Схема: (Lab1)
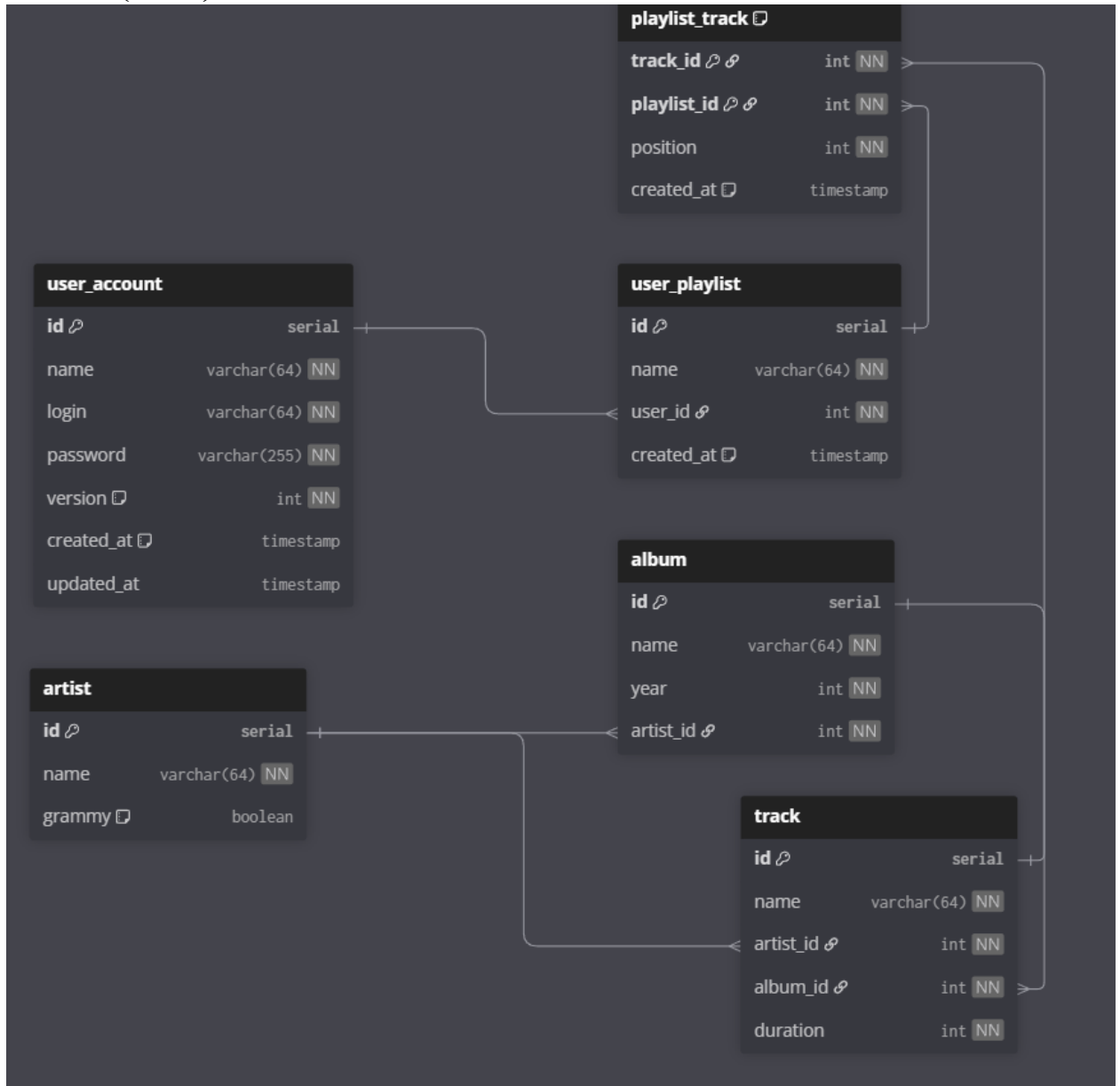

Я створив базу даних, яка має такі сутності:
user _account, artist, album, track, user_playlist, playlist_track

Користувач може додавати до свого кастомного списку (user_playlist) різні треки з track таблиці. Це реалізовано зв'язками між іншими сутностями.

