Part-2 OLTP Queries

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Github Link - <u>ashutosh-kumar10/BDS-Assignment (github.com)</u>
Loom Video Link - <u>https://www.loom.com/share/2fd88791aa414995b18de8fb35c64a78</u>

Query Execution Snapshot:

1) Query to filter and sort by 'track_genre' (alphabetical order)

2) Example: Retrieve tracks in the 'acoustic' genre, sorted by popularity in descending order.

3) Covered Query for Retrieving Acoustic Tracks

```
// Create an index on 'track_genre'
db.spotify.createIndex({ track_genre: 1 });

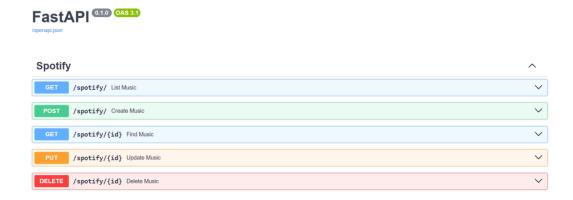
// Covered query using the index
db.spotify.find({ track_genre: 'acoustic' }, {track_id: 1, track_genre: 1 });
```

```
Atlas atlas-erydsr-shard-0 [primary] spotify> db.spotify.createIndex({ track_genre: 1 });
track_genre.1
Atlas atlas-erydsr-shard-0 [primary] spotify> db.spotify.find({ track_genre: 'acoustic' }, {track_id: 1, track_genre: 1 });
{
    __id: ObjectId("6587223b8bd7b22648c891c3"),
    track_id: '$Su01kmiRyPWxo1Q0JUgSV',
    track_genre: 'acoustic'
},
    __id: ObjectId("6587223c8bd7b22648c891c4"),
    track_id: '4gPND8W1i3p13qLCt0Ki3A',
```

4) Partitioning (Example using Range-based Partitioning):

```
// Assuming 'time_signature' is a relevant key for partitioning
db.spotify.createIndex({ time_signature: 1 }); // Indexing for better query performance
// Query for data within a specific partition (e.g., time_signature = 4)
db.spotify.find({ time_signature: "4" });
```

API Service End Points



Response for calling spotify/{id} end point for track id - 4qPNDBW1i3p13qLCt0Ki3A

```
curl - X 'GET' \
    'http://localhost:8000/spotify/4qPNDBWli3pl3qLCt0Ki3A' \
    -H 'accept: application/json'

Request URL

http://localhost:8000/spotify/4qPNDBWli3pl3qLCt0Ki3A

Server response

Code Details

Response body

{
    "track_id": "4qPNDBWli3pl3qLCt0Ki3A",
    "artists": "Ben Woodward",
    "album_name": "Ghost (Acoustic)",
    "track_name": "Ghost (Acoustic)",
    "popularity": 55,
    "duration_ms": 149610,
    "explicit": "FALSE",
    "danceability": 0.42,
    "energy": 0.166,
```