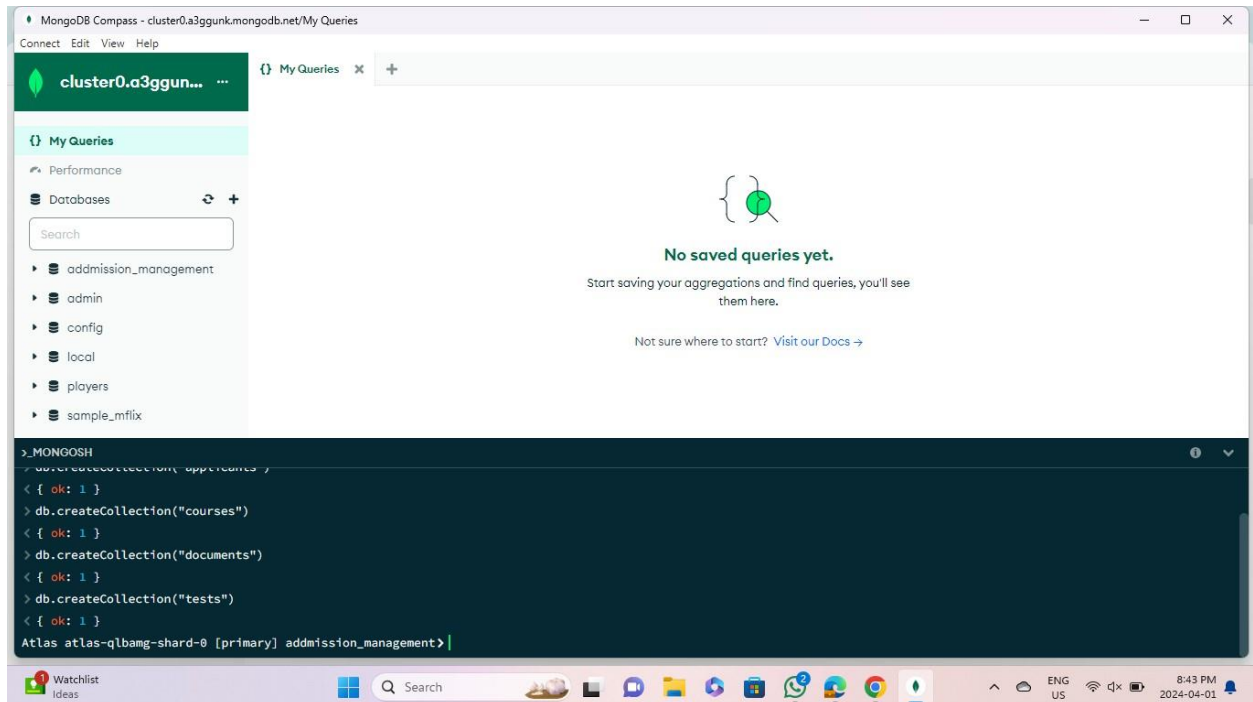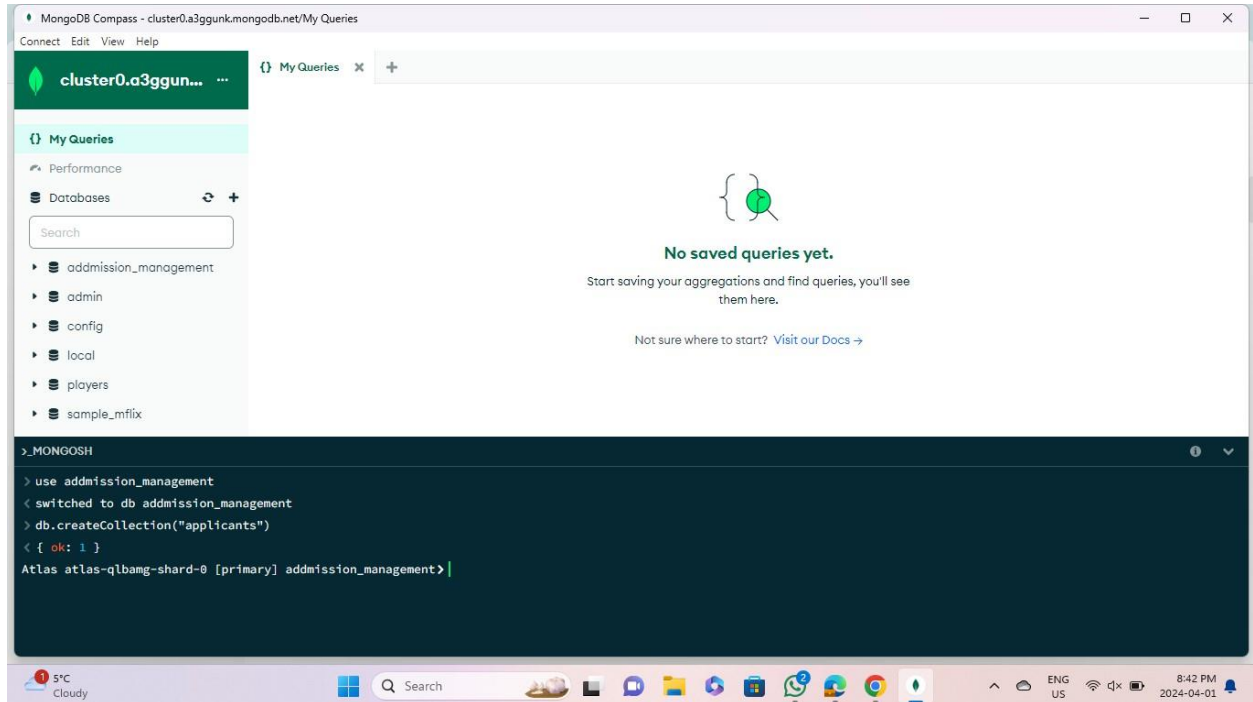Pawan Kumar (500229660)

