

LAB 2

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I. Perform the following DB operations using MongoDB.

1. Create a database "Student" with the following attributes RollNo, Age, ContactNo, Email-

Id.

```
Atlas atlas-obhkd-shard-0 [primary] test> use lab2
switched to db lab2
Atlas atlas-obhkd-shard-0 [primary] lab2> db.createCollection("Student");
{ ok: 1 }
Atlas atlas-obhkd-shard-0 [primary] lab2> db.Student.insert({RollNo:1, Age:21, Cont:9876, email:"antara.de9@gmail.com"});
DeprecationWarning: Collection.insert() is deprecated. Use insertOne, insertMany, or bulkWrite.
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('660a7e27c196623bb2d14a0e') }
}
Atlas atlas-obhkd-shard-0 [primary] lab2> db.Student.insert({RollNo:2, Age:22, Cont:9976, email:"anushka.de9@gmail.com"});
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('660a7e4bc196623bb2d14a0f') }
}
Atlas atlas-obhkd-shard-0 [primary] lab2> db.Student.insert({RollNo:3, Age:21, Cont:5576, email:"anubhav.de9@gmail.com"});
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('660a7e56c196623bb2d14a10') }
}
Atlas atlas-obhkd-shard-0 [primary] lab2> db.Student.insert({RollNo:4, Age:20, Cont:4476, email:"pani.de9@gmail.com"});
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('660a7e65c196623bb2d14a11') }
}
Atlas atlas-obhkd-shard-0 [primary] lab2> db.Student.insert({RollNo:10, Age:23, Cont:2276, email:"rekha.de9@gmail.com"});
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('660a7e6ec196623bb2d14a12') }
}
Atlas atlas-obhkd-shard-0 [primary] lab2> db.Student.find()
```

use lab2

```
db.createCollection("Student");
```

2. Insert appropriate values

```
db.Student.insert({RollNo:1, Age:21, Cont:9876, email:"antara.de9@gmail.com"});
```

```
db.Student.insert({RollNo:2, Age:22, Cont:9976, email:"anushka.de9@gmail.com"});
```

```
db.Student.insert({RollNo:3, Age:21, Cont:5576, email:"anubhav.de9@gmail.com"});
```

```
db.Student.insert({RollNo:4, Age:20, Cont:4476, email:"pani.de9@gmail.com"});
```

```
db.Student.insert({RollNo:10, Age:23, Cont:2276, email:"rekha.de9@gmail.com"});
```

```

{
  acknowledged: true,
  insertedIds: { '0': ObjectId('660a7e6ec196623bb2d14a12') }
}
Atlas atlas-obhkd-shard-0 [primary] lab2> db.Student.find()
[
  {
    _id: ObjectId('660a7e27c196623bb2d14a0e'),
    RollNo: 1,
    Age: 21,
    Cont: 9876,
    email: 'antara.de9@gmail.com'
  },
  {
    _id: ObjectId('660a7e4bc196623bb2d14a0f'),
    RollNo: 2,
    Age: 22,
    Cont: 9976,
    email: 'anushka.de9@gmail.com'
  },
  {
    _id: ObjectId('660a7e56c196623bb2d14a10'),
    RollNo: 3,
    Age: 21,
    Cont: 5576,
    email: 'anubhav.de9@gmail.com'
  },
  {
    _id: ObjectId('660a7e65c196623bb2d14a11'),
    RollNo: 4,
    Age: 20,
    Cont: 4476,
    email: 'pani.de9@gmail.com'
  },
  {
    _id: ObjectId('660a7e6ec196623bb2d14a12'),
    RollNo: 10,
    Age: 23,
    Cont: 2276,
    email: 'rekha.de9@gmail.com'
  }
]
Atlas atlas-obhkd-shard-0 [primary] lab2> |
fwd-i-search: _

```

3. Write query to update Email-Id of a student with rollno 10.

```

Atlas atlas-obhkd-shard-0 [primary] lab2> db.Student.update({RollNo:10},{ $set:{email:"Abhinav@gmail.com"}})
DeprecationWarning: Collection.update() is deprecated. Use updateOne, updateMany, or bulkWrite.
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}

