

```
Microsoft Windows [Version 10.0.22631.3296]
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C:\Users\arshn>git clone https://github.com/arshnoorkaursidhu/MongoDB-Workload-Documents.git
Cloning into 'MongoDB-Workload-Documents'...
remote: Enumerating objects: 4, done.
remote: Counting objects: 100% (4/4), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (4/4), done.

C:\Users\arshn>
```

MongoDB Compass - arshnoorkaursidhu\arshnoorkaursidhu\coursemanagement\assignments

arshnoorkaursidhu2.r...

My Queries Performance Databases

Database: coursemanagement

collections: assignments, courses, enrollments, instructions, students

Documents: 4 Aggregations Schema Indexes: 3 Validation

Your pipeline is currently empty. Generate aggregation

Preview STAGE

```
1 *.assignments.aggregate()
2 {
3   $lookup: {
4     from: "enrollments",
5     localField: "enrollment_id",
6     foreignField: "_id",
7     as: "enrollments"
8   }
9 }
10 {
11   $project: "$enrollments"
12 }
13 {
14   $lookup: {
15     from: "students",
16     localField: "enrollments.student_id",
17     foreignField: "_id",
18     as: "students"
19 }
```

4

Summary: { course: "10" }

Script: { _id: "course_10" }

MongoDB Compass - arshnoorkaur2\newton\mongodb\coursemanagement\enrollments

Connect Edit View Collections Help

arshnoorkaur2...

My Queries Performance Databases

Search

- TermiDB
- ...newton_xxxx_85oc239094d...
- admin
- config
- coursemanagement
 - assignments
 - courses
 - enrollments
 - instructors
 - students

coursemanagement > enrollments

Documents 4 Aggregations Schema Indexes Validation

Your pipeline is currently empty. Generate aggregation

Explain Explain Raw Options

Untitled - modified SAVE CREATE NEW EXPORT TO LABVIEW

PREVIEW STAGE

```
25 {
26   $group: {
27     _id: "$course_id",
28     total_enrollments: { $sum: 1 }
29   }
30 }
31 {
32   $sort: {
33     total_enrollments: { $gt: 0 }
34   }
35 }
```

Stage control is required

+ Add Stage

```
1 {
2   $group: {
3     _id: "$course_id",
4     avg_grade: { $avg: "$grade" }
5   }
6 }
7 }
8 }
```

Atlas atlas-c4eb50-shard-0 [primary] coursemanagement

MongoDB Compass - arshnoorkaur2\newton\mongodb\coursemanagement\assignments

Connect Edit View Collections Help

arshnoorkaur2...

My Queries Performance Databases

Search

- TermiDB
- ...newton_xxxx_85oc239094d...
- admin
- config
- coursemanagement
 - assignments
 - courses
 - enrollments
 - instructors
 - students

coursemanagement > assignments

Documents 4 Aggregations Schema Indexes Validation

Your pipeline is currently empty. Generate aggregation

Explain Explain Raw Options

Untitled - modified SAVE CREATE NEW EXPORT TO LABVIEW

PREVIEW STAGE

```
4 {
5   $match: {
6     $or: [
7       { $gt: { "$date": "$start_date", "$lte": { "$date": "2023-08-01" } } }
8     ]
9   }
10 }
11 {
12   $lookup: {
13     from: "courses",
14     localField: "course_id",
15     foreignField: "_id",
16     as: "course"
17   }
18 }
19 {
20   $unwind: "$course"
21 }
```

No Preview Documents

```
1 {
2   $group: {
3     _id: "$course_id",
4     avg_grade: { $avg: "$grade" }
5   }
6 }
7 }
```

Atlas atlas-c4eb50-shard-0 [primary] coursemanagement

MongoDB Compass - arshnoorkour21newkourngadbur/coursemanagement.com

Connected | Edit | View | Collections | Help

arshnoorkour21newkourngadbur

My Queries | Performance | Databases | Search | Collections | coursemanagement | assignments | courses | enrollments | students

coursemanagement > courses

Documents | Aggregations | Schema | Indexes | Validation

Filter & Query: { Field: "value" } or \$meta: query

Buttons: Explain | Reset | Find | Options

1 - 12 of 12

ADD DATA | EXPORT DATA | UPDATE | DELETE

```
{ "_id": "60b4f638a9a5d2189487",  
  "title": "Mathematics",  
  "instructor": "tylodon",  
  "credits": 3  
}
```

```
{ "_id": "60b4f638a9a5d2189488",  
  "title": "Computer Science",  
  "instructor": "tylodon",  
  "credits": 3  
}
```

```
{ "_id": "60b4f638a9a5d2189489",  
  "title": "Introduction to MongoDB",  
  "instructor": "tylodon",  
  "credits": 3  
}
```

Constructor in MongoDB

```
{  
  "gender": "male",  
  "count": { $sum: 1 }  
}
```

42°C | 42°C | Search | 21:02 AM | 2024-04-01

MongoDB Compass - arshnoorkour21newkourngadbur/coursemanagement.com

Connected | Edit | View | Collections | Help

arshnoorkour21newkourngadbur

My Queries | Performance | Databases | Search | Collections | coursemanagement | assignments | courses | enrollments | students

coursemanagement > courses

Documents | Aggregations | Schema | Indexes | Validation

Filter & Query: { Field: "value" } or \$meta: query

Buttons: Explain | Reset | Find | Options

1 - 12 of 12

ADD DATA | EXPORT DATA | UPDATE | DELETE

```
{ "_id": "60b4f638a9a5d2189487",  
  "title": "Mathematics",  
  "instructor": "tylodon",  
  "credits": 3  
}
```

```
{ "_id": "60b4f638a9a5d2189488",  
  "title": "Computer Science",  
  "instructor": "tylodon",  
  "credits": 3  
}
```

```
{ "_id": "60b4f638a9a5d2189489",  
  "title": "Introduction to MongoDB",  
  "instructor": "tylodon",  
  "credits": 3  
}
```

```
{  
  "gender": "male",  
  "count": { $sum: 1 }  
}
```

42°C | 42°C | Search | 21:02 AM | 2024-04-01

MongoDB Compass - arshnoorkour21newkouragadun/coursenagement.mlab.com

Connected | Edit | View | Collections | Help

arshnoorkour21newkouragadun

My Queries | Collections | Database: coursenagement | Collections: assignments, courses, enrollments, instructors, students, workload

Database: coursenagement | Collection: instructors

Documents | Aggregations | Schema | Indexes | Validation

Filter & Query: (Field: "value") or \$meta:query

Buttons: Explain, Reset, Find, Options

1-9 of 9

ADD DATA | EXPORT DATA | UPDATE | DELETE

{ "id": ObjectId("5006a233a8a5d2185457"), "name": "John", "department": "Math" }
{ "id": ObjectId("5006a233a8a5d2185458"), "name": "James", "department": "Physics" }
{ "id": ObjectId("5006a233a8a5d2185459"), "name": "Michael Frege", "department": "Math", "email": "michael.frege@example.com" }

Terminal (MongoDB Shell):

```
use coursenagement;
db.courses.find( { instructor: "John" }).explain("executionStats")
```

MongoDB Compass - arshnoorkour21newkouragadun/coursenagement.mlab.com

Connected | Edit | View | Collections | Help

arshnoorkour21newkouragadun

My Queries | Collections | Database: coursenagement | Collections: assignments, courses, enrollments, instructors, students, workload

Database: coursenagement | Collection: instructors

Documents | Aggregations | Schema | Indexes | Validation

Filter & Query: (Field: "value") or \$meta:query

Buttons: Explain, Reset, Find, Options

1-9 of 9

ADD DATA | EXPORT DATA | UPDATE | DELETE

{ "id": ObjectId("5006a233a8a5d2185457"), "name": "John", "department": "Math" }
{ "id": ObjectId("5006a233a8a5d2185458"), "name": "James", "department": "Physics" }
{ "id": ObjectId("5006a233a8a5d2185459"), "name": "Michael Frege", "department": "Math", "email": "michael.frege@example.com" }

Terminal (MongoDB Shell):

```
use coursenagement;
db.instructors.find( { department: "Mathematics" }).explain("executionStats")
```


MongoDB Compass - arshnoorkour2.f...
Connected | Edit | View | Collections | Help

arshnoorkour2.f...
My Queries | coursemanagement | enrollments | instructors | assignments

coursemanagement > instructors

Documents: 4 | Aggregations | Schema | Indexes | Validation

Type a query (Field: 'value') or Generate query

ADD DATA | EXPORT DATA | UPDATE | DELETE

1-9 of 9

```
{ "_id": "ObjectId('689c4e38a96c5a514b034')",  
  "name": "John",  
  "department": "Null" },  
{ "_id": "ObjectId('689c4e38a96c5a514b034')",  
  "name": "Travis",  
  "department": "Physics" },  
{ "_id": "ObjectId('689c4e38a96c5a514b034')",  
  "name": "Prinder Singh",  
  "department": "Null",  
  "email": "prinder.singh@compila.com" }
```

Terminal

```
> db.instructors.find({ student_id: "689c4e38a96c5a514b034" }, {explain:"verbose"})  
> {  
  explainText: "1",  
  queryPlan: {  
    indexUsed: "coursemanagement.instructors",  
    indexFilterKeys: {  
      student_id: {  
        value: "689c4e38a96c5a514b034"  
      }  
    }  
  }  
}
```

MongoDB Compass - arshnoorkour2.f...
Connected | Edit | View | Collections | Help

arshnoorkour2.f...
My Queries | coursemanagement | enrollments | instructors | assignments

coursemanagement > instructors

Documents: 4 | Aggregations | Schema | Indexes | Validation

Type a query (Field: 'value') or Generate query

ADD DATA | EXPORT DATA | UPDATE | DELETE

1-9 of 9

```
{ "_id": "ObjectId('689c4e38a96c5a514b034')",  
  "name": "John",  
  "department": "Null" },  
{ "_id": "ObjectId('689c4e38a96c5a514b034')",  
  "name": "Travis",  
  "department": "Physics" },  
{ "_id": "ObjectId('689c4e38a96c5a514b034')",  
  "name": "Prinder Singh",  
  "department": "Null",  
  "email": "prinder.singh@compila.com" }
```

Terminal

```
> db.students.find({ age: { $gt: 20 } }, {explain:"queryPlan"})  
> {  
  explainText: "1",  
  queryPlan: {  
    indexUsed: "coursemanagement.students",  
    indexFilterKeys: {  
      age: {  
        value: {  
          $gt: 20  
        }  
      }  
    }  
  }  
}
```

MongoDB Compass - arshnoorkour2.f... | Connected | Edit | View | Collections | Help

My Queries | Databases | Collections | **assignments**

coursemanagement > assignments

Documents | Aggregations | Schema | Indexes | Validation

Type & query: (Field: "value") or **Basic query**

1-12 of 12

ADD DATA | EXPORT DATA | UPDATE | DELETE

_id: ObjectId('66b5503545d545248931')	course: "Mathematics"	title: "Homework 1"	dueDate: "2024-04-15"	maxScore: 100
_id: ObjectId('66b5503545d545248932')	course: "Physics"	title: "Lab Report"	dueDate: "2024-04-15"	maxScore: 100
_id: ObjectId('66b5503545d545248933')				

```
1. RUN QUERY
2. www.arshnoorkour2.f... | www.arshnoorkour2.f... | www.arshnoorkour2.f... | www.arshnoorkour2.f...
3. assignments_due_date
4. db.instructors.createIndex({ "department": 1 }, { name: "instructors_department" })
5. instructors_department
6. db.courses.createIndex({ "instructor": 1 }, { name: "courses_instructor" })
7. courses_instructor
8. db.your_collection.createIndex({your_field: 1})
9. your_field_1
Atlas atlas-c4eb3d-shard-0 [primary] coursemanagement>
```

MongoDB Compass - arshnoorkour2.f... | Connected | Edit | View | Collections | Help

My Queries | Databases | Collections | **enrollments**

coursemanagement > enrollments

Documents | Aggregations | Schema | Indexes | Validation

Type & query: (Field: "value") or **Basic query**

1-13 of 13

ADD DATA | EXPORT DATA | UPDATE | DELETE

_id: ObjectId('66b5503545d545248931')	studentId: ObjectId('66b5503545d545248931')	courseId: ObjectId('66b5503545d545248931')	enrollmentDate: 2024-04-08T00:00:00.000+00:00
_id: ObjectId('66b5503545d545248932')	student: "John"	course: "Mathematics"	grade: "A"
_id: ObjectId('66b5503545d545248933')	student: "Jane"	course: "Physics"	

```
1. RUN QUERY
2. www.arshnoorkour2.f... | www.arshnoorkour2.f... | www.arshnoorkour2.f... | www.arshnoorkour2.f...
3. enrollments_student_id
4. db.enrollments.createIndex({ "due_date": 1 }, { name: "enrollments_due_date" })
5. assignments_due_date
6. db.instructors.createIndex({ "department": 1 }, { name: "instructors_department" })
7. instructors_department
8. db.courses.createIndex({ "instructor": 1 }, { name: "courses_instructor" })
9. courses_instructor
Atlas atlas-c4eb3d-shard-0 [primary] coursemanagement>
```


MongoDB Compass - arshnoorkour2@newtonxongadun/coursmanagemnt/enrollments

Connect Edit View Collections Help

arshnoorkour2.f...

My Queries Performance Databases

Search

- assignments
- courses
- enrollments
- instructors
- students
- workload
- books
- tattoo_shop
- test
- todo

coursemanagement > enrollments

Documents 4 Aggregations Schema Indexes Validation

Filter & Query: (Field "value") or \$exists:query

EXPLAIN RESET FIND Options

1-13 of 13

ADD DATA EXPORT DATA UPDATE DELETE

```
{
  "_id": ObjectId("5090849735829dc5d246597"),
  "studentID": ObjectId("0149c457c39a0b4ae79372"),
  "courseID": ObjectId("0149c457c39a0b4ae79372"),
  "enrollmentDate": 2024-04-04T00:00:00.000+00:00

  "_id": ObjectId("50907f2233a9dc5d246597"),
  "student": "jigish",
  "course": "PythonWeb123",
  "grade": "B"

  "_id": ObjectId("50907f2233a9dc5d246597"),
  "student": "harsh",
  "course": "PythonWeb123",
  "grade": "C"
}
```

Terminal

```
python3 mongo.py
{
}
db.enrollments.createIndex([ "student_id": 1 ], { name: "enrollments_student_id" })
+ mongoServerSelectionError: connect ECONNREFUSED 52.136.49.28:27017
db.enrollments.createIndex([ "student_id": 1 ], { name: "enrollments_student_id" })
enrollments_student_id
db.assignments.createIndex([ "due_date": 1 ], { name: "assignments_due_date" })
assignments_due_date
Atlas atlas-c46d3-shard-0 [primary] coursemanagement>
```

MongoDB Compass - arshnoorkour2@newtonxongadun/coursmanagemnt/workload

Connect Edit View Collections Help

arshnoorkour2.f...

My Queries Performance Databases

Search

- coursemanagement
- assignments
- courses
- enrollments
- instructors
- students

coursemanagement > workload

Documents 5 Aggregations Schema Indexes Validation

Filter & Query: (Field "value") or \$exists:query

EXPLAIN RESET FIND Options

1-5 of 5

ADD DATA EXPORT DATA UPDATE DELETE

```
Query: "5090c44a39829dc5d246597"

{
  "_id": ObjectId("5090c44a39829dc5d246597"),
  "Collection": "Instructors", "db": "coursemanagement",
  "Name": "Instructor", "Department": "Department",
  "Query": "PythonWeb123"

  "_id": ObjectId("5090c44a39829dc5d246597"),
  "Collection": "Courses", "db": "coursemanagement",
  "Name": "Instructor", "Query": "PythonWeb123"

  "_id": ObjectId("5090c44a39829dc5d246597")
}
```

Terminal

```
python3 mongo.py
{
  "operationTime": Timestamp("2024-04-04T00:00:00.000+00:00")
}
db.enrollments.createIndex([ "student_id": 1 ], { name: "enrollments_student_id" })
+ mongoServerSelectionError: connect ECONNREFUSED 52.136.49.28:27017
db.enrollments.createIndex([ "student_id": 1 ], { name: "enrollments_student_id" })
enrollments_student_id
Atlas atlas-c46d3-shard-0 [primary] coursemanagement>
```

MongoDB Compass - arshnoorkour2.f... | Connected | Edit | View | Collections | Help

My Queries | coursemanagement | assignments | workload

coursemanagement > workload

Documents | Aggregations | Schema | Indexes | Validation

Find & query: { "value": 1 } or \$meta: query

ADD DATA | EXPORT DATA | UPDATE | DELETE

1-5 of 2

Query: "5000c44a28879ac5d314933d"

{ "_id": "ObjectID('5000c44a28879ac5d314933d')",
 "collection": "Instructors", "db": "Instructors", "find": {},
 "name": "Hengde", "department": "Computer Science",
 "query": "Workload" }, {}

{ "_id": "ObjectID('5000c44a28879ac5d314933d')",
 "collection": "Courses", "db": "Courses", "find": {},
 "name": "Hengde", "instructor": "Hengde",
 "query": "Hengde" }, {}

{ "_id": "ObjectID('5000c44a28879ac5d314933d')",
 "collection": "Courses", "db": "Courses", "find": {},
 "name": "Hengde", "instructor": "Hengde",
 "query": "Hengde" }, {}

```
> db.assignments.find( { due_date: { $lt: new Date('2024-05-20') } } ).explain("executionStats")
{
  "explainInterface": "TL",
  "queryPlanner": {
    "namespace": "coursemanagement.assignments",
    "optimizedPlanStage": false,
    "parsedQuery": {
      "due_date": {
        "$lt": "2024-05-20T00:00:00.000Z"
      }
    }
  }
}
```

MongoDB Compass - arshnoorkour2.f... | Connected | Edit | View | Collections | Help

My Queries | coursemanagement | assignments | workload

coursemanagement > workload

Documents | Aggregations | Schema | Indexes | Validation

Find & query: { "value": 1 } or \$meta: query

ADD DATA | EXPORT DATA | UPDATE | DELETE

1-5 of 2

Query: "5000c44a28879ac5d314933d"

{ "_id": "ObjectID('5000c44a28879ac5d314933d')",
 "collection": "Instructors", "db": "Instructors", "find": {},
 "name": "Hengde", "department": "Computer Science",
 "query": "Workload" }, {}

{ "_id": "ObjectID('5000c44a28879ac5d314933d')",
 "collection": "Courses", "db": "Courses", "find": {},
 "name": "Hengde", "instructor": "Hengde",
 "query": "Hengde" }, {}

{ "_id": "ObjectID('5000c44a28879ac5d314933d')",
 "collection": "Courses", "db": "Courses", "find": {},
 "name": "Hengde", "instructor": "Hengde",
 "query": "Hengde" }, {}

```
> db.courses.explain("executionStats").find( { instructor: "Hengde" } )
{
  "explainInterface": "TL",
  "queryPlanner": {
    "namespace": "coursemanagement.courses",
    "optimizedPlanStage": false,
    "parsedQuery": {
      "instructor": {
        "$eq": "Hengde"
      }
    }
  }
}
```

MongoDB Compass - arshnoorkour2@newtonkongsat.net/coursenmanagement/workload

Connected | Edit | View | Collections | Help

My Queries | coursenmanagement | enrollments | assignments | workload

Documents | Aggregations | Schema | Indexes | Validation

Find & query: { "id": "value" } or **Run data query**

EXPLAIN | RESET | FIND | Options

1-5 of 2

ADD DATA | EXPORT DATA | UPDATE | DELETE

Query: "6080c44e308490c54514603d"

id: ObjectId("6080c44e308490c54514603d")
Collection: "instructors", "db.instructors.Find()"
Name/namespace: "department"
Query: "Mathematics" }

id: ObjectId("6080c44e308490c54514603d")
Collection: "enrollments", "db.enrollments.Find()"
Name/namespace: "instructor"
Query: "math"

id: ObjectId("6080c44e308490c54514603d")

1-5 of 2

```
use coursenmanagement
> db.instructors.findOne({ department: "Mathematics" })
{
  _id: ObjectId("6080c44e308490c54514603d"),
  name: "Mathematics",
  department: "Mathematics",
  instructor_id: "6080c44e308490c54514603d",
  student_id: "6080c44e308490c54514603d",
  enrollment_id: "6080c44e308490c54514603d",
  assignment_id: "6080c44e308490c54514603d",
  workload_id: "6080c44e308490c54514603d"
}
```

MongoDB Compass - arshnoorkour2@newtonkongsat.net/coursenmanagement/workload

Connected | Edit | View | Collections | Help

My Queries | coursenmanagement | enrollments | assignments | workload

Documents | Aggregations | Schema | Indexes | Validation

Find & query: { "id": "value" } or **Run data query**

EXPLAIN | RESET | FIND | Options

1-5 of 2

ADD DATA | EXPORT DATA | UPDATE | DELETE

Query: "6080c44e308490c54514603d"

id: ObjectId("6080c44e308490c54514603d")
Collection: "instructors", "db.instructors.Find()"
Name/namespace: "department"
Query: "Mathematics" }

id: ObjectId("6080c44e308490c54514603d")
Collection: "enrollments", "db.enrollments.Find()"
Name/namespace: "instructor"
Query: "math"

id: ObjectId("6080c44e308490c54514603d")

1-5 of 2

```
use coursenmanagement
> db.enrollments.findOne({ enrollment_id: "6080c44e308490c54514603d" })
{
  _id: ObjectId("6080c44e308490c54514603d"),
  name: "Mathematics",
  department: "Mathematics",
  instructor_id: "6080c44e308490c54514603d",
  student_id: "6080c44e308490c54514603d",
  enrollment_id: "6080c44e308490c54514603d",
  assignment_id: "6080c44e308490c54514603d",
  workload_id: "6080c44e308490c54514603d"
}
```

MongoDB Compass - arshnoorkour2@newtonkongaduraj/coursemangement:workload

Connected | Edit | View | Collections | Help

arshnoorkour2.f...

