Aayush Shah
19BCE245
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Big Data Analytics

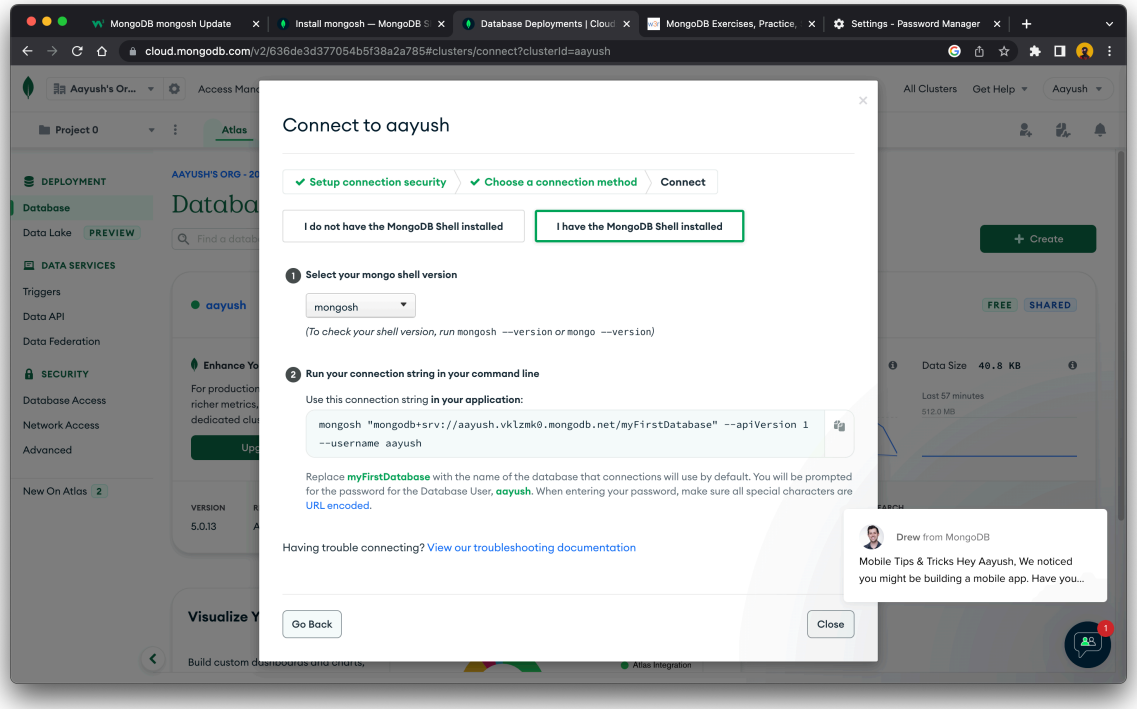
Practical 8

Aim

Setup MongoDB environment in your system. Import Restaurant Dataset and perform CRUD operation.

Using MongoDB Atlas (online database)

