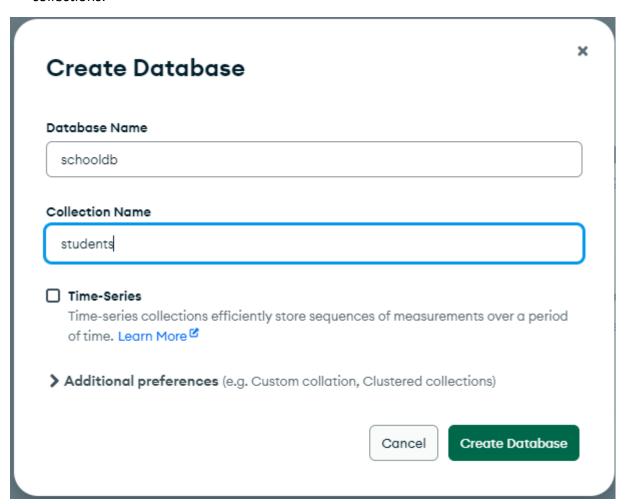
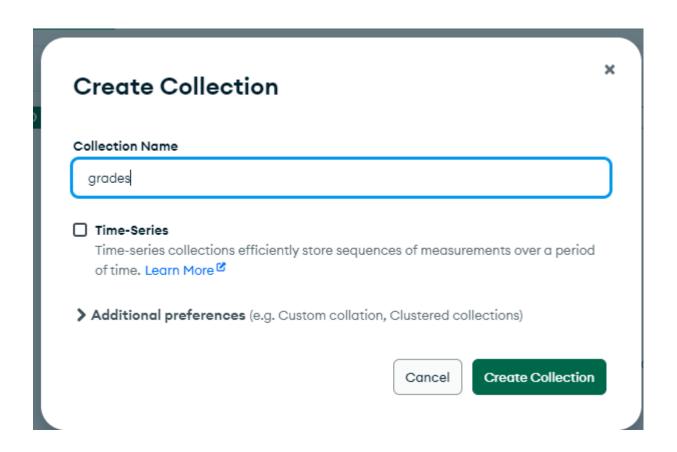
# IT-2234(Practical Exam)

## ICAE02

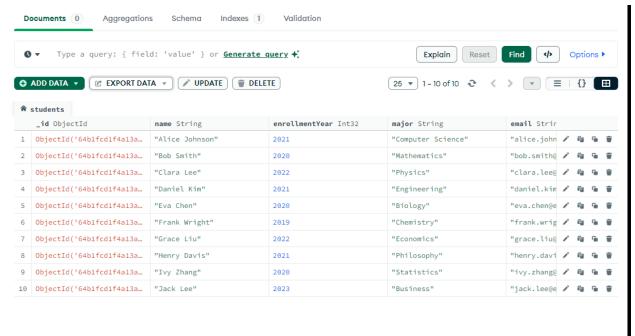
#### 01.Create Database and Collection

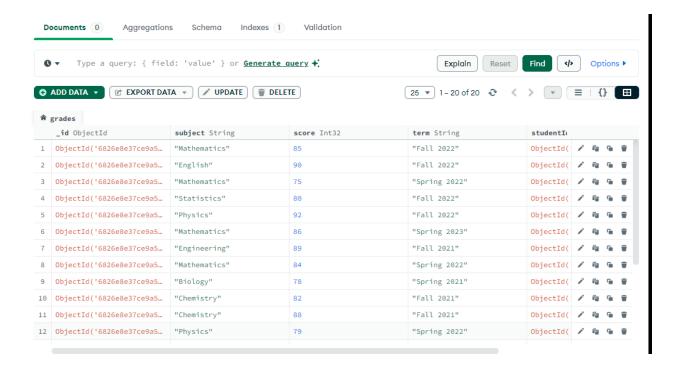
Create the students and grades collections and insert the sample documents into both collections.





#### 02. Show both collections in table view.





03. Find the female students and only display their name, age and gender.

db.students.find({gender:"Female"},{name:1,age:1,gender:1,\_id:0})

04. Find the students who are younger than 22 and enrolled after 2020

db.students.find({age:{\$lt:22},enrollmentYear:{\$gt:2020}})

```
db.students.find({age:{$\ti:22},enrollmentYear:{$\sqrt:2020}})

{
    db.students.find({age:{$\ti:22},enrollmentYear:{$\sqrt:2020}})

{
        -_id: ObjectId('64bifcdif4al3a00le3d4lal'),
        name: 'Alice Johnson',
        enrollmentYear: 2021,
        major: 'Computer Science',
        email: 'alice.johnson@example.com',
        gender: 'Female',
        age: 20
    }
{
        -_id: ObjectId('64bifcdif4al3a00le3d4la3'),
        name: 'Clara Lee',
        enrollmentYear: 2022,
        major: 'Physics',
        email: 'clara.lee@example.com',
        gender: 'Female',
        age: 19
    }
{
        -_id: ObjectId('64bifcdif4al3a00le3d4la4'),
        name: 'Daniel Kim',
        enrollmentYear: 2021,
        major: 'Engineering',
    }
}
```

### 05. Find all grades for "Alice Johnson".

```
var aliceId = ObjectId("64b1fcd1f4a13a001e3d41a1");
db.grades.find({ studentId: aliceId });
```

```
var aliceId = ObjectId("64b1fcd1f4a13a001e3d41a1");

db.grades.find({ studentId: aliceId });

{
    _id: ObjectId('6826e8e37ce9a56ea8ba4540'),
    subject: 'Mathematics',
    score: 85,
    term: 'Fall 2022',
    studentId: ObjectId('64b1fcd1f4a13a001e3d41a1')
}

{
    _id: ObjectId('6826e8e37ce9a56ea8ba4541'),
    subject: 'English',
    score: 90,
    term: 'Fall 2022',
    studentId: ObjectId('64b1fcd1f4a13a001e3d41a1')
}
schooldb>
```

06. Find how many students followed the subject "Mathematics"

db.grades.distinct("studentId", { subject: "Mathematics" }).length

```
> db.grades.distinct("studentId", { subject: "Mathematics" }).length
< 4
schooldb>
```

07. Find all students with grades in the term "Fall 2022".

```
const fallStudents = db.grades.distinct("studentId", { term: "Fall 2022" });
db.students.find({ _id: { $in: fallStudents } });
```