My Queries | coursemangement | assignments | workload

Documents | Aggregations | Schema | Indexes | Validation

Filter & Query: { "field": "value" } or \$meta: query

ADD DATA | EXPORT DATA | UPDATE | DELETE

1-5 of 2

Query: "5000c44a20899ac5d314933d"

db: ObjectId("5000c44a20899ac5d314933d")
Collection: "Instructors", db: Instructors-Find[]
Name: MongoDB: "department"
Query: "Workshop-101"

db: ObjectId("5000c44a20899ac5d314933d")
Collection: "Courses", db: Courses-Find[]
Name: MongoDB: "instructor"
Query: "null"

db: ObjectId("5000c44a20899ac5d314933d")

MONITOR

```
> db.students.find({ age: { $gt: 20 } }).explain("executionStats")
{
  explainText: "1",
  queryPlan: {
    stages: [
      {
        stage: "collection",
        indexFilter: false,
        parallelism: 1
      }
    ]
  }
}
```

DB-401 16 Academy

MongoDB Compass - arshnoorkour2@newtonkongaduraj/coursemangement:workload

Connected | Edit | View | Collections | Help

arshnoorkour2.f...

My Queries | coursemangement | assignments | workload

Documents | Aggregations | Schema | Indexes | Validation

Filter & Query: { "field": "value" } or \$meta: query

ADD DATA | EXPORT DATA | UPDATE | DELETE

1-5 of 2

Query: "5000c44a20899ac5d314933d"

db: ObjectId("5000c44a20899ac5d314933d")
Collection: "Instructors", db: Instructors-Find[]
Name: MongoDB: "department"
Query: "Workshop-101"

db: ObjectId("5000c44a20899ac5d314933d")
Collection: "Courses", db: Courses-Find[]
Name: MongoDB: "instructor"
Query: "null"

db: ObjectId("5000c44a20899ac5d314933d")

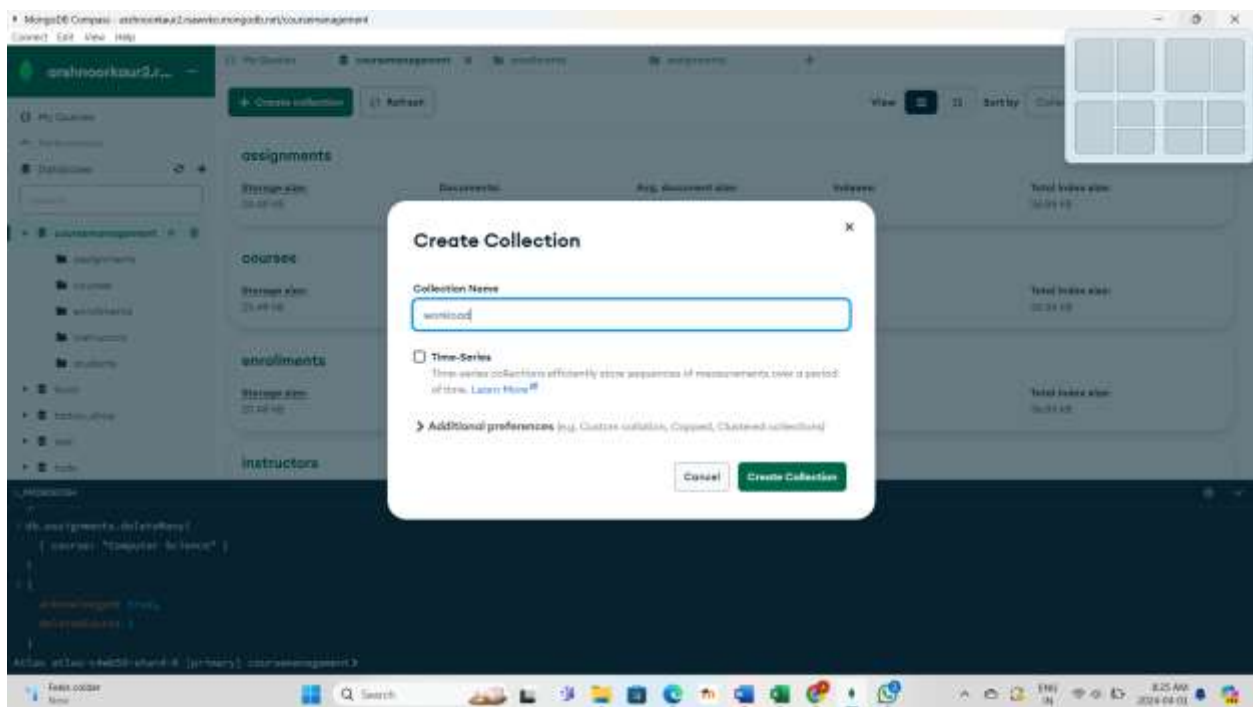
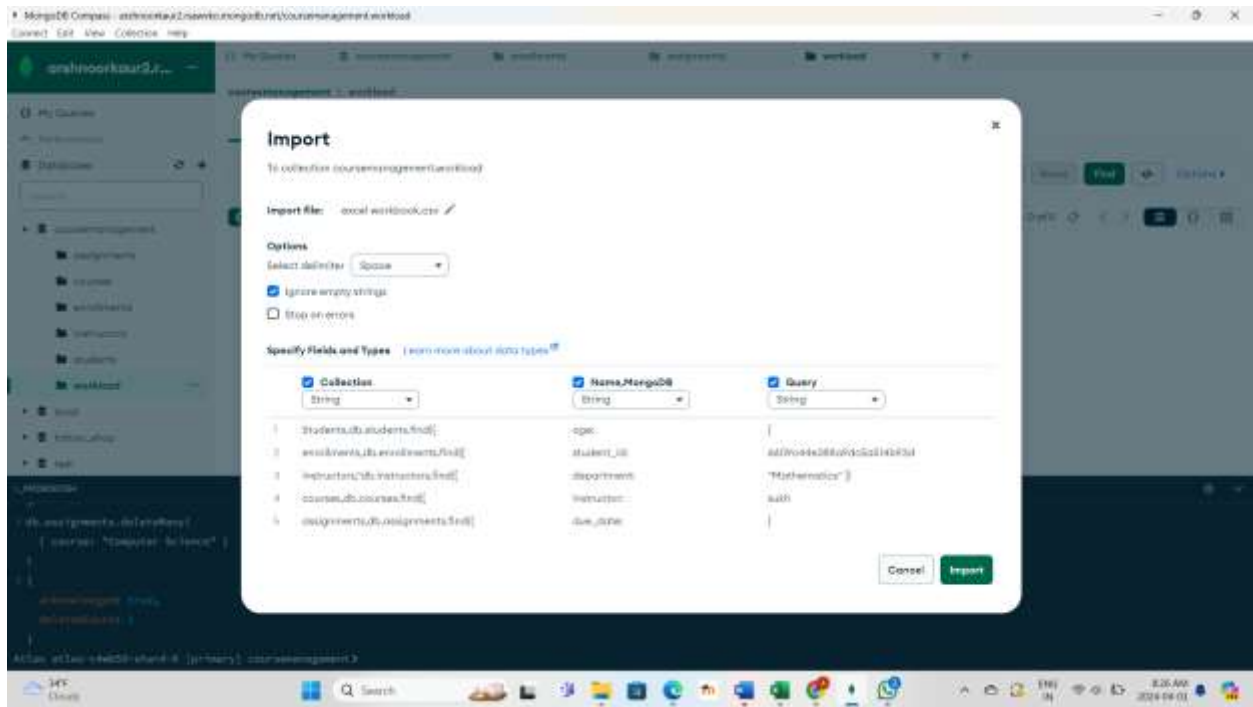
MONITOR

```
> db.assignments.deleteMany(
  { course: "Computer Science" }
)
{
  acknowledged: true,
  deletedCount: 1
}
```

Import completed.
1 documents imported.

Atime: 2024-04-01 10:10:10.101Z

34% Cloud



MongoDB Compass - arshnoorkour2@newtonxngadbur/coursmanagemnt.com

Connect Edit View Collections Help

arshnoorkour2.f...

My Queries Performance Databases Search

coursemanagement assignments courses enrollments instructors students

coursemanagement > courses

Documents 4 Aggregations Schema Indexes Validation

Type & query: { Field: "value" } or \$addToSet query

EXPLAIN REVERT FIND Options

1-12 of 12

ADD DATA EXPORT DATA UPDATE DELETE

```
{ "_id": ObjectId("50504f9e388a3cb0248042"),  
  "title": "Computer Science",  
  "instructor": "jason",  
  "credits": 3  
}
```

```
{ "_id": ObjectId("50504f9e388a3cb0248043"),  
  "title": "Introduction to MongoDB",  
  "instructor": ObjectId("50504f9e388a3cb0248042"),  
  "credits": 3  
}
```

```
{ "_id": ObjectId("50504f9e388a3cb0248044"),  
  "title": "Web Development with Node.js",  
  "instructor": ObjectId("50504f9e388a3cb0248043"),  
  "credits": 4  
}
```

MongoDB Shell

```
> db.assignments.deleteMany(  
  { course: "Computer Science" }  
)  
>  
< {  
  acknowledged: true,  
  deletedCount: 3  
}
```

Atlas atlas-c4b03-shard-0 [primary] coursemanagement>

42°F Mostly cloudy

MongoDB Compass - arshnoorkour2@newtonxngadbur/coursmanagemnt.com

Connect Edit View Collections Help

arshnoorkour2.f...

My Queries Performance Databases Search

coursemanagement assignments courses enrollments instructors students

coursemanagement > courses

Documents 4 Aggregations Schema Indexes Validation

Type & query: { Field: "value" } or \$addToSet query

EXPLAIN REVERT FIND Options

1-12 of 12

ADD DATA EXPORT DATA UPDATE DELETE

```
{ "_id": ObjectId("50504f9e388a3cb0248042"),  
  "title": "Mathematics",  
  "instructor": "tylison",  
  "credits": 3  
}
```

```
{ "_id": ObjectId("50504f9e388a3cb0248043"),  
  "title": "Physics",  
  "instructor": "tylison",  
  "credits": 4  
}
```

```
{ "_id": ObjectId("50504f9e388a3cb0248044"),  
  "title": "Computer Science",  
  "instructor": "jason",  
  "credits": 3  
}
```

MongoDB Shell

```
> db.courses.deleteMany(  
  { instructor: "tylison" }  
)  
>  
< {  
  acknowledged: true,  
  deletedCount: 2  
}
```

Atlas atlas-c4b03-shard-0 [primary] coursemanagement>

42°F Mostly cloudy

MongoDB Compass - atlas-atlas-c4eb03-shard-0 [primary] coursemangement.enslments

Course Management > enrollments

Documents | Aggregators | Schema | Indexes | Validation

Type a query: { \$filter: { value: } or \$addToSet: { value: } }

ADD DATA | EXPORT DATA | UPDATE | DELETE

1 - 11 of 11

grade
{ "_id": ObjectId("66b7f47a9020a211a813a7"), "studentID": ObjectId("66b7f47a9020a211a813a7"), "courseID": ObjectId("66b7f47a9020a211a813a7"), "enrollmentDate": "2024-01-01T00:00:00.000+00:00" }
{ "_id": ObjectId("66b7f47a9020a211a813a7"), "studentID": ObjectId("66b7f47a9020a211a813a7"), "courseID": ObjectId("66b7f47a9020a211a813a7"), "enrollmentDate": "2024-01-01T00:00:00.000+00:00" }
{ "_id": ObjectId("66b7f47a9020a211a813a7") }

```
> use coursemangement
> db.instructors.deleteMany(
  { department: "Computer Science" }
)
{
  acknowledged: true,
  deletedCount: 4
}
Atlas atlas-c4eb03-shard-0 [primary] coursemangement>
```

MongoDB Compass - atlas-atlas-c4eb03-shard-0 [primary] coursemangement.enslments

Course Management > enrollments

Documents | Aggregators | Schema | Indexes | Validation

Type a query: { \$filter: { value: } or \$addToSet: { value: } }

ADD DATA | EXPORT DATA | UPDATE | DELETE

1 - 11 of 11

grade
{ "_id": ObjectId("66b7f47a9020a211a813a7"), "studentID": ObjectId("66b7f47a9020a211a813a7"), "courseID": ObjectId("66b7f47a9020a211a813a7"), "enrollmentDate": "2024-01-01T00:00:00.000+00:00" }
{ "_id": ObjectId("66b7f47a9020a211a813a7"), "studentID": ObjectId("66b7f47a9020a211a813a7"), "courseID": ObjectId("66b7f47a9020a211a813a7"), "enrollmentDate": "2024-01-01T00:00:00.000+00:00" }
{ "_id": ObjectId("66b7f47a9020a211a813a7") }

```
> use coursemangement
> db.enrollments.deleteMany(
  { enrollmentDate: { $lt: new Date("2024-01-01") } }
)
{
  acknowledged: true,
  deletedCount: 0
}
Atlas atlas-c4eb03-shard-0 [primary] coursemangement>
```


MongoDB Compass - orshnoorkour2@newtonxngadbur/coursenmanagement.students

Connected | Edit | View | Collections | Help

orshnoorkour2.f...

My Queries | Performance | Databases | Collections | orshnoorkour2.f... | assignments | courses | enrollments | instructors | **students** | boot | todos_upload | test | todo

coursemanagement > students

Documents | Aggregations | Schema | Indexes | Validation

Find > Query > Query: { Field: "value" } or \$meta: query < > Explain | Reset | Find | Options

1 - 20 of 22 < > [] [] [] [] []

ADD DATA | EXPORT DATA | UPDATE | DELETE

_id: ObjectId("6606a83a8a5c5d34953f")	
name: "Vijay"	
age: 25	
email: "vijay@pqr.com"	
_id: ObjectId("6606a83a8a5c5d34953f")	
name: "Anvi"	
age: 24	
grade: "A"	
_id: ObjectId("6606a83a8a5c5d34953f")	
name: "Rishi"	
age: 22	

```
> db.enrollments.deleteOne(
  { studentId: ObjectId("6606a83a8a5c5d34953f") }
)
```

```
{
  acknowledged: true,
  deletedCount: 1
}
```

42°F Mostly cloudy 10:40 PM 2024-05-31

MongoDB Compass - orshnoorkour2@newtonxngadbur/coursenmanagement.students

Connected | Edit | View | Collections | Help

orshnoorkour2.f...

My Queries | Performance | Databases | Collections | orshnoorkour2.f... | assignments | courses | enrollments | instructors | **students** | boot | todos_upload | test | todo

coursemanagement > students

Documents | Aggregations | Schema | Indexes | Validation

Find > Query > Query: { Field: "value" } or \$meta: query < > Explain | Reset | Find | Options

1 - 20 of 22 < > [] [] [] [] []

ADD DATA | EXPORT DATA | UPDATE | DELETE

_id: ObjectId("6606a83a8a5c5d34953f")	
name: "Vijay"	
age: 25	
email: "vijay@pqr.com"	
_id: ObjectId("6606a83a8a5c5d34953f")	
name: "Anvi"	
age: 24	
grade: "A"	
_id: ObjectId("6606a83a8a5c5d34953f")	
name: "Rishi"	
age: 22	

```
> insertMany(
  {
    name: "Arvind Kumar"
  }
)
```

```
{
  acknowledged: true,
  insertedCount: 1
}
```

42°F Mostly cloudy 10:40 PM 2024-05-31

MongoDB Compass - arshnoorkour2.f...
Connected | Edit | View | Collections | Help

My Queries | coursemanagement | assignments | **instructors** | X | +

coursemanagement > instructors

Documents | Aggregations | Schema | Indexes | Validation

Filter & Query: { Field: "value" } or **Basic query**

Buttons: Explain | Reset | Find | Options

1-14 of 14

ADD DATA | EXPORT DATA | UPDATE | DELETE

```
{ "_id": ObjectId("509b6133a6a6d5d249534"),  
  "name": "Aditya Saxena",  
  "department": "Computer Science",  
  "email": "adityasaxena@gmail.com" }  
  
{ "_id": ObjectId("509b6133a6a6d5d249534"),  
  "name": "Rishi",  
  "department": "Maths" }  
  
{ "_id": ObjectId("509b6133a6a6d5d249534"),  
  "name": "Rishi",  
  "department": "Physics" }
```

Terminal:

```
_MONGODB  
mongo> use coursemanagement  
coursemanagement> db.instructors.insertMany([  
  { name: "Aditya", department: "Physics" },  
  { name: "Rishi", department: "Maths" } ])
```

42°F Mostly cloudy

MongoDB Compass - arshnoorkour2.f...
Connected | Edit | View | Collections | Help

My Queries | coursemanagement | assignments | **assignments** | X | +

coursemanagement > assignments

Documents | Aggregations | Schema | Indexes | Validation

Filter & Query: { Field: "value" } or **Basic query**

Buttons: Explain | Reset | Find | Options

1-14 of 14

ADD DATA | EXPORT DATA | UPDATE | DELETE

```
{ "_id": ObjectId("509b6133a6a6d5d249534"),  
  "course": "Mathematics",  
  "title": "Homework 2",  
  "dueDate": "2024-09-10",  
  "maxScore": 100 }  
  
{ "_id": ObjectId("509b6133a6a6d5d249534"),  
  "course": "Physics",  
  "title": "Lab Report",  
  "dueDate": "2024-09-15",  
  "maxScore": 100 }  
  
{ "_id": ObjectId("509b6133a6a6d5d249534"),  
  "course": "Computer Science",  
  "title": "Project" }
```

Terminal:

```
_MONGODB  
mongo> use coursemanagement  
coursemanagement> db.assignments.insertMany([  
  { course: "Mathematics", title: "Homework 2", dueDate: "2024-09-10", maxScore: 100 },  
  { course: "Physics", title: "Lab Report", dueDate: "2024-09-15", maxScore: 100 },  
  { course: "Computer Science", title: "Project" } ])
```

42°F Mostly cloudy

MongoDB Compass - arshnoorkaur2@newkourngdb.net/coursemanagement/courses

Connect Edit View Collections Help

arshnoorkaur2...

