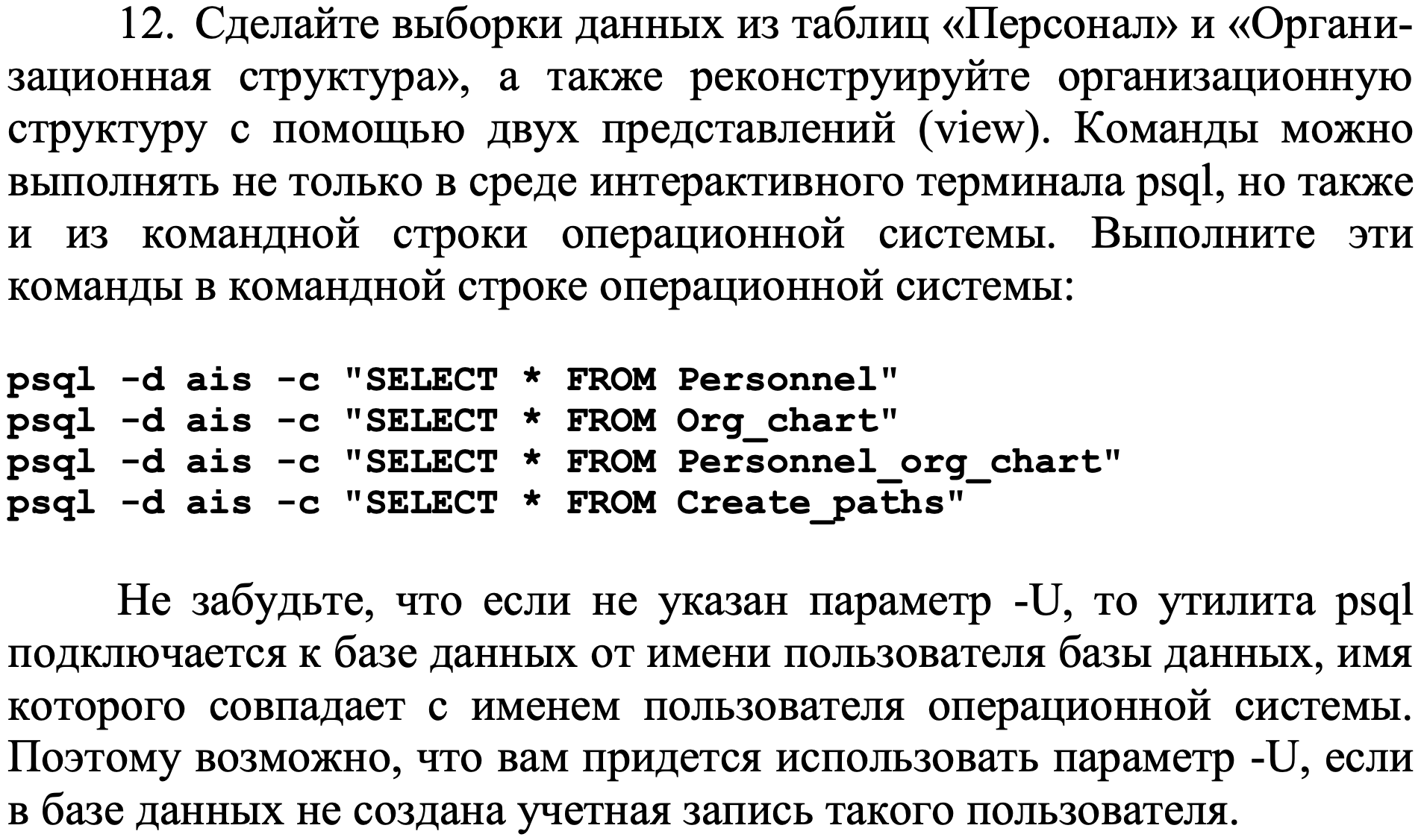
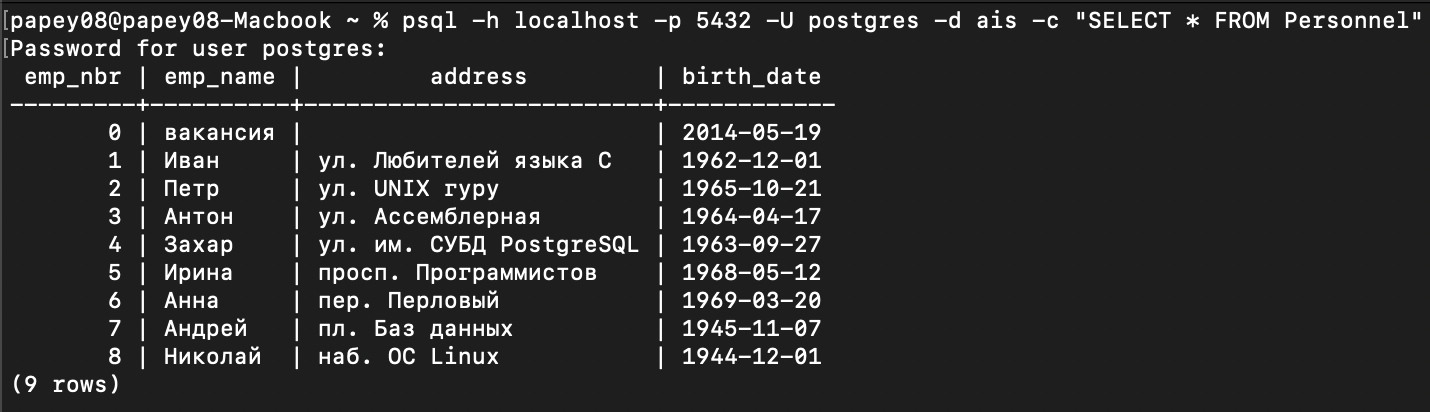
Домашняя работа №10

