WORKING WITH MONGODB

I.   CREATE DATABASE IN MONGODB.

```
Atlas atlas-8epmyl-shard-0 [primary] mydb> use bds
switched to db bds
Atlas atlas-8epmyl-shard-0 [primary] bds> show dbs
admin   232.00 KiB
local    27.65 GiB
```

II.   CREATE OPERATIONS:

1. To create a collection by the name "Student". Let us take a look at the collection list prior to the creation of the new collection "Student".

   db.createCollection("Student");

```
Atlas atlas-8epmyl-shard-0 [primary] bds> db.createCollection("student");
{ ok: 1 }
```

2. To drop a collection by the name "Student".

   db.Student.drop();

```
Atlas atlas-8epmyl-shard-0 [primary] bds> show collections
student
Atlas atlas-8epmyl-shard-0 [primary] bds> db.student.drop()
true
Atlas atlas-8epmyl-shard-0 [primary] bds> show collections
```

3. Create a collection by the name "Students" and store the following data in it.

   db.Student.insert({_id:1,StudName:"MichelleJacintha",Grade:"VII",Hobbies:"InternetSurfing"});

```
Atlas atlas-8epmyl-shard-0 [primary] bds> db.createCollection("student");
{ ok: 1 }
Atlas atlas-8epmyl-shard-0 [primary] bds> show collections
student
```

III. INSERT OPERATIONS:

```
Atlas atlas-8epmyl-shard-0 [primary] bds> db.student.insert({id:1,studname:"anu",grade:"I",section:"B"})
DeprecationWarning: Collection.insert() is deprecated. Use insertOne, insertMany, or bulkWrite.
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('67c6dedf4f4e6bac69fa4214') }
}
Atlas atlas-8epmyl-shard-0 [primary] bds> db.student.insert({id:2,studname:"seenu",grade:"II",section:"A"})
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('67c6def64f4e6bac69fa4215') }
}
Atlas atlas-8epmyl-shard-0 [primary] bds> db.student.insert({id:3,studname:"thanu",grade:"III",section:"A"})
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('67c6df1a4f4e6bac69fa4216') }
}
```

```
bds> db.student.insertOne({name:"John",age:30,city:"new york"})
{
  acknowledged: true,
  insertedId: ObjectId('67c87daebce5194002fa4214')
}
```

```
bds> db.student.insertMany([{name:"Alice",age:32,city:"los angeles"},
{name:"alice",age:39,city:"chicago"}])
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('67c87e68bce5194002fa4216'),
    '1': ObjectId('67c87e68bce5194002fa4217')
  }
}
```

IV. UPDATE OPERATIONS

Before updating Collection:

```
Atlas atlas-8epmyl-shard-0 [primary] bds> db.student.find()
[
  {
    _id: ObjectId('67c6dedf4f4e6bac69fa4214'),
    id: 1,
    studname: 'anu',
    grade: 'I',
    section: 'B'
  },
  {
    _id: ObjectId('67c6def64f4e6bac69fa4215'),
    id: 2,
    studname: 'seenu',
    grade: 'II',
    section: 'A'
  },
  {
    _id: ObjectId('67c6df1a4f4e6bac69fa4216'),
    id: 3,
    studname: 'thanu',
    grade: 'III',
    section: 'A'
  }
]
```

update operation:

```
Atlas atlas-8epmyl-shard-0 [primary] bds> db.student.update({id:3,studname:"thanu",grade:"III"},{$set:{grade:"V"}})
DeprecationWarning: Collection.update() is deprecated. Use updateOne, updateMany, or bulkWrite.
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
```

After updating Collection:

```
Atlas atlas-8epmyl-shard-0 [primary] bds> db.student.find()
[
  {
    _id: ObjectId('67c6dedf4f4e6bac69fa4214'),
    id: 1,
    studname: 'anu',
    grade: 'I',
    section: 'B'
  },
  {
    _id: ObjectId('67c6def64f4e6bac69fa4215'),
    id: 2,
    studname: 'seenu',
    grade: 'II',
    section: 'A'
  },
  {
    _id: ObjectId('67c6df1a4f4e6bac69fa4216'),
    id: 3,
    studname: 'thanu',
    grade: 'V',
    section: 'A'
  }
]
```

```
bds> db.student.updateOne({name:"John"},{$set:{age:33}},{upsert:true}
);
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
```

```
bds> db.student.updateMany({name:"John"},{$set:{age:33}},{upsert:true
});
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 0,
  upsertedCount: 0
}
```

V. DELETE OPERATIONS:

```
bds> db.student.deleteOne({name:"John"})
{ acknowledged: true, deletedCount: 1 }
```

```
bds> db.student.deleteMany({age:{$lt:50}})
{ acknowledged: true, deletedCount: 1 }
```

VI. FIND METHOD

```
Atlas atlas-8epmyl-shard-0 [primary] bds> db.student.find()
[
  {
    _id: ObjectId('67c6dedf4f4e6bac69fa4214'),
    id: 1,
    studname: 'anu',
    grade: 'I',
    section: 'B'
  },
  {
    _id: ObjectId('67c6def64f4e6bac69fa4215'),
    id: 2,
    studname: 'seenu',
    grade: 'II',
    section: 'A'
  },
  {
    _id: ObjectId('67c6df1a4f4e6bac69fa4216'),
    id: 3,
    studname: 'thanu',
    grade: 'V',
    section: 'A'
  }
]
```

