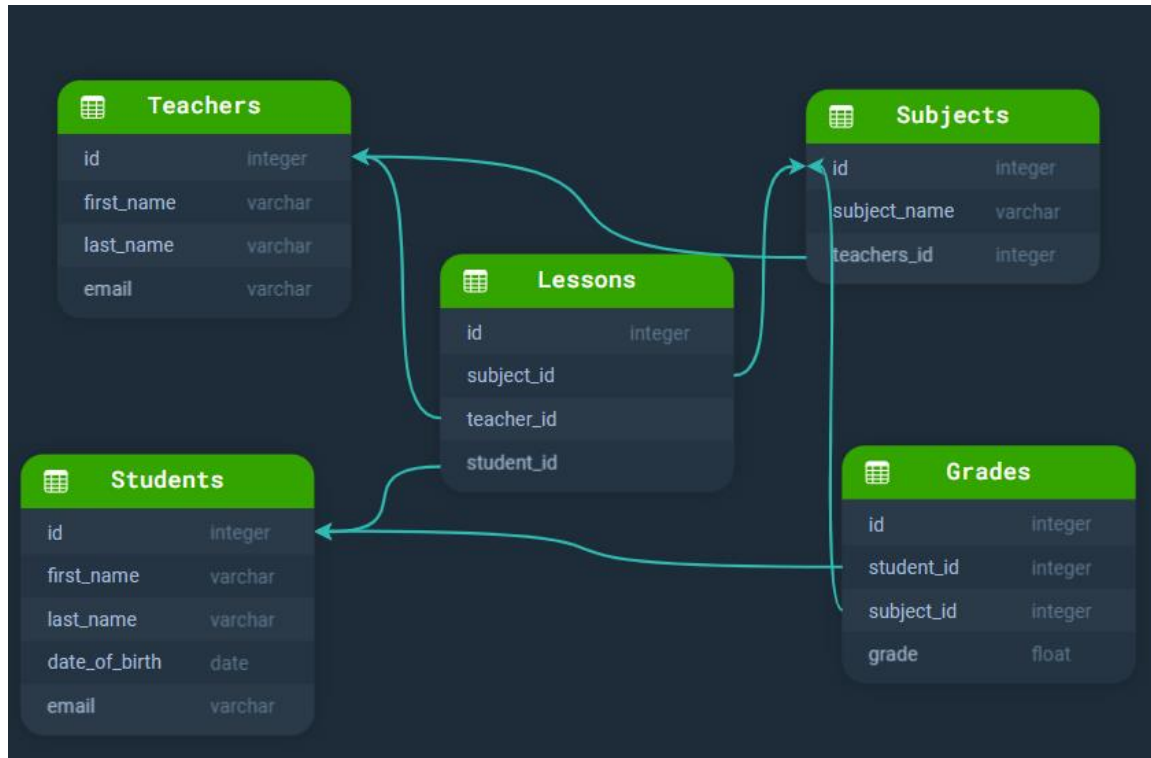


Лабораторная работа №9

Ахметова Мадина и Мусабекова Амина П3А

Тема: Группировки. Выборки из нескольких таблиц.

Схема базы данных:



Выборка с использованием агрегирующей функции

SELECT COUNT (*) AS email FROM students

university_db/postgres@PostgreSQL 16

Query Query History Scratch Pad x

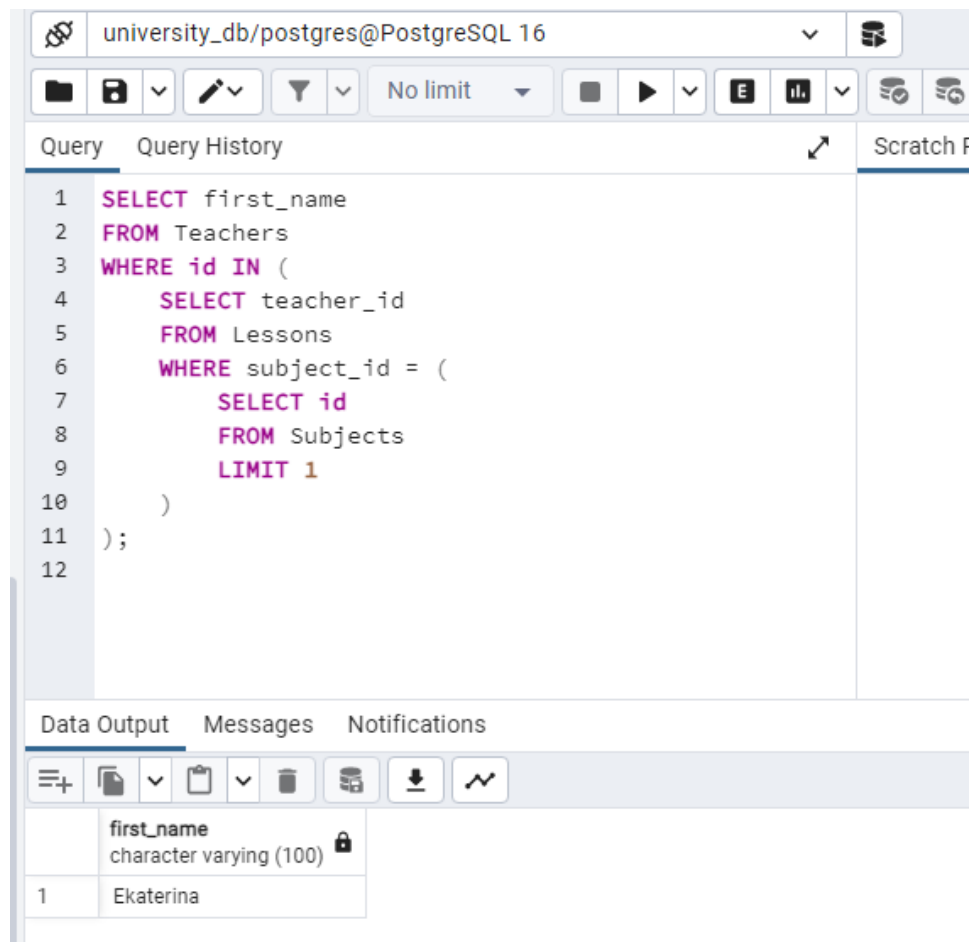
```
1 SELECT COUNT (*) AS email FROM students
```

Data Output Messages Notifications

	email	
1	bigint	2

Выборка с вложенным запросом

```
SELECT first_name
FROM Teachers
WHERE id IN (
    SELECT teacher_id
    FROM Lessons
    WHERE subject_id = (
        SELECT id
        FROM Subjects
        LIMIT 1
    )
);
```



Выборка с использованием GROUP BY и агрегирующей функции

```
SELECT subject_id,
       count(*) AS teacher_id
FROM Lessons
```

GROUP BY subject_id;

The screenshot shows a SQL query editor with a 'Query' tab. The query is as follows:

```
1 SELECT subject_id,  
2     count(*) AS teacher_id  
3 FROM Lessons  
4 GROUP BY subject_id;
```

Below the query editor, there is a 'Data Output' tab showing the results of the query. The results are displayed in a table with two columns: 'subject_id' (integer) and 'teacher_id' (bigint). The table contains one row with the values 1 and 2 respectively.

	subject_id integer	teacher_id bigint
1	1	2

Выборка с использованием HAVING

SELECT id, first_name, last_name

FROM teachers

GROUP BY id, first_name, last_name

HAVING COUNT(*) > 0 AND MAX(first_name) LIKE 'a%';

The screenshot shows a SQL query editor with a 'Query' tab. The query is as follows:

```
1 SELECT id, first_name, last_name  
2 FROM teachers  
3 GROUP BY id, first_name, last_name  
4 HAVING COUNT(*) > 0 AND MAX(first_name) LIKE 'a%';  
5
```

Below the query editor, there is a 'Data Output' tab showing the results of the query. The results are displayed in a table with three columns: 'id' ([PK] integer), 'first_name' (character varying (100)), and 'last_name' (character varying (100)). The table is currently empty.