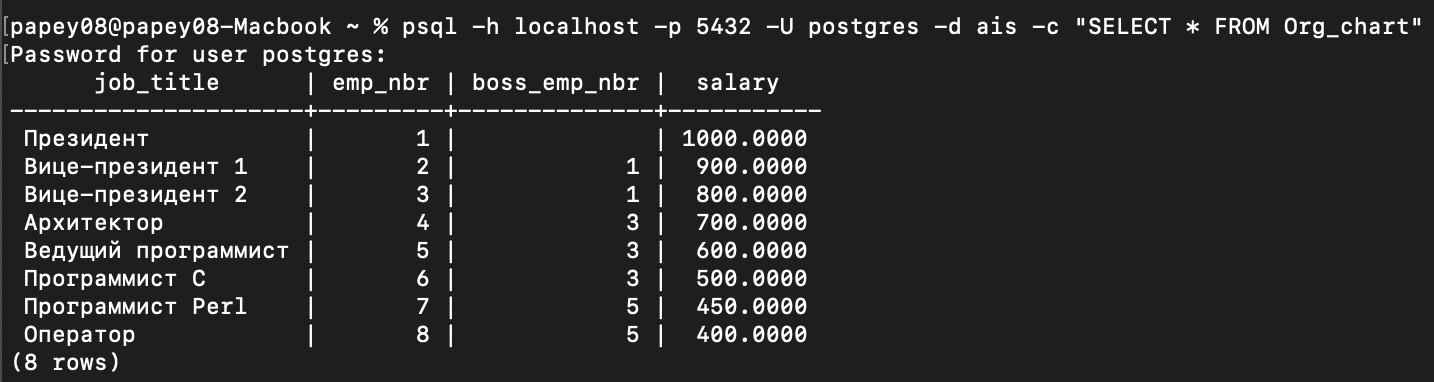
Попов Матвей, М8О-114СВ-24

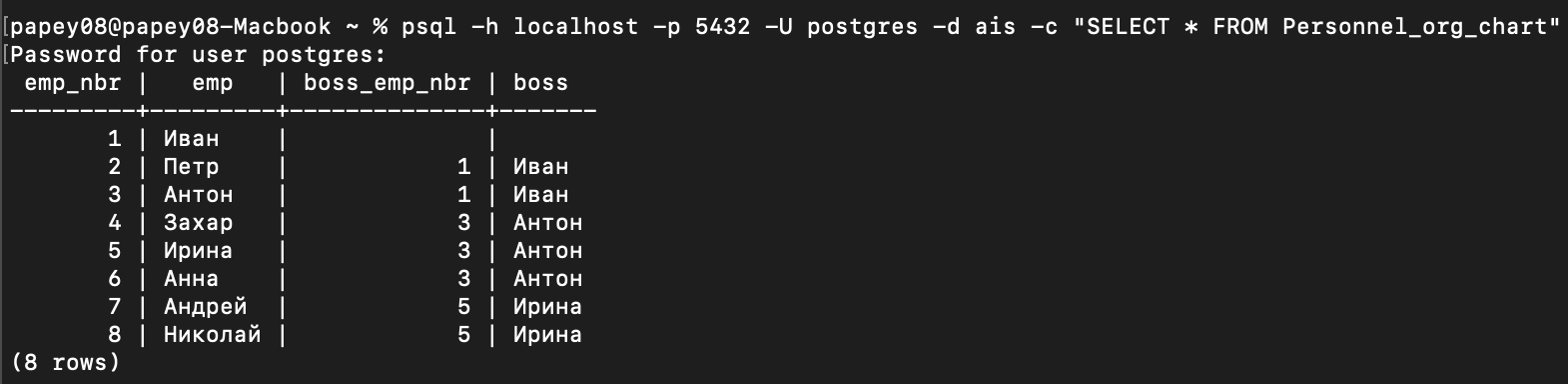
# Задание 12

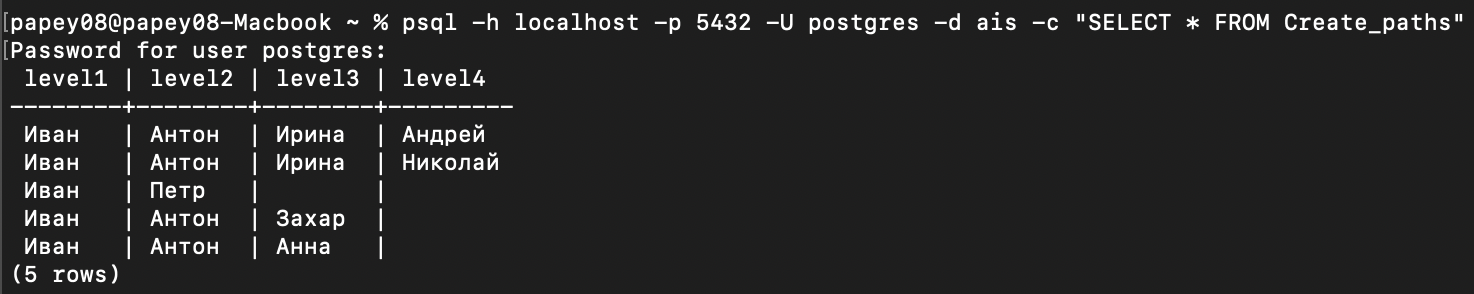


## Результат

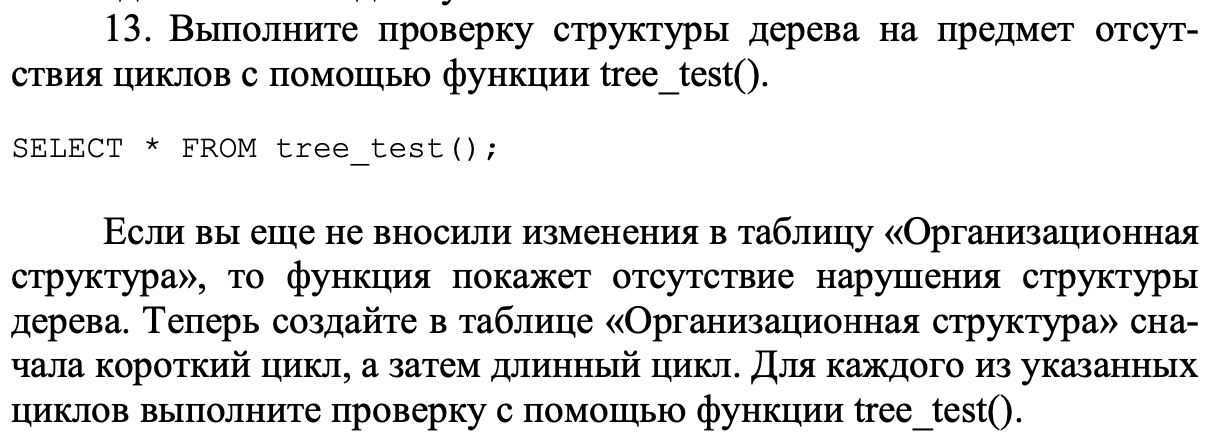








# Задание 13



## Запрос

SELECT \* FROM tree\_test();

BEGIN;

UPDATE org\_chart

SET boss\_emp\_nbr = 3

WHERE emp\_nbr = 2;

UPDATE org\_chart

SET boss\_emp\_nbr = 2

WHERE emp\_nbr = 3;

SELECT \* FROM tree\_test();

ROLLBACK;

BEGIN;

UPDATE org\_chart