Код: (Lab2)
1)

```
CREATE TABLE user_account (

  id SERIAL PRIMARY KEY,

  name VARCHAR(64) NOT NULL,
```

```sql
    login VARCHAR(64) NOT NULL UNIQUE,
    password VARCHAR(255) NOT NULL,
    version INT NOT NULL DEFAULT 1,
    created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
    updated_at TIMESTAMP NULL
);

CREATE TABLE artist (
    id SERIAL PRIMARY KEY,
    name VARCHAR(64) NOT NULL,
    grammy BOOLEAN DEFAULT FALSE
);

CREATE TABLE album (
    id SERIAL PRIMARY KEY,
    name VARCHAR(64) NOT NULL,
    year INT NOT NULL,
    artist_id INT NOT NULL,
    FOREIGN KEY (artist_id) REFERENCES artist(id)
);

CREATE TABLE track (
    id SERIAL PRIMARY KEY,
    name VARCHAR(64) NOT NULL,
    artist_id INT NOT NULL,
    album_id INT NOT NULL,
    duration INT NOT NULL,
    FOREIGN KEY (artist_id) REFERENCES artist(id),
    FOREIGN KEY (album_id) REFERENCES album(id)
```

```sql
);

CREATE TABLE user_playlist (
    id SERIAL PRIMARY KEY,
    name VARCHAR(64) NOT NULL,
    user_id INT NOT NULL,
    created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
    FOREIGN KEY (user_id) REFERENCES user_account(id) ON DELETE CASCADE
);

CREATE TABLE playlist_track  (
    track_id INT NOT NULL,
    playlist_id INT NOT NULL,
    PRIMARY KEY (playlist_id, track_id),
    position INT NOT NULL,
    created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
    FOREIGN KEY (track_id) REFERENCES track(id) ON DELETE CASCADE,
    FOREIGN KEY (playlist_id) REFERENCES user_playlist(id) ON DELETE CASCADE,
    UNIQUE(playlist_id, position)
);


2)
INSERT INTO user_account (name, login, password)
VALUES ('Alex1', 'alex1', 'secret');
INSERT INTO user_account (name, login, password, version)
VALUES ('Alex2', 'alex2', 'secret1', 2);
INSERT INTO user_account (name, login, password, version)
```

```sql
VALUES ('Alex3', 'alex3', 'secret2', 3);

INSERT INTO artist (name, grammy)
VALUES ('AC/DC', false);
INSERT INTO artist (name, grammy)
VALUES ('Metallica', true);
INSERT INTO artist (name, grammy)
VALUES ('Michael Jackson', true);

INSERT INTO album (name, year, artist_id)
VALUES ('Back in Black', 1980, 1);
INSERT INTO album (name, year, artist_id)
VALUES ('Kill ''Em All', 1983, 2);
INSERT INTO album (name, year, artist_id)
VALUES ('Bad', 1987, 3);

INSERT INTO track (name, artist_id, album_id, duration)
VALUES ('Hells Bells', 1, 1, 312);
INSERT INTO track (name, artist_id, album_id, duration)
VALUES ('Shoot to Thrill', 1, 1, 321);
INSERT INTO track (name, artist_id, album_id, duration)
VALUES ('Back in Black', 1, 1, 255);
INSERT INTO track (name, artist_id, album_id, duration)
VALUES ('You Shook Me All Night Long', 1, 1, 210);

INSERT INTO track (name, artist_id, album_id, duration)
VALUES ('Hit the Lights', 2, 2, 257);
INSERT INTO track (name, artist_id, album_id, duration)
VALUES ('The Four Horsemen', 2, 2, 433);
```

```sql
INSERT INTO track (name, artist_id, album_id, duration)
VALUES ('Seek & Destroy', 2, 2, 415);


INSERT INTO track (name, artist_id, album_id, duration)
VALUES ('Bad', 3, 3, 247);
INSERT INTO track (name, artist_id, album_id, duration)
VALUES ('The Way You Make Me Feel', 3, 3, 298);
INSERT INTO track (name, artist_id, album_id, duration)
VALUES ('Man in the Mirror', 3, 3, 321);
INSERT INTO track (name, artist_id, album_id, duration)
VALUES ('Dirty Diana', 3, 3, 294);


INSERT INTO user_playlist (name, user_id, created_at)
VALUES ('Rock Classics', 1, CURRENT_TIMESTAMP);
INSERT INTO user_playlist (name, user_id, created_at)
VALUES ('Workout Mix', 2, CURRENT_TIMESTAMP);
INSERT INTO user_playlist (name, user_id, created_at)
VALUES ('Chill Vibes', 3, CURRENT_TIMESTAMP);


INSERT INTO playlist_track (track_id, playlist_id, position)
VALUES (3, 1, 1);
INSERT INTO playlist_track (track_id, playlist_id, position)
VALUES (4, 1, 2);
INSERT INTO playlist_track (track_id, playlist_id, position)
VALUES (7, 1, 3);
INSERT INTO playlist_track (track_id, playlist_id, position)
VALUES (11, 1, 4);


INSERT INTO playlist_track (track_id, playlist_id, position)
```

```sql
VALUES (2, 2, 1);
INSERT INTO playlist_track (track_id, playlist_id, position)
VALUES (6, 2, 2);
INSERT INTO playlist_track (track_id, playlist_id, position)
VALUES (9, 2, 3);


INSERT INTO playlist_track (track_id, playlist_id, position)
VALUES (10, 3, 1);
INSERT INTO playlist_track (track_id, playlist_id, position)
VALUES (4, 3, 2);
```

Приклад роботи:

Data Output Messages Notifications

id [PK] integer	name character varying (64)	artist_id integer	album_id integer	duration integer
1	Hells Bells	1	1	312
2	Shoot to Thrill	1	1	321
3	Back in Black	1	1	255
4	You Shook Me All Night Long	1	1	210
5	Hit the Lights	2	2	257
6	The Four Horsemen	2	2	433
7	Seek & Destroy	2	2	415
8	Bad	3	3	247
9	The Way You Make Me Feel	3	3	298
10	Man in the Mirror	3	3	321
11	Dirty Diana	3	3	294

id [PK] integer	name character varying (64)	user_id integer	created_at timestamp without time zone
1	Rock Classics	1	2025-09-21 18:46:49.52779
2	Workout Mix	2	2025-09-21 18:46:49.52779
3	Chill Vibes	3	2025-09-21 18:46:49.52779

Data Output Messages Notifications

id [PK] integer	name character varying (64)	year integer	artist_id integer
1	Back in Black	1980	1
2	Kill "Em All	1983	2
3	Bad	1987	3

Data Output Messages Notifications

Showing rows: 1 to 3

id [PK] integer	name character varying (64)	login character varying (64)	password character varying (255)	version integer	created_at timestamp without time zone	updated_at timestamp without time zone
1	Alex1	alex1	secret	1	2025-09-21 18:46:49.52779	[null]
2	Alex2	alex2	secret1	2	2025-09-21 18:46:49.52779	[null]
3	Alex3	alex3	secret2	3	2025-09-21 18:46:49.52779	[null]