```

db.Student.update({RollNo:10},{ \$set:{email:"Abhinav@gmail.com"}})

4. Replace the student name from "ABC" to "FEM" of rollno 11

db.Student.update({RollNo:11,Name:"ABC"},{ \$set:{Name:"FEM"}})

```
Atlas atlas-obbhkd-shard-0 [primary] lab2> db.Student.update({RollNo:11,Name:"ABC"},{$set:{Name:"FEM"}})
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
```

II. Perform the following DB operations using MongoDB.

1. Create a collection by name Customers with the following attributes.

Cust_id, Acc_Bal, Acc_Type

```
Atlas atlas-obbhkd-shard-0 [primary] lab2> db.createCollection("Customers");
{ ok: 1 }
```

db.createCollection("Customers");

2. Insert at least 5 values into the table

```
Atlas atlas-obbhkd-shard-0 [secondary] lab2> db.Customers.insert({cust_id:1,Balance:200, Type:"S"});
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('660a83d4c196623bb2d14a14') }
}
Atlas atlas-obbhkd-shard-0 [primary] lab2> db.Customers.insert({cust_id:1,Balance:1000, Type:"Z"})
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('660a83e9c196623bb2d14a15') }
}
Atlas atlas-obbhkd-shard-0 [primary] lab2> db.Customers.insert({cust_id:2,Balance:100, Type:"Z"});
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('660a83f0c196623bb2d14a16') }
}
Atlas atlas-obbhkd-shard-0 [primary] lab2> db.Customers.insert({cust_id:2,Balance:1000, Type:"C"});
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('660a83f8c196623bb2d14a17') }
}
Atlas atlas-obbhkd-shard-0 [primary] lab2> db.Customers.insert({cust_id:2,Balance:500, Type:"C"});
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('660a8400c196623bb2d14a18') }
}
Atlas atlas-obbhkd-shard-0 [primary] lab2> db.Customers.insert({cust_id:2,Balance:50, Type:"S"});
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('660a8407c196623bb2d14a19') }
}
Atlas atlas-obbhkd-shard-0 [primary] lab2> db.Customers.insert({cust_id:3,Balance:500, Type:"Z"});
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('660a840fc196623bb2d14a1a') }
```

db.Customers.insert({cust_id:1,Balance:200, Type:"S"});

db.Customers.insert({cust_id:1,Balance:1000, Type:"Z"})

db.Customers.insert({cust_id:2,Balance:100, Type:"Z"});

```
db.Customers.insert({cust_id:2,Balance:1000, Type:"C"});
db.Customers.insert({cust_id:2,Balance:500, Type:"C"});
db.Customers.insert({cust_id:2,Balance:50, Type:"S"});
db.Customers.insert({cust_id:3,Balance:500, Type:"Z"});
```

3. Write a query to display those records whose total account balance is greater than 1200 of account type 'Z' for each customer_id.

```
Atlas atlas-obhkd-shard-0 [primary] lab2> db.Customers.aggregate ({ $match: { Type: "Z" } }, { $group : { _id : "$cust_id", TotAccBal : { $sum: "$Balance" } } }, { $match: { TotAccBal: { $gt: 1200 } } } );
[ { _id: 3, TotAccBal: 5600 } ]
```

```
db.Customers.aggregate ({ $match: { Type: "Z" } }, { $group : { _id : "$cust_id", TotAccBal : { $sum: "$Balance" } } }, { $match: { TotAccBal: { $gt: 1200 } } } );
```

4. Determine Minimum and Maximum account balance for each customer_id

```
Atlas atlas-obhkd-shard-0 [primary] lab2> db.Customers.aggregate ({ $group : { _id : "$cust_id", minAccBal : { $min: "$Balance" }, maxAccBal : { $max: "$Balance" } } } );
[
  { _id: 1, minAccBal: 200, maxAccBal: 1000 },
  { _id: 2, minAccBal: 50, maxAccBal: 1000 },
  { _id: 3, minAccBal: 500, maxAccBal: 500 }
]
```

```
db.Customers.aggregate ({ $group : { _id : "$cust_id", minAccBal : { $min: "$Balance" }, maxAccBal : { $max: "$Balance" } } } );
```