SET boss\_emp\_nbr = 5

WHERE emp\_nbr = 4;

UPDATE org\_chart

SET boss\_emp\_nbr = 6

WHERE emp\_nbr = 5;

UPDATE org\_chart

SET boss\_emp\_nbr = 4

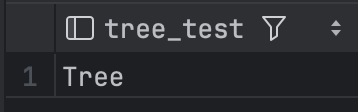
WHERE emp\_nbr = 6;

SELECT \* FROM tree\_test();

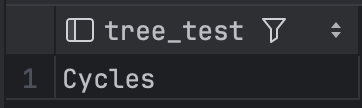
ROLLBACK;

## Результат

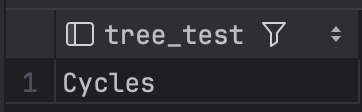
Первая проверка (нет циклов):



Вторая проверка (короткий цикл):

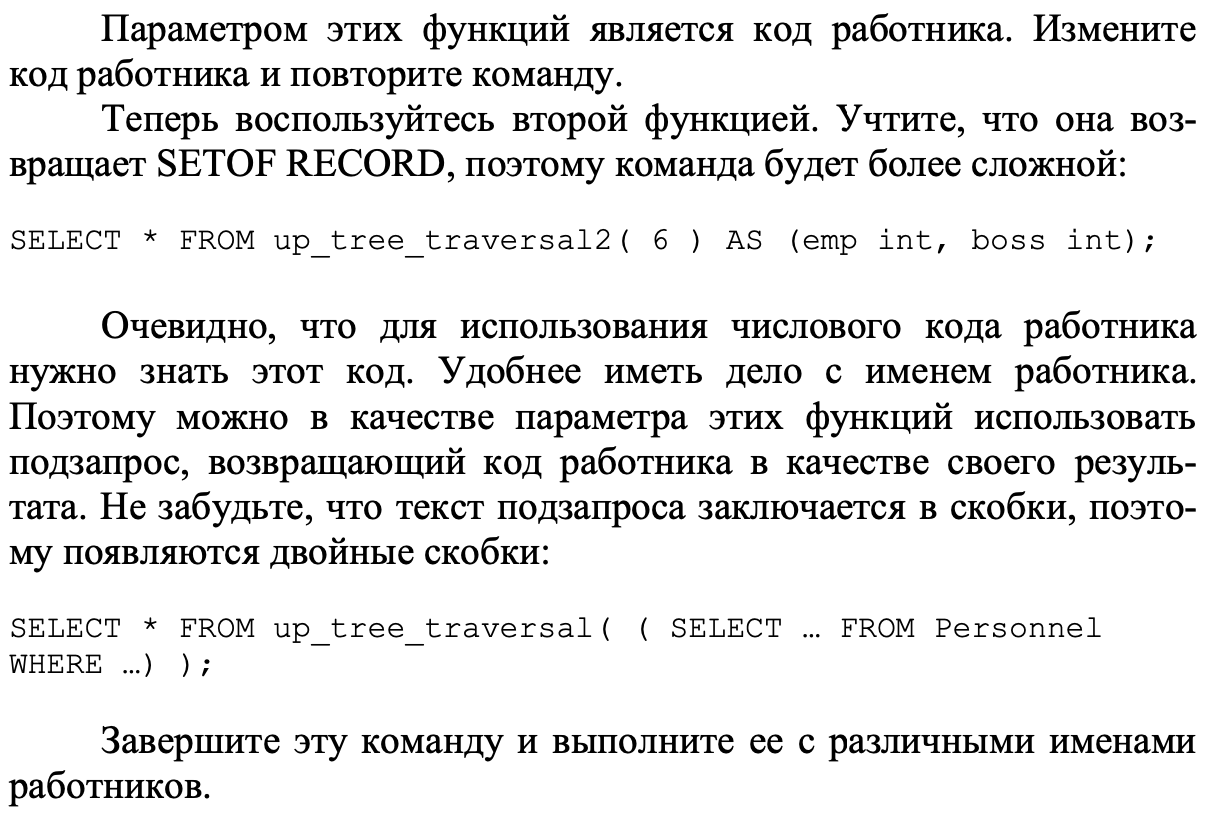


Третья проверка (длинный цикл):



