

# MongoDB Queries:

## Connecting via Terminal

```
The server generated these startup warnings when booting
2024-04-02T14:07:11.772+05:30: Using the XFS filesystem is strongly recommended with the WiredTiger storage engine. See http://dochub.mongodb.org/core/prodnotes-filesystem
2024-04-02T14:07:13.965+05:30: Access control is not enabled for the database. Read and write access to data and configuration is unrestricted
-----
bmscscse@bmscscse-HP-Elite-Tower-800-G9-Desktop-PC: $ mongosh "mongodb+srv://cluster0.rgt87ws.mongodb.net/DB" --apiVersion 1 --username kanjikacs21
Enter password: ****
Current Mongosh Log ID: 660bc92b49e8e6b3e924e25d
Connecting to:  mongodb+srv://cluster0.rgt87ws.mongodb.net/DB?appName=mongosh+2.1.5
Using MongoDB:  7.0.7 (API Version 1)
Using Mongosh:  2.1.5
Mongosh 2.2.2 is available for download: https://www.mongodb.com/try/download/shell
For mongosh info see: https://docs.mongodb.com/mongosh-shell/
Atlas atlas-6navq6-shard-0 [primary] DB> □
```

I. Perform the following DB operations using MongoDB.

1. Create a database “Student” with the following attributes Rollno, Age, ContactNo, Email-Id.
2. Insert appropriate values
3. Write query to update Email-Id of a student with rollno 10.
4. . Replace the student name from “ABC” to “FEM” of rollno 11

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
2. Insert at least 5 values into the table
3. Write a query to display those records whose total account balance is greater than 1200 of account type ‘Z’ for each customer\_id.
4. Determine Minimum and Maximum account balance for each customer\_i

Solutions:

```
Atlas atlas-12eb3b-shard-0 [primary] DB> db.Student.update({rollNo:60},
{$set:{name:"Koko"}},{upsert:true});
```

```
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
```

```
Atlas atlas-12eb3b-shard-0 [primary] MY_DB> db.Student.find();
```

```
[
  {
    _id: 1,
```

```

    name: Riya,
    rollNo: 80,
    age: 14,
    phNo: '9999988888',
    email: riyas@gmail.com'
  },
  {
    _id: 2,
    name: 'Vaibhav',
    rollNo: 70,
    age: 15,
    email: 'vaibhav@gmail.com',
    phNo: '8888855555'
  },
  {
    _id: 3,
    name: 'Koko',
    rollNo: 60,
    age: 14,
    email: 'koko@gmail.com',
    phNo: '9305678192'
  }
]
Atlas atlas-12eb3b-shard-0 [primary] DB> db.createCollection("Customers");
{ ok: 1 }
Atlas atlas-12eb3b-shard-0 [primary] DB>
db.Student.insertOne({custId:1,accBal:10000,accType:"saving"});
{
  acknowledged: true,
  insertedId: ObjectId('660295b055dc2f3d86c4479f')
}
Atlas atlas-12eb3b-shard-0 [primary] DB>
db.Customers.insertOne({custId:1,accBal:10000,accType:"saving"});
{
  acknowledged: true,
  insertedId: ObjectId('660295c155dc2f3d86c447a0')
}
Atlas atlas-12eb3b-shard-0 [primary] DB>
db.Customers.insertOne({custId:2,accBal:50000,accType:"current"});
{
  acknowledged: true,
  insertedId: ObjectId('6602960055dc2f3d86c447a1')
}

```

```

Atlas atlas-12eb3b-shard-0 [primary] DB>
db.Customers.insertOne({custId:3,accBal:60000,accType:"current"});
{
  acknowledged: true,
  insertedId: ObjectId('6602960e55dc2f3d86c447a2')
}
Atlas atlas-12eb3b-shard-0 [primary] DB>
db.Customers.insertOne({custId:4,accBal:20000,accType:"savings"});
{
  acknowledged: true,
  insertedId: ObjectId('6602961c55dc2f3d86c447a3')
}
Atlas atlas-12eb3b-shard-0 [primary] DB>
db.Customers.insertOne({custId:5,accBal:200000,accType:"current"});
{
  acknowledged: true,
  insertedId: ObjectId('6602962955dc2f3d86c447a4')
}
Atlas atlas-12eb3b-shard-0 [primary] DB>
db.Customers.update({custId:1},{ $set:{accType:"savings"}});
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
Atlas atlas-12eb3b-shard-0 [primary] DB> db.Customers.find();
[
  {
    _id: ObjectId('660295c155dc2f3d86c447a0'),
    custId: 1,
    accBal: 10000,
    accType: 'savings'
  },
  {
    _id: ObjectId('6602960055dc2f3d86c447a1'),
    custId: 2,
    accBal: 50000,
    accType: 'current'
  },
  {
    _id: ObjectId('6602960e55dc2f3d86c447a2'),
    custId: 3,

