Лабораторная работа №8

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Группа: ПЗУ
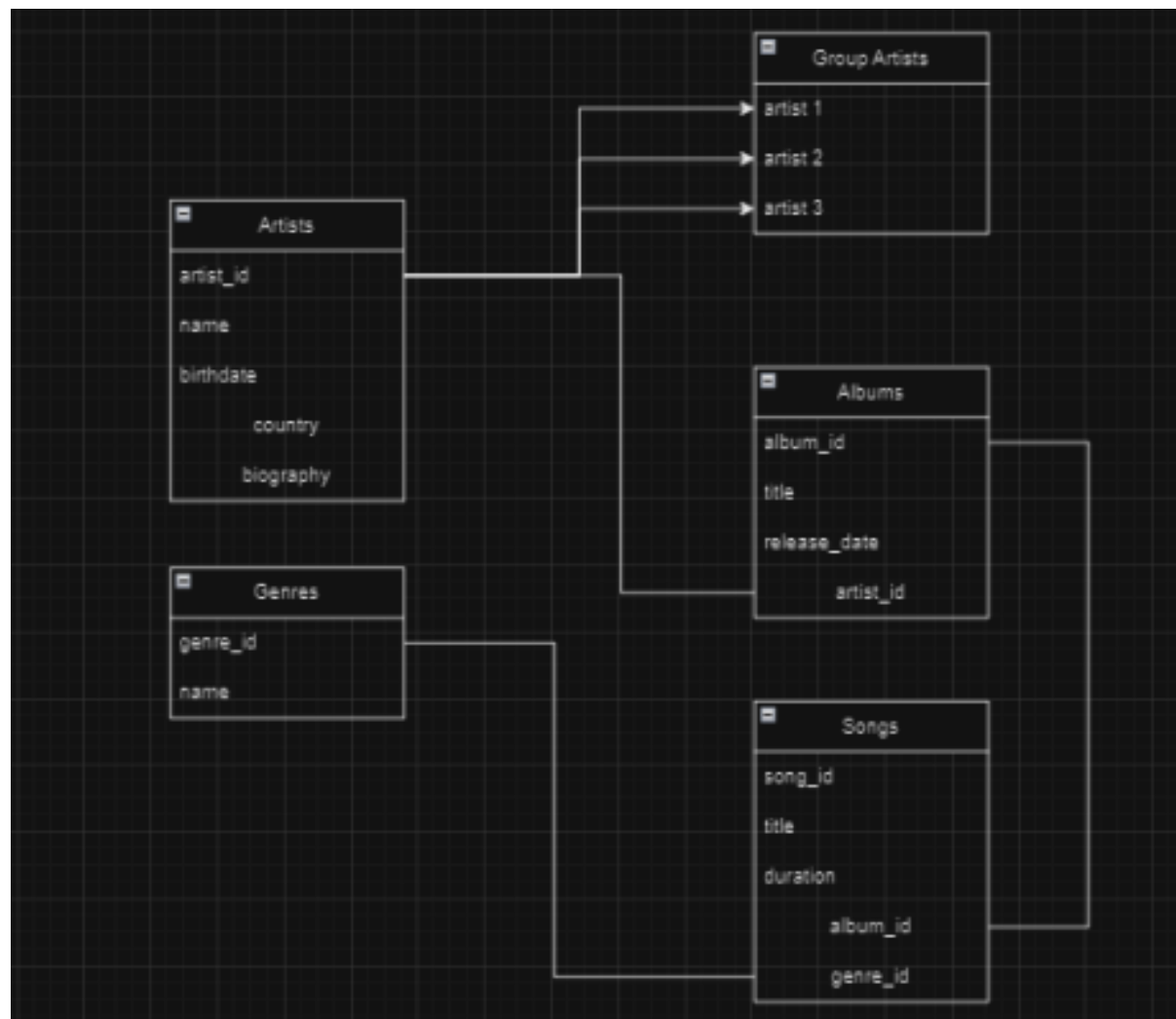
Работали в программе: pgAdmin4

Цель: освоить процесс написания SQl-запросов для выборки из одной таблицы.

Задача. Для своей базы данных:

1.Написать SELECT-запросы: - с использованием арифметических операций - с фильтрацией по условиям - с использованием оператора IN, BETWEEN - с использованием оператора LIKE - с сортировкой - с использованием оператора LIMIT

2.Написать INSERT/UPDATE/DELETE запросы

Схема базы данных

SELECT-запрос с использованием арифметических операций

SELECT album_id + genre_id AS sum FROM songs;

```
1   SELECT album_id + genre_id AS sum FROM songs;
```

Data Output   Messages   Notifications

sum integer 🔒
3
6
4
6
5
4

SELECT-запрос с фильтрацией по условиям

SELECT * FROM songs WHERE album_id > 2 AND genre_id = '3';

```
1  SELECT * FROM songs WHERE album_id > 2 AND genre_id = '3';
```

Data Output   Messages   Notifications

id [PK] integer	title text	duration time without time zone	album_id integer	genre_id integer
2	Wizard	04:06:03	3	3
40	Money For Nothing	03:23:35	3	3

