UNIVERSITI TEKNIKAL MALAYSIA MELAKA
FAKULTI TEKNOLOGI DAN KEJURUTERAAN ELEKTRONIK DAN KOMPUTER

BERR 2243
DATABASE & CLOUD SYSTEM

SEM 2 2024/2025

EXERCISE : WEEK 2

No	Name	Matrix No	Photo
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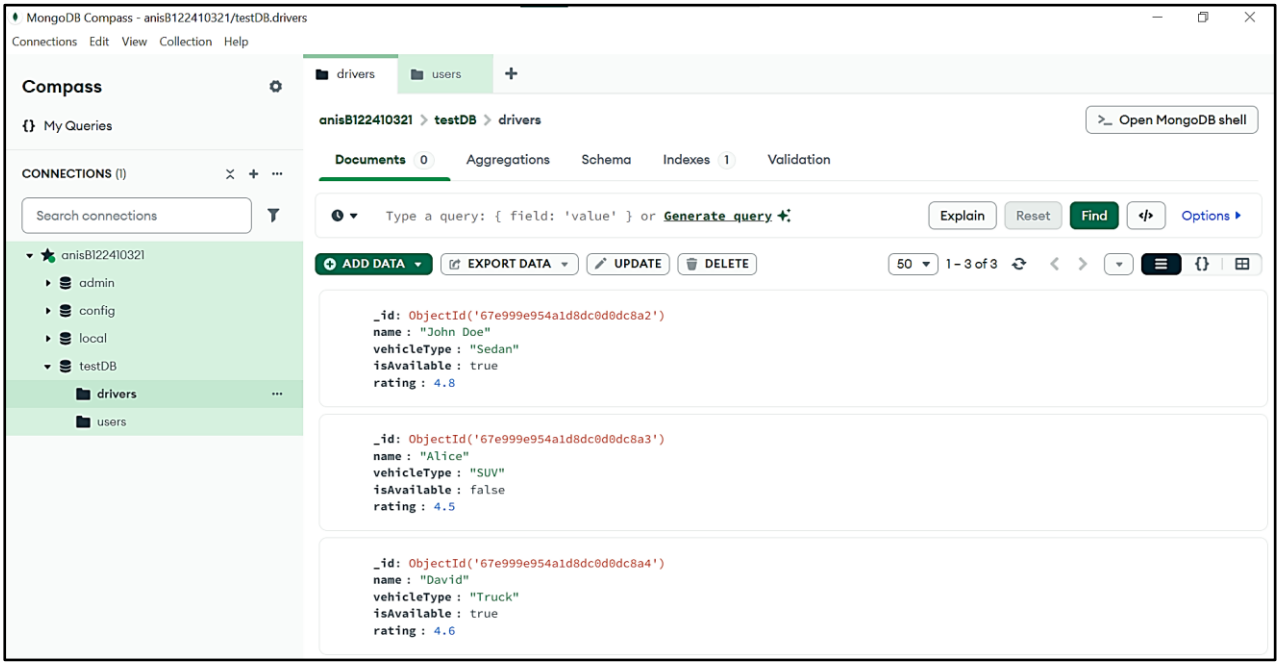
1. **GitHub Repository**: https://github.com/anishafifza

2. **Screenshots of:**

- **Document in MongoDB Compass**



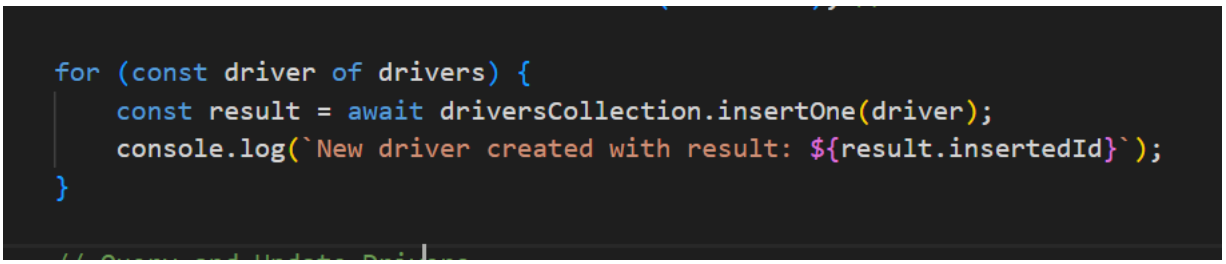
Exercise Questions

Answer:

1. Explain what is CRUD operations and how it is relates to the mongo functions in the exercise.

Create – C

Inserting new documents into a collection.