```

```

    accBal: 60000,
    accType: 'current'
  },
  {
    _id: ObjectId('6602961c55dc2f3d86c447a3'),
    custId: 4,
    accBal: 20000,
    accType: 'savings'
  },
  {
    _id: ObjectId('6602962955dc2f3d86c447a4'),
    custId: 5,
    accBal: 200000,
    accType: 'current'
  }
]
Atlas atlas-12eb3b-shard-0 [primary]DB>
db.Customers.insertOne({custId:1,accBal:30000,accType:"current"});
{
  acknowledged: true,
  insertedId: ObjectId('6602980955dc2f3d86c447a5')
}
Atlas atlas-12eb3b-shard-0 [primary] DB>
db.Customers.insertOne({custId:2,accBal:20000,accType:"savings"});
{
  acknowledged: true,
  insertedId: ObjectId('6602982f55dc2f3d86c447a6')
}
Atlas atlas-12eb3b-shard-0 [primary] DB>
db.Customers.update({custId:1},{ $set:{accType:"savings"}});
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 0,
  upsertedCount: 0
}
Atlas atlas-12eb3b-shard-0 [primary] DB>
db.Customers.update({custId:2},{ $set:{accType:"current"}});
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 0,

```

```
    upsertedCount: 0
  }
Atlas atlas-12eb3b-shard-0 [primary] DB> db.Customers.find();
[
  {
    _id: ObjectId('660295c155dc2f3d86c447a0'),
    custId: 1,
    accBal: 10000,
    accType: 'savings'
  },
  {
    _id: ObjectId('6602960055dc2f3d86c447a1'),
    custId: 2,
    accBal: 50000,
    accType: 'current'
  },
  {
    _id: ObjectId('6602960e55dc2f3d86c447a2'),
    custId: 3,
    accBal: 60000,
    accType: 'current'
  },
  {
    _id: ObjectId('6602961c55dc2f3d86c447a3'),
    custId: 4,
    accBal: 20000,
    accType: 'savings'
  },
  {
    _id: ObjectId('6602962955dc2f3d86c447a4'),
    custId: 5,
    accBal: 200000,
    accType: 'current'
  },
  {
    _id: ObjectId('6602980955dc2f3d86c447a5'),
    custId: 1,
    accBal: 30000,
    accType: 'current'
  },
  {
    _id: ObjectId('6602982f55dc2f3d86c447a6'),
    custId: 2,
    accBal: 20000,
```

```

    accType: 'savings'
  }
]
Atlas atlas-12eb3b-shard-0 [primary] DB>
db.Customers.update({custId:2,accBal:30000},{set:{accType:"savings"}});
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
Atlas atlas-12eb3b-shard-0 [primary] DB>
db.Customers.update({custId:2,accBal:20000},{set:{accType:"current"}});
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
Atlas atlas-12eb3b-shard-0 [primary] DB>
db.Customers.update({custId:1,accBal:30000},{set:{accType:"savings"}});
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
Atlas atlas-12eb3b-shard-0 [primary] DB> db.Customers.find();
[
  {
    _id: ObjectId('660295c155dc2f3d86c447a0'),
    custId: 1,
    accBal: 10000,
    accType: 'savings'
  },
  {
    _id: ObjectId('6602960055dc2f3d86c447a1'),
    custId: 2,
    accBal: 50000,
    accType: 'current'
  },
]

```

```
{
  _id: ObjectId('6602960e55dc2f3d86c447a2'),
  custId: 3,
  accBal: 60000,
  accType: 'current'
},
{
  _id: ObjectId('6602961c55dc2f3d86c447a3'),
  custId: 4,
  accBal: 20000,
  accType: 'savings'
},
{
  _id: ObjectId('6602962955dc2f3d86c447a4'),
  custId: 5,
  accBal: 200000,
  accType: 'current'
},
{
  _id: ObjectId('6602980955dc2f3d86c447a5'),
  custId: 1,
  accBal: 30000,
  accType: 'savings'
},
{
  _id: ObjectId('6602982f55dc2f3d86c447a6'),
  custId: 2,
  accBal: 20000,
  accType: 'current'
}
]
```

Atlas atlas-12eb3b-shard-0 [primary] DB>

```
db.Customers.aggregate({$match:{accType:'savings'}},{ $group:{_id:"$custId",TotalAccBal:{$sum:"$accBal"}}},{ $match:{TotalAccBal:{$gt:20000}}});
```

```
[ { _id: 1, TotalAccBal: 40000 } ]
```