Loyalist college Toronto

2024W-T2 COMP1031 - Introduction to Data Communication 03 (P00 Group 3)

Instructor – Aditya Saxena

Screenshot 1: MongoDB Compass - addmission_management

MongoDB Compass - cluster0.a3ggunk.mongodb.net/addmission_management

Connect Edit View Help

cluster0.a3ggun...

{} My Queries | ≡ addmission_management ✕ | +

{} My Queries
Performance
Databases

Search

▼ ≡ addmission_mana... + 🗑
  ■ applicants
  ■ collection1
  ■ courses
  ■ documents
  ■ tests

courses

Storage size:	Documents:	Avg. document size:	Indexes:	Total index size:
4.10 kB	0	0 B	1	4.10 kB

documents

Storage size:	Documents:	Avg. document size:	Indexes:	Total index size:
4.10 kB	0	0 B	1	4.10 kB

tests

Storage size:	Documents:	Avg. document size:	Indexes:	Total index size:
4.10 kB	0	0 B	1	4.10 kB

```
>_MONGOSH
> db.applicants.insertOne({
    "name": "pawan_kumar"
})
< {
    acknowledged: true,
    insertedId: ObjectId('660b55aadd6f77b7a47f59b2')
}
Atlas atlas-qlbamg-shard-0 [primary] addmission_management>
```

5°C Cloudy   Q Search   ENG US   8:47 PM 2024-04-01

Screenshot 2: MongoDB Compass - collection1

MongoDB Compass - cluster0.a3ggunk.mongodb.net/addmission_management.collection1

Connect Edit View Collection Help

cluster0.a3ggun...

{} My Queries | ≡ addmission_management | ■ collection1 ✕ | +

{} My Queries
Performance
Databases

Search

▼ ≡ addmission_management
  ■ applicants
  ■ collection1 ...
  ■ courses
  ■ documents
  ■ tests

addmission_management.collection1

1 DOCUMENTS   **1** INDEXES

Documents Aggregations Schema Indexes Validation

Filter 🔗 🕐 ▾   Type a query: { field: 'value' } or Generate query ✦   Explain Reset **Find** ‹/› Options ▸

● ADD DATA ▾   ⬚ EXPORT DATA ▾   1-1 of 1   ‹ › ≡ {} ⊞

```
_id: ObjectId('660b50b8fb100e8ffa54624b')
name: "Document 1"
```

```
>_MONGOSH
> db.courses.insertMany([
    {"course": "computer_science"},
    {"course": "business"}
])
< {
    acknowledged: true,
    insertedIds: {
      '0': ObjectId('660b566add6f77b7a47f59b3'),
      '1': ObjectId('660b566add6f77b7a47f59b4')
```

5°C Cloudy   Q Search   ENG US   8:50 PM 2024-04-01

Connect Edit View Collection Help

cluster0.a3ggun...