# Задание 14

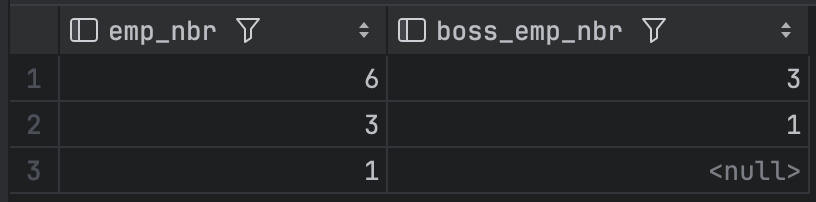
## 



## Запрос

SELECT \* FROM up\_tree\_traversal(6);

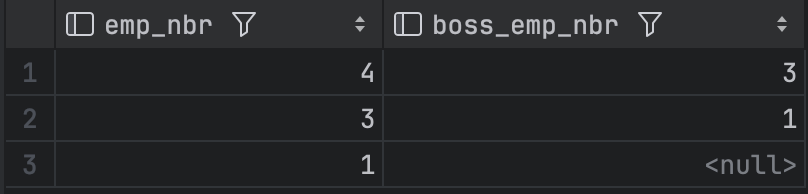
## Результат



## Запрос

SELECT \* FROM up\_tree\_traversal(4);

## Результат



## Запрос

SELECT \* FROM up\_tree\_traversal2(6) AS (emp int, boss int);

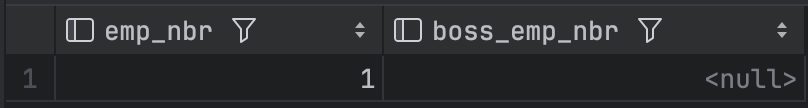
## Результат



## Запрос

SELECT \* FROM up\_tree\_traversal((SELECT emp\_nbr FROM personnel WHERE emp\_name = 'Иван'));

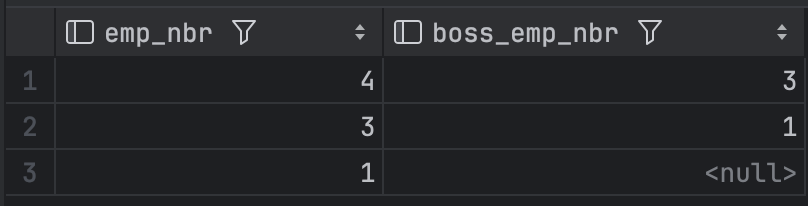
## Результат



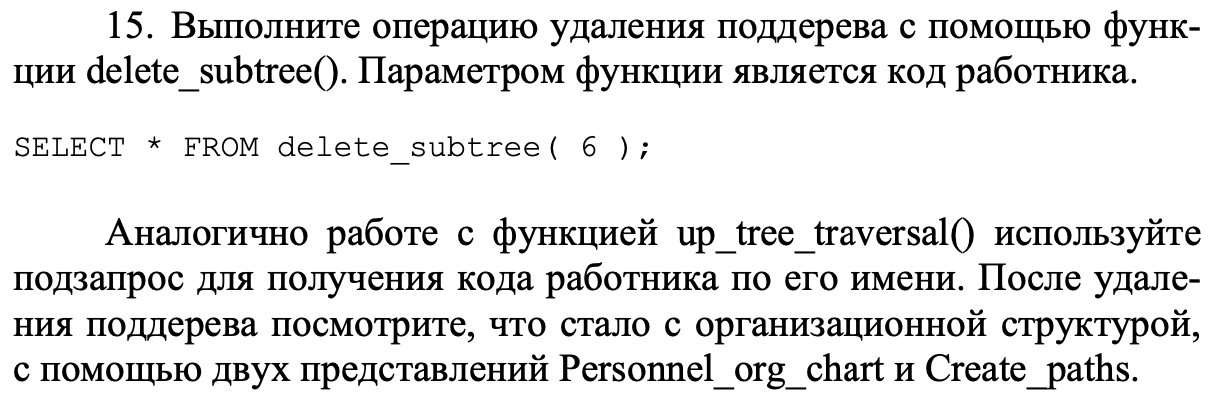
## Запрос

SELECT \* FROM up\_tree\_traversal((SELECT emp\_nbr FROM personnel WHERE emp\_name = 'Захар'));