Read – R

Querying / fetching documents from a collection.

```
// Query and Update Drivers
const availableDrivers = await db.collection('drivers').find(
    {
        isAvailable: true,
        rating: { $gte: 4.5 }
    }).toArray();
    console.log("Available drivers:", availableDrivers);
```

Update – U

Modifying existing documents.

```
// Update
const updateResult = await db.collection('drivers').updateOne(
    { name: "John Doe" },
    { $inc: { rating: 0.1 } }
);
console.log(`Drivers updated with result: ${updateResult}`);
```

Delete – D

Removing documents from a collection.

```
// Delete - Task 6
const deleteResult = await db.collection('drivers').deleteOne({ isAvailable: false });
console.log(`Driver delete with result: ${deleteResult}`);
}
```

2. Identify all the mongo operators used in the exercise, then explain the usage for each.

$gte (Greater Than or Equal to):
Used in the find() query to get all drivers whose rating is 4.5 or higher

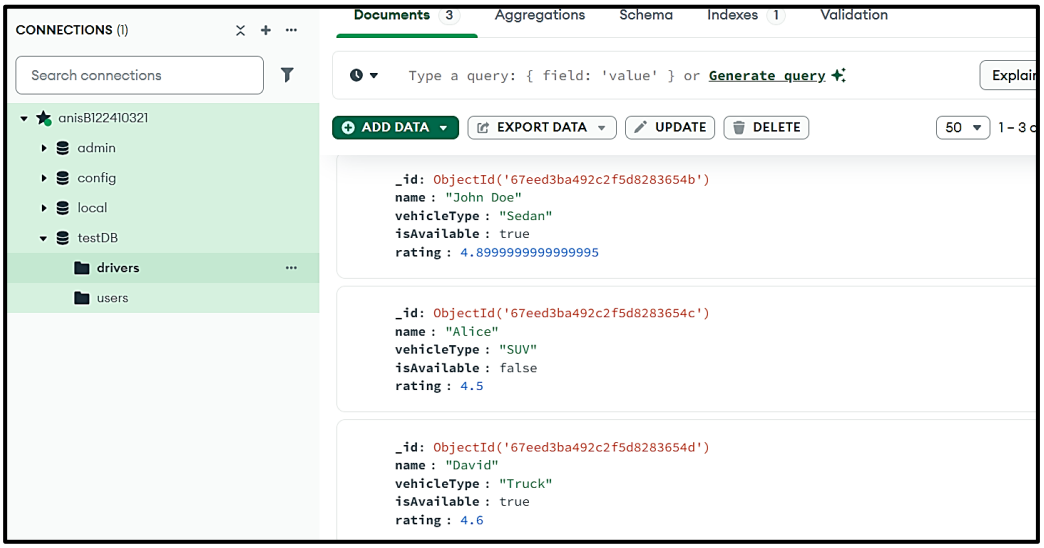
```
// Query and Update Drivers
const availableDrivers = await db.collection('drivers').find(
    {
        isAvailable: true,
        rating: { $gte: 4.5 }
    }).toArray();
    console.log("Available drivers:", availableDrivers);
```

$inc (Increment Operator):
Used in the updateOne() function to increase John Doe's rating by 0.1.

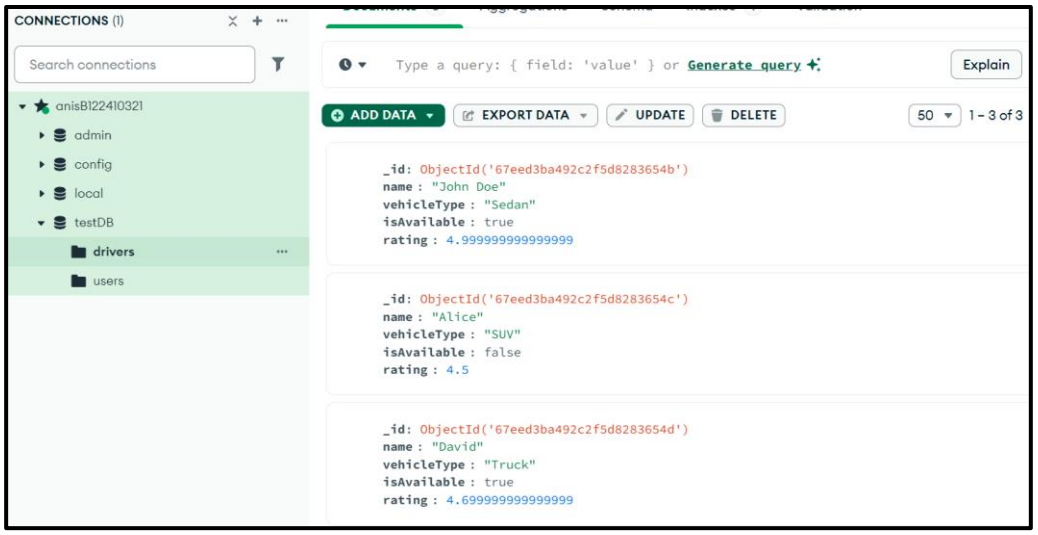
```
// Update
const updateResult = await db.collection('drivers').updateOne(
    { name: "John Doe" },
    { $inc: { rating: 0.1 } }
);
console.log(`Drivers updated with result: ${updateResult}`);
```

3. Replace the mongo functions in Task 5 to updateMany instead of updateOne, compare the diFerence based on the result in console and the mongo compass.

Before :



After :



4. Replace the mongo functions in Task 6 to deleteMany instead of deleteOne, compare the difference based on the result in console and the mongo compass.

Before :

After :