SELECT-запрос с использованием оператора IN

SELECT * FROM songs WHERE genre_id IN (2,3);

SELECT-запрос с использованием оператора BETWEEN

SELECT * FROM songs WHERE genre_id
BETWEEN 1 AND 3;

```
1  SELECT * FROM songs WHERE genre_id BETWEEN 1 AND 3;
```

Data Output   Messages   Notifications

	id [PK] integer	title text	duration time without time zone	album_id integer	genre_id integer
1	1	Мало	02:28:00	2	1
2	2	Wizard	04:06:03	3	3
3	39	Lady in Black	02:49:30	2	2
4	40	Money For Nothing	03:23:35	3	3
5	41	Walk of Life	02:40:19	3	2
6	42	Heavy Fuel	04:15:45	2	2

SELECT-запрос с сортировкой

SELECT * FROM songs ORDER BY duration DESC;

```
1  SELECT * FROM songs ORDER BY duration DESC;
```

Data Output   Messages   Notifications

	id [PK] integer	title text	duration time without time zone	album_id integer	genre_id integer
1	42	Heavy Fuel	04:15:45	2	2
2	2	Wizard	04:06:03	3	3
3	40	Money For Nothing	03:23:35	3	3
4	39	Lady in Black	02:49:30	2	2
5	41	Walk of Life	02:40:19	3	2
6	1	Мало	02:28:00	2	1

SELECT-запрос с использованием оператора LIMIT

SELECT * FROM songs LIMIT 3;

```
1  SELECT * FROM songs LIMIT 3;
```

Data Output   Messages   Notifications

	id [PK] integer	title text	duration time without time zone	album_id integer	genre_id integer
1	1	Мало	02:28:00	2	1
2	2	Wizard	04:06:03	3	3
3	39	Lady in Black	02:49:30	2	2

INSERT-запрос

INSERT INTO songs (duration, album_id, genre_id) VALUES ('2:26:10','2', 2);

```
1  INSERT INTO songs (duration, album_id, genre_id) VALUES ('2:26:10','2', 2);
```

Data Output   Messages   Notifications

INSERT 0 1

Query returned successfully in 116 msec.

id [PK] integer	title text	duration time without time zone	album_id integer	genre_id integer
1	Мало	02:28:00	2	1
2	Wizard	04:06:03	3	3
39	Lady in Black	02:49:30	2	2
40	Money For Nothing	03:23:35	3	3
41	Walk of Life	02:40:19	3	2
42	Heavy Fuel	04:15:45	2	2
43	[null]	02:26:10	2	2

UPDATE-запрос

UPDATE songs SET album_id = '2' WHERE genre_id = 3;

```
1   UPDATE songs SET album_id = '2' WHERE genre_id = 3;
```

Data Output   Messages   Notifications

UPDATE 2

Query returned successfully in 63 msec.

1	1	Мало	02:28:00	2	1
2	2	Wizard	04:06:03	2	3
3	39	Lady in Black	02:49:30	2	2
4	40	Money For Nothing	03:23:35	2	3
5	41	Walk of Life	02:40:19	3	2
6	42	Heavy Fuel	04:15:45	2	2
7	43	[null]	02:26:10	2	2

DELETE-запрос

DELETE FROM songs WHERE album_id = '3';

Итог лабораторной работы

Листинг SQL-Запросов

11:45:23

▶ DELETE FROM songs WHERE album_id = '3';

11:44:56

▦ SELECT * FROM public.songs ORDER BY id ASC

11:44:32

▶ UPDATE songs SET album_id = '2' WHERE genre_id = 3;

11:44:11

▶ UPDATE songs SET album_id = '2' WHERE genre_id = 1;

11:44:04

▦ SELECT * FROM public.songs ORDER BY id ASC

11:43:44

▶ INSERT INTO songs (duration, album_id, genre_id) VALUES…

11:43:20

▶ SELECT * FROM songs LIMIT 3;

11:42:34

▶ SELECT * FROM songs LIMIT 10;

11:42:30

▶ SELECT * FROM songs LIMIT 2;

11:42:25

▶ SELECT * FROM songs LIMIT 1;

11:42:22

▶ SELECT * FROM songs LIMIT 3;

11:42:19

▶ SELECT * FROM songs ORDER BY duration DESC;

11:41:24

▶ SELECT * FROM songs ORDER BY genre_id DESC;

11:41:18

▶ SELECT * FROM songs WHERE genre_id BETWEEN 1 AND 3;

11:40:25

▶ SELECT * FROM songs WHERE genre_id BETWEEN 2 AND 3;

11:40:22

▶ SELECT * FROM songs WHERE duration BETWEEN 2 AND 3;

11:39:48

▶ SELECT * FROM duration WHERE album_id BETWEEN 3 AND 4;

11:39:30

▶ SELECT * FROM songs WHERE album_id BETWEEN 3 AND 4;

11:38:47

▶ SELECT * FROM songs WHERE genre_id IN (2,3);

11:37:29