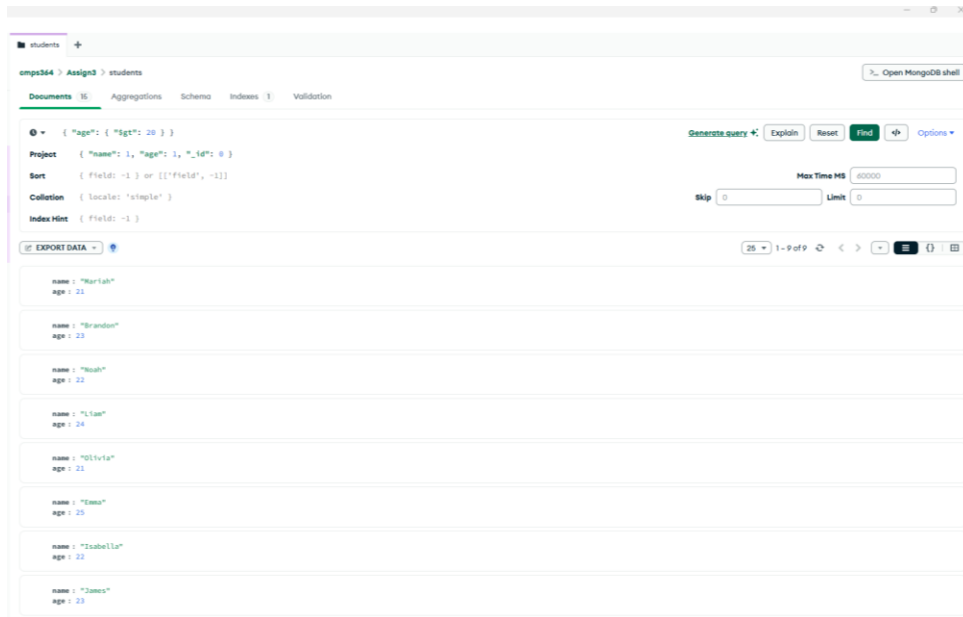


Assignment 3 Screenshots

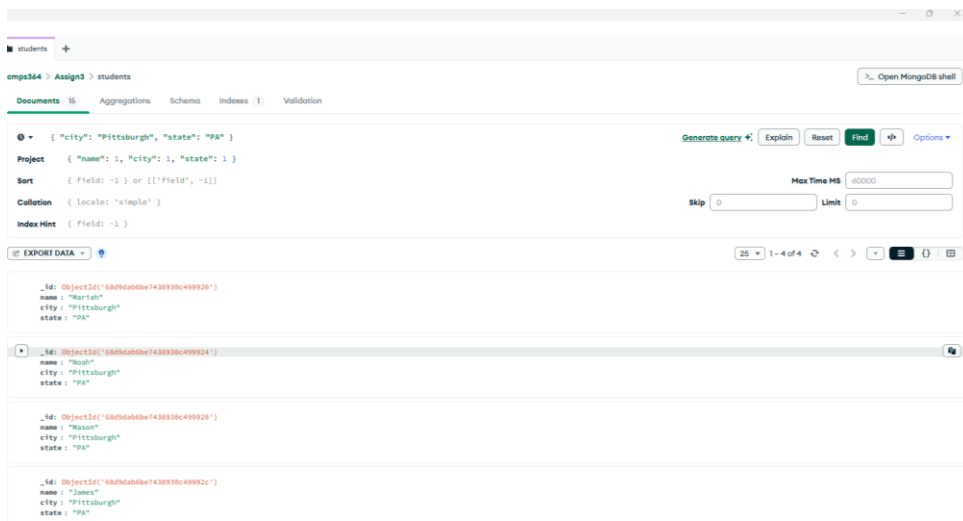
Mariah Martin

Query 1 – Finding Documents

1A) Older than 20, show only name & age



1B) Students from a specific city & state



1C) Return only 3 fields for all students

The screenshot shows the MongoDB Compass interface for the 'students' collection. The query is set to find all documents and project only the 'name', 'age', and 'course' fields. The results are displayed as a list of documents.

```
Project { "name": 1, "course": 1, "age": 1, "_id": 0 }
```

name	age	course
"Mariah"	23	"CMP5364"
"Ethan"	19	"CMP5364"
"Brandon"	23	"CMP5364"
"Ava"	20	"CMP5364"
"Noah"	22	"CMP5364"
"Sophia"	18	"CMP5364"
"Liam"	14	"CMP5364"

Query 2 – Sorting Documents

Top 5 students by grade (score) descending

The screenshot shows the MongoDB Compass interface for the 'students' collection. The query is set to sort documents by 'score' in descending order and limit the results to 5. The results are displayed as a table.

```
Sort { "score": -1 }
```

_id	studentId	name	age	city	state	course	enrollmentYear	score
1	0b9c1d0f080b0b0b0e743b...	"Olivia"	21	"Columbus"	"OH"	"CMP5364"	2022	99
2	0b9c1d0f080b0b0b0e743b...	"Mariah"	21	"Pittsburgh"	"PA"	"CMP5364"	2022	95
3	0b9c1d0f080b0b0b0e743b...	"Noah"	19	"Cleveland"	"OH"	"CMP5364"	2022	93
4	0b9c1d0f080b0b0b0e743b...	"Ava"	20	"Columbus"	"OH"	"CMP5364"	2023	92
5	0b9c1d0f080b0b0b0e743b...	"Lucas"	20	"Erie"	"PA"	"CMP5364"	2024	91

