

Questions

- The tools needed to work with an SQL and noSQL database are:
 - SQL: MySQL, Oracle, SQL query language, PHP, CPanel Hosting
 - noSQL: Couchbase, MongoDB Atlas, MongoDB Shell (JavaScript)
- After working with both types of databases, I do not think I outright choose one database type over the other because I like certain things from both types. I think SQL databases are more intuitive as they are set up as actual tables with columns and records. I also prefer querying in SQL. However, having records, or rather documents, be in JSON format in noSQL databases makes them a lot easier and preferable to use with actual projects and applications. I am much more accustomed to SQL databases; however, if I had to pick I would choose noSQL databases just because of the integrated JSON data format.

Part 1

The screenshot displays the MongoDB Atlas web interface. On the left sidebar, the 'Band' namespace is expanded, showing a list of collections including 'set_list'. The main panel shows the 'Band.set_list' collection with a storage size of 4KB and 0 total documents. Below this, a filter bar shows a filter of '{ field: 'value' }'. The query results section displays 10 results, showing the first three documents in JSON format:

```
{ "_id": ObjectId("6241d7a3ad274f49b4118683"),  
  "artists": Array,  
    "0": "Christina Perri",  
    "title": "A Thousand Years",  
    "genres": Array,  
      "0": "Pop",  
      "year": "2011"  
}
```

```
{ "_id": ObjectId("6241d7a3ad274f49b4118684"),  
  "artists": Array,  
    "0": "Bon Jovi",  
    "title": "Livin' on a Prayer",  
    "genres": Array,  
      "0": "Rock",  
      "year": "1986"  
}
```

```
{ "_id": ObjectId("6241d7a3ad274f49b4118685"),  
  "artists": Array,  
    "0": "Bruno Mars",  
    "title": "Marry You",  
    "genres": Array
```

Part 2

- Select Database

```
Atlas atlas-z9wpsk-shard-0 [primary] local> use Band
switched to db Band
Atlas atlas-z9wpsk-shard-0 [primary] Band>
```

- Show all data from all songs

```
Atlas atlas-z9wpsk-shard-0 [primary] Band> db.set_list.find()
[
  {
    _id: ObjectId("6241d7a3ad274f49b4118683"),
    artists: [ 'Christina Perri' ],
    title: 'A Thousand Years',
    genres: [ 'Pop' ],
    year: '2011'
  },
  {
    _id: ObjectId("6241d7a3ad274f49b4118684"),
    artists: [ 'Bon Jovi' ],
    title: 'Livin' on a Prayer',
    genres: [ 'Rock' ],
    year: '1986'
  },
  {
    _id: ObjectId("6241d7a3ad274f49b4118685"),
    artists: [ 'Bruno Mars' ],
    title: 'Marry You',
    genres: [ 'R&B/Soul' ],
    year: '2011'
  },
  {
    _id: ObjectId("6241d7a3ad274f49b4118686"),
    artists: [ 'Ed Sheeran' ],
    title: 'Perfect',
    genres: [ 'Pop' ],
    year: '2017'
  },
  {

```

```
_id: ObjectId("6241d7a3ad274f49b4118687"),
artists: [ 'John Legend' ],
title: 'All of Me',
genres: [ 'R&B/Soul' ],
year: '2013'
},
{
  _id: ObjectId("6241d7a3ad274f49b4118688"),
  artists: [ 'Bad Bunny', 'Sech' ],
  title: 'Ignorantes',
  genres: [ 'Reggaetón' ],
  year: '2020'
},
{
  _id: ObjectId("6241d7a3ad274f49b4118689"),
  artists: [ 'Louis Armstrong' ],
  title: 'What a Wonderful World',
  genres: [ 'Holiday' ],
  year: '1968'
},
{
  _id: ObjectId("6241d7a3ad274f49b411868a"),
  artists: [ 'The Beatles' ],
  title: 'I Want to Hold Your Hand',
  genres: [
    'R&B/Soul',
    'Alternative/Indie',
    "Children's Music",
    'Folk',
    'Pop',
    'Rock'
  ],
  year: '1964'
},
{
  _id: ObjectId("6241d7a3ad274f49b411868b"),
  artists: [ 'Miles Davis' ],
  title: 'All Blues',
  genres: [ 'Jazz' ],
  year: '1959'
}
```

```

    },
    {
      _id: ObjectId("6241d7a3ad274f49b411868c"),
      artists: [ 'Jack Brooks', 'Harry Warren' ],
      title: "That's Amore",
      genres: [ 'Pop', 'Holiday' ],
      year: '1953'
    }
  ]
Atlas atlas-z9wpsk-shard-0 [primary] Band>

```

- Show all song titles from a particular genre (pop)

```

Atlas atlas-z9wpsk-shard-0 [primary] Band> db.set_list.find({genres: "Pop"},
{title : 1, _id : 0})
[
  { title: 'A Thousand Years' },
  { title: 'Perfect' },
  { title: 'I Want to Hold Your Hand' },
  { title: "That's Amore" }
]
Atlas atlas-z9wpsk-shard-0 [primary] Band>

```