A. To search for documents from the "Students" collection based on certain search criteria.

```
Atlas atlas-8epmyl-shard-0 [primary] bds> db.student.find({studname:"seenu"}
)
[
  {
    _id: ObjectId('67c6def64f4e6bac69fa4215'),
    id: 2,
    studname: 'seenu',
    grade: 'II',
    section: 'A'
  }
]
```

B. To display only the StudName and Grade from all the documents of the Students collection. The identifier_id should be suppressed and NOT displayed.

```
Atlas atlas-8epmyl-shard-0 [primary] bds> db.student.find({},{studname:1,gra
de:1,_id:0})
[
  { studname: 'anu', grade: 'I' },
  { studname: 'seenu', grade: 'II' },
  { studname: 'thanu', grade: 'V' }
]
```

C. To find those documents where the Grade is set to 'I'

```
Atlas atlas-8epmyl-shard-0 [primary] bds> db.student.find({ grade: { $eq: "I
" }}).pretty()
[
  {
    _id: ObjectId('67c6dedf4f4e6bac69fa4214'),
    id: 1,
    studname: 'anu',
    grade: 'I',
    section: 'B'
  }
]
```

D. To find those documents from the Students collection where the student name is set to either 'anu' or is set to 'seenu'.

```
Atlas atlas-8epmyl-shard-0 [primary] bds> db.student.find({studname:{$in:["anu","seenu"]}})
.pretty()
[
  {
    _id: ObjectId('67c6dedf4f4e6bac69fa4214'),
    id: 1,
    studname: 'anu',
    grade: 'I',
    section: 'B'
  },
  {
    _id: ObjectId('67c6def64f4e6bac69fa4215'),
    id: 2,
    studname: 'seenu',
    grade: 'II',
    section: 'A'
  }
]
```

E. To find documents from the Students collection where the StudName begins with "s".

```
Atlas atlas-8epmyl-shard-0 [primary] bds> db.student.find({studname:/^s/}).pretty()
[
  {
    _id: ObjectId('67c6def64f4e6bac69fa4215'),
    id: 2,
    studname: 'seenu',
    grade: 'II',
    section: 'A'
  }
]
```

F. To find documents from the Students collection where the StudNamehas an "e" in any position.

```
Atlas atlas-8epmyl-shard-0 [primary] bds> db.student.find({studname:/e/}).pretty()
[
  {
    _id: ObjectId('67c6def64f4e6bac69fa4215'),
    id: 2,
    studname: 'seenu',
    grade: 'II',
    section: 'A'
  }
]
```

G. To find documents from the Students collection where the StudName ends with "u".

```
Atlas atlas-8epmyl-shard-0 [primary] bds> db.student.find({studname:/u$/}).pretty()
[
  {
    _id: ObjectId('67c6dedf4f4e6bac69fa4214'),
    id: 1,
    studname: 'anu',
    grade: 'I',
    section: 'B'
  },
  {
    _id: ObjectId('67c6def64f4e6bac69fa4215'),
    id: 2,
    studname: 'seenu',
    grade: 'II',
    section: 'A'
  },
  {
    _id: ObjectId('67c6df1a4f4e6bac69fa4216'),
    id: 3,
    studname: 'thanu',
    grade: 'V',
    section: 'A'
  }
]
```

H. To find the number of documents in the Students collection.

```
Atlas atlas-8epmyl-shard-0 [primary] bds> db.student.count();
3
```

I. To sort the documents from the Students collection in the descending order of StudName.

```
Atlas atlas-8epmyl-shard-0 [primary] bds> db.student.find().sort({studname:-1}).pretty()
[
  {
    _id: ObjectId('67c6df1a4f4e6bac69fa4216'),
    id: 3,
    studname: 'thanu',
    grade: 'V',
    section: 'A'
  },
  {
    _id: ObjectId('67c6def64f4e6bac69fa4215'),
    id: 2,
    studname: 'seenu',
    grade: 'II',
    section: 'A'
  },
  {
    _id: ObjectId('67c6dedf4f4e6bac69fa4214'),
    id: 1,
    studname: 'anu',
    grade: 'I',
    section: 'B'
  }
]
```

J. To sort the documents from the Students collection in the ascending order of StudName.

```
Atlas atlas-8epmyl-shard-0 [primary] bds> db.student.find().sort({studname:1}).pretty()
[
  {
    _id: ObjectId('67c6dedf4f4e6bac69fa4214'),
    id: 1,
    studname: 'anu',
    grade: 'I',
    section: 'B'
  },
  {
    _id: ObjectId('67c6def64f4e6bac69fa4215'),
    id: 2,
    studname: 'seenu',
    grade: 'II',
    section: 'A'
  },
  {
    _id: ObjectId('67c6df1a4f4e6bac69fa4216'),
    id: 3,
    studname: 'thanu',
    grade: 'V',
    section: 'A'
  }
]
```