My Queries Performance Databases

coursemanagement

- assignments
- courses**
- enrollments
- instructors
- students

local laptop, shop test todo

coursemanagement > courses

Documents 4 Aggregations Schema Indexes Validation

Type a query (Field: "value") or Generate query

ADD DATA EXPORT DATA UPDATE DELETE

1-14 of 14

credits	4
<pre>{ "_id": ObjectId("4a8a5a5f8d8a2233a813c7"), "title": "Advanced Machine Learning", "instructor": ObjectId("689b00358a0bca4514b040"), "credits": 3 }</pre>	
<pre>{ "_id": ObjectId("4a8a5a5f8d8a2233a813c7"), "title": "Advanced Machine Learning", "instructor": ObjectId("689b00358a0bca4514b040"), "credits": 4 }</pre>	
<pre>{ "_id": ObjectId("4a8a5a5f8d8a2233a813c7") }</pre>	

```

> db.courses.updateMany(
  { credits: { $lt: 3 } },
  { $set: { credits: 6 } }
)
{
  acknowledged: true,
  insertedCount: 0,
  matchedCount: 2
}

```

42°F Mostly cloudy

Search

8:45 PM 2024-08-31

MongoDB Compass - arshnoorkaur2@newkourngdb.net/coursemanagement/courses

Connect Edit View Collections Help

arshnoorkaur2...

My Queries Performance Databases

coursemanagement

- assignments
- courses**
- enrollments
- instructors
- students

local laptop, shop test todo

coursemanagement > courses

Documents 4 Aggregations Schema Indexes Validation

Type a query (Field: "value") or Generate query

ADD DATA EXPORT DATA UPDATE DELETE

1-14 of 14

credits	3
<pre>{ "_id": ObjectId("4a8a5a5f8d8a2233a813c7"), "title": "Cybersecurity Fundamentals", "instructor": ObjectId("689b00358a0bca4514b040"), "credits": 3 }</pre>	
<pre>{ "_id": ObjectId("4a8a5a5f8d8a2233a813c7"), "title": "Computer Networking", "instructor": ObjectId("689b00358a0bca4514b040"), "credits": 5 }</pre>	
<pre>{ "_id": ObjectId("4a8a5a5f8d8a2233a813c7") }</pre>	

```

{
  acknowledged: true,
  insertedCount: 0,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
Atlas atlas-c4e09-shard-0 [primary] coursemanagement> db.courses.updateMany(
  { credits: { $lt: 3 } },
  { $set: { credits: 6 } }
)

```

42°F Mostly cloudy

Search

8:45 PM 2024-08-31

MongoDB Compass - arshnoorkaur2.r...
Connect Edit View Collection Help

arshnoorkaur2.r...
My Queries Performance Databases

coursemanagement
assignments
courses
enrollments
instructors
students
local
tattoo_shop
test
todo

coursemanagement > courses
Documents: 4 Aggregations Schema Indexes: 1 Validation

Type a query: { field: 'value' } or [Generate query](#)

ADD DATA EXPORT DATA UPDATE DELETE

```
{ "_id": ObjectId("6099b64d386a9dc5a014b939"),  
  "courseName": "Introduction to MongoDB",  
  "instructor": "aditya sarkar",  
  "credits": 3  
}
```

```
{ "_id": ObjectId("6090c4f6383abdc5a14b948"),  
  "title": "Mathematics",  
  "instructor": "ginder",  
  "credits": 3  
}
```

```
{ "_id": ObjectId("6089c4f6383abdc5a14b941"),  
  "title": "Physics",  
  "instructor": "sukhi",  
  "credits": 3  
}
```

1. MONGODB
insertMany: null,
matchedCount: 4,
modifiedCount: 4

MongoDB Compass - arshnoorkaur2.r...
Connect Edit View Collection Help

arshnoorkaur2.r...
My Queries Performance Databases

coursemanagement
assignments
courses
enrollments
instructors
students
local
tattoo_shop
test
todo

coursemanagement > instructors
Documents: 4 Aggregations Schema Indexes: 1 Validation

Type a query: { field: 'value' } or [Generate query](#)

EXPLORE RESET FIND Options

1-16 of 14

ADD DATA EXPORT DATA UPDATE DELETE

```
{ "_id": ObjectId("6099b64d386a9dc5a014b939"),  
  "name": "aditya sarkar",  
  "department": "Computer Science",  
  "email": "adityasarkar@gmail.com"  
}
```

```
{ "_id": ObjectId("6090c4f6383abdc5a14b948"),  
  "name": "sukhi",  
  "department": "Maths"  
}
```

```
{ "_id": ObjectId("6089c4f6383abdc5a14b941"),  
  "name": "ginder",  
  "department": "Physics"  
}
```

1. MONGODB
{ department: "Mathematics" },
{ \$eq: { department: "Math" } }
{
 acknowledged: true,
 insertedId: null,
 matchedCount: 4,
 modifiedCount: 4
}

MongoDB Compass - arshnoorkaur2@mongodb.net/coursemangement:enrollments

Connect Edit View Collections Help

arshnoorkaur2...

My Queries

Performance

Databases

- coursemanagement
 - assignments
 - courses
 - enrollments
 - instructors
 - students
- food
- totop_shop
- test
- todo

coursemanagement > enrollments

Documents 4 Aggregations Schema Indexes Validation

Type a query: (Field "value") or Generate query

EXPLAIN RESET FIND OPTIONS

1-14 of 14

ADD DATA EXPORT DATA UPDATE DELETE

```
{ "_id": ObjectId("66066433a29c5d23853c"),
  "studentID": ObjectId("6149c47e11bdc4baf92921"),
  "courseID": ObjectId("6149c47e11bdc4baf92921"),
  "enrollmentDate": "2024-01-01T00:00:00.000+00:00" },
{ "_id": ObjectId("66066433a29c5d23853c"),
  "student": "jagan",
  "course": "Mathematics",
  "grade": "A" },
{ "_id": ObjectId("66066433a29c5d23853c"),
  "student": "Rishi",
  "course": "Physics" }
```

1

```
> use coursemangement;
> insertMany(
  {
    studentID: ObjectId("6149c47e11bdc4baf92921"),
    courseID: ObjectId("6149c47e11bdc4baf92921"),
    enrollmentDate: new Date("2024-01-01")
  },
  {
    department: "Mathematics"
  },
  {
    department: "Physics"
  }
);
```

MongoDB Compass - arshnoorkaur2@mongodb.net/coursemangement:enrollments

Connect Edit View Collections Help

arshnoorkaur2...

My Queries

Performance

Databases

- coursemanagement
 - assignments
 - courses
 - enrollments
 - instructors
 - students
- food
- totop_shop
- test
- todo

coursemanagement > enrollments

Documents 4 Aggregations Schema Indexes Validation

Type a query: (Field "value") or Generate query

EXPLAIN RESET FIND OPTIONS

1-14 of 14

ADD DATA EXPORT DATA UPDATE DELETE

```
{ "courseID": ObjectId("66066433a29c5d23853c"),
  "enrollmentDate": "2024-01-01T00:00:00.000+00:00" },
{ "_id": ObjectId("66066433a29c5d23853c"),
  "studentID": ObjectId("6149c47e11bdc4baf92921"),
  "courseID": ObjectId("6149c47e11bdc4baf92921"),
  "enrollmentDate": "2024-01-01T00:00:00.000+00:00" },
{ "_id": ObjectId("66066433a29c5d23853c"),
  "studentID": ObjectId("6149c47e11bdc4baf92921"),
  "courseID": ObjectId("6149c47e11bdc4baf92921"),
  "enrollmentDate": "2024-01-01T00:00:00.000+00:00" }
```

3

```
> use coursemangement;
> insertMany(
  {
    studentID: ObjectId("6149c47e11bdc4baf92921"),
    courseID: ObjectId("6149c47e11bdc4baf92921"),
    enrollmentDate: new Date("2024-01-01")
  },
  {
    department: "Mathematics"
  },
  {
    department: "Physics"
  }
);
```


MongoDB Compass - orshnoorkour2.f... | Connected | Edit | View | Collections | Help

orshnoorkour2.f... | My Queries | coursemanagement | assignments | assignments

coursemanagement > assignments

Documents | Aggregations | Schema | Indexes | Validation

Filter & Query: { Field: "value" } or \$meta: query

ADD DATA | EXPORT DATA | UPDATE | DELETE

1-14 of 14

1

```
{ "_id": ObjectId("509b0e53a5a5a5a5a5a5a5a5"),
  "title": "Assignment 1",
  "course": "Introduction to MongoDB",
  "dueDate": "2024-04-15T00:00:00Z",
  "maxScore": 50
},
{ "_id": ObjectId("509b0e53a5a5a5a5a5a5a5a5"),
  "course": "Mathematical",
  "title": "Homework 1",
  "dueDate": "2024-04-15"
},
{ "_id": ObjectId("509b0e53a5a5a5a5a5a5a5a5"),
  "course": "Physics"
}
```

42°F Mostly cloudy

MongoDB Compass - orshnoorkour2.f... | Connected | Edit | View | Collections | Help

orshnoorkour2.f... | My Queries | coursemanagement | assignments | assignments

coursemanagement > assignments

Documents | Aggregations | Schema | Indexes | Validation

Filter & Query: { Field: "value" } or \$meta: query

ADD DATA | EXPORT DATA | UPDATE | DELETE

1-14 of 14

```
{ title: "Assignment 1",
  [ Set( [ maxScore: 50 ] ) ]
},
{
  acknowledged: true,
  insertedId: null,
  updatedCount: 1,
  modifiedCount: 1,
  upsertedId: null
}
```

42°F Mostly cloudy

MongoDB Compass - arshnoorkour21newkourngadun/coursenagement.com

Connected | Edit | View | Collections | Help

arshnoorkour21newkourngadun

My Queries | Performance | Databases | Collections | Documents | Aggregations | Schema | Indexes | Validation

courses

Type a query: (Field: "value") or \$meta: query

ADD DATA | EXPORT DATA | UPDATE | DELETE

1-14 of 14

```
{ "_id": ObjectId("6088b4238a9dc5d5345591"),
  "courseName": "Introduction to MongoDB",
  "instructor": "Nellya xamoo",
  "credits": 3 }

{ "_id": ObjectId("6088b4238a9dc5d5345591"),
  "title": "Introduction to MongoDB",
  "instructor": "Nellya xamoo",
  "credits": 3 }

{ "_id": ObjectId("6088b4238a9dc5d5345591"),
  "title": "Introduction to MongoDB",
  "instructor": "Nellya xamoo",
  "credits": 3 }
```

Atlas atlas-c4e09-shard-0 [primary] coursenagement.db.courses.updateOne

```
{ title: "Assignment 1" },
{ test: { marksheet: 99 } }
```

MongoDB Compass - arshnoorkour21newkourngadun/coursenagement.com

Connected | Edit | View | Collections | Help

arshnoorkour21newkourngadun

My Queries | Performance | Databases | Collections | Documents | Aggregations | Schema | Indexes | Validation

courses

Type a query: (Field: "value") or \$meta: query

ADD DATA | EXPORT DATA | UPDATE | DELETE

1-14 of 14

```
{ title: "Computer Science",
  "instructor": "Nellya xamoo",
  "credits": 3 }

{ "_id": ObjectId("6088b4238a9dc5d5345591"),
  "title": "Introduction to MongoDB",
  "instructor": ObjectId("6088b4238a9dc5d5345591"),
  "credits": 3 }

{ "_id": ObjectId("6088b4238a9dc5d5345591"),
  "title": "Web Development with Node.js",
  "instructor": ObjectId("6088b4238a9dc5d5345591"),
  "credits": 4 }
```

Atlas atlas-c4e09-shard-0 [primary] coursenagement.db.courses.updateOne

```
{ title: "Introduction to MongoDB",
  { test: { instructor: ObjectId("6088b4238a9dc5d5345591") } } }
```

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


MongoDB Compass - arshnoorkour2@newarkongadun/coursmanagemnt:enrollments

Connected | Edit | View | Collections | Help

arshnoorkour2.f...

My Queries | Performance | Databases | Collections | enrollments

coursemanagement > enrollments

Documents | Aggregations | Schema | Indexes | Validation

Filter & Query: { Field: "value" } or \$meta: query

Buttons: Explain | Reset | Find | Options

1-14 of 14

Buttons: ADD DATA | EXPORT DATA | UPDATE | DELETE

grade: "B"

```
{
  "_id": ObjectId("66b647a879a2711a4c79a4"),
  "studentID": ObjectId("66b6488320a6a7a034a63a"),
  "courseID": ObjectId("66b6488320a6a7a034a63a"),
  "enrollDate": "2024-04-01T00:00:00.000+00:00"
}
```

```
{
  "_id": ObjectId("66b647a879a2711a4c79a4"),
  "studentID": ObjectId("66b6488320a6a7a034a63a"),
  "courseID": ObjectId("66b6488320a6a7a034a63a"),
  "enrollDate": "2024-04-01T00:00:00.000+00:00"
}
```

```
{
  "_id": ObjectId("66b647a879a2711a4c79a4")
}
```

Terminal:

```
Atlas atlas-c4e09-shard-0 [primary] coursemanagement> db.coursemanagement.insertOne(
  {
    name: "Maths Savana",
    { $set: { department: "Computer Science and Engineering" } } )
```

42°F Mostly cloudy 3:01 PM 2024-05-31

MongoDB Compass - arshnoorkour2@newarkongadun/coursmanagemnt:enrollments

Connected | Edit | View | Collections | Help

arshnoorkour2.f...

My Queries | Performance | Databases | Collections | enrollments

coursemanagement > enrollments

Documents | Aggregations | Schema | Indexes | Validation

Filter & Query: { Field: "value" } or \$meta: query

Buttons: Explain | Reset | Find | Options

1-14 of 14

Buttons: ADD DATA | EXPORT DATA | UPDATE | DELETE

```
{
  "_id": ObjectId("66b650355c9c5a524893"),
  "studentID": ObjectId("66b647a879a2711a4c79a4"),
  "courseID": ObjectId("66b6488320a6a7a034a63a"),
  "enrollDate": "2024-04-01T00:00:00.000+00:00"
}
```

```
{
  "_id": ObjectId("66b650355c9c5a524893"),
  "student": "Ajay",
  "course": "Maths Savana",
  "grade": "A"
}
```

```
{
  "_id": ObjectId("66b650355c9c5a524893"),
  "student": "Ajay",
  "course": "Maths Savana"
}
```

Terminal:

```
Atlas atlas-c4e09-shard-0 [primary] coursemanagement> db.enrollments.insertOne(
  {
    $set: {
      studentID: "66b647a879a2711a4c79a4",
      { $set: { enrollDate: new Date("2024-04-01") } }
    }
  } )
```

42°F Mostly cloudy 3:03 PM 2024-05-31

MongoDB Compass - arshnoorkaur2@newtonkongob.net/coursenagement/enrollments

Convert Edit View Collections Help

arshnoorkaur2.f...

My Queries Performance Databases

coursemanagement > enrollments

Documents 4 Aggregations Schema Indexes 1 Validation

Type a query: (field: "value") or Generate query

EXPLAIN RECALL FIND

1-14 of 14

ADD DATA EXPORT DATA UPDATE DELETE

```
{
  "_id": "ObjectId('90636a03386a5a524b0b')",
  "studentId": "ObjectId('6146fa7e3bda3e5af92273')",
  "courseId": "ObjectId('5348cf7e3bda3e5af92273')",
  "enrollmentDate": "2024-03-30T09:00:00+05:30"
}
```

```
{
  "_id": "ObjectId('90636a03386a5a524b0b')",
  "student": "jagan",
  "course": "Mathematics",
  "grade": "A"
}
```

```
{
  "_id": "ObjectId('90636a03386a5a524b0b')",
  "student": "arsh",
  "course": "Physics",
  "grade": "B"
}
```

MONITOR

```
{
  "operation": "update",
  "matchedCount": 1,
  "modifiedCount": 1,
  "upsertedCount": 0
}
```

Atlas atlas-ch659-shard-0 (primary) coursemanagement > db.enrollments.updateOne(

{ studentId: ObjectId('90636a03386a5a524b0b') },

MongoDB Compass - arshnoorkaur2@newtonkongob.net/coursenagement/students

Convert Edit View Collections Help

arshnoorkaur2.f...

My Queries Performance Databases

coursemanagement > students

Documents 10 Aggregations Schema Indexes 1 Validation

Type a query: (field: "value") or Generate query

EXPLAIN RECALL FIND Options

1-20 of 20

ADD DATA EXPORT DATA UPDATE DELETE

```
grade: "A"
```

```
{
  "_id": "ObjectId('90636a03386a5a524b0b')",
  "name": "Jagan",
  "age": 22,
  "email": "jagan@gmail.com",
  "grade": "A"
}
```

```
{
  "_id": "ObjectId('90636a03386a5a524b0b')",
  "name": "Purnima Kaur",
  "age": 23,
  "email": "purnimakaur@gmail.com"
}
```

MONITOR

```
at: /app/main.js:www.mongodb.com:27017
{
  "operation": "update",
  "matchedCount": 1,
  "modifiedCount": 1,
  "upsertedCount": 0
}
```

```
> db.students.updateOne(
  { name: "Purnima Kaur" },
  { $set: { age: 23 } }
)
```

```
>
```

42°F Mostly cloudy

Search

100% 14 6:20 PM 2024-09-30

MongoDB Compass - arshnoorkaur2@arshnoorkaur2:~/coursemanagement/students

Connect Edit View Collection Help

arshnoorkaur2.f...

My Queries Performance Databases

Search

coursemanagement

- assignments
- courses
- enrollments
- instructors
- students

coursemanagement > students

Documents | Aggregations | Schema | Indexes | Validation

Type a query (Field: "value") or [Generate query](#)

EXPLAIN RESET FIND Options

1 - 20 of 22

ADD DATA EXPORT DATA UPDATE DELETE

age	22
email	"arshnoorkaur@gmail.com"
_id	ObjectId("6089fcb4820a2223a033a5")
name	"Mayank Singh"
age	28
email	"mayank.singh@gmail.com"
_id	ObjectId("6089fcb4820a2223a033a6")
name	"Sitaran Kaur"
age	24
email	"sitarankaur@gmail.com"
_id	ObjectId("6089fcb4820a2223a033a7")

```
1. MongoDB
> use coursemanagement
> use students
> find({})
{ "_id" : ObjectId("6089fcb4820a2223a033a5"),
  "name" : "Mayank Singh",
  "age" : 28,
  "email" : "mayank.singh@gmail.com" }
{ "_id" : ObjectId("6089fcb4820a2223a033a6"),
  "name" : "Sitaran Kaur",
  "age" : 24,
  "email" : "sitarankaur@gmail.com" }
{ "_id" : ObjectId("6089fcb4820a2223a033a7"),
  "name" : "Arshnoorkaur",
  "age" : 22,
  "email" : "arshnoorkaur@gmail.com" }
> updateOne(
  { '_id': ObjectId('6089fcb4820a2223a033a5') },
  { '$set': { 'name': 'Mayank Kaur' } },
  { 'upsert': true })
{ 'acknowledged' : true, 'modifiedCount' : 1 }
```

42°F Mostly cloudy

Search

8:23 PM 2024-08-31

MongoDB Compass - arshnoorkaur2@arshnoorkaur2:~/coursemanagement/students

Connect Edit View Collection Help

arshnoorkaur2.f...