## Результат



# Задание 15

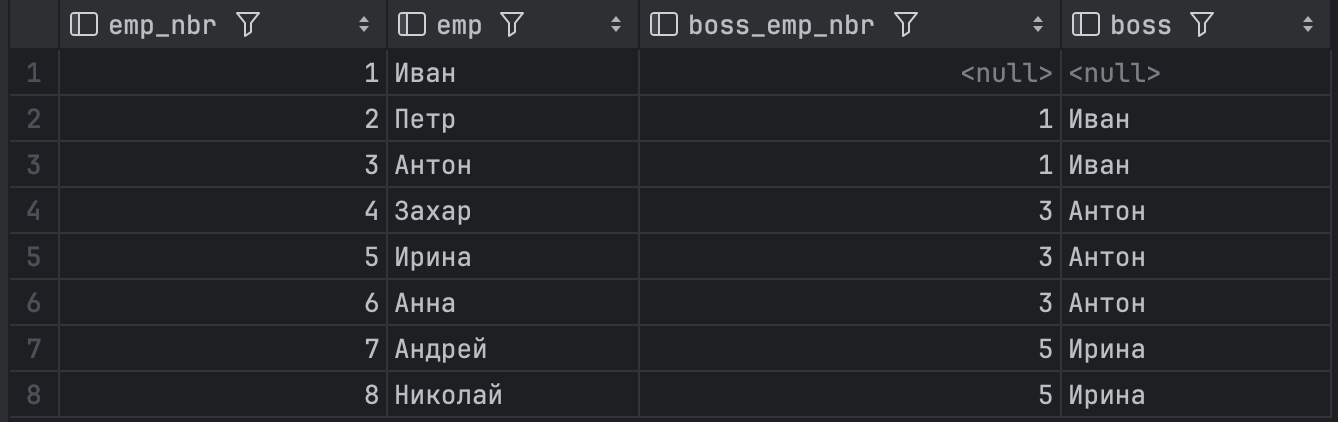


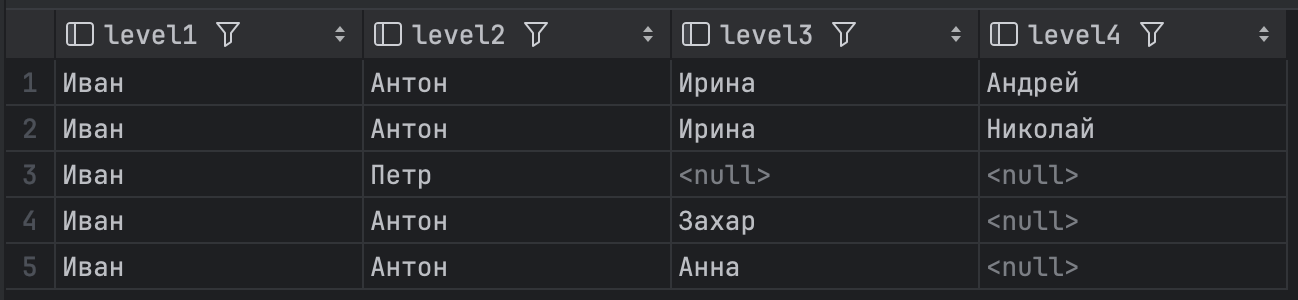
## Запрос

SELECT \* FROM personnel\_org\_chart;

SELECT \* FROM create\_paths;

## Результат





## Запрос

BEGIN;

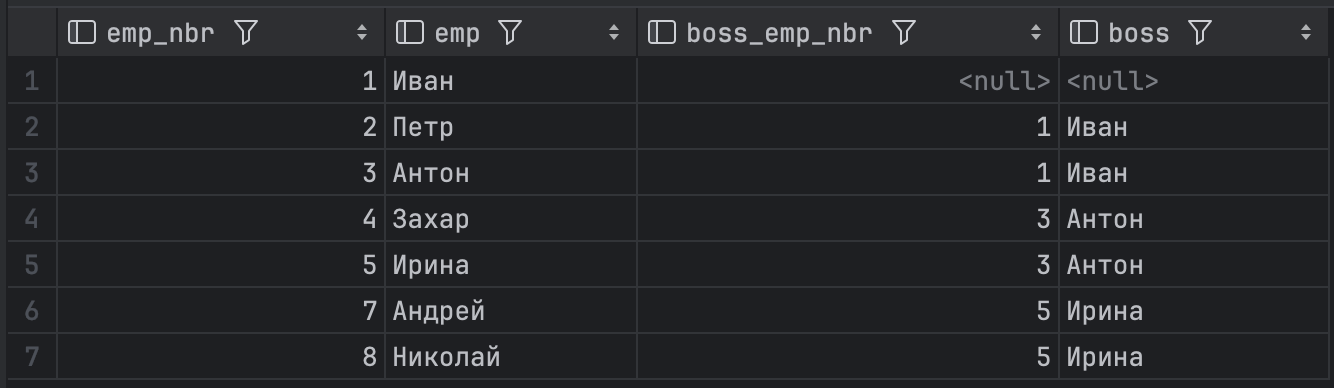
SELECT \* FROM delete\_subtree(6);

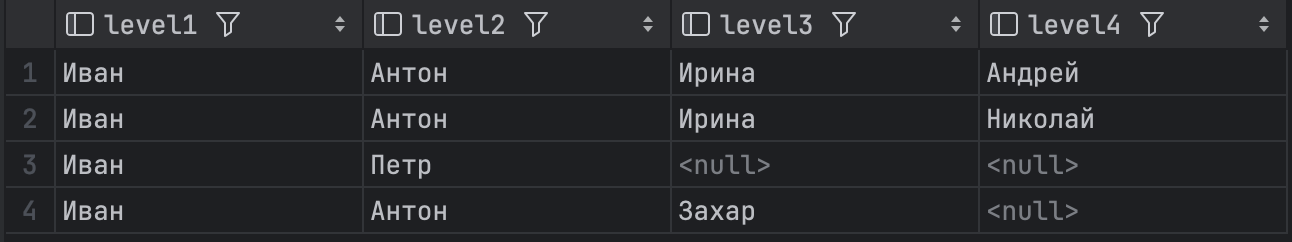
SELECT \* FROM personnel\_org\_chart;

SELECT \* FROM create\_paths;

ROLLBACK;

## Результат





## Запрос

BEGIN;