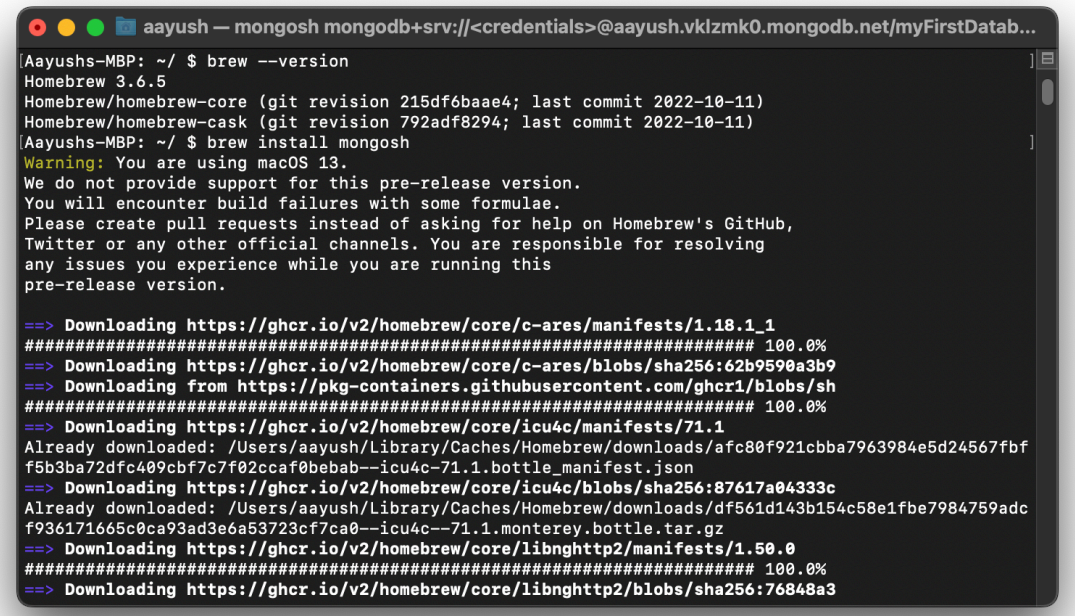
1. Creating account and setting up on *https://www.mongodb.com/atlas/database*



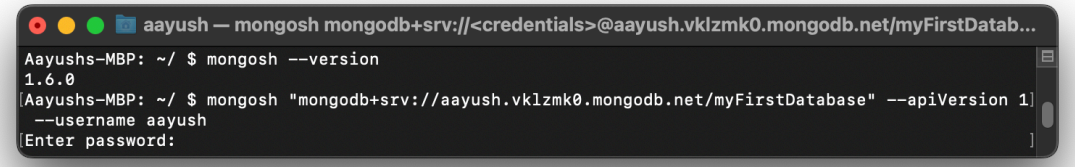
2. Installing *mongosh* with *HomeBrew*

Also we can use inbuilt mongosh command prompt which comes with *mongodb compass*