My Queries Performance Databases

Search

coursemanagement

- assignments
- courses
- enrollments
- instructors
- students

coursemanagement > students

Documents | Aggregations | Schema | Indexes | Validation

Type a query (Field: "value") or [Generate query](#)

EXPLAIN RESET FIND Options

1 - 20 of 22

ADD DATA EXPORT DATA UPDATE DELETE

age	22
email	"arshnoorkaur@gmail.com"
_id	ObjectId("6089fcb4820a2223a033a5")
name	"Mayank Singh"
age	28
email	"mayank.singh@gmail.com"
_id	ObjectId("6089fcb4820a2223a033a6")
name	"Sitaran Kaur"
age	24
email	"sitarankaur@gmail.com"
_id	ObjectId("6089fcb4820a2223a033a7")

```
1. MongoDB
> use coursemanagement
> use students
> find({})
{ "_id" : ObjectId("6089fcb4820a2223a033a5"),
  "name" : "Mayank Singh",
  "age" : 28,
  "email" : "mayank.singh@gmail.com" }
{ "_id" : ObjectId("6089fcb4820a2223a033a6"),
  "name" : "Sitaran Kaur",
  "age" : 24,
  "email" : "sitarankaur@gmail.com" }
{ "_id" : ObjectId("6089fcb4820a2223a033a7"),
  "name" : "Arshnoorkaur",
  "age" : 22,
  "email" : "arshnoorkaur@gmail.com" }
> updateOne(
  { '_id': ObjectId('6089fcb4820a2223a033a5') },
  { '$set': { 'name': 'Mayank Kaur' } },
  { 'upsert': true })
{ 'acknowledged' : true, 'modifiedCount' : 1 }
```

MongoDB Compass - arshnoorkaur2.r...
Connect Edit View Collection Help

My Queries Performance Databases

coursemanagement > students

Documents | Aggregations | Schema | Indexes | Validation

Type a query | Field: 'value' | or Generate query

ADD DATA EXPORT DATA UPDATE DELETE

1-20 of 22

```
agn : ""
email : "arshnoorkaur@gmail.com"

_id : ObjectId("6009fca8626a233a813a13")
name : "Arpreet Singh"
age : 28
email : "arpreet Singh@gmail.com"

_id : ObjectId("6009fca8626a233a813a14")
name : "Seren Kaur"
age : 24
email : "seren@arshnoorkaur.com"
```

Atlas atlas-c4w69-shard-0 [primary] coursemanagement

27
only locally

MongoDB Compass - arshnoorkaur2.r...
Connect Edit View Collection Help

My Queries Performance Databases

coursemanagement > instructors

Documents | Aggregations | Schema | Indexes | Validation

Type a query | Field: 'value' | or Generate query

ADD DATA EXPORT DATA UPDATE DELETE

1-14 of 14

```
_id : ObjectId("6009a3308a2b8c3a51403a1")
name : "Aditya Saxena"
department : "Computer Science"
email : "adityasaxena@gmail.com"

_id : ObjectId("6009a3308a2b8c3a51403a2")
name : "Aashu"
department : "Mathematics"

_id : ObjectId("6009a3308a2b8c3a51403a3")
name : "Pranav"
department : "Physics"
```

Atlas atlas-c4w69-shard-0 [primary] coursemanagement

27
only locally

MongoDB Compass - arshnoorkaur2.r...
Connect Edit View Collection Help

My Queries Performance Databases coursemanagement assignments courses **enrollments** instructors students

coursemanagement > enrollments

Documents 4 Aggregations Schema Indexes 1 Validation

Type a query (Field: 'value') or **Generate query**

ADD DATA **EXPORT DATA** **UPDATE** **DELETE** 1-14 of 14

Find **Explain** **Insert** **Options**

```
{ "_id": ObjectId("6089fca926a2313a013a7"),  
  "studentId": ObjectId("0009e3205bdc5c514b944"),  
  "courseId": ObjectId("6089fca926a2313a013a7"),  
  "enrollmentDate": 2024-02-22T00:00:00+00:00  
}
```

```
{ "_id": ObjectId("6089fca926a2313a013a7"),  
  "studentId": ObjectId("6089fca926a2313a013a7"),  
  "courseId": ObjectId("6089fca926a2313a013a7"),  
  "enrollmentDate": 2024-02-22T00:00:00+00:00  
}
```

```
{ "_id": ObjectId("6089fca926a2313a013a7"),  
  "studentId": ObjectId("0009e3205bdc5c514b944")  
}
```

Atlas atlas-c4w05-shard-0 [primary] coursemanagement

Search

MongoDB Compass - arshnoorkaur2.r...
Connect Edit View Collection Help

My Queries Performance Databases coursemanagement assignments courses **enrollments** instructors students

coursemanagement > courses

Documents 4 Aggregations Schema Indexes 1 Validation

Type a query (Field: 'value') or **Generate query**

ADD DATA **EXPORT DATA** **UPDATE** **DELETE** 1-14 of 14

Find **Explain** **Insert** **Options**

```
{ "_id": ObjectId("6089fca926a2313a013a7"),  
  "title": "Data Visualization",  
  "instructor": ObjectId("0009e3205bdc5c514b944"),  
  "credits": 3  
}
```

```
{ "_id": ObjectId("6089fca926a2313a013a7"),  
  "title": "Cybersecurity Fundamentals",  
  "instructor": ObjectId("0009e3205bdc5c514b944"),  
  "credits": 3  
}
```

```
{ "_id": ObjectId("6089fca926a2313a013a7")  
}
```

Atlas atlas-c4w05-shard-0 [primary] coursemanagement

Search

MongoDB Compass - arshnoorkour21@workxngod.net/coursenagement/assignments

Connect Edit View Collections Help

My Queries | coursenagement | assignments

Database: coursenagement

collections: assignments

Documents | Aggregations | Schema | Indexes | Validation

Type a query: { Field: "value" } or [Generate query](#)

1 - 14 of 14

ADD DATA | EXPORT DATA | UPDATE | DELETE

Document
<pre>{ "_id": "609f6c3a8226a2213a013a6f", "title": "Assignment 9", "course": "609f6c3a8226a2213a013a6f", "dueDate": "2024-05-20T00:00:00.000+00:00", "maxScore": 100 }</pre>
<pre>{ "_id": "609f6c3a8226a2213a013a6f", "title": "Assignment 9", "course": "609f6c3a8226a2213a013a6f", "dueDate": "2024-05-27T00:00:00.000+00:00", "maxScore": 100 }</pre>

```
{ "_id": "609f6c3a8226a2213a013a6f",  
  "title": "Assignment 9",  
  "course": "609f6c3a8226a2213a013a6f",  
  "dueDate": "2024-05-27T00:00:00.000+00:00",  
  "maxScore": 100 }
```

```
{ "_id": "609f6c3a8226a2213a013a6f",  
  "title": "Assignment 9",  
  "course": "609f6c3a8226a2213a013a6f",  
  "dueDate": "2024-05-27T00:00:00.000+00:00",  
  "maxScore": 100 }
```

Atlas: atlas-c4d09-shard-0 [primary] coursenagement>

MongoDB Compass - arshnoorkour21@workxngod.net/coursenagement/assignments

Connect Edit View Collections Help

My Queries | coursenagement | assignments

Database: coursenagement

collections: assignments

Documents | Aggregations | Schema | Indexes | Validation

Type a query: { Field: "value" } or [Generate query](#)

1 - 4 of 4

ADD DATA | EXPORT DATA | UPDATE | DELETE

Document
<pre>{ "_id": "609f6c3a8226a2213a013a6f", "title": "Assignment 1", "course": "609f6c3a8226a2213a013a6f", "dueDate": "2024-05-20T00:00:00.000+00:00", "maxScore": 100 }</pre>
<pre>{ "_id": "609f6c3a8226a2213a013a6f", "title": "Assignment 1", "course": "609f6c3a8226a2213a013a6f", "dueDate": "2024-05-20", "maxScore": 100 }</pre>
<pre>{ "_id": "609f6c3a8226a2213a013a6f", "title": "Assignment 1", "course": "609f6c3a8226a2213a013a6f", "dueDate": "2024-05-20", "maxScore": 100 }</pre>
<pre>{ "_id": "609f6c3a8226a2213a013a6f", "title": "Assignment 1", "course": "609f6c3a8226a2213a013a6f", "dueDate": "2024-05-20", "maxScore": 100 }</pre>

```
{ "_id": "609f6c3a8226a2213a013a6f",  
  "title": "Assignment 1",  
  "course": "609f6c3a8226a2213a013a6f",  
  "dueDate": "2024-05-20",  
  "maxScore": 100 }
```

```
{ "_id": "609f6c3a8226a2213a013a6f",  
  "title": "Assignment 1",  
  "course": "609f6c3a8226a2213a013a6f",  
  "dueDate": "2024-05-20",  
  "maxScore": 100 }
```

Atlas: atlas-c4d09-shard-0 [primary] coursenagement>

MongoDB Compass - orshnoorkour2@newtonnongadun/coursenagement:assignments

Connected | Edit View Collections Help

orshnoorkour2.f...

My Queries | Performance | Databases | coursenagement | assignments | courses | assignments | instructors | students | boot | todos_shop | test | todo

assignments

Documents | Aggregations | Schema | Indexes | Validation

Type & query: (Field: "value") or **Generate query**

ADD DATA | **EXPORT DATA** | **UPDATE** | **DELETE**

1-4 of 4

```

{ "_id": ObjectId("660b0438a96d5d349536"),
  "title": "Assignment 1",
  "course": "Introduction to ReactJS",
  "dueDate": "2024-04-15T00:00:00.000Z",
  "maxScore": 100 }

{ "_id": ObjectId("660b0438a96d5d349537"),
  "course": "Web Development",
  "title": "Session 1",
  "dueDate": "2024-04-15" }

{ "_id": ObjectId("660b0438a96d5d349538"),
  "course": "Web Development" }

```

```

{ $match: { "assignment": 3 }, $sort: { $objectId: "660b0438a96d5d349536" }, $project: { "dueDate": new Date("2024-04-15"), "maxScore": new Date("2024-04-15"), "title": "Assignment 3", "course": { $objectId: "660b0438a96d5d349536" }, "dueDate": new Date("2024-04-15"), "maxScore": 100 },
{ $match: "Assignment 3", "course": { $objectId: "660b0438a96d5d349536" }, "dueDate": new Date("2024-04-15"), "maxScore": 100 },
{ $match: "Assignment 3", "course": { $objectId: "660b0438a96d5d349536" }, "dueDate": new Date("2024-04-15"), "maxScore": 100 },
{ $match: "Assignment 3", "course": { $objectId: "660b0438a96d5d349536" }, "dueDate": new Date("2024-04-15"), "maxScore": 100 },
{ $match: "Assignment 3", "course": { $objectId: "660b0438a96d5d349536" }, "dueDate": new Date("2024-04-15"), "maxScore": 100 },
{ $match: "Assignment 3", "course": { $objectId: "660b0438a96d5d349536" }, "dueDate": new Date("2024-04-15"), "maxScore": 100 }
}

```

db.assignments.aggregate(\$sort)

MongoDB Compass - orshnoorkour2@newtonnongadun/coursenagement:instructors

Connected | Edit View Collections Help

orshnoorkour2.f...

My Queries | Performance | Databases | coursenagement | assignments | courses | assignments | instructors | students | boot | todos_shop | test | todo

instructors

Documents | Aggregations | Schema | Indexes | Validation

Type & query: (Field: "value") or **Generate query**

ADD DATA | **EXPORT DATA** | **UPDATE** | **DELETE**

1-4 of 4

```

{ "_id": ObjectId("660b0438a96d5d349537"),
  "name": "John",
  "department": "Mathematics" }

{ "_id": ObjectId("660b0438a96d5d349538"),
  "name": "Jane",
  "department": "Physics" }

{ "_id": ObjectId("660b0438a96d5d349539"),
  "name": "James",
  "department": "Computer Science" }

```

```

{ $match: { "instructor": 3 }, $sort: { $objectId: "660b0438a96d5d349537" }, $project: { "name": new Date("2024-04-15"), "department": new Date("2024-04-15"), "name": "John", "department": { $objectId: "660b0438a96d5d349537" }, "name": new Date("2024-04-15"), "department": 100 },
{ $match: "Instructor 3", "instructor": { $objectId: "660b0438a96d5d349537" }, "name": new Date("2024-04-15"), "department": 100 },
{ $match: "Instructor 3", "instructor": { $objectId: "660b0438a96d5d349537" }, "name": new Date("2024-04-15"), "department": 100 },
{ $match: "Instructor 3", "instructor": { $objectId: "660b0438a96d5d349537" }, "name": new Date("2024-04-15"), "department": 100 },
{ $match: "Instructor 3", "instructor": { $objectId: "660b0438a96d5d349537" }, "name": new Date("2024-04-15"), "department": 100 },
{ $match: "Instructor 3", "instructor": { $objectId: "660b0438a96d5d349537" }, "name": new Date("2024-04-15"), "department": 100 }
}

```

Atlas atlan-c4b3d-shard-0 [primary] coursenagement(3)

MongoDB Compass - arshnoorkaur2@aws:~/mongodb/courses/coursemanagement/instructors

Connect Edit View Collections Help

arshnoorkaur2...

My Queries Performance Databases

coursemanagement

assignments courses enrollments **instructors** students

coursemanagement > instructors

Documents 4 Aggregations Schema Indexes 1 Validation

Type a query (Field: 'value') or Generate Query

EXPLAIN RESET FIND OPTIONS

1 - 4 of 4

ADD DATA EXPORT DATA UPDATE DELETE

```

{ "_id": "609c13d716896c12288a6c5b0349442",
  "name": "Jaspreet Kaur",
  "department": "Mathematics",
  "email": "jaspreet.kaur@example.com" },
{ "_id": "609c13d716896c12288a6c5b0349443",
  "name": "Randeep Singh",
  "department": "Physics",
  "email": "randeep.singh@example.com" },
{ "_id": "609c13d716896c12288a6c5b0349444",
  "name": "Aarizpal Kaur",
  "department": "Chemistry",
  "email": "aarizpal.kaur@example.com" },
{ "_id": "609c13d716896c12288a6c5b0349445",
  "name": "Harpreet Kaur",
  "department": "Computer Science",
  "email": "harpreet.kaur@example.com" },
{ "_id": "609c13d716896c12288a6c5b0349446",
  "name": "Jaswinder Kaur",
  "department": "Mathematics",
  "email": "jaswinder.kaur@example.com" }

```

db.instructors.insertMany(instructors)

4PT MongoDB

MongoDB Compass - arshnoorkaur2@aws:~/mongodb/courses/coursemanagement/enrollments

Connect Edit View Collections Help

arshnoorkaur2...

My Queries Performance Databases

coursemanagement

assignments courses **enrollments** instructors students

coursemanagement > enrollments

Documents 4 Aggregations Schema Indexes 1 Validation

Type a query (Field: 'value') or Generate Query

EXPLAIN RESET FIND OPTIONS

1 - 4 of 4

ADD DATA EXPORT DATA UPDATE DELETE

```

{ "course": "Physics",
  "student": "Jaspreet",
  "grade": "A" },
{ "_id": "609c13d716896c12288a6c5b0349447",
  "student": "Randeep",
  "course": "Physics",
  "grade": "B" },
{ "_id": "609c13d716896c12288a6c5b0349448",
  "student": "Jaspreet",
  "course": "Computer Science",
  "grade": "C" }

```

```

const enrollments = [
  {
    course: "Physics",
    student: "Jaspreet",
    grade: "A"
  },
  {
    course: "Physics",
    student: "Randeep",
    grade: "B"
  },
  {
    course: "Physics",
    student: "Aarizpal",
    grade: "C"
  },
  {
    course: "Physics",
    student: "Harpreet",
    grade: "D"
  },
  {
    course: "Physics",
    student: "Jaswinder",
    grade: "E"
  }
];

```

Atlas atlas-c4b03-shard-0 (primary) coursemanagement

4PT MongoDB

MongoDB Compass - arshnoorkour2.f... | Connected | Edit | View | Collections | Help

arshnoorkour2.f...

My Queries | Performance | Databases | coursemanagement | assignments | courses | **enrollments** | instructors | students | todo | todo_shop | test | todo

coursemanagement > enrollments

Documents | Aggregations | Schema | Indexes | Validation

Filter & Query: { Field: "value" } or \$meta: query

1-4 of 4

ADD DATA | EXPORT DATA | UPDATE | DELETE

```
{ "_id": ObjectId("6088497035829dc5d246597"),
  "studentID": ObjectId("6149c47c70ba6b4a792972"),
  "courseID": ObjectId("6149c47c70ba6b4a792972"),
  "enrollmentDate": "2024-05-20T08:00:00.000+05:30" },
{ "_id": ObjectId("6088497035829dc5d246597"),
  "student": "Ajay",
  "course": "ReactJS",
  "grade": "B" },
{ "_id": ObjectId("6088497035829dc5d246597"),
  "student": "Ansh",
  "course": "ReactJS",
  "grade": "C" }
```

1

MongoDB Compass - arshnoorkour2.f... | Connected | Edit | View | Collections | Help

arshnoorkour2.f...