{} My Queries   addmission_management   courses   ×   +

addmission_management.courses   0   1
                                                                DOCUMENTS   INDEXES

Documents   Aggregations   Schema   Indexes   Validation

Filter ⊘ 🕐 ▾   Type a query: { field: 'value' } or **Generate_query** +⁝   Explain   Reset   Find   </>   Options ▸

⊕ ADD DATA ▾   ⬀ EXPORT DATA ▾   1-2 of 2 ↻ ‹ › ☰ {} ⊞

    _id: ObjectId('660b566add6f77b7a47f59b3')
    course: "computer_science"

    _id: ObjectId('660b566add6f77b7a47f59b4')
    course: "business"

>_MONGOSH

```
> db.courses.insertMany([
      {"course": "computer_science"},
      {"course": "business"}
  ])
< {
      acknowledged: true,
      insertedIds: {
          '0': ObjectId('660b566add6f77b7a47f59b3'),
          '1': ObjectId('660b566add6f77b7a47f59b4')
```

Snipping Tool   ···   ×

Screenshot copied to clipboard and saved
Select here to mark up and share.

5°C
Cloudy   🔍 Search   ENG   8:51 PM
                                                          US   2024-04-01

Connect Edit View Collection Help

cluster0.a3ggun...

{} My Queries   addmission_management   applicants   ×   +

addmission_management.applicants   0   1
                                                                DOCUMENTS   INDEXES

Documents   Aggregations   Schema   Indexes   Validation

Filter ⊘ 🕐 ▾   Type a query: { field: 'value' } or **Generate_query** +⁝   Explain   Reset   Find   </>   Options ▸

⊕ ADD DATA ▾   ⬀ EXPORT DATA ▾   1-3 of 3 ↻ ‹ › ☰ {} ⊞

    _id: ObjectId('660b58f0dd6f77b7a47f59b5')
    name: "harjass"

    _id: ObjectId('660b58f0dd6f77b7a47f59b6')
    name: "sehaj"

>_MONGOSH

```
< {
      acknowledged: true,
      insertedIds: {
          '0': ObjectId('660b58f0dd6f77b7a47f59b5'),
          '1': ObjectId('660b58f0dd6f77b7a47f59b6')
      }
  }
Atlas atlas-qlbamg-shard-0 [primary] addmission_management >
```

6°C
Cloudy   🔍 Search   ENG   9:01 PM
                                                          US   2024-04-01

MongoDB Compass - cluster0.a3ggunk.mongodb.net/addmission_management.courses

Connect Edit View Collection Help

{} My Queries   addmission_management   courses

addmission_management.courses

0 DOCUMENTS   1 INDEXES

Documents Aggregations Schema Indexes Validation

Filter Type a query: { field: 'value' } or Generate query

Explain Reset Find Options

ADD DATA EXPORT DATA

1 – 4 of 4

```
_id: ObjectId('660b5932dd6f77b7a47f59b7')
course: "info tech"

_id: ObjectId('660b5932dd6f77b7a47f59b8')
course: "networking"
```

>_MONGOSH

```
}}
< {
    acknowledged: true,
    insertedIds: {
        '0': ObjectId('660b5932dd6f77b7a47f59b7'),
        '1': ObjectId('660b5932dd6f77b7a47f59b8')
    }
}
Atlas atlas-qlbamg-shard-0 [primary] addmission_management>
```

6°C Cloudy   ENG US   9:02 PM 2024-04-01

MongoDB Compass - cluster0.a3ggunk.mongodb.net/addmission_management.courses

Connect Edit View Collection Help

AutoSave Off Book1 - E... Search Pawan Kumar PK

File Home Insert Draw Page Layout Formulas Data Review View Automate Help   Comments Share

Paste | Aptos Narrow | 11 | B I U | Number | Conditional Formatting ~ | Format as Table ~ | Cell Styles ~ | Cells | Editing | Sensitivity | Add-ins | Analyze Data

Clipboard Font Alignment Number Styles Sensitivity Add-ins

F7   fx

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	applicants	courses	tests	documents										
2	pawan kumar	comp sc.												
3	sehaj	business												
4	harjass	info tech												
5		networking												
6														
7														
8														
9														
10														
11														