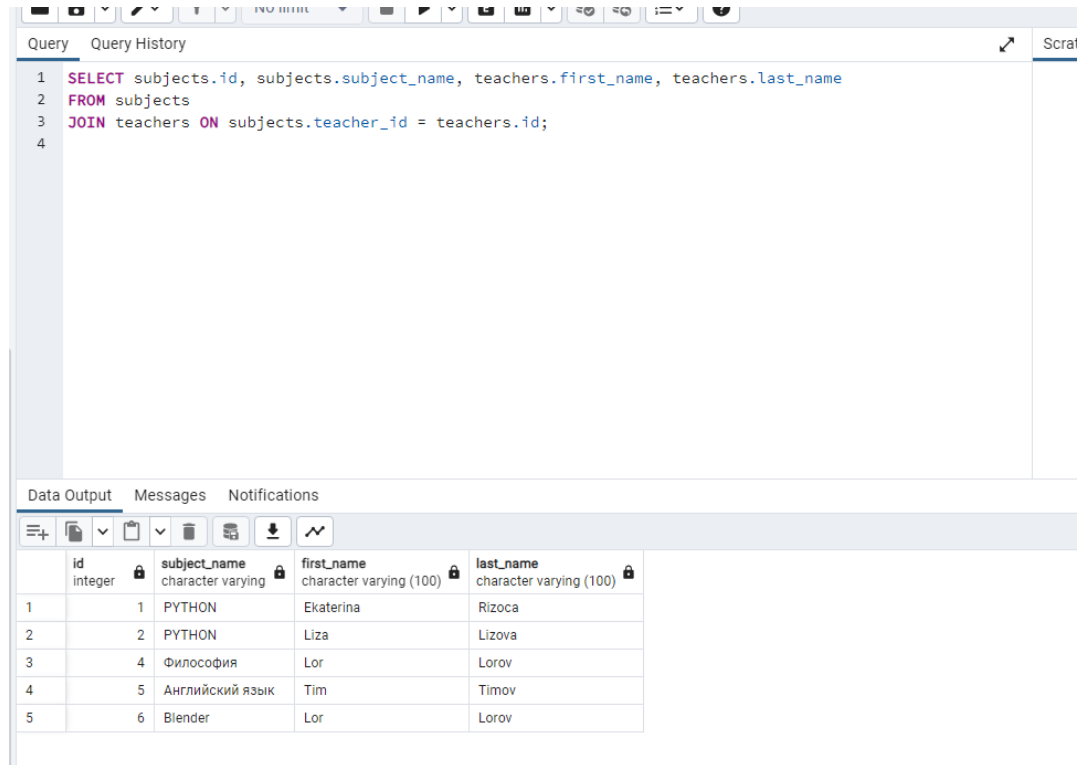
	id [PK] integer	first_name character varying (100)	last_name character varying (100)
--	--------------------	---------------------------------------	--------------------------------------

Выборка с объединением таблиц с использованием JOIN

SELECT subjects.id, subjects.subject_name, teachers.first_name, teachers.last_name

FROM subjects

JOIN teachers ON subjects.teacher_id = teachers.id;



The screenshot shows a database query editor interface. The top section is titled "Query" and contains the following SQL query:

```
1 SELECT subjects.id, subjects.subject_name, teachers.first_name, teachers.last_name
2 FROM subjects
3 JOIN teachers ON subjects.teacher_id = teachers.id;
4
```

The bottom section is titled "Data Output" and displays the results of the query in a table format. The table has five columns: id, subject_name, first_name, and last_name. The data is as follows:

	id	subject_name	first_name	last_name
1	1	PYTHON	Ekaterina	Rizoca
2	2	PYTHON	Liza	Lizova
3	4	Философия	Lor	Lorov
4	5	Английский язык	Tim	Timov
5	6	Blender	Lor	Lorov