Which can be downloaded through *https://www.mongodb.com/products/compass*



3. Checking *mongodb* version and connecting to the database

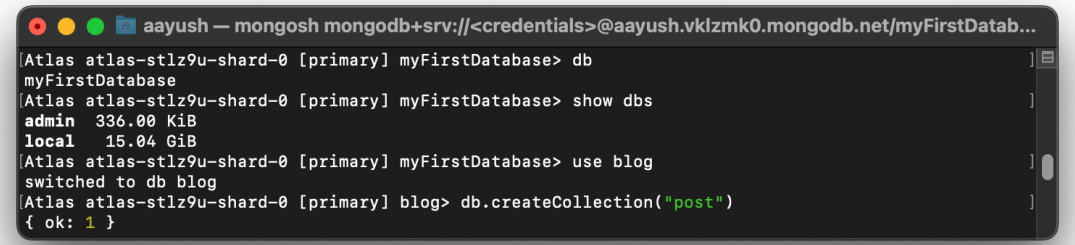


4. Various basic commands execution

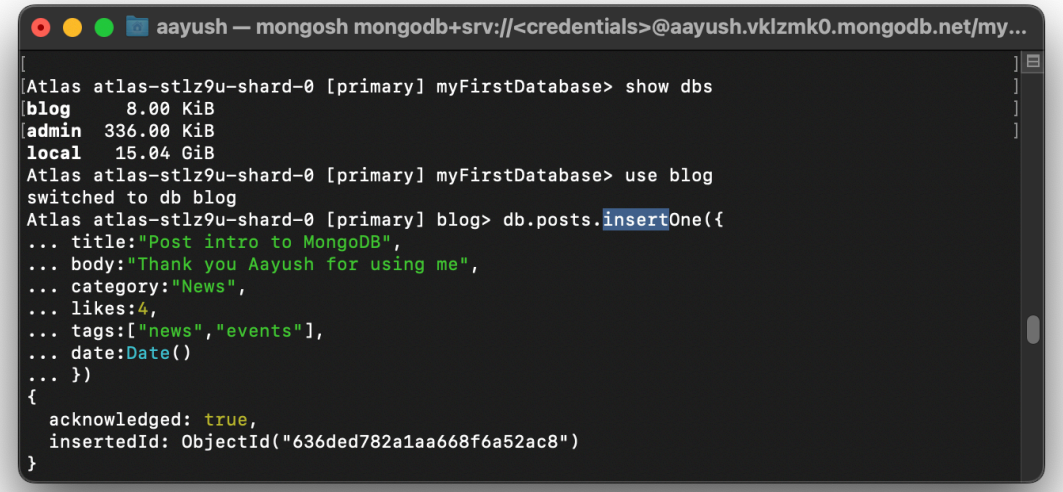
   4.1. *db* : check current database

   4.2. *Show dbs* : check available database

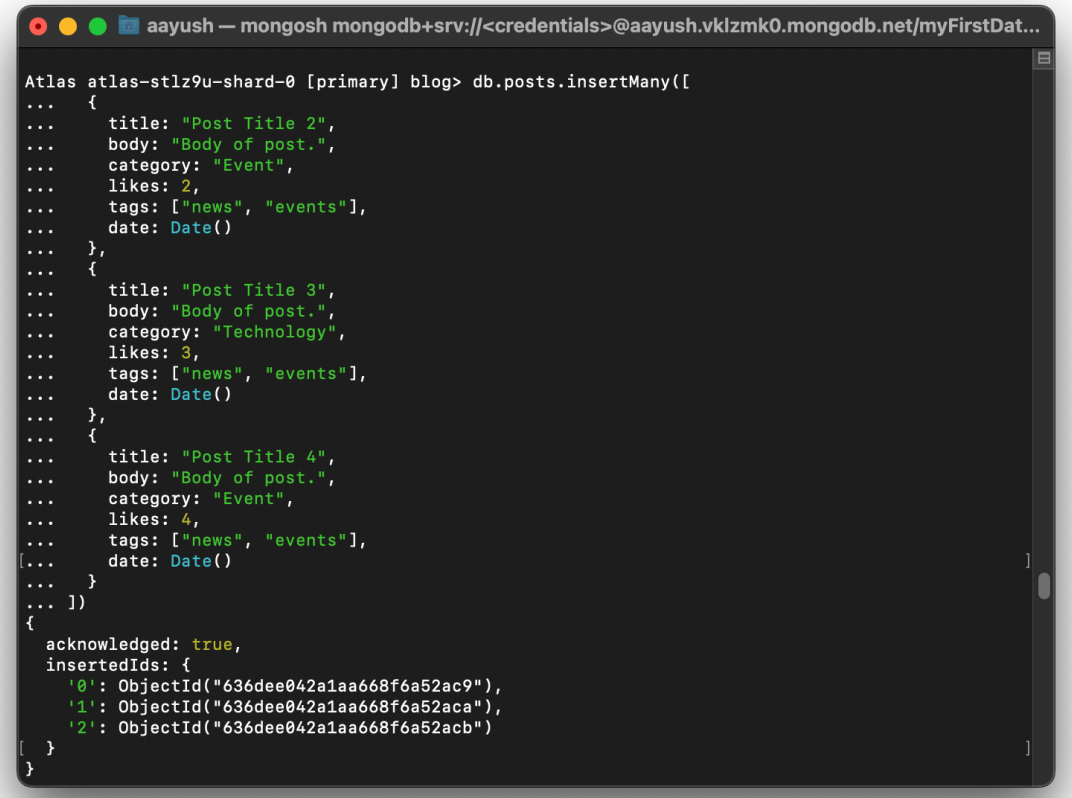
   4.3. *Use <name>* : create new database named as <name>



