**(100),

current\_position **VARCHAR**(50),

base\_salary **DECIMAL**(10, 2),

department\_id **INT** **references** departments(department\_id)

);

**create** **table** positions\_history(

history\_id SERIAL **primary** **key**,

employee\_id **INT** **references** employees(employee\_id),

position **VARCHAR**(30),

start\_date **DATE**,

end\_date **DATE**

);

**create** **table** vacations(

vacation\_id SERIAL **primary** **key**,

employee\_id **INT** **references** employees(employee\_id),

start\_date **DATE**,

 end\_date **DATE**,

duration\_days **INT** --(to improve further)

);

|  |  |
| --- | --- |
| **departments** |  |
| department\_id | PK |
| department\_name |  |
| abbreviation |  |
| department\_head |  |

|  |  |
| --- | --- |
| **employees** |  |
| employee\_id | PK |
| last\_name |  |
| first\_name |  |
| middle\_name |  |
| passport |  |
| birth\_date |  |
| birth\_place |  |
| address |  |
| current\_position |  |
| base\_salary |  |
| department\_id | FK |

|  |  |
| --- | --- |
| **positions\_history** |  |
| history\_id | PK |
| employee\_id | FK |
| position |  |
| start\_date |  |
| end\_date |  |

|  |  |
| --- | --- |
| **vacations** |  |
| vacation\_id | PK |
| employee\_id | FK |
| start\_date |  |
| end\_date |  |
| duration\_days |  |

List of employees in department through view:

**create** **or** **replace** view department\_employees **as**

**select** e.first\_name, e.last\_name, e,current\_position, d.**name** **as** department\_name

**from** employees e

**join** departments d **on** e.department\_id = d.department\_id;

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

**select** \* **from** department\_employees **where** department\_name = 'Sales';

Vacations for employee:

**create** **or** **replace** view employee\_vacation\_summary **as**

**select** e.employee\_id, e.first\_name, e.last\_name, v.start\_date, v.end\_date, (v.end\_date - v.start\_date + 1) **as** duration\_days,

**SUM**(v.end\_date - v.start\_date + 1) **over** (**partition** **by** e.employee\_id) **as** total\_vacation\_days

**from** employees e

**join** vacations v **on** e.employee\_id = v.employee\_id;

Employee salary:

**create** **or** **replace** view employee\_position\_salary **as**

**select** first\_name, last\_name, current\_position, base\_salary, hire\_date,

round(base\_salary \* **POWER** (1.012, **extract**(**year** **from** **AGE**(CURRENT\_DATE, hire\_date))), 2) **as** current\_salary

**from** employees;

Department list of employees and head:

**create** **or** **replace** view department\_summary **as**

**select** d.department\_id, d.department\_name **as** department\_name, d.department\_head,

count(e.employee\_id) **as** employee\_count

**from** departments d

**left** **join** employees e **on** d.department\_id = e.department\_id

**group** **by** d.department\_id, d.department\_name, d.department\_head;

**select** \* **from** department\_summary;