My Queries | Performance | Databases | coursemanagement | assignments | courses | enrollments | instructors | **students** | todo | todo_shop | test | todo

coursemanagement > students

Documents | Aggregations | Schema | Indexes | Validation

Filter & Query: { Field: "value" } or \$meta: query

1-16 of 16

ADD DATA | EXPORT DATA | UPDATE | DELETE

```
{ name: "Shruti Kaur",
  age: 22,
  email: "shrutikaur@gmail.com" },
{ "_id": ObjectId("6088497035829dc5d246597"),
  name: "Gurpreet Singh",
  age: 21,
  email: "gurpreetsingh@gmail.com" },
{ "_id": ObjectId("6088497035829dc5d246597"),
  name: "Harpreet Kaur",
  age: 21,
  email: "harpreetkaur@gmail.com" }
```

MongoDB Compass - arshnoorkaur2... | Connected | Edit | View | Collections | Help

My Queries | My Databases | Collections | Documents | Aggregations | Schema | Indexes | Validation

coursemanagement > students

Type a query: (Field: "value") or [Semantic query](#)

[ADD DATA](#) [EXPORT DATA](#) [UPDATE](#) [DELETE](#)

1 - 12 of 12

```
{ "_id": ObjectId("600b6333a6a5d34953f"),  
  "name": "Vijay",  
  "age": 25,  
  "email": "vijay@gmail.com"  
}
```

```
{ "_id": ObjectId("600b6443b6a5d34953f"),  
  "name": "Anil",  
  "age": 28,  
  "grade": "A"  
}
```

```
{ "_id": ObjectId("600b64e33a6a5d34953f"),  
  "name": "Ravi",  
  "age": 22  
}
```

Terminal

```
root@kali:~/mongodb#  
_mongo>  
{ "name": "Harpreet Kaur", "age": 22, "email": "harpreetkaur@gmail.com" },  
{ "name": "Gurpreet Singh", "age": 21, "email": "gurpreetsingh@gmail.com" },  
{ "name": "Harpreet Kaur", "age": 23, "email": "harpreetkaur@gmail.com" },  
{ "name": "Harpreet Singh", "age": 24, "email": "harpreetsingh@gmail.com" },  
{ "name": "Simran Kaur", "age": 24, "email": "simransingh@gmail.com" },  
{ "name": "Jaspreet Singh", "age": 25, "email": "jaspreetsingh@gmail.com" },  
{ "name": "Ravneet Kaur", "age": 26, "email": "ravneetkaur@gmail.com" },  
{ "name": "Gaganpreet Singh", "age": 27, "email": "gaganpreetsingh@gmail.com" },
```

MongoDB Compass - arshnoorkaur2... | Connected | Edit | View | Collections | Help

My Queries | My Databases | Collections | Documents | Aggregations | Schema | Indexes | Validation

coursemanagement > instructors

Type a query: (Field: "value") or [Semantic query](#)

[ADD DATA](#) [EXPORT DATA](#) [UPDATE](#) [DELETE](#)

1 - 4 of 4

```
{ "_id": ObjectId("600b6333a6a5d34953f"),  
  "name": "Vijay",  
  "department": "Computer Science",  
  "email": "vijay@gmail.com"  
}
```

```
{ "_id": ObjectId("600b6443b6a5d34953f"),  
  "name": "Anil",  
  "department": "Mathematics"  
}
```

```
{ "_id": ObjectId("600b64e33a6a5d34953f"),  
  "name": "Ravi",  
  "department": "Physics"  
}
```

Terminal

```
root@kali:~/mongodb#  
_mongo>  
> use coursemanagement  
> db.instructors.findOne({ department: "Physics" })  
{  
  "_id": ObjectId("600b64e33a6a5d34953f"),  
  "name": "Ravi",  
  "department": "Physics"  
}
```

MongoDB Compass - orshnoorkour2.f...
Connected | Edit | View | Collections | Help

orshnoorkour2.f...
My Queries | coursemangement | enrollments | students | students | instructors

My Queries
Performance
Databases
Search
coursemangement
assignments
courses
enrollments
instructors
students
tools
mongo_ufop
test
tools

Documents | Aggregations | Schema | Indexes | Validation

Find & query: { Field: "value" } or **Basic query**

EXPLAIN | RESET | FIND | Options

1-4 of 4

ADD DATA | EXPORT DATA | UPDATE | DELETE

```
{ "_id": ObjectId("660b7122888ac3a148844"),  
  "name": "Jugan",  
  "department": "Computer Science",  
  "email": "jughyaxen@gmail.com" }  
  
{ "_id": ObjectId("660b7122888ac3a148844"),  
  "name": "Jugan",  
  "department": "Mathematics" }  
  
{ "_id": ObjectId("660b7122888ac3a148844"),  
  "name": "Jugan",  
  "department": "Physics" }
```

Terminal
MongoDB
atlas-atlas-c4eb3d-shard-0 [primary] coursemangement> db.instructors.find({ department: "Physics" })

MongoDB Compass - orshnoorkour2.f...
Connected | Edit | View | Collections | Help

orshnoorkour2.f...
My Queries | coursemangement | enrollments | students | students | enrollments

My Queries
Performance
Databases
Search
coursemangement
assignments
courses
enrollments
instructors
students
tools
mongo_ufop
test
tools

Documents | Aggregations | Schema | Indexes | Validation

Find & query: { Field: "value" } or **Basic query**

EXPLAIN | RESET | FIND | Options

1-4 of 4

ADD DATA | EXPORT DATA | UPDATE | DELETE

```
{ "_id": ObjectId("660b7122888ac3a148844"),  
  "student": "Jugan",  
  "course": "Mathematics",  
  "grade": "A" }  
  
{ "_id": ObjectId("660b7122888ac3a148844"),  
  "student": "Jugan",  
  "course": "Physics",  
  "grade": "B" }  
  
{ "_id": ObjectId("660b7122888ac3a148844"),  
  "student": "Jugan",  
  "course": "Computer Science",  
  "grade": "C" }
```

Terminal
MongoDB
atlas-atlas-c4eb3d-shard-0 [primary] coursemangement>

MongoDB Compass - arshnoorkour2@newtonkongaibauri:coursemanagement.arshnoorkour2

Connected | Edit | View | Collections | Help

My Queries | coursemanagement | enrollments | students | students | enrollments

coursemanagement > enrollments

Documents | Aggregations | Schema | Indexes | Validation

Type & query: (Field: "value") or \$meta:query

1-4 of 4

ADD DATA | EXPORT DATA | UPDATE | DELETE

```
{ "_id": ObjectId("660884d28a26c5d524659f"),
  "studentID": ObjectId("6149c4a7c70a0b04a70372"),
  "courseID": ObjectId("6149c4a7c70a0b04a70372"),
  "enrollmentDate": "2024-08-08T08:00:00.000+05:30" }

{ "_id": ObjectId("660884d28a26c5d524659f"),
  "student": "Ajay",
  "course": "Python 101",
  "grade": "A" }

{ "_id": ObjectId("660884d28a26c5d524659f"),
  "student": "Ansh",
  "course": "Python 101",
  "grade": "B" }
```

Terminal:

```
~$ mongo
> use coursemanagement
> db.courses.findOne({ instructor: "aditya saxena" })
{
  "_id": ObjectId("660884d28a26c5d524659f"),
  "courseName": "Introduction to MongoDB",
  "instructor": "aditya saxena",
  "credits": 3
}
> db.enrollments.findOne({ grade: "A" })
```

MongoDB Compass - arshnoorkour2@newtonkongaibauri:coursemanagement.com

Connected | Edit | View | Collections | Help

My Queries | coursemanagement | enrollments | students | students | courses

coursemanagement > courses

Documents | Aggregations | Schema | Indexes | Validation

Type & query: (Field: "value") or \$meta:query

1-4 of 4

ADD DATA | EXPORT DATA | UPDATE | DELETE

```
{ "_id": ObjectId("660884d28a26c5d524659f"),
  "courseName": "Introduction to MongoDB",
  "instructor": "aditya saxena",
  "credits": 3 }

{ "_id": ObjectId("660884d28a26c5d524659f"),
  "title": "Mathematics",
  "instructor": "Ajay",
  "credits": 2 }

{ "_id": ObjectId("660884d28a26c5d524659f"),
  "title": "Physics",
  "instructor": "Ansh",
  "credits": 2 }
```

Terminal:

```
~$ mongo
> use coursemanagement
> db.courses.findOne({ instructor: "aditya saxena" })
{
  "_id": ObjectId("660884d28a26c5d524659f"),
  "courseName": "Introduction to MongoDB",
  "instructor": "aditya saxena",
  "credits": 3
}
>
```


MongoDB Compass - arshnoorkour2.f... | Connected | Edit | View | Collections | Help

My Queries | coursemanagement | assignments | students | students | courses | x | +

coursemanagement > courses

Documents | 4 | Aggregations | Schema | Indexes | Validation

Type & query: (Field: "value") or \$meta: query

EXPLAIN | RESET | FIND | Options

1-4 of 4

ADD DATA | EXPORT DATA | UPDATE | DELETE

```
{ "_id": ObjectId("6600b4238a9d5d514b9471"),  
  "courseName": "Introduction to Rangoor",  
  "instructor": "willis xaxiao",  
  "credits": 3 }  
  
{ "_id": ObjectId("6600b4238a9d5d514b9472"),  
  "title": "Mathematics",  
  "instructor": "jordan",  
  "credits": 3 }  
  
{ "_id": ObjectId("6600b4238a9d5d514b9473"),  
  "title": "Physics",  
  "instructor": "willis",  
  "credits": 3 }
```

Terminal

```
➜ ~ mongo --host localhost --port 27020 --use coursemanagement --eval 'use coursemanagement; db.courses.find( { "_id": ObjectId("6600b4238a9d5d514b9471") }, { "_id": 1, "courseName": "Mathematics", "title": "Homework 1", "dueDate": "2024-04-18" })'
```

Atlas atlas-chdb0-shard-0 [primary] coursemanagement> use coursemanagement
coursemanagement> db.courses.find({ "_id": ObjectId("6600b4238a9d5d514b9471") }, { "_id": 1, "courseName": "Mathematics", "title": "Homework 1", "dueDate": "2024-04-18" })

MongoDB Compass - arshnoorkour2.f... | Connected | Edit | View | Collections | Help

My Queries | coursemanagement | assignments | students | students | assignments | x | +

coursemanagement > assignments

Documents | 4 | Aggregations | Schema | Indexes | Validation

Type & query: (Field: "value") or \$meta: query

EXPLAIN | RESET | FIND | Options

1-4 of 4

ADD DATA | EXPORT DATA | UPDATE | DELETE

```
{ "_id": ObjectId("6600b4238a9d5d514b9471"),  
  "course": "Introduction to Rangoor",  
  "dueDate": "2024-04-18T00:00:00.000Z",  
  "maxScore": 100 }  
  
{ "_id": ObjectId("6600b4238a9d5d514b9472"),  
  "course": "Mathematics",  
  "title": "Homework 1",  
  "dueDate": "2024-04-18" }  
  
{ "_id": ObjectId("6600b4238a9d5d514b9473"),  
  "course": "Physics",  
  "title": "Lab Report",  
  "dueDate": "2024-04-18" }
```

Terminal

```
➜ ~ mongo --host localhost --port 27020 --use coursemanagement --eval 'use coursemanagement; db.assignments.find( { "_id": ObjectId("6600b4238a9d5d514b9471") }, { "_id": 1, "course": "Mathematics", "title": "Homework 1", "dueDate": "2024-04-18" })'
```

Atlas atlas-chdb0-shard-0 [primary] coursemanagement>

MongoDB Compass - arshnoorkur2.f... | Connected | Edit | View | Collections | Help

My Queries | Performance | Databases | coursemanagement | assignments | courses | enrollments | instructors | students | local | todos_shop | test | todo

coursemanagement > assignments

Documents | Aggregations | Schema | Indexes | Validation

Type a query: (Field: "value") or Generate query

ADD DATA | EXPORT DATA | UPDATE | DELETE

1-4 of 4

```
{
  "course": "Introduction to MongoDB",
  "startDate": "2024-04-01T00:00:00.000+00:00",
  "maxScore": 100,
  "_id": ObjectId("660b380388bdc5a5140946")
},
{
  "course": "Mathematics",
  "title": "Homework 3",
  "startDate": "2024-04-10",
  "_id": ObjectId("660b380388bdc5a5140947")
},
{
  "course": "Physics",
  "title": "Lab Report",
  "startDate": "2024-04-15",
  "_id": ObjectId("660b380388bdc5a5140948")
}
```

Terminal

```
PS C:\Users\arshnoorkur> mongo --host localhost --port 27020 --use coursemanagement
MongoDB shell version: 6.0.1
> use coursemanagement
switched to db coursemanagement
> use assignments
switched to db coursemanagement.assignments
> db.assignments.findOne({_id: ObjectId("660b380388bdc5a5140946")})
{
  "_id": ObjectId("660b380388bdc5a5140946"),
  "course": "Introduction to MongoDB",
  "startDate": "2024-04-01T00:00:00.000+00:00",
  "maxScore": 100
}
```

MongoDB Compass - arshnoorkur2.f... | Connected | Edit | View | Collections | Help

My Queries | Performance | Databases | coursemanagement | assignments | courses | enrollments | instructors | students | local | todos_shop | test | todo

coursemanagement > students

Documents | Aggregations | Schema | Indexes | Validation

Type a query: (Field: "value") or Generate query

ADD DATA | EXPORT DATA | UPDATE | DELETE

1-3 of 3

```
{
  "_id": ObjectId("660b380388bdc5a5140949"),
  "name": "Pavraj",
  "age": 19,
  "email": "pavrajgill.com"
},
{
  "_id": ObjectId("660b380388bdc5a5140950"),
  "name": "Ishika",
  "age": 18,
  "grade": "9"
},
{
  "_id": ObjectId("660b380388bdc5a5140951"),
  "name": "Rishabh",
  "age": 22
}
```

Terminal

```
PS C:\Users\arshnoorkur> mongo --host localhost --port 27020 --use coursemanagement
MongoDB shell version: 6.0.1
> use coursemanagement
switched to db coursemanagement
> use students
switched to db coursemanagement.students
> db.students.findOne({_id: ObjectId("660b380388bdc5a5140949")})
{
  "_id": ObjectId("660b380388bdc5a5140949"),
  "name": "Pavraj",
  "age": 19,
  "email": "pavrajgill.com"
}
```

The screenshot displays the MongoDB Compass application. On the left sidebar, the database 'arshnoorkaur2' is selected, and the 'courses' collection is highlighted. The main panel shows the 'Documents' tab with three documents in the 'courses' collection. The first document is:


```
{ "_id": ObjectId("60b0b4d38a9b65d34539"), "courseName": "Introduction to MongoDB", "instructor": "Millyn Kaur", "credits": 3 }
```

 The second document is:


```
{ "_id": ObjectId("60b0c4f838a9b65d34539"), "title": "MongoDB", "instructor": "Gurpreet", "credits": 2 }
```

 The third document is:


```
{ "_id": ObjectId("60b0c4f838a9b65d34539"), "title": "MongoDB", "instructor": "Gurpreet", "credits": 2 }
```

 At the bottom, a terminal window shows the command:


```
mongo --u admin --p --host localhost:27021 --ssl --sslCAFile ca.pem --sslKeyFile key.pem --sslCertFile cert.pem --sslAllowInvalidCertificates --eval 'use arshnoorkaur2; use collection courses; insert({courseName: "Introduction to MongoDB", instructor: "Millyn Kaur", credits: 3}); insert({title: "MongoDB", instructor: "Gurpreet", credits: 2}); insert({title: "MongoDB", instructor: "Gurpreet", credits: 2});'
```

 The terminal output shows the successful insertion of three documents into the 'courses' collection.

MongoDB Compass - orshnoorkour2.f...
Connected | Edit | View | Collections | Help

orshnoorkour2.f...
My Queries | coursemanagement | enrollments | students | students | students

coursemanagement > students

Documents | Aggregations | Schema | Indexes | Validation

Type & query: (Field: "value") or \$meta: query

1-12 of 12

ADD DATA | EXPORT DATA | UPDATE | DELETE

```
{ "_id": ObjectId("66b6a833a8a8d5d34953f"),  
  "name": "Naveen",  
  "age": 25,  
  "email": "naveen@outlook.com"  
}
```

```
{ "_id": ObjectId("66b6a833a8a8d5d34953f"),  
  "name": "Naveen",  
  "age": 25,  
  "grade": "A"  
}
```

```
{ "_id": ObjectId("66b6a833a8a8d5d34953f"),  
  "name": "Naveen",  
  "age": 25,  
  "grade": "A"  
}
```

Terminal

```
atlas@atlas-c4b0d-shard-0 [primary] test> const student = db.students.findOne({ name: "Naveen" });  
atlas@atlas-c4b0d-shard-0 [primary] test> printjson(student);
```

MongoDB Compass - orshnoorkour2.f...
Connected | Edit | View | Collections | Help

orshnoorkour2.f...
My Queries | coursemanagement | enrollments | students | students | enrollments

coursemanagement > enrollments

Documents | Aggregations | Schema | Indexes | Validation

Type & query: (Field: "value") or \$meta: query

1-4 of 4

ADD DATA | EXPORT DATA | UPDATE | DELETE

```
{ "course": "Mathematics",  
  "grade": "A"  
}
```

```
{ "_id": ObjectId("66b6a833a8a8d5d34953f"),  
  "student": "Naveen",  
  "course": "Physics",  
  "grade": "B"  
}
```

```
{ "_id": ObjectId("66b6a833a8a8d5d34953f"),  
  "student": "Naveen",  
  "course": "Computer Science",  
  "grade": "C"  
}
```

Terminal

```
atlas@atlas-c4b0d-shard-0 [primary] test> {  
  acknowledged: true,  
  insertedAt: null,  
  matchedCount: 0,  
  modifiedCount: 0,  
  upsertedCount: 0  
}
```

MongoDB Compass - orshnoorkour2.f...
Connected | Edit | View | Collections | Help

orshnoorkour2.f...
My Queries | coursemanagement | enrollments | students | students | enrollments

coursemanagement > enrollments

Documents | Aggregations | Schema | Indexes | Validation

Filter & Query: { Field: "value" } or \$meta: query

ADD DATA | EXPORT DATA | UPDATE | DELETE

1 - 4 of 4

```
{ "_id": ObjectId("660b511388a9d5d348847c"),  
  "course": "Mathematics",  
  "grade": "A" }  
  
{ "_id": ObjectId("660b511388a9d5d348847c"),  
  "student": "John",  
  "course": "Physics",  
  "grade": "B" }  
  
{ "_id": ObjectId("660b511388a9d5d348847c"),  
  "student": "John",  
  "course": "Computer Science",  
  "grade": "C" }
```

Terminal

```
mongo> use coursemanagement; use enrollments;  
modifiiedCount: 0,  
updatedCount: 0 }  
Atlas atlan-c4b20-shard-0 [primary] test> db.enrollments.updateMany(  
  { grade: "A" },  
  { $set: { grade: "B" } }  
)  
{
```

MongoDB Compass - orshnoorkour2.f...
Connected | Edit | View | Collections | Help

orshnoorkour2.f...
My Queries | coursemanagement | enrollments | students | students | instructors

coursemanagement > instructors

Documents | Aggregations | Schema | Indexes | Validation

Filter & Query: { Field: "value" } or \$meta: query

ADD DATA | EXPORT DATA | UPDATE | DELETE

1 - 4 of 4

```
{ "_id": ObjectId("660b511388a9d5d348847c"),  
  "name": "John Doe",  
  "department": "Computer Science",  
  "email": "john.doe@example.com" }  
  
{ "_id": ObjectId("660b511388a9d5d348847c"),  
  "name": "Jane Smith",  
  "department": "Mathematics" }  
  
{ "_id": ObjectId("660b511388a9d5d348847c"),  
  "name": "Mike Johnson",  
  "department": "Physics" }
```

Terminal

```
mongo> use coursemanagement; use instructors;  
{  
  acknowledged: true,  
  insertedCount: 0,  
  matchedCount: 1,  
  modifiedCount: 0,  
  updatedCount: 0 }  
Atlas atlan-c4b20-shard-0 [primary] test>
```


MongoDB Compass - arshnoorkour2.f... | Connected | Edit | View | Collections | Help

arshnoorkour2.f...

My Queries | Performance | Databases | coursemanagement | assignments | **enrollments** | students | enrollments

coursemanagement > enrollments

Documents | Aggregations | Schema | Indexes | Validation

Filter & Query: { Field: "value" } or \$meta: query

Buttons: Explain | Reset | Find | Options

1-4 of 4

ADD DATA | EXPORT DATA | UPDATE | DELETE

_id	ObjectId('660645035829dc5d346591')
studentId	ObjectId('6149c4e7c0a0b04e70372')
courseId	ObjectId('6130c7e9c0a0b04e70372')
enrollmentDate	2024-05-05T05:00:00.000+05:30

_id	ObjectId('660645035829dc5d346591')
student	"jagan"
course	"Maths test"
grade	"B"

_id	ObjectId('660645035829dc5d346591')
student	"harsh"
course	"Physics"

```
use coursemanagement;
update enrollments set $set: {
  assignmentId: 1,
  newEnrollment: 1,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
```

Atlas atlas-c4eb0-shard-0 [primary] test

MongoDB Compass - arshnoorkour2.f... | Connected | Edit | View | Collections | Help

arshnoorkour2.f...