5. *insertOne* command for inserting a document



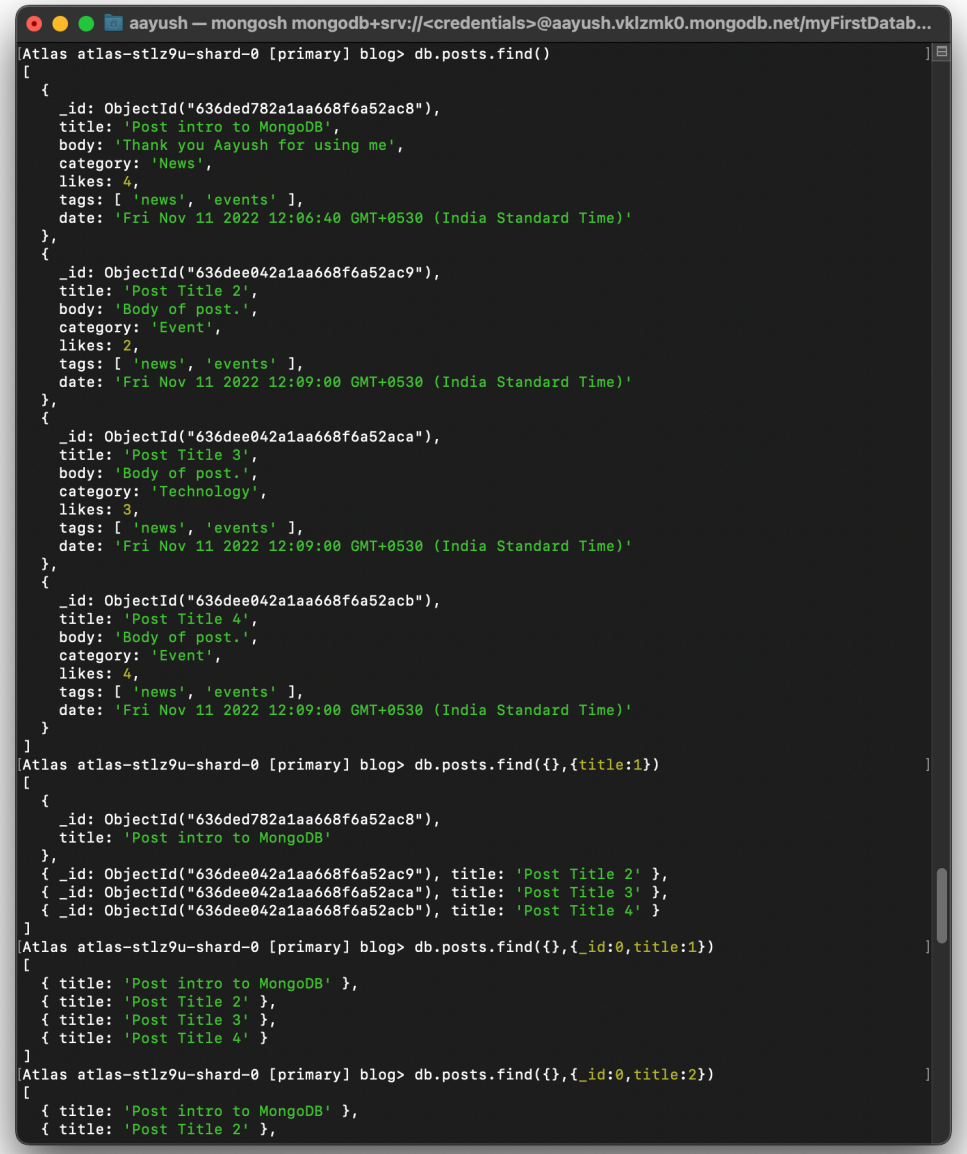
6. *insertMany* command for inserting more than one documents



