Shri Vile Parle Kelavani Mandal's
DWARKADAS J. SANGHVI COLLEGE OF ENGINEERING
(Autonomous College Affiliated to the University of Mumbai)
NAAC Accredited with "A" Grade (CGPA : 3.18)

Department of Information Technology A.Y. 2024-2025

Class: TY Btech-IT, Semester: VI Subject: Big Data Lab

Experiment – 7: Programming exercises in NoSQL

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1. **Aim:** To perform NoSQL Database Operation.

2. **Objectives:**
   - To understand NoSQL type of database
   - To implement mongodb and handle unstructured database.

3. **Outcomes:** After study of this experiment, the student will be able to
   - Store and retrieve different types of data in mongodb.
   - Understand the importance of NoSQL.

4. **Prerequisite:** NoSQL, Mongodb.

5. **Requirements:** PC,Internet and MongDB.

6. **Brief Theory:**
   Students need to write the theory of following points.
   1. Features of Mongodb
   2. Advantages of MongoDB over RDBMS

7. **Laboratory Exercise**
 Execute Minimum 20 commands. Example of which are given below. Also include CRUD commands
   - To see the list of databases in the system:

   ```
   test> show dbs;
   admin        40.00 KiB
   college      72.00 KiB
   config       72.00 KiB
   local        80.00 KiB
   wanderlust   80.00 KiB
   ```

   - To select a database.

   ```
   test> use college
   switched to db college
   college> db
   college
   ```

   - To find out the currently selected database:

   ```
   test> use college
   switched to db college
   college> db
   college
   ```

- To delete / drop a database then do this:

```
wanderlust> show collections
listings
```

```
college> db.dropDatabase()
{ ok: 1, dropped: 'college' }
college> show collections
```

- To see the collections in a database:

```
wanderlust> show collections
listings
```

- Create a new database named "Exam":

```
college> use Exam
switched to db Exam
Exam> use wanderlust
switched to db wanderlust
```

- To read data from collection

```
listings
wanderlust> db.listings.find({})
[
  {
    _id: ObjectId('67e27f3bb04a81e5d22a3ab7'),
    title: 'Modern Loft in Downtown',
    description: '  Is a Sweet Place.',
    image: {
      filename: 'listingimage',
      url: 'https://images.unsplash.com/photo-1501785888041-af3ef285b470?ixlib=rb-4.0.3&ixid=M3wxMjA
to=format&fit=crop&w=800&q=60'
    },
    price: 1100,
    location: 'New York City',
    country: 'United States',
    __v: 0
```

Remove an entry from the database

```
wanderlust> db.listings.deleteOne({title:"Beachfront Villa in Greece"})
{ acknowledged: true, deletedCount: 1 }
```

- To get a count of entries in a database

```
wanderlust> db.listings.countDocuments()
27
```

- Updating a entry

```
wanderlust> db.listings.updateOne({id:'67e27f3bb04a81e5d22a3acb'},{$set:{title:"Beachfront villa in G
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
```

- To drop a database from the data-set

```
wanderlust> show collections
listings
```

- Using where condition to find data

```
wanderlust> db.listings.find({ price: { $lt: 1000 } })
[
  {
    _id: ObjectId('67e27f3bb04a81e5d22a3aba'),
    title: 'Secluded Treehouse Getaway',
    description: "Live among the treetops in this unique treehouse retreat. A true n
    image: {
      filename: 'listingimage',
      url: 'https://images.unsplash.com/photo-1520250497591-112f2f40a3f4?ixlib=rb-4.
to=format&fit=crop&w=800&q=60'
    },
    price: 800,
    location: 'Portland',
    country: 'United States',
    __v: 0
  },
```

- Using function findOne()

```
wanderlust> db.listings.findOne({ price: { $lt: 1000 } })
{
  _id: ObjectId('67e27f3bb04a81e5d22a3aba'),
  title: 'Secluded Treehouse Getaway',
  description: "Live among the treetops in this unique treehouse retreat. A true nature lover's paradise."
  image: {
    filename: 'listingimage',
    url: 'https://images.unsplash.com/photo-1520250497591-112f2f40a3f4?ixlib=rb-4.0.3&ixid=M3wxMjA3fDB8MHx
=format&fit=crop&w=800&q=60'
  },
  price: 800,
  location: 'Portland',
  country: 'United States',
  __v: 0
}
```

Equal query

```
wanderlust> db.listings.find({ country: "United States" })
[
  {
    _id: ObjectId('67e27f3bb04a81e5d22a3ab7'),
    title: 'Modern Loft in Downtown',
    description: '   Is a Sweet Place.',
    image: {
      filename: 'ListingImage',
      url: 'https://images.unsplash.com/photo-1501785888041-af3ef285b470?ixlib=rb-4.0.3&ixid=M3wxMjA3fD88MHxzZWFy
to=format&fit=crop&w=800&q=60'
    },
    price: 1100,
    location: 'New York City',
    country: 'United States',
    __v: 0
  }
]
```

Conclusion:We learnt the implementation of mongosh command.