My Queries | Performance | Databases | coursemanagement | assignments | students | **courses**

coursemanagement > courses

Documents | Aggregations | Schema | Indexes | Validation

Filter & Query: { Field: "value" } or \$meta: query

Buttons: Explain | Reset | Find | Options

1-4 of 4

ADD DATA | EXPORT DATA | UPDATE | DELETE

_id	ObjectId('660645035829dc5d346591')
courseName	"Introduction to MongoDB"
instructor	"Jagdeep Kumar"
credits	3

_id	ObjectId('660645035829dc5d346591')
title	"Mathematics"
instructor	"Jagan"
credits	2

_id	ObjectId('660645035829dc5d346591')
title	"Physics"
instructor	"Harsh"

```
use coursemanagement;
update courses set $set: {
  credits: 3
}
```

Atlas atlas-c4eb0-shard-0 [primary] test

MongoDB Compass - orshnoorkour2@newtonongardun:~/coursemanagement/students

Connected | Edit | View | Collections | Help

orshnoorkour2.f...

My Queries | Performance | Databases | coursemanagement | assignments | courses | enrollments | instructors | **students** | boot | todos_ufop | test | todo

coursemanagement > students

Documents | Aggregations | Schema | Indexes | Validation

Type & query: (Field: "value") or **Schema: query**

1-12 of 12

ADD DATA | EXPORT DATA | UPDATE | DELETE

```

{
  "_id": ObjectId("60b648888888888888888888"),
  "name": "Tushar",
  "age": 21,
  "email": "tushar@ppp.com",
  "grade": "12"
}

{
  "_id": ObjectId("60b648888888888888888888"),
  "name": "SUDHAR",
  "age": 21,
  "email": "sushar@ppp.com",
  "grade": "12"
}

```

```

{
  "assignments": {
    "assignment": {
      "id": 1,
      "name": "Test 1",
      "score": 85,
      "status": "Completed"
    }
  },
  "courses": {
    "course": {
      "id": 1,
      "name": "Maths",
      "score": 85,
      "status": "Completed"
    }
  },
  "enrollments": {
    "enrollment": {
      "id": 1,
      "name": "Test 1",
      "score": 85,
      "status": "Completed"
    }
  },
  "instructors": {
    "instructor": {
      "id": 1,
      "name": "Test 1",
      "score": 85,
      "status": "Completed"
    }
  },
  "students": {
    "student": {
      "id": 1,
      "name": "Test 1",
      "score": 85,
      "status": "Completed"
    }
  }
}

```

Atlas atlas-c4600-shard-0 [primary] test1

MongoDB Compass - orshnoorkour2@newtonongardun:~/coursemanagement/students

Connected | Edit | View | Collections | Help

orshnoorkour2.f...

My Queries | Performance | Databases | coursemanagement | assignments | courses | enrollments | instructors | **students** | boot | todos_ufop | test | todo

coursemanagement > students

Documents | Aggregations | Schema | Indexes | Validation

Type & query: (Field: "value") or **Schema: query**

1-12 of 12

ADD DATA | EXPORT DATA | UPDATE | DELETE

```

{
  "_id": ObjectId("60b648888888888888888888"),
  "name": "Tushar",
  "age": 21,
  "email": "tushar@ppp.com"
}

{
  "_id": ObjectId("60b648888888888888888888"),
  "name": "SUDHAR",
  "age": 21,
  "email": "sushar@ppp.com"
}

{
  "_id": ObjectId("60b648888888888888888888"),
  "name": "SUDHAR",
  "age": 21,
  "email": "sushar@ppp.com"
}

```

```

{
  "assignments": {
    "assignment": {
      "id": 1,
      "name": "Test 1",
      "score": 85,
      "status": "Completed"
    }
  },
  "courses": {
    "course": {
      "id": 1,
      "name": "Maths",
      "score": 85,
      "status": "Completed"
    }
  },
  "enrollments": {
    "enrollment": {
      "id": 1,
      "name": "Test 1",
      "score": 85,
      "status": "Completed"
    }
  },
  "instructors": {
    "instructor": {
      "id": 1,
      "name": "Test 1",
      "score": 85,
      "status": "Completed"
    }
  },
  "students": {
    "student": {
      "id": 1,
      "name": "Test 1",
      "score": 85,
      "status": "Completed"
    }
  }
}

```

Atlas atlas-c4600-shard-0 [primary] test1 db.students.aggregate(

1

MongoDB Compass - arshnoorkour2.f...
Connected | Edit | View | Collections | Help

arshnoorkour2.f...

My Queries | Performance | Databases | Collections | arshnoorkour2.f... | coursemanagement | enrollments | students | students | enrollments | X | +

coursemanagement > enrollments

Documents | Aggregations | Schema | Indexes | Validation

Filter & Query: { Field: "value" } or \$match: query

ADD DATA | EXPORT DATA | UPDATE | DELETE

1-4 of 4

```
{ "_id": ObjectId("660665035629dc5d246591"),  
  "studentID": ObjectId("6149c47e70ba3b4a920727"),  
  "courseID": ObjectId("6149c47e70ba3b4a920727"),  
  "enrollmentDate": "2024-06-06T08:04:00.000+00:00"  
}
```

```
{ "_id": ObjectId("660672283a9dc5d246591"),  
  "student": "jugan",  
  "course": "Mathematics",  
  "grade": "A"  
}
```

```
{ "_id": ObjectId("660672283a9dc5d246591"),  
  "student": "harsh",  
  "course": "Physics"  
}
```

Terminal

```
Atlas atlas-344659-shard-0 [primary] test> // update one document in the "enrollments" collection  
db.enrollments.updateOne(  
  { studentID: ObjectId("6149c47e70ba3b4a920727") }, // filter criteria  
  { $set: { $merge: { $set: { "enrollmentDate": ObjectId("6149c47e70ba3b4a920727") } } } } // update operation  
)
```

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MongoDB Compass - arshnoorkour2.f...
Connected | Edit | View | Collections | Help

arshnoorkour2.f...

My Queries | Performance | Databases | Collections | arshnoorkour2.f... | coursemanagement | enrollments | students | students | enrollments | X | +

coursemanagement > enrollments

Documents | Aggregations | Schema | Indexes | Validation

Filter & Query: { Field: "value" } or \$match: query

ADD DATA | EXPORT DATA | UPDATE | DELETE

1-4 of 4

```
{ "_id": ObjectId("660665035629dc5d246591"),  
  "studentID": ObjectId("6149c47e70ba3b4a920727"),  
  "courseID": ObjectId("6149c47e70ba3b4a920727"),  
  "enrollmentDate": "2024-06-06T08:04:00.000+00:00"  
}
```

```
{ "_id": ObjectId("660672283a9dc5d246591"),  
  "student": "jugan",  
  "course": "Mathematics",  
  "grade": "A"  
}
```

```
{ "_id": ObjectId("660672283a9dc5d246591"),  
  "student": "harsh",  
  "course": "Physics"  
}
```

Terminal

```
Atlas atlas-344659-shard-0 [primary] test> // update one document in the "enrollments" collection  
db.enrollments.updateOne(  
  { studentID: ObjectId("6149c47e70ba3b4a920727") }, // filter criteria  
  { $set: { $merge: { $set: { "enrollmentDate": ObjectId("6149c47e70ba3b4a920727") } } } } // update operation  
)
```

49°C Sunny

MongoDB Compass - arshnoorkaur2.rsawvko.mongodb.net/coursemanagement.assignments

Connect Edit View Collection Help

arshnoorkaur2.r...

My Queries coursemanagement assignments students students assignments

coursemanagement > assignments

Documents 4 Aggregations Schema Indexes Validation

Type a query: { field: 'value' } or [Generate query](#)

ADD DATA EXPORT DATA UPDATE DELETE

1-4 of 4

```
{ "course": "MATHEMATICS", "title": "Homework 1", "dueDate": "2024-04-10", "_id": ObjectId("6609c58c388a9dc5a514b947") }
{ "course": "Physics", "title": "Lab Report", "dueDate": "2024-04-15", "_id": ObjectId("6609c58c388a9dc5a514b948") }
{ "course": "Computer Science", "title": "Project", "dueDate": "2024-04-20", "_id": ObjectId("6609c58c388a9dc5a514b949") }
```

```
>_MONGOSH
>
{
  acknowledged: true,
  insertedIds: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
Atlas atlas-c4b03-shard-0 [primary] test>
```

MongoDB Compass - arshnoorkaur2.rsawvko.mongodb.net/coursemanagement.assignments

Connect Edit View Collection Help

arshnoorkaur2.r...

My Queries coursemanagement assignments students

coursemanagement > assignments

Documents 4 Aggregations Schema Indexes Validation

Type a query: { field: 'value' } or [Generate query](#)

ADD DATA EXPORT DATA UPDATE DELETE

```
{ "course": "MATHEMATICS", "title": "Homework 1", "dueDate": "2024-04-10", "_id": ObjectId("6609c58c388a9dc5a514b947") }
{ "course": "Physics", "title": "Lab Report", "dueDate": "2024-04-15", "_id": ObjectId("6609c58c388a9dc5a514b948") }
{ "course": "Computer Science", "title": "Project", "dueDate": "2024-04-20", "_id": ObjectId("6609c58c388a9dc5a514b949") }
```

```
>_MONGOSH
```

MongoDB Compass - arshnoorkour2.f...
Connect Edit View Collections Help

arshnoorkour2.f...

My Queries
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courses
enrollments
instructors
students
tools
tools_uhup
tools

coursemanagement > Instructors

Documents 4 Aggregations Schema Indexes Validation

Type & query: { Field: "value" } or **Basic query**

EXPLAIN EXECUTE FIND Options

1-4 of 4

ADD DATA EXPORT DATA UPDATE DELETE

```
{ "_id": ObjectId("500bc338a6d5d349534"),  
  "name": "Taditya Saxena",  
  "department": "Computer Science",  
  "email": "Tadityasaxena@gmail.com" }  
  
{ "_id": ObjectId("500bc338a6d5d349534"),  
  "name": "Taditya",  
  "department": "Mathematics" }  
  
{ "_id": ObjectId("500bc338a6d5d349534"),  
  "name": "Taditya",  
  "department": "Physics" }
```

Terminal

```
mongo  
use coursemanagement  
updateInstructors {  
}
```

Atlas atlas-shard-0 [primary] test // update one document in the "instructors" collection
db.instructors.update(
 { name: "Taditya" }, // Filter criteria
 { \$set: { department: "Computer Science" } } // Update operation
)

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MongoDB Compass - arshnoorkour2.f...
Connect Edit View Collections Help

arshnoorkour2.f...

My Queries
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enrollments
instructors
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tools
tools_uhup
tools

coursemanagement > Students

Documents 12 Aggregations Schema Indexes Validation

Type & query: { Field: "value" } or **Basic query**

EXPLAIN EXECUTE FIND Options

1-12 of 12

ADD DATA EXPORT DATA UPDATE DELETE

```
{ "_id": ObjectId("500bc44329a39c7d349534"),  
  "name": "Taditya",  
  "age": 24,  
  "grade": "A" }  
  
{ "_id": ObjectId("500bc44329a39c7d349534"),  
  "name": "Taditya",  
  "age": 22,  
  "grade": "B" }  
  
{ "_id": ObjectId("500bc44329a39c7d349534"),  
  "name": "Taditya",  
  "age": 21 }
```

Terminal

```
mongo  
use coursemanagement  
updateStudents {  
}
```

Atlas atlas-shard-0 [primary] test // update one document in the "students" collection
db.students.update(
 { name: "Taditya" }, // Filter criteria
 { \$set: { grade: "A" } } // Update operation
)

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MongoDB Compass - arshnoorkour2@newtonkongsolab:~/coursemanagement:students

Connect Edit View Collections Help

arshnoorkour2.f...

My Queries Performance Databases Search

Database: coursemanagement

Collection: students

Documents | Aggregations | Schema | Indexes | Validation

Filter & Query: { Field: "value" } or \$meta: query

Buttons: Explain, Insert, Find, Options

1 - 12 of 12

ADD DATA EXPORT DATA UPDATE DELETE

1-12 of 12

Document 1: { "id": "507e12415000444388a6c5d34953d7", "name": "SAVI", "age": 21, "grade": "A" }

Document 2: { "id": "507e12415000444388a6c5d34953d7", "name": "SURIYA", "age": 23, "grade": "B" }

Document 3: { "id": "507e12415000444388a6c5d34953d7", "name": "SURIYA", "age": 23, "grade": "B" }

Terminal:

```
mongo> use coursemanagement
mongo> use students
mongo> insert({name:"SAVI",age:21,grade:"A"})
{
  "acknowledged" : true,
  "insertedId" : ObjectId("507e12415000444388a6c5d34953d7")
}
MongoDB Atlas atlas-c4w09-shard-0 (primary) test> db.students.aggregate(
  [ { $match: { name: "SAVI" } },
    { $sort: { grade: "B" } } ]
);
```

MongoDB Compass - arshnoorkour2@newtonkongsolab:~/coursemanagement:students

Connect Edit View Collections Help

arshnoorkour2.f...

My Queries Performance Databases Search

Database: coursemanagement

Collection: students

Documents | Aggregations | Schema | Indexes | Validation

Filter & Query: { Field: "value" } or \$meta: query

Buttons: Explain, Insert, Find, Options

1 - 12 of 12

ADD DATA EXPORT DATA UPDATE DELETE

Document 1: { "id": "507e12415000444388a6c5d34953d7", "name": "SURIYA", "age": 23, "email": "suriya@gmail.com" }

Document 2: { "id": "507e12415000444388a6c5d34953d7", "name": "SAVI", "age": 21, "grade": "A" }

Document 3: { "id": "507e12415000444388a6c5d34953d7", "name": "SURIYA", "age": 23, "grade": "B" }

Terminal:

```
mongo> use coursemanagement
mongo> use students
mongo> insert({name:"SURIYA",age:23,email:"suriya@gmail.com"})
{
  "acknowledged" : true,
  "insertedId" : ObjectId("507e12415000444388a6c5d34953d7")
}
MongoDB Atlas atlas-c4w09-shard-0 (primary) test> db.students.aggregate(
  [ { $match: { name: "SURIYA" } },
    { $sort: { grade: "A" } } ]
);
```

MongoDB Compass - arshnoorkaur2.r... | coursemanagement.assignments

My Queries | coursemanagement | assignments | students

coursemanagement > assignments

Documents | Aggregations | Schema | Indexes | Validation

Type a query: (Field "value") or Generate query

ADD DATA | EXPORT DATA | UPDATE | DELETE

1-4 of 4

_id	ObjectId('60b0e6f8d89b0d3d842e')
title	"Assignment 1"
course	"Introduction to MongoDB"
dueDate	2024-08-17T00:00:00.000+00:00
maxScore	100

_id	ObjectId('60b0e6f8d89b0d3d842e')
course	"Mathematics"
title	"Homework 1"
dueDate	"2024-08-10"

_id	ObjectId('60b0e6f8d89b0d3d842e')
course	"Physics"

```
use test;
use coursemanagement;
use assignments;

insertMany(
  [{
    title: "Assignment 1",
    course: "Introduction to MongoDB",
    dueDate: new Date(),
    maxScore: 100
  }],
  {
    ordered: false,
    writeConcern: {
      w: 1,
      wtimeout: 1000
    }
  }
);
```

Atlas atlas-cld03-shard-0 [primary] test

MongoDB Compass - arshnoorkaur2.r... | coursemanagement.assignments

My Queries | coursemanagement | assignments | students

coursemanagement > assignments

Documents | Aggregations | Schema | Indexes | Validation

Type a query: (Field "value") or Generate query

ADD DATA | EXPORT DATA | UPDATE | DELETE

1-4 of 4

_id	ObjectId('60b0e6f8d89b0d3d842e')
title	"Assignment 1"
course	"Introduction to MongoDB"
dueDate	2024-08-17T00:00:00.000+00:00
maxScore	100

_id	ObjectId('60b0e6f8d89b0d3d842e')
course	"Mathematics"
title	"Homework 1"
dueDate	"2024-08-10"

_id	ObjectId('60b0e6f8d89b0d3d842e')
course	"Physics"

```
for (let i = 0; i < 10; i++) {
  const randomStudent = studentId(Meth.floor(Meth.random() * studentId.length));
  const randomCourse = courseId(Meth.floor(Meth.random() * courseId.length));
  db.assignments.insertOne({
    studentId: randomStudent,
    courseId: randomCourse,
    assignmentId: new Date()
  });
}
```

MongoDB Compass - orshnoorkour2.f...
Connected | Edit | View | Collections | Help

orshnoorkour2.f...
My Queries | Performance | Databases | Collections | orshnoorkour2.f... | assignments | students

coursemanagement > assignments

Documents | Aggregations | Schema | Indexes | Validation

Type & query: (Field "value") or \$meta:query

ADD DATA | EXPORT DATA | UPDATE | DELETE

1-4 of 4

```
{ "_id": ObjectId("500b6b55a5a5c5d2185367"),  
  "title": "Assignment 1",  
  "course": "Introduction to MongoDB",  
  "dueDate": "2024-04-15T00:00:00Z",  
  "maxScore": 100  
}
```

```
{ "_id": ObjectId("500b6b55a5a5c5d2185368"),  
  "course": "Mathematical",  
  "title": "Homework 1",  
  "dueDate": "2024-04-15"  
}
```

```
{ "_id": ObjectId("500b6b55a5a5c5d2185369"),  
  "course": "Physics"  
}
```

MongoShell

```
use coursemanagement;  
use coursemanagement; // Use the database  
maxScore: Math.Floor(Math.random() * 101) // Random max score between 0 and 100  
}
```

```
{  
  acknowledged: true,  
  insertedIds: [ObjectId("500b6b55a5a5c5d2185368")]  
}
```

Atlas atlas-c4k03-shard-0 [primary] test>

MongoDB Compass - orshnoorkour2.f...
Connected | Edit | View | Collections | Help

orshnoorkour2.f...
My Queries | Performance | Databases | Collections | orshnoorkour2.f... | assignments | students

coursemanagement > assignments

Documents | Aggregations | Schema | Indexes | Validation

Type & query: (Field "value") or \$meta:query

ADD DATA | EXPORT DATA | UPDATE | DELETE

1-4 of 4

```
{ "_id": ObjectId("500b6b55a5a5c5d2185367"),  
  "title": "Assignment 1",  
  "course": "Introduction to MongoDB",  
  "dueDate": "2024-04-15T00:00:00Z",  
  "maxScore": 100  
}
```

```
{ "_id": ObjectId("500b6b55a5a5c5d2185368"),  
  "course": "Mathematical",  
  "title": "Homework 1",  
  "dueDate": "2024-04-15"  
}
```

```
{ "_id": ObjectId("500b6b55a5a5c5d2185369"),  
  "course": "Physics"  
}
```

MongoShell

```
const courseList = ["Mathematics", "Physics", "Chemistry", "Biology", "History", "Literature", "Art", "Music", "Health", "Education"];  
const assignmentTitles = ["Homework 1", "Lab Report", "Project", "Midterm", "Final Exam"];  
for (let i = 0; i < 10; i++) {  
  const randomCourse = courseList[Math.floor(Math.random() * courseList.length)];  
  const assignmentTitle = assignmentTitles[Math.floor(Math.random() * assignmentTitles.length)];  
  const randomScore = Math.floor(Math.random() * 101);  
  const dueDate = new Date(Date.now() + Math.random() * (1000 * 60 * 60 * 24 * 30)); // Random due date within 30 days  
  const maxScore = Math.floor(Math.random() * 101) // Random max score between 0 and 100  
}
```