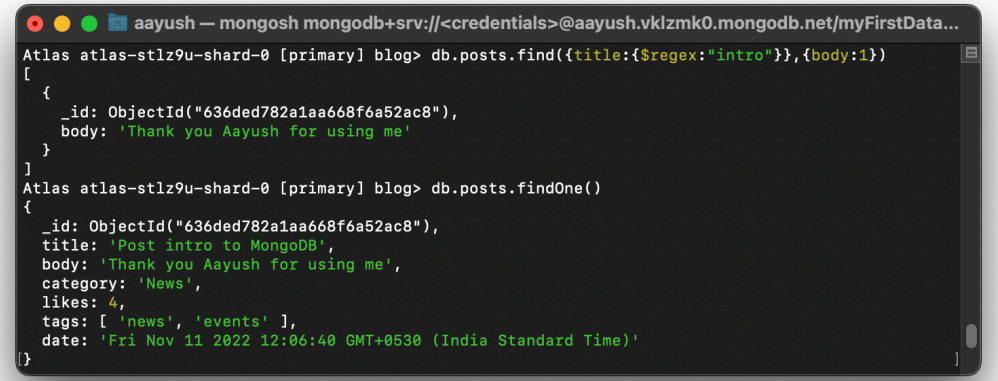
7. Different usecase of *find* to display documents

7.1. *find()* : display whole collection

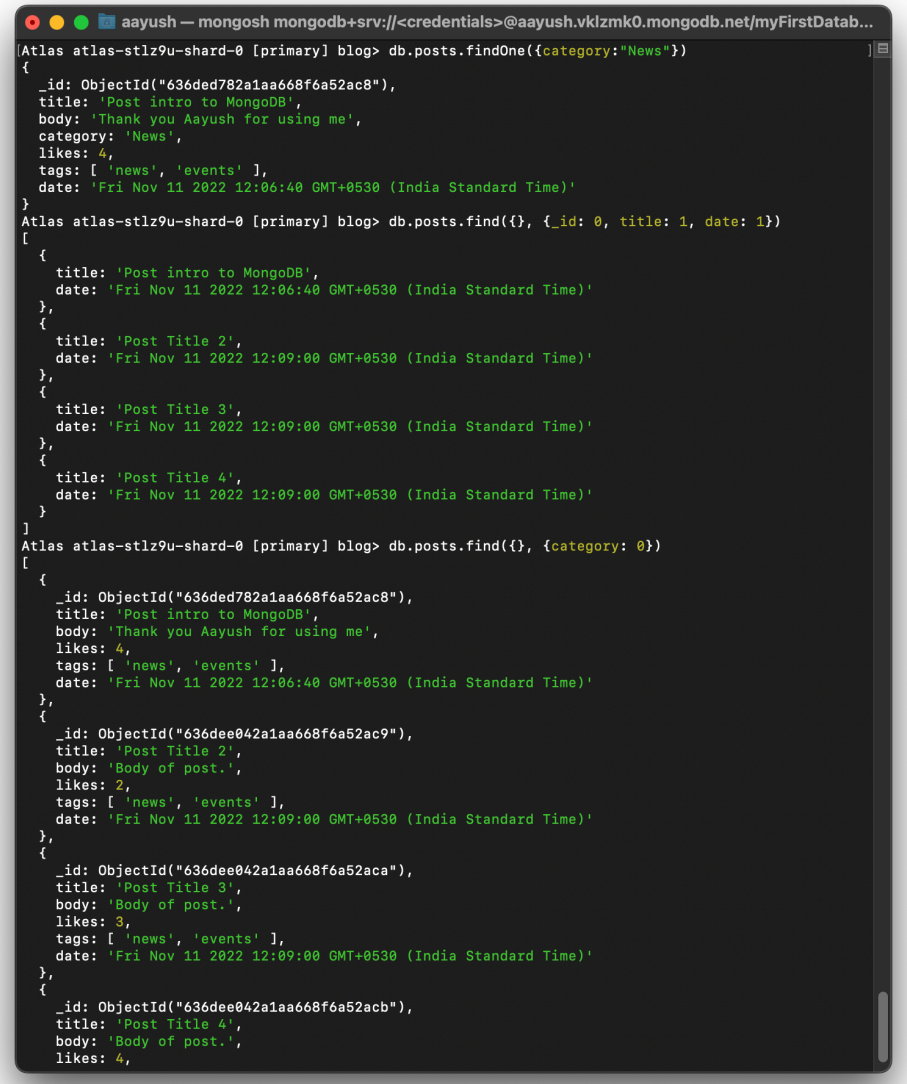
7.2. *find({},{_id:0,name:1})* : Only show name field without showing ids