Query 3 – Combine Find + Sort + Limit

3A) Enrolled after 2020 → sort by year ASC (first 10)

students +

cmps364 > Assign3 > students Open MongoDB shell

Documents 15 Aggregations Schema Indexes 1 Validation

{ "enrollmentYear": { "\$gt": 2020 } }
 Generate query Explain Reset Find Options

Project {}

Sort { "enrollmentYear": 1 }

Collation {}

Index Hint {}

MaxTimeMS 60000

Skip 0 Limit 10

ADD DATA EXPORT DATA UPDATE DELETE

25 1-10 of 10

#	students	_id ObjectId	studentId Int32	name String	age Int32	city String	state String	course String	enrollmentYear Int32	score
1		ObjectId('68d6db6e743b...')	7	"Liam"	24	"Erie"	"PA"	"CMP364"	2021	78
2		ObjectId('68d6db6e743b...')	13	"James"	23	"Pittsburgh"	"PA"	"CMP364"	2021	87
3		ObjectId('68d6db6e743b...')	2	"Ethan"	19	"Cleveland"	"OH"	"CMP364"	2021	88
4		ObjectId('68d6db6e743b...')	1	"Mariah"	21	"Pittsburgh"	"PA"	"CMP364"	2022	95
5		ObjectId('68d6db6e743b...')	14	"Mia"	19	"Cleveland"	"OH"	"CMP364"	2022	93
6		ObjectId('68d6db6e743b...')	8	"Olivia"	21	"Columbus"	"OH"	"CMP364"	2022	99
7		ObjectId('68d6db6e743b...')	4	"Ava"	20	"Columbus"	"OH"	"CMP364"	2023	92
8		ObjectId('68d6db6e743b...')	9	"Nason"	19	"Pittsburgh"	"PA"	"CMP364"	2023	65
9		ObjectId('68d6db6e743b...')	6	"Sophia"	18	"Cleveland"	"OH"	"CMP364"	2024	90
10		ObjectId('68d6db6e743b...')	11	"Lucas"	20	"Erie"	"PA"	"CMP364"	2024	91

3B) Same as 3A but reverse order

students +

cmps364 > Assign3 > students Open MongoDB shell

Documents 15 Aggregations Schema Indexes 1 Validation

{ "enrollmentYear": { "\$gt": 2020 } }
 Generate query Explain Reset Find Options

Project {}

Sort { "enrollmentYear": -1 }

Collation {}

Index Hint {}

MaxTimeMS 60000

Skip 0 Limit 10

ADD DATA EXPORT DATA UPDATE DELETE

25 1-10 of 10

#	students	_id ObjectId	studentId Int32	name String	age Int32	city String	state String	course String	enrollmentYear Int32	score
1		ObjectId('68d6db6e743b...')	6	"Sophia"	18	"Cleveland"	"OH"	"CMP364"	2024	90
2		ObjectId('68d6db6e743b...')	11	"Lucas"	20	"Erie"	"PA"	"CMP364"	2024	91
3		ObjectId('68d6db6e743b...')	4	"Ava"	20	"Columbus"	"OH"	"CMP364"	2023	92
4		ObjectId('68d6db6e743b...')	9	"Nason"	19	"Pittsburgh"	"PA"	"CMP364"	2023	65
5		ObjectId('68d6db6e743b...')	1	"Mariah"	21	"Pittsburgh"	"PA"	"CMP364"	2022	95
6		ObjectId('68d6db6e743b...')	14	"Mia"	19	"Cleveland"	"OH"	"CMP364"	2022	93
7		ObjectId('68d6db6e743b...')	8	"Olivia"	21	"Columbus"	"OH"	"CMP364"	2022	99
8		ObjectId('68d6db6e743b...')	13	"James"	23	"Pittsburgh"	"PA"	"CMP364"	2021	87
9		ObjectId('68d6db6e743b...')	2	"Ethan"	19	"Cleveland"	"OH"	"CMP364"	2021	88
10		ObjectId('68d6db6e743b...')	7	"Liam"	24	"Erie"	"PA"	"CMP364"	2021	78

3C) Grade > 80 → sort by age descending (limit is 3)

students

cmps364 > Assign3 > students

Documents 16AggregationsSchemaIndexes 1Validation

0

{ "score": { "\$gt": 88 } }

Project

{ field: 0 }

Sort

{ "age": -1 }

Collation

{ locale: 'simple' }

Index Hint

{ field: -1 }

Generate query

Explain

Reset

Find

Options

Max Time MS

60000

Skip

0

Limit

3

ADD DATA

EXPORT DATA

UPDATE

DELETE

25

1-3 of 3

<

>

★ students

	_id ObjectId	studentId Int32	name String	age Int32	city String	state String	course String	enrollmentYear Int32	score
1	ObjectId('68d9dab6e7438...	10	"Emma"	25	"Cleveland"	"OH"	"CMPS364"	2020	82
2	ObjectId('68d9dab6e7438...	13	"James"	23	"Pittsburgh"	"PA"	"CMPS364"	2021	87
3	ObjectId('68d9dab6e7438...	5	"Noah"	22	"Pittsburgh"	"PA"	"CMPS364"	2020	84