MongoDB Compass - orshnoorkour2@newtonxongadunet:coursemanagement,assignments

Connected | Edit | View | Collections | Help

orshnoorkour2.f... My Queries coursemanagement assignments students +

coursemanagement > assignments

Documents 4 | Aggregations | Schema | Indexes | Validation

Find > Type & query: (Field: "value") or \$meta: query Explain Reset Find Options

ADD DATA EXPORT DATA UPDATE DELETE 1-4 of 4

```
{ "_id": ObjectId("500b0e63a0a96c5d218536"),
  "title": "Assignment 1",
  "course": "Introduction to MongoDB",
  "dueDate": "2024-04-30T00:00:00.000+00:00",
  "maxScore": 100
}
```

```
{ "_id": ObjectId("500b0e63a0a96c5d218537"),
  "course": "Mathematical",
  "title": "Homework 1",
  "dueDate": "2024-04-15"
}
```

```
{ "_id": ObjectId("500b0e63a0a96c5d218538"),
  "course": "Physics"
}
```

Atlas atlas-c4b03-shard-0 [primary] test

```
use test;
use coursemanagement;
use assignments;
for (let i = 1; i <= 10; i++) {
  db.instructors.insertOne({
    name: "Instructor " + i,
    department: "Department " + i,
    email: "instructor" + i + "@example.com"
  });
}
```

49°C Sunny 6:07 PM 2024-05-31

MongoDB Compass - orshnoorkour2@newtonxongadunet:coursemanagement,assignments

Connected | Edit | View | Collections | Help

orshnoorkour2.f... My Queries coursemanagement assignments students +

coursemanagement > assignments

Documents 4 | Aggregations | Schema | Indexes | Validation

Find > Type & query: (Field: "value") or \$meta: query Explain Reset Find Options

ADD DATA EXPORT DATA UPDATE DELETE 1-4 of 4

```
{ "_id": ObjectId("500b0e63a0a96c5d218536"),
  "title": "Assignment 1",
  "course": "Introduction to MongoDB",
  "dueDate": "2024-04-30T00:00:00.000+00:00",
  "maxScore": 100
}
```

```
{ "_id": ObjectId("500b0e63a0a96c5d218537"),
  "course": "Mathematical",
  "title": "Homework 1",
  "dueDate": "2024-04-15"
}
```

```
{ "_id": ObjectId("500b0e63a0a96c5d218538"),
  "course": "Physics"
}
```

Atlas atlas-c4b03-shard-0 [primary] test

```
use test;
use coursemanagement;
use assignments;
for (let i = 1; i <= 10; i++) {
  db.instructors.insertOne({
    name: "Instructor " + i,
    department: "Department " + i,
    email: "instructor" + i + "@example.com"
  });
}
```

49°C Sunny 6:08 PM 2024-05-31

MongoDB Compass - orshnoorkour2@newtonongard.net/coursemanagement/assignments

Connected | Edit | View | Collections | Help

orshnoorkour2.f...

My Queries | Performance | Databases | Search | Collections | coursemanagement | assignments | courses | enrollments | instructors | students | tools | tutoroo_shop

coursemanagement > assignments

Documents | Aggregations | Schema | Indexes | Validation

Type & query: (Field: "value") or \$meta:query

ADD DATA | EXPORT DATA | UPDATE | DELETE

1-4 of 4

1. { "_id": ObjectId("500b5638a5a5c5d2185367"), "title": "Assignment 1", "course": "Introduction to Rpg200", "dueDate": "2024-04-03T00:00:00.000+00:00", "awardscore": 100 }

2. { "_id": ObjectId("500b5638a5a5c5d2185368"), "course": "Maths101", "title": "Homework 1", "dueDate": "2024-04-10" }

3. { "_id": ObjectId("500b5638a5a5c5d2185369"), "course": "Physics" }

Atlas atlas-c4eb03-shard-0 [primary] test

```
const student = {
  credits: Math.floor(Math.random() * 4) + 3 // Random credits between 3 and 6
};

const acknowledged = true;
const studentId = ObjectId('500b5638a5a5c5d2185368');

Atlas atlas-c4eb03-shard-0 [primary] test
```

MongoDB Compass - orshnoorkour2@newtonongard.net/coursemanagement/assignments

Connected | Edit | View | Collections | Help

orshnoorkour2.f...

My Queries | Performance | Databases | Search | Collections | coursemanagement | assignments | courses | enrollments | instructors | students | tools | tutoroo_shop

coursemanagement > assignments

Documents | Aggregations | Schema | Indexes | Validation

Type & query: (Field: "value") or \$meta:query

ADD DATA | EXPORT DATA | UPDATE | DELETE

1-4 of 4

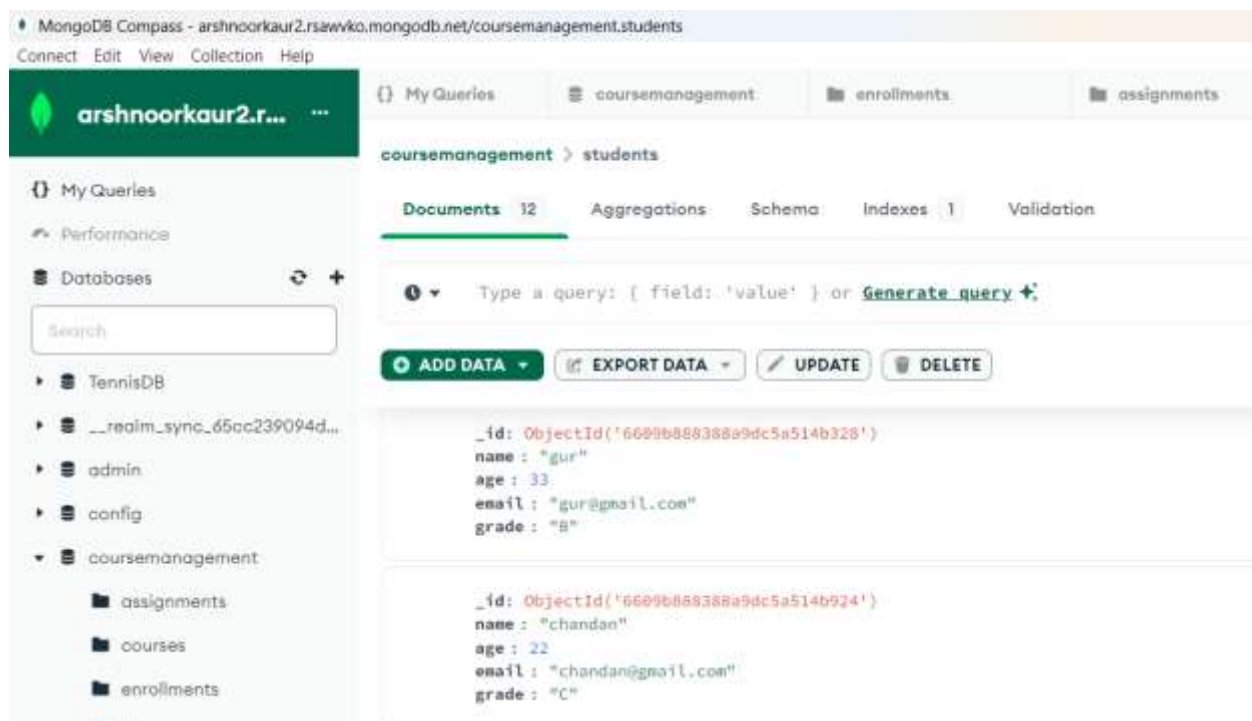
1. { "_id": ObjectId("500b5638a5a5c5d2185367"), "title": "Assignment 1", "course": "Introduction to Rpg200", "dueDate": "2024-04-03T00:00:00.000+00:00", "awardscore": 100 }

2. { "_id": ObjectId("500b5638a5a5c5d2185368"), "course": "Maths101", "title": "Homework 1", "dueDate": "2024-04-10" }

3. { "_id": ObjectId("500b5638a5a5c5d2185369"), "course": "Physics" }

Atlas atlas-c4eb03-shard-0 [primary] test

```
Atlas atlas-c4eb03-shard-0 [primary] test // Populate the "courses" collection with 20 documents
const courseNames = ["Mathematics", "Physics", "Computer Science", "Biology", "Chemistry"];
for (let i = 1; i <= 20; i++) {
  db.courses.insertOne({
    title: courseNames[Math.floor(Math.random() * courseNames.length)],
    instructor: "Instructor " + i,
    credits: Math.floor(Math.random() * 4) + 3 // Random credits between 3 and 6
  });
}
```

MongoDB Compass - orshnoorkour2@newtonkongsolab:~/coursemanagement/students

Connected | Edit | View | Collections | Help

orshnoorkour2.f...

My Queries | Performance | Databases | Search | Collections | orshnoorkour2.f... | coursemanagement | assignments | enrollments | students

coursemanagement > students

Documents | Aggregations | Schema | Indexes | Validation

Find > Query > Query: { "value": 1 } or \$addToSet > Explain | Reset | Find | Options

1-12 of 12

ADD DATA | EXPORT DATA | UPDATE | DELETE

```
{ "_id": ObjectId("66086833896c5d34932d1"),
  "name": "guy",
  "age": 33,
  "email": "guy@google.com",
  "grade": "A" }

{ "_id": ObjectId("66086833896c5d34932d1"),
  "name": "tylenda",
  "age": 33,
  "email": "tylenda@google.com",
  "grade": "B" }

{ "_id": ObjectId("66086833896c5d34932d1"),
  "name": "tylenda",
  "age": 33,
  "email": "tylenda@google.com",
  "grade": "B" }
```

Terminal

```
Atlas atlas-4ad5d-shard-0 [primary] test> for (let i = 1; i <= 10; i++) {
  db.students.insertOne({name: "Student " + i, age: Math.floor(Math.random() * 10) + 10, email: String.fromCharCode(65 + Math.floor(Math.random() * 11))});
}
```

32% Spring

MongoDB Compass - orshnoorkour2@newtonkongsolab:~/coursemanagement/students

Connected | Edit | View | Collections | Help

orshnoorkour2.f...

My Queries | Performance | Databases | Search | Collections | orshnoorkour2.f... | coursemanagement | assignments | enrollments | students

coursemanagement > students

Documents | Aggregations | Schema | Indexes | Validation

Find > Query > Query: { "value": 1 } or \$addToSet > Explain | Reset | Find | Options

1-12 of 12

ADD DATA | EXPORT DATA | UPDATE | DELETE

```
{ "_id": ObjectId("66086833896c5d34932d1"),
  "name": "guy",
  "age": 33,
  "email": "guy@google.com",
  "grade": "A" }

{ "_id": ObjectId("66086833896c5d34932d1"),
  "name": "tylenda",
  "age": 33,
  "email": "tylenda@google.com",
  "grade": "B" }

{ "_id": ObjectId("66086833896c5d34932d1"),
  "name": "tylenda",
  "age": 33,
  "email": "tylenda@google.com",
  "grade": "B" }
```

Terminal

```
Atlas atlas-4ad5d-shard-0 [primary] test> for (let i = 1; i <= 10; i++) {
  db.students.insertOne({name: "Student " + i, age: Math.floor(Math.random() * 10) + 10, email: String.fromCharCode(65 + Math.floor(Math.random() * 11))});
}
```

32% Spring

MongoDB Compass - arshnoorkour2.f... | Connected | Edit | View | Collections | Help

My Queries | `__mongodb.com_20240405...` | Instructions | Databases | coursemanagement | enrollments

coursemanagement > enrollments

Documents | 0 | Aggregations | Schema | Indexes | Validation

Type a query: (Field: "value") or `$match: {query: }` | Explain | Save | Find | Options

1-4 of 4

ADD DATA | EXPORT DATA | UPDATE | DELETE

```

{
  "_id": ObjectId("668c71238a9d5a514894e"),
  "student": "jagan",
  "course": "Mathematics",
  "grade": "A"
}

{
  "_id": ObjectId("668c71238a9d5a514894e"),
  "student": "jagan",
  "course": "Physics",
  "grade": "B"
}

{
  "_id": ObjectId("668c71238a9d5a514894e"),
  "student": "jagan",
  "course": "Computer Science",
  "grade": "B"
}

```

Terminal:

```

$ mongo
> use coursemanagement
> use enrollments
> insertMany([
  {
    "student": "jagan",
    "course": "Mathematics",
    "grade": "A"
  },
  {
    "student": "jagan",
    "course": "Physics",
    "grade": "B"
  },
  {
    "student": "jagan",
    "course": "Computer Science",
    "grade": "B"
  }
])

```

Atlas atlas-c4609-shard-0 [primary] coursemanagement

MongoDB Compass - arshnoorkour2.f... | Connected | Edit | View | Collections | Help

My Queries | `__mongodb.com_20240405...` | Instructions | Databases | coursemanagement | enrollments

coursemanagement > enrollments

Documents | 0 | Aggregations | Schema | Indexes | Validation

Type a query: (Field: "value") or `$match: {query: }` | Explain | Save | Find | Options

1-1 of 1

ADD DATA | EXPORT DATA | UPDATE | DELETE

```

{
  "_id": ObjectId("668c71238a9d5a514894e"),
  "student": "jagan",
  "course": "Mathematics",
  "grade": "A"
}

```

Terminal:

```

$ mongo
> use coursemanagement
> use enrollments
> insertMany([
  {
    "student": "jagan",
    "course": "Mathematics",
    "grade": "A"
  },
  {
    "student": "jagan",
    "course": "Physics",
    "grade": "B"
  },
  {
    "student": "jagan",
    "course": "Computer Science",
    "grade": "B"
  }
])

```

Atlas atlas-c4609-shard-0 [primary] coursemanagement > db.enrollments.insertMany([{ student: "jagan", course: "Mathematics", grade: "A" }, { student: "jagan", course: "Physics", grade: "B" }, { student: "jagan", course: "Computer Science", grade: "B" }])

MongoDB Compass - arshnoorkour2...@mongodb.com

Connected | Edit | View | Collections | Help

My Queries | arshnoorkour2... | Instructions | Databases | coursemanagement | **assignments**

coursemanagement > assignments

Documents | 0 | Aggregations | Schema | Indexes | Validation

Type & query: (Field: "value") > or Basic query

1-4 of 4

ADD DATA | EXPORT DATA | UPDATE | DELETE

```
{
  "_id": ObjectId("608b5338e0dc5d140944"),
  "course": "Mathematics",
  "title": "Homework 1",
  "dueDate": "2024-09-10"
}

{
  "_id": ObjectId("608b5338e0dc5d140944"),
  "course": "Physics",
  "title": "Lab Report",
  "dueDate": "2024-09-15"
}

{
  "_id": ObjectId("608b5338e0dc5d140944"),
  "course": "Computer Science",
  "title": "Project",
  "dueDate": "2024-09-20"
}
```

MongoDB Shell

```
use coursemanagement
show collections
use assignments
insert {}
```

Atlas atlas-c4k09-shard-0 [primary] coursemanagement

MongoDB Compass - arshnoorkour2...@mongodb.com

Connected | Edit | View | Collections | Help

My Queries | arshnoorkour2... | Instructions | Databases | coursemanagement | **assignments**

coursemanagement > assignments

Documents | 0 | Aggregations | Schema | Indexes | Validation

Type & query: (Field: "value") > or Basic query

1-1 of 1

ADD DATA | EXPORT DATA | UPDATE | DELETE

```
{
  "_id": ObjectId("608b5338e0dc5d140944"),
  "course": "Mathematics",
  "title": "Homework 1",
  "dueDate": "2024-09-10",
  "score": 100
}
```

MongoDB Shell

```
use coursemanagement
show collections
use assignments
insert {}
```

Atlas atlas-c4k09-shard-0 [primary] coursemanagement > db.assignments.aggregate([{\$group: {\$_id: '\$course', title: '\$title', dueDate: '\$dueDate', score: '\$score'}}])

MongoDB Compass - arshnoorkour2@newtonkongaiburi/coursmanagemnt.com

Connected | Edit | View | Collections | Help

arshnoorkour2.f... | My Queries | Documents | Aggregations | Schema | Indexes | Validation

coursesmanagement > courses

Type a query: (Field: "value") or **\$addToSet: query**

ADD DATA | EXPORT DATA | UPDATE | DELETE

1 - 4 of 4

1. title: "Mathematics", instructor: "jishu", credits: 3

2. title: "Physics", instructor: "jishu", credits: 4

3. title: "Computer Science", instructor: "jishu", credits: 3

```
mongo> use coursesmanagement
switched to db coursesmanagement
mongo> insert({
  title: "Mathematics",
  instructor: "jishu",
  credits: 3
})
WriteResult({
  "nInserted" : 1
})
mongo> insert({
  title: "Physics",
  instructor: "jishu",
  credits: 4
})
WriteResult({
  "nInserted" : 1
})
mongo> insert({
  title: "Computer Science",
  instructor: "jishu",
  credits: 3
})
WriteResult({
  "nInserted" : 1
})
```

MongoDB Compass - arshnoorkour2@newtonkongaiburi/coursmanagemnt.com

Connected | Edit | View | Collections | Help

arshnoorkour2.f... | My Queries | Documents | Aggregations | Schema | Indexes | Validation

coursesmanagement > courses

Type a query: (Field: "value") or **\$addToSet: query**

ADD DATA | EXPORT DATA | UPDATE | DELETE

1 - 4 of 4

1. title: "Mathematics", instructor: "jishu", credits: 3

2. title: "Physics", instructor: "jishu", credits: 4

3. title: "Computer Science", instructor: "jishu", credits: 3

MongoDB Compass - arshnoorkaur2... - atlas.mongodb.net/coursemanagement/students

Connect Edit View Collections Help

arshnoorkaur2...

My Queries Performance Databases

Database: coursemanagement Collection: students

Documents 0 Aggregations Schema Indexes Validation

Type a query: (Field: "value") or Generate query

ADD DATA EXPORT DATA UPDATE DELETE

1-4 of 4

```
{ "_id": ObjectId("609c44e3809d63a14093d"),  
  "name": "DAVI",  
  "age": 20,  
  "grade": "10"  
}
```

```
{ "_id": ObjectId("609c44e3809d63a14093e"),  
  "name": "ADAM",  
  "age": 22,  
  "grade": "10"  
}
```

```
{ "_id": ObjectId("609c44e3809d63a14093f"),  
  "name": "DANIEL",  
  "age": 21,  
  "grade": "11"  
}
```

Atlas atlas-c4650-shard-0 [primary] coursemanagement> db.coursemanagement.insertMany([{ title: "Mathematics", instructors: "John", credits: 3 }, { title: "Physics", instructors: "John", credits: 4 },

3075

MongoDB Compass - arshnoorkaur2... - atlas.mongodb.net/coursemanagement/students

Connect Edit View Collections Help

arshnoorkaur2...