8. Query for finding documents which contains intro in title field and use of findOne for only giving one output



9. Different uses of *findOne*



10. Update document

• To update an existing document we can use the *updateOne()* or *updateMany()* methods.

• The first parameter is a query object to define which document or documents should be updated.

• The second parameter is an object defining the updated

Here we'll perform update operation to update the like count of specific title

10.1. First query displays the whole table

10.2. Second query is for updating data

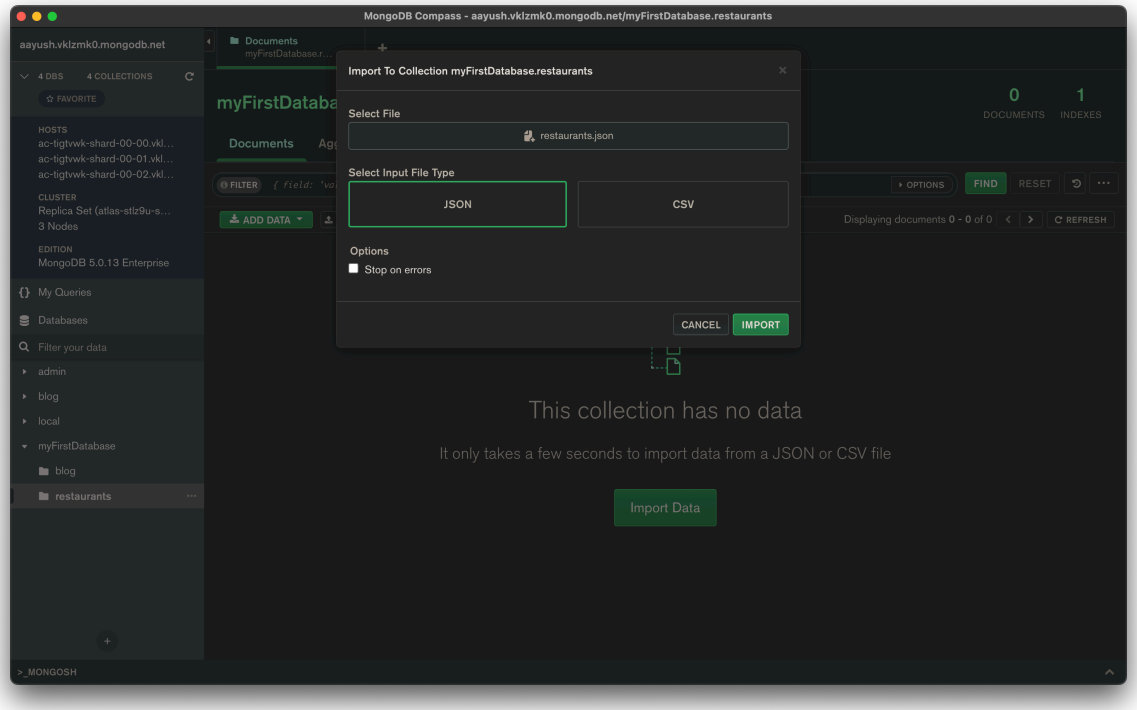
10.3. Third query is for displaying updated data