Atlas atlas-12eb3b-shard-0 [primary] DB>

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

```
[
  { _id: 1, minAccBal: 10000, maxAccBal: 'accBal' },
  { _id: 4, minAccBal: 20000, maxAccBal: 'accBal' },
  { _id: 5, minAccBal: 200000, maxAccBal: 'accBal' },
  { _id: 2, minAccBal: 20000, maxAccBal: 'accBal' },
  { _id: 3, minAccBal: 60000, maxAccBal: 'accBal' }
```

```

]
Atlas atlas-12eb3b-shard-0 [primary] DB>
db.Customers.aggregate({$group:{_id:"$custId",minAccBal:{$min:"$accBal"},maxAcc
Bal:{$max:"$accBal"}}});
[
  { _id: 3, minAccBal: 60000, maxAccBal: 60000 },
  { _id: 4, minAccBal: 20000, maxAccBal: 20000 },
  { _id: 5, minAccBal: 200000, maxAccBal: 200000 },
  { _id: 2, minAccBal: 20000, maxAccBal: 50000 },
  { _id: 1, minAccBal: 10000, maxAccBal: 30000 }
]
Atlas atlas-12eb3b-shard-0 [primary] DB>

```

## Student Entries

QUERY RESULTS: 1-3 OF 3

<pre> _id: 1 Name: "Koko" Roll_No: 60 Age: 14 Contact_No: "9305678192" Email_id: "kokos@gmail.com" </pre>
<pre> _id: 2 Name: "Neha" Roll_No: 30 Age: 14 Contact_No: "9305178192" Email_id: "riyao@gmail.com" </pre>
<pre> _id: 3 Name: "Vaibhav" Roll_No: 20 </pre>

## Customer Entries

QUERY RESULTS: 1-7 OF 7

<pre> _id: ObjectId('660295c8c09e7a80f3e56c3b') cust_id: 1 Acc_Bal: 1234 Acc_Typ: "Savings" </pre>
<pre> _id: ObjectId('660295e5c09e7a80f3e56c3c') cust_id: 2 Acc_Bal: 2344 Acc_Typ: "Current" </pre>
<pre> _id: ObjectId('660295fdc09e7a80f3e56c3d') cust_id: 3 Acc_Bal: 4089 </pre>



Sorting based on account balance descending:

```
Atlas atlas-6navq6-shard-0 [primary] DB> db.customers.find().sort({Acc_Bal:-1}).pretty()
[
  {
    _id: ObjectId('66029629c09e7a80f3e56c3f'),
    cust_id: 5,
    Acc_Bal: 90929,
    Acc_Typ: 'Savings'
  },
  {
    _id: ObjectId('660297ffc09e7a80f3e56c40'),
    cust_id: 1,
    Acc_Bal: 4500,
    Acc_Typ: 'Savings'
  },
  {
    _id: ObjectId('660295fdc09e7a80f3e56c3d'),
    cust_id: 3,
    Acc_Bal: 4089,
    Acc_Typ: 'Current'
  },
  {
    _id: ObjectId('660295e5c09e7a80f3e56c3c'),
    cust_id: 2,
    Acc_Bal: 2344,
    Acc_Typ: 'Current'
  },
  {
    _id: ObjectId('660295c8c09e7a80f3e56c3b'),
    cust_id: 1,
    Acc_Bal: 1234,
    Acc_Typ: 'Savings'
  },
  {
    _id: ObjectId('6602981ec09e7a80f3e56c41'),
    cust_id: 2,
    Acc_Bal: 500,
    Acc_Typ: 'Current'
  },
  {
    _id: ObjectId('66029617c09e7a80f3e56c3e'),
    cust_id: 4,
    Acc_Bal: 409,
    Acc_Typ: 'Savings'
  }
]
```

Sorting based on Customer Id ascending:

```
Atlas atlas-6navq6-shard-0 [primary] DB> db.customers.find().sort({cust_id:1}).pretty()
[
  {
    _id: ObjectId('660295c8c09e7a80f3e56c3b'),
    cust_id: 1,
    Acc_Bal: 1234,
    Acc_Typ: 'Savings'
  },
  {
    _id: ObjectId('660297ffc09e7a80f3e56c40'),
    cust_id: 1,
    Acc_Bal: 4500,
    Acc_Typ: 'Savings'
  },
  {
    _id: ObjectId('660295e5c09e7a80f3e56c3c'),
    cust_id: 2,
    Acc_Bal: 2344,
    Acc_Typ: 'Current'
  },
  {
    _id: ObjectId('6602981ec09e7a80f3e56c41'),
    cust_id: 2,
    Acc_Bal: 500,
    Acc_Typ: 'Current'
  },
  {
    _id: ObjectId('660295fdc09e7a80f3e56c3d'),
    cust_id: 3,
    Acc_Bal: 4089,
    Acc_Typ: 'Current'
  },
  {
    _id: ObjectId('66029617c09e7a80f3e56c3e'),
    cust_id: 4,
    Acc_Bal: 409,
    Acc_Typ: 'Savings'
  },
  {
    _id: ObjectId('66029629c09e7a80f3e56c3f'),
    cust_id: 5,
    Acc_Bal: 90929,
    Acc_Typ: 'Savings'
  }
]
```