My Queries Performance Databases

Database: coursemanagement Collection: students

Documents 0 Aggregations Schema Indexes Validation

Type a query: (Field: "value") or Generate query

ADD DATA EXPORT DATA UPDATE DELETE

1-4 of 4

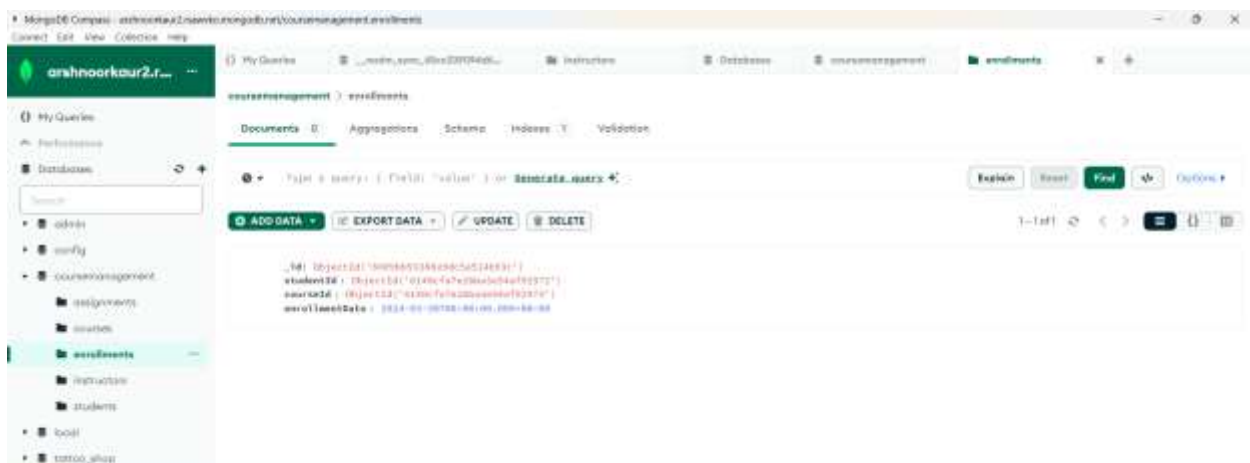
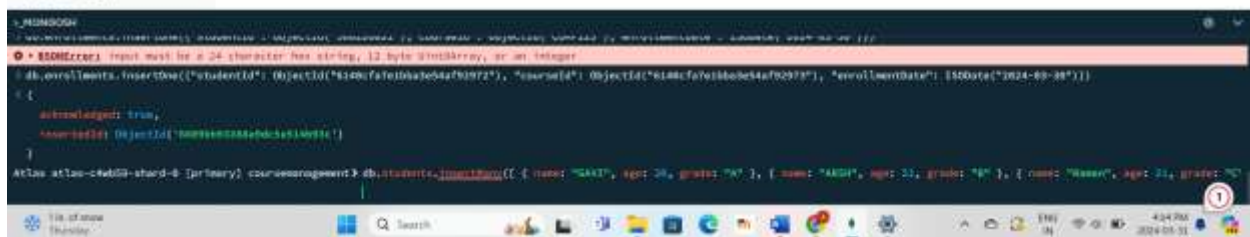
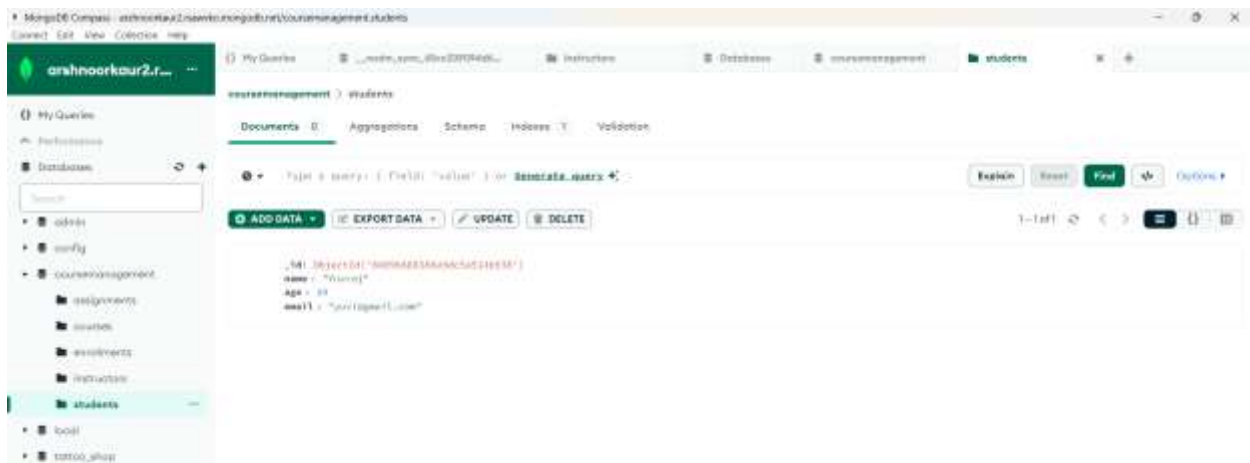
```
{ "_id": ObjectId("609c44e3809d63a14093d"),  
  "name": "DAVI",  
  "age": 20,  
  "grade": "10"  
}
```

```
{ "_id": ObjectId("609c44e3809d63a14093e"),  
  "name": "ADAM",  
  "age": 22,  
  "grade": "10"  
}
```

```
{ "_id": ObjectId("609c44e3809d63a14093f"),  
  "name": "DANIEL",  
  "age": 21,  
  "grade": "11"  
}
```

Atlas atlas-c4650-shard-0 [primary] coursemanagement>

Atlas atlas-c4650-shard-0 [primary] coursemanagement>



MongoDB Compass - arshnoorkour2.f... | Connected | Edit | View | Collections | Help

My Queries | Performance | Databases | Search | Collections | arshnoorkour2.f... | coursemanagement | enrollments

Documents | Aggregations | Schema | Indexes | Validation

Type a query (Field: "value") or **Basic query**

0 - 0 of 0

ADD DATA | **EXPORT DATA** | **UPDATE** | **DELETE**

Insert Data

This collection has no data
It only takes a few seconds to import data from a JSON or CSV file.

```
1 db.enrollments.insertOne({"studentId": ObjectId("590226831"), "courseId": ObjectId("C00F123"), "enrollmentDate": ISODate("2024-03-30")})
2
3 ERROR Error: input must be a 34 character hex string, 12 byte BSONArray, or an integer
4 db.enrollments.insertOne({"studentId": ObjectId("6348cfa7e1b2a6e4a9f92973"), "courseId": ObjectId("614dcfa7e1b2a6e4a9f92973"), "enrollmentDate": ISODate("2024-03-30")})
5
6 {
7   acknowledged: true,
8   insertedId: ObjectId("6009eab335e6dca514093c")
9 }
10
11 Atlas atlas-c4k09-shard-0 [primary] coursemanagement
```

30% Spring | Search | 1:07 PM | 2024-03-31

MongoDB Compass - arshnoorkour2.f... | Connected | Edit | View | Collections | Help

My Queries | Performance | Databases | Search | Collections | arshnoorkour2.f... | coursemanagement | enrollments

Documents | Aggregations | Schema | Indexes | Validation

Type a query (Field: "value") or **Basic query**

0 - 0 of 0

ADD DATA | **EXPORT DATA** | **UPDATE** | **DELETE**

Insert Data

This collection has no data
It only takes a few seconds to import data from a JSON or CSV file.

```
1 model: {
2   type: "assignment",
3   title: "Introduction to MongoDB",
4   course: "Introduction to MongoDB",
5   dueDate: ISODate("2024-04-01"),
6   maxScore: 100
7 }
8
9 db.assignments.insertOne({"title": "Assignment 1", "course": "Introduction to MongoDB", "dueDate": ISODate("2024-04-01"), "maxScore": 100})
10
11 {
12   acknowledged: true,
13   insertedId: ObjectId("6009eab335e6dca514093c")
14 }
15
16 Atlas atlas-c4k09-shard-0 [primary] coursemanagement> db.enrollments.insertOne({"studentId": ObjectId("590226831"), "courseId": ObjectId("C00F123"), "enrollmentDate": ISODate("2024-03-30")})
```

30% Spring | Search | 1:08 PM | 2024-03-31

MongoDB Compass - arshnoorkaur2.rsawko.mongodb.net/coursemanagement.assignments

Connect Edit View Collection Help

arshnoorkaur2.r...

My Queries

Performance

Databases

- admin
- config
- coursemanagement
 - assignments
 - courses
 - enrollments
 - instructors
 - students
- local
- tattoo_shop

coursemanagement > assignments

Documents 0 Aggregations Schema Indexes 1 Validation

Type a query: { field: 'value' } or [Generate query](#)

ADD DATA EXPORT DATA UPDATE DELETE

1-1 of 1

```
{ "_id": ObjectId("6609badb388a9dc5a514b93b"),
  "title": "Assignment 1",
  "course": "Introduction to MongoDB",
  "dueDate": "2024-04-01T00:00:00.000+00:00",
  "maxScore": 100 }
```

```
>_MONGOSH
use coursemanagement;
use assignments;
insertOne({title: "Assignment 1", "course": "Introduction to MongoDB", "dueDate": ISODate("2024-04-01"), "maxScore": 100})
{
  acknowledged: true,
  insertedOne: {
    _id: ObjectId("6609badb388a9dc5a514b93b")
  }
}
Atlas atlas-c4b03-shard-0 [primary] coursemanagement
```

MongoDB Compass - arshnoorkaur2.rsawko.mongodb.net/coursemanagement.assignments

Connect Edit View Collection Help

arshnoorkaur2.r...

My Queries

Performance

Databases

- admin
- config
- coursemanagement
 - assignments
 - courses
 - enrollments
 - instructors
 - students
- local
- tattoo_shop

coursemanagement > assignments

Documents 0 Aggregations Schema Indexes 1 Validation

Type a query: { field: 'value' } or [Generate query](#)

ADD DATA EXPORT DATA UPDATE DELETE

```
{ "_id": ObjectId('6609badb388a9dc5a514b93b'),
  "title": "Assignment 1",
  "course": "Introduction to MongoDB",
  "dueDate": "2024-04-01T00:00:00.000+00:00",
  "maxScore": 100 }
```

```
>_MONGOSH
use coursemanagement;
use assignments;
insertOne({title: "Assignment 1", "course": "Introduction to MongoDB", "dueDate": ISODate("2024-04-01"), "maxScore": 100})
{
  acknowledged: true,
  insertedOne: {
    _id: ObjectId("6609badb388a9dc5a514b93b")
  }
}
Atlas atlas-c4b03-shard-0 [primary] coursemanagement
```

MongoDB Compass - arshnoorkour2.f...
Connected | Edit | View | Collections | Help

arshnoorkour2.f...
My Queries | Performance | Databases | Search | Collections | assignments | ...

coursemanagement > assignments
Documents | 0 | Aggregations | Schema | Indexes | Validation

Type & query: { Field: "value" } or [Generate query](#)

EXPLAIN | RESET | FIND | Options

0 - 0 of 0 | < > < > < > < >

ADD DATA | EXPORT DATA | UPDATE | DELETE

This collection has no data
It only takes a few seconds to import data from a JSON or CSV file.

Import Data

```
u_MONGOSh
root@arshnoorkour2.f...:~/coursemanagement# mongo
> use coursemanagement
switched to db coursemanagement
> db.instructors.insertOne({name: "aditya saxena", department: "Computer Science", email: "adityasaxena@gmail.com"})
{acknowledged: true,
  insertedId: ObjectId('6089e338a5d54514b535')}
> db.assignments.insertOne({title: "Assignment 1", course: "Introduction to MongoDB", dueDate: ISODate("2024-06-01"), maxScore: 100})
Atlas atlas-c4b03-shard-0 [primary] coursemanagement>
```

MongoDB Compass - arshnoorkour2.f...
Connected | Edit | View | Collections | Help

arshnoorkour2.f...
My Queries | Performance | Databases | Search | Collections | instructors | ...

coursemanagement > instructors
Documents | 0 | Aggregations | Schema | Indexes | Validation

Type & query: { Field: "value" } or [Generate query](#)

EXPLAIN | RESET | FIND | Options

1 - 1 of 1 | < > < > < > < >

ADD DATA | EXPORT DATA | UPDATE | DELETE

```
{_id: ObjectId('6089e338a5d54514b535'),
  name: "aditya saxena",
  department: "Computer Science",
  email: "adityasaxena@gmail.com"}
```

```
u_MONGOSh
root@arshnoorkour2.f...:~/coursemanagement# mongo
> use coursemanagement
switched to db coursemanagement
> db.instructors.insertOne({name: "aditya saxena", department: "Computer Science", email: "adityasaxena@gmail.com"})
{acknowledged: true,
  insertedId: ObjectId('6089e338a5d54514b535')}
> db.instructors.insertOne({name: "aditya saxena", department: "Computer Science", email: "adityasaxena@gmail.com"})
Atlas atlas-c4b03-shard-0 [primary] coursemanagement>
```


MongoDB Compass - arshnoorkour2... | Connected | Edit | View | Help

My Queries | coursemanagement | Instructions

+ Create collection | Refresh

View | II | Sort by | Collection Name

My Queries

Databases

- TestDB
- ...name_xxxx_55oc339094d...
- admin
- config
- coursemanagement
 - assignments
 - courses
 - enrollments
 - instructors
 - students

assignments

Storage size	Documents	Avg. document size	Indexes	Total Index size
4.0 KB	0	0 B	1	4.0 KB

courses

Storage size	Documents	Avg. document size	Indexes	Total Index size
4.0 KB	0	0 B	1	4.0 KB

enrollments

Storage size	Documents	Avg. document size	Indexes	Total Index size
4.0 KB	0	0 B	1	4.0 KB

instructors

```
Atlas atlas-c46d3-shard-0 [primary] coursemanagement> db.coursemanagement.insertOne({
  "course": "Introduction to MongoDB",
  "instructor": "Aditya Sharma",
  "credits": 1
})
```

49°C Sunny | Search | 1:27 PM | 2024-05-31

MongoDB Compass - arshnoorkour2... | Connected | Edit | View | Help

My Queries | coursemanagement | Instructions

+ Create collection | Refresh

View | II | Sort by | Collection Name

My Queries

Databases

- TestDB
- ...name_xxxx_55oc339094d...
- admin
- config
- coursemanagement
 - local
 - tokens_shop
 - trade

assignments

Storage size	Documents	Avg. document size	Indexes	Total Index size
4.0 KB	0	0 B	1	4.0 KB

courses

Storage size	Documents	Avg. document size	Indexes	Total Index size
4.0 KB	0	0 B	1	4.0 KB

enrollments

Storage size	Documents	Avg. document size	Indexes	Total Index size
4.0 KB	0	0 B	1	4.0 KB

instructors

```
Atlas atlas-c46d3-shard-0 [primary] coursemanagement>
{
  "name": "Yuvraj",
  "age": 19,
  "email": "yuv@gnail.com"
}
```

49°C Sunny | Search | 1:23 PM | 2024-05-31

MongoDB Compass - orshnoorkour2.f... My Queries

orshnoorkour2.f...

My Queries

Databases

- orshnoorkour2.f...
- admin
- config
- coursemanagement
- local
- mongo_atlas
- tools

No saved queries yet.

Start saving your aggregations and find queries, you'll see them here.

Not sure where to start? Visit our [docs](#).

```
> mongo
> use coursemanagement
> db.createCollection("instructors")
> db.createCollection("assignments")
> db.createCollection("enrollments")
> db.createCollection("students")
Atlas atlas-c4d09-shard-0 [primary] coursemanagement>
```

MongoDB Compass - orshnoorkour2.f... My Queries

orshnoorkour2.f...

My Queries

Databases

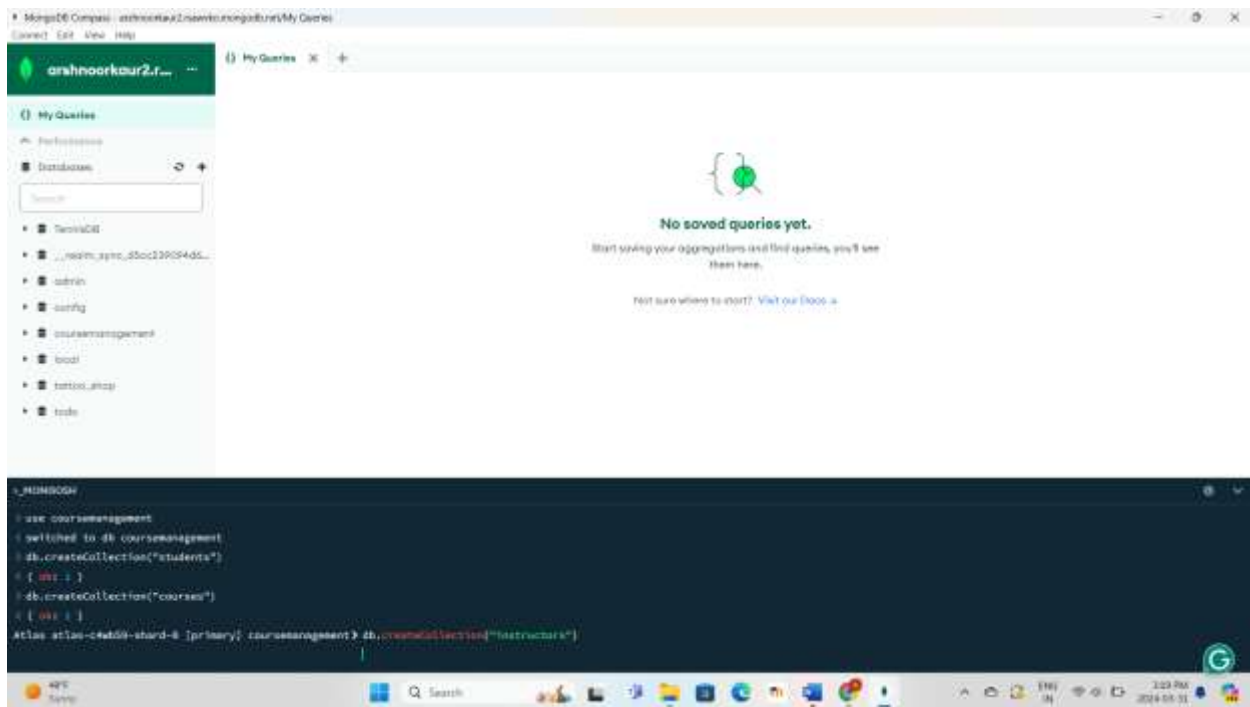
- orshnoorkour2.f...
- admin
- config
- coursemanagement
- local
- mongo_atlas
- tools

No saved queries yet.

Start saving your aggregations and find queries, you'll see them here.

Not sure where to start? Visit our [docs](#).

```
> mongo
> use coursemanagement
> db.createCollection("courses")
> db.createCollection("instructors")
> db.createCollection("assignments")
> db.createCollection("enrollments")
Atlas atlas-c4d09-shard-0 [primary] coursemanagement>
```



MongoDB Compass - arshnoorkour2.f... | My Queries

My Queries

Databases

- TermiDB
- ..._nwm_xym_85oc39094d5...
- admin
- config
- coursemanagement
- local
- mongo_atlas
- tools

No saved queries yet.

Start saving your aggregations and find queries, you'll see them here.

Not sure where to start? Visit our [docs](#).

```
u_MONGOw
use coursemanagement
switched to db coursemanagement
db.createCollection("students")
{ ok: 1 }
Atlas atlas-c4w609-shard-0 [primary] coursemanagement> db.createCollection("courses")
```

49°C Sunny 1:53 PM 2024-08-31

MongoDB Compass - arshnoorkour2.f... | My Queries

My Queries

Databases

- TermiDB
- ..._nwm_xym_85oc39094d5...
- admin
- config
- coursemanagement
- local
- mongo_atlas
- tools

No saved queries yet.

Start saving your aggregations and find queries, you'll see them here.

Not sure where to start? Visit our [docs](#).

```
u_MONGOw
use coursemanagement
switched to db coursemanagement
atlas atlas-c4w609-shard-0 [primary] coursemanagement>
```

49°C Sunny 1:55 PM 2024-08-31