Sheet1

Ready Accessibility: Good to go   100%

>_MONGOS

```
}}
< {
    ackno
    inser
        '0': ObjectId('660b5932dd6f77b7a47f59b7'),
        '1': ObjectId('660b5932dd6f77b7a47f59b8')
    }
}
Atlas atlas-qlbamg-shard-0 [primary] addmission_management>
```

6°C Cloudy   ENG US   9:03 PM 2024-04-01

Screenshot 1 (Excel - Book1):

applicants	courses	tests	documents
pawan kumar	comp sc.		
sehaj	business		
harjass	info tech		
shivam	networking		

- Create Excel file called workload.xlsx. Write down list of common queries (atleast 5). Identify Workloads on excel file. (USE THIS TUTORIAL - https://learn.mongodb.com/courses/identifying-database-workloads)

- check execution stats for each query (using mongosh, take screenshot)

- Create indexes based on the workload excel file.

Screenshot 2 (MongoDB Compass - addmission_management.courses):

```
    _id: ObjectId('660b566add6f77b7a47f59b4')
    course: "data_COMM"

    _id: ObjectId('660b5932dd6f77b7a47f59b7')
    course: "info tech"
```

MONGOSH:

```
    upsertedCount: 0
  }
> db.courses.updateOne(
    { "course": "business" }, // Filter: Find the document where the course is "business"
    { $set: { "course": "data_COMM" } } // Update: Set the course to "data_COMM"
)
< {
    acknowledged: true,
```

cluster0.a3ggun... ...

{} My Queries

⌁ Performance

🗄 Databases   ↻ +

Search

▾ 🗄 addmission_management

    📁 applicants   ...
    📁 collection1
    📁 courses
    📁 documents
    📁 tests

{} My Queries   🗄 addmission_management   📁 applicants   ✕   +

addmission_management.applicants

0 DOCUMENTS   1 INDEXES

Documents   Aggregations   Schema   Indexes   Validation

Filter 🗗   🕐 ▾   Type a query: { field: 'value' } or **Generate query** ⁺ₓ   Explain   Reset   **Find**   ‹/›   Options ▸

⊕ ADD DATA ▾   ⬈ EXPORT DATA ▾   1–3 of 3   ↻   ‹ ›   ☰ {} ⊞

    _id: ObjectId('660b55aadd6f77b7a47f59b2')
    name: "pawan_kumar"

    _id: ObjectId('660b58f0dd6f77b7a47f59b5')
    name: "harjass"

>_MONGOSH   ⓘ   ⌄

```
> 1 | db.applicants.findOne("name" : "pawan_kumar")
  |                  ^
> db.applicants.findOne({ "name": "pawan_kumar" })
< {
    _id: ObjectId('660b55aadd6f77b7a47f59b2'),
    name: 'pawan_kumar'
  }
Atlas atlas-qlbamg-shard-0 [primary] addmission_management>
```

🌤 5°C
Mostly cloudy
⊞ 🔍 Search   ENG US 🕐 9:32 PM 2024-04-01

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cluster0.a3ggun... ...

{} My Queries

⌁ Performance

🗄 Databases   ↻ +

Search

▾ 🗄 addmission_management

    📁 applicants   ...
    📁 collection1
    📁 courses
    📁 documents
    📁 tests

{} My Queries   🗄 addmission_management   📁 applicants   ✕   +

addmission_management.applicants

0 DOCUMENTS   1 INDEXES

Documents   Aggregations   Schema   Indexes   Validation

Filter 🗗   🕐 ▾   Type a query: { field: 'value' } or **Generate query** ⁺ₓ   Explain   Reset   **Find**   ‹/›   Options ▸

⊕ ADD DATA ▾   ⬈ EXPORT DATA ▾   1–3 of 3   ↻   ‹ ›   ☰ {} ⊞

    _id: ObjectId('660b55aadd6f77b7a47f59b2')
    name: "pawan_kumar"

    _id: ObjectId('660b58f0dd6f77b7a47f59b5')
    name: "harjass"

>_MONGOSH   ⓘ   ⌄

```
    _id: ObjectId('660b55aadd6f77b7a47f59b2'),
    name: 'pawan_kumar'
  }
> db.applicants.deleteOne({"name": "anshu"})
< {
    acknowledged: true,
    deletedCount: 1
  }
Atlas atlas-qlbamg-shard-0 [primary] addmission_management>
```

🌤 5°C
Mostly cloudy
⊞ 🔍 Search   ENG US 🕐 9:33 PM 2024-04-01