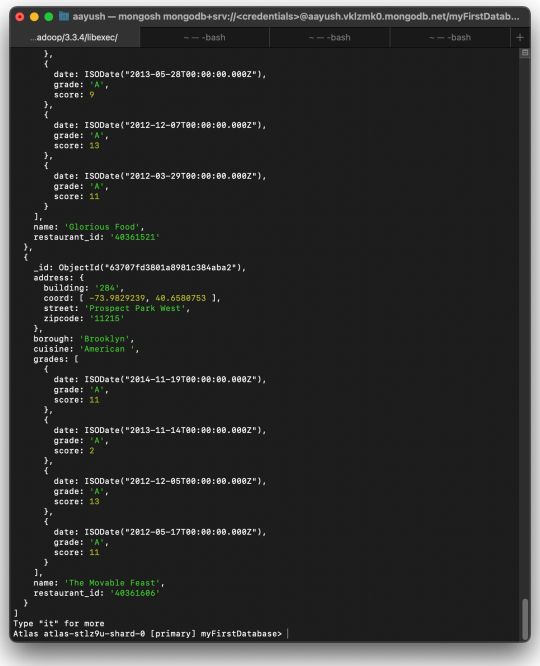
aayush — mongosh mongodb+srv://<credentials>@aayush.vklzmk0.mongodb.net/myFirstDatab...

```
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
Atlas atlas-stlz9u-shard-0 [primary] blog> db.posts.find({},{title:1,likes:1})
[
  {
    _id: ObjectId("636ded782a1aa668f6a52ac8"),
    title: 'Post intro to MongoDB',
    likes: 4
  },
  {
    _id: ObjectId("636dee042a1aa668f6a52ac9"),
    title: 'Post Title 2',
    likes: 2
  },
  {
    _id: ObjectId("636dee042a1aa668f6a52aca"),
    title: 'Post Title 3',
    likes: 3
  },
  {
    _id: ObjectId("636dee042a1aa668f6a52acb"),
    title: 'Post Title 4',
    likes: 4
  }
]
Atlas atlas-stlz9u-shard-0 [primary] blog> db.posts.updateOne({title:"Post Title 2"},{$set:{likes:1
0}})
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
Atlas atlas-stlz9u-shard-0 [primary] blog> db.posts.find({},{title:1,likes:1})
[
  {
    _id: ObjectId("636ded782a1aa668f6a52ac8"),
    title: 'Post intro to MongoDB',
    likes: 4
  },
  {
    _id: ObjectId("636dee042a1aa668f6a52ac9"),
    title: 'Post Title 2',
    likes: 10
  },
  {
    _id: ObjectId("636dee042a1aa668f6a52aca"),
    title: 'Post Title 3',
    likes: 3
  },
  {
    _id: ObjectId("636dee042a1aa668f6a52acb"),
    title: 'Post Title 4',
    likes: 4
  }
]
Atlas atlas-stlz9u-shard-0 [primary] blog>
```

11. Importing json data file (restaurants.json) and display documents in collection

db.restaurants.find()





12. Query to display the first 5 restaurant which is in the borough Bronx

db.restaurants.find({"borough": "Bronx"}).limit(5);

13. Query to display the next 5 restaurants after skipping first 5 which are in the borough Bronx.

db.restaurants.find({"borough": "Bronx"}).skip(5).limit(5)

14. Query to find the restaurants who achieved a score more than 90.

db.restaurants.find({grades : { $elemMatch:{"score":{$gt : 90}}}});

15. Query to find the restaurants that achieved a score, more than 80 but less than 100.

16. Write a MongoDB query to arrange the name of the restaurants in descending along with all the columns

Conclusion

From this practical, I installed mongoDB shell **mongosh** and used mongosh shell online as well as in mongodb compass. I also executed different queries for different crud operations. Moreover, I learnt how to import json file manually through mongodb compass.