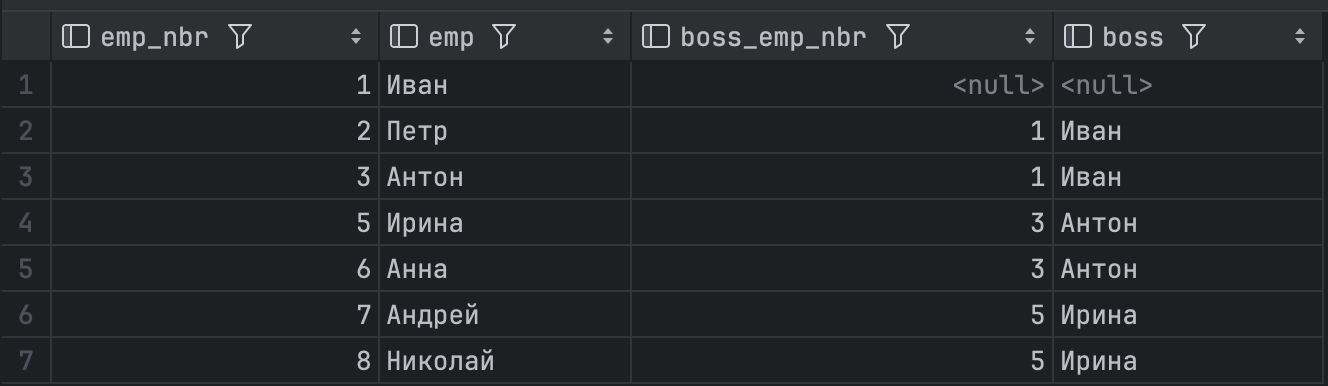
SELECT \* FROM delete\_subtree((SELECT emp\_nbr FROM personnel WHERE emp\_name = 'Захар'));

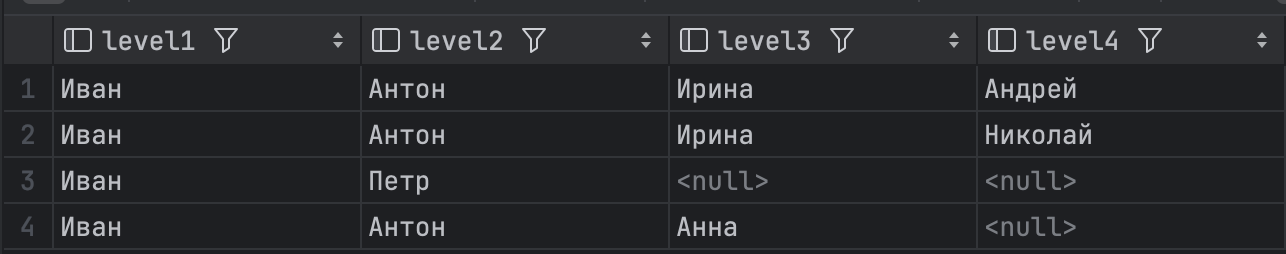
SELECT \* FROM personnel\_org\_chart;

SELECT \* FROM create\_paths;

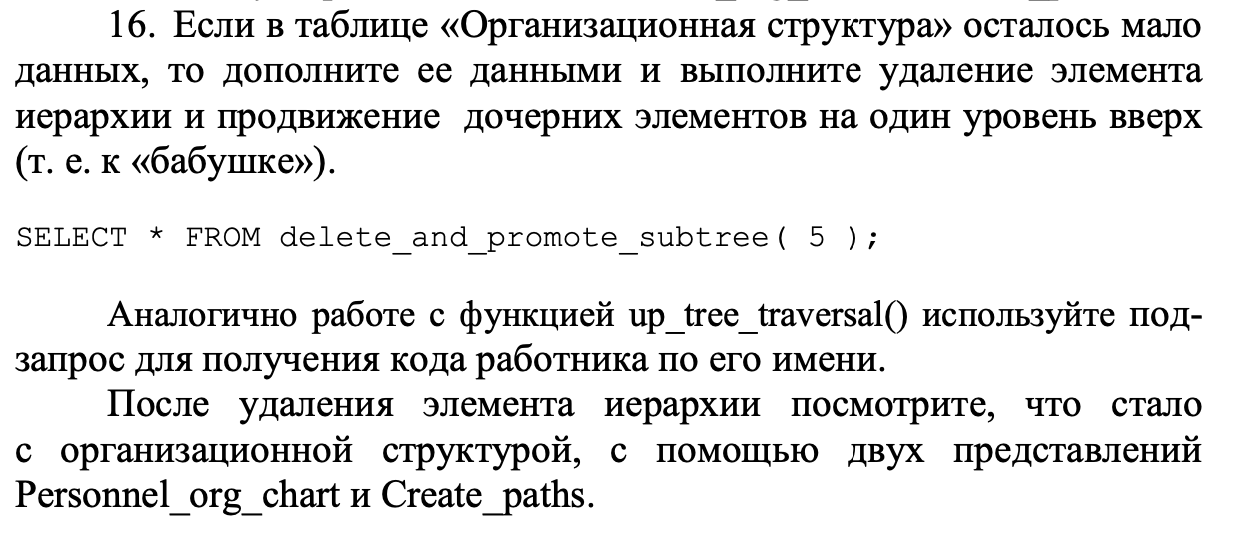
ROLLBACK;

## Результат





# Задание 16



## Запрос

BEGIN;

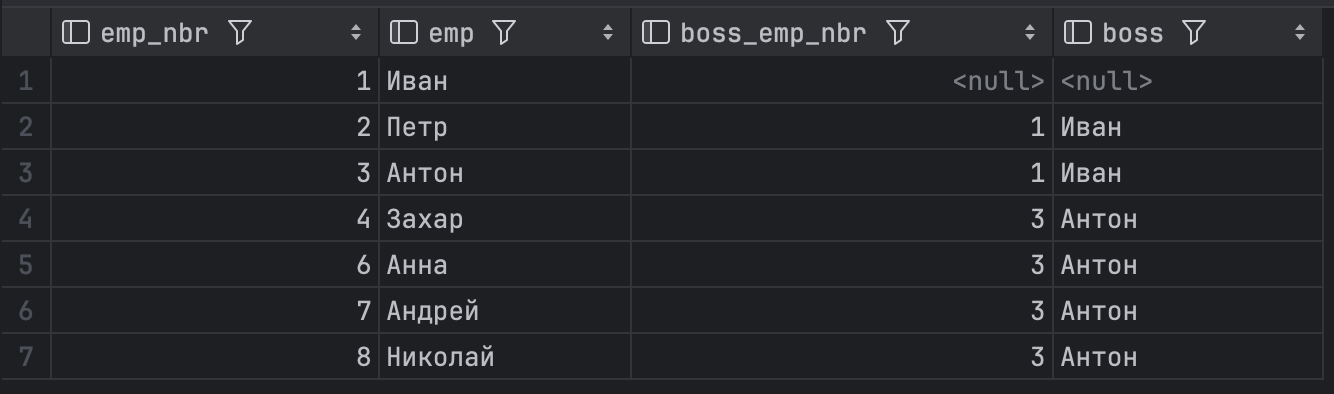
SELECT \* FROM delete\_and\_promote\_subtree(5);

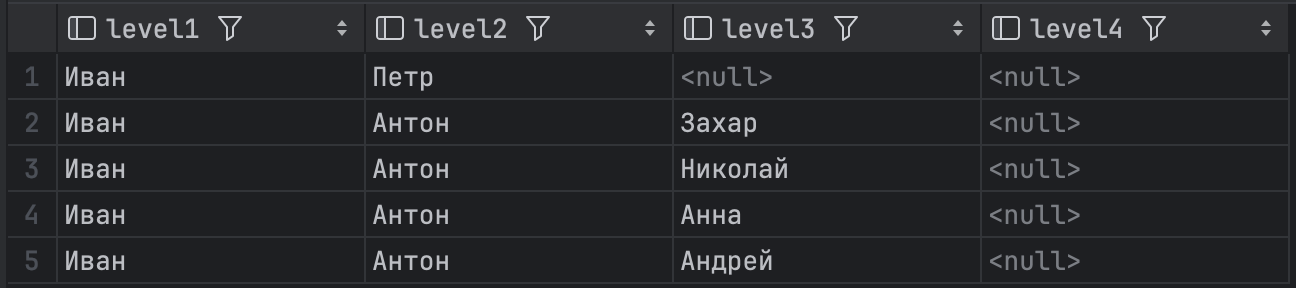
SELECT \* FROM personnel\_org\_chart;

SELECT \* FROM create\_paths;

ROLLBACK;

## Результат





## Запрос

BEGIN;

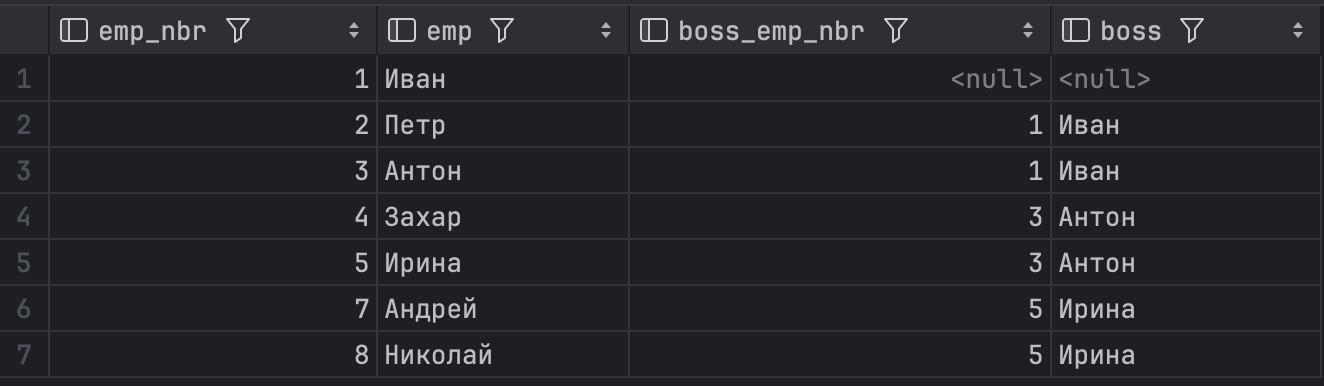
SELECT \* FROM delete\_and\_promote\_subtree((SELECT emp\_nbr FROM personnel WHERE emp\_name = 'Анна'));

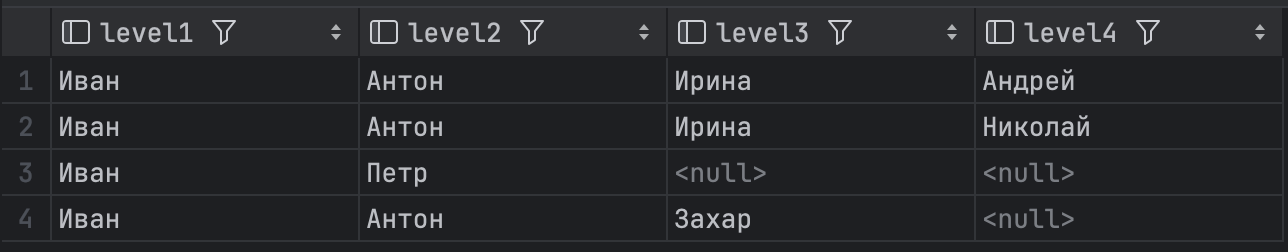
SELECT \* FROM personnel\_org\_chart;

SELECT \* FROM create\_paths;

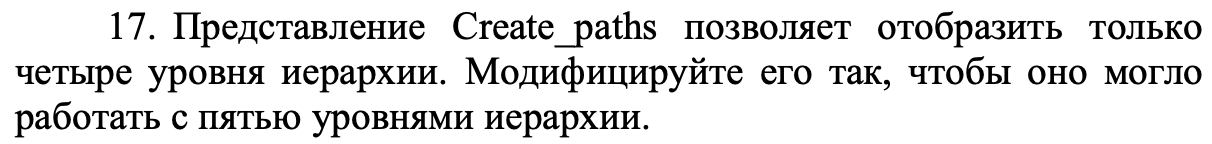
ROLLBACK;

## Результат





# Задание 17



## Запрос

CREATE VIEW Create\_paths ( level1, level2, level3, level4, level5 ) AS

SELECT O1.emp AS e1, O2.emp AS e2, O3.emp AS e3, O4.emp AS e4, O5.emp AS e5

FROM Personnel\_org\_chart AS O1

LEFT OUTER JOIN Personnel\_org\_chart AS O2 ON O1.emp = O2.boss

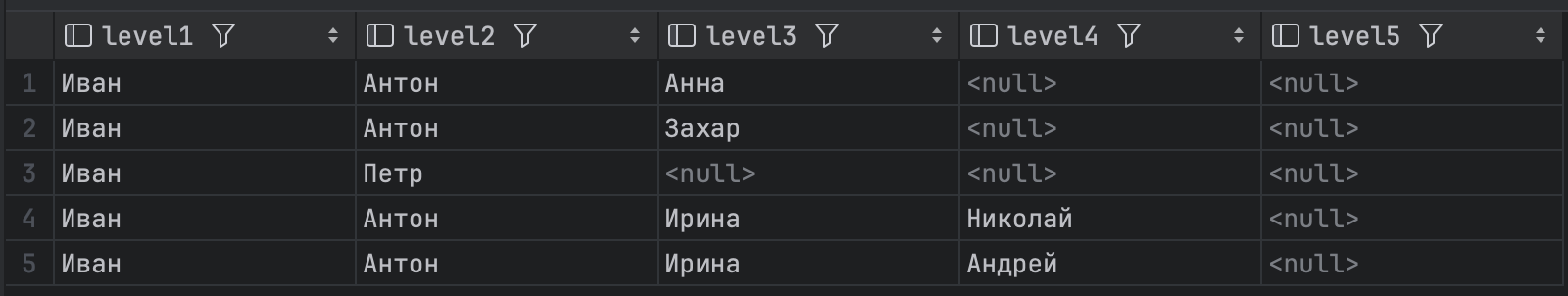
LEFT OUTER JOIN Personnel\_org\_chart AS O3 ON O2.emp = O3.boss

LEFT OUTER JOIN Personnel\_org\_chart AS O4 ON O3.emp = O4.boss

LEFT OUTER JOIN Personnel\_org\_chart AS O5 ON O4.emp = O5.boss

WHERE O1.emp = 'Иван';

## Результат



## Запрос

--- добавляем сотрудника в иерархию

INSERT INTO personnel (emp\_nbr, emp\_name, address, birth\_date)

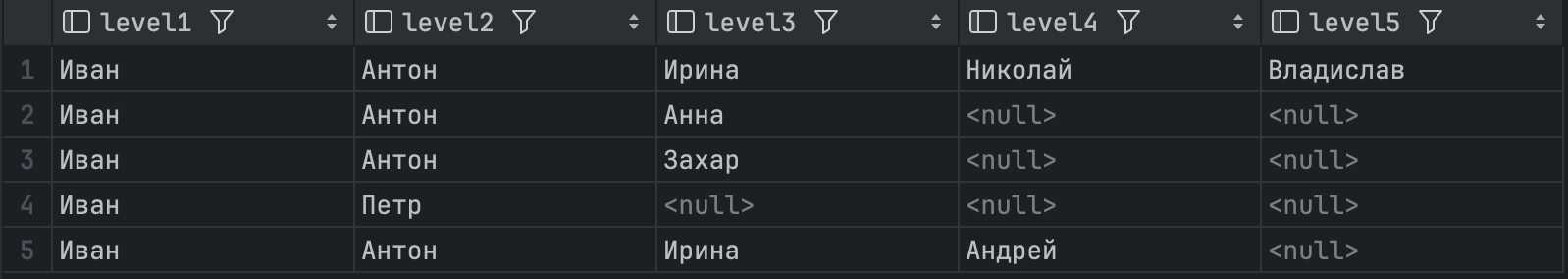
VALUES (9, 'Владислав', 'просп. Реляционных СУБД', '2000-01-01');

INSERT INTO org\_chart (job\_title, emp\_nbr, boss\_emp\_nbr, salary)

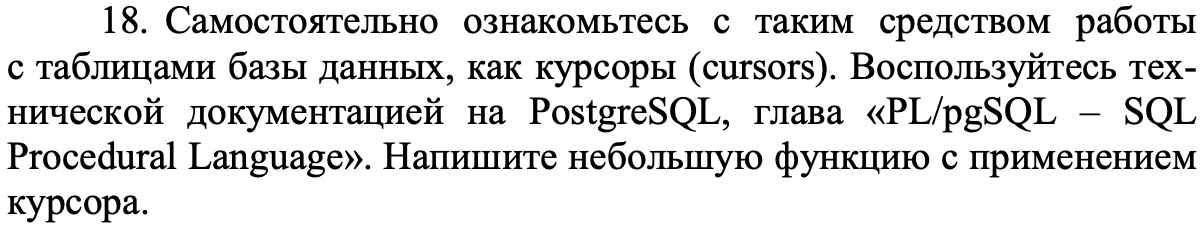
VALUES ('Бэкендер', 9, 8, 300);

SELECT \* FROM create\_paths;

## Результат



# Задание 18



## Запрос

CREATE OR REPLACE FUNCTION get\_addresses()

RETURNS VOID AS $$

DECLARE cursor CURSOR FOR

SELECT emp\_name, address FROM personnel;

record RECORD;

BEGIN

OPEN cursor;

LOOP

FETCH cursor INTO record;

EXIT WHEN NOT FOUND;

RAISE NOTICE 'name: %, address: %', record.emp\_name, record.address;

END LOOP;

CLOSE cursor;

END;

$$ LANGUAGE plpgsql;

SELECT get\_addresses();

## Результат

