MongoDB Documentation

Section 1: Data Insertion

1. Create a Database:

I created a database named `companyDB`.

2. Create a Collection:

Then, I created a collection called `employees` and inserted multiple employee details, including fields such as `name`, `ID`, `salary`, `skills`, `department_name`, and `age`.

3. Check the Data:

To verify the inserted data, I used the `find()` method:

```
db.employees.find();
```

Section 2: Relational Operators

Task 2: Find employees whose salary is greater than 50,000:

```
db.employees.find({ salary: { $gt: 50000 } });
```

Task 3: Retrieve employees whose age is between 25 and 35:

```
db.employees.find({ age: { $gte: 25, $lte: 35 } });
```

Task 4: Find employees in the IT department and sort them by age in descending order:

```
db.employees.find({ department_name: "IT" }).sort({ age: -1 });
```

Task 5: Retrieve employees whose names start with the letter 'A' or 'D':

```
db.employees.find({ name: { $regex: "^[AD]" } });
```

Section 3: Logical Operators

Task 6: Find employees who are either active or have a salary greater than 80,000:

```
db.employees.find({ $or: [ { salary: { $gt: 80000 } }, { status: "active" } ] });
```

Task 7: Retrieve employees who are not from the Sales department:

```
db.employees.find({ department_name: { $ne: "Sales department" } });
```

Task 8: Find employees who have both the skills "communication" and "presentation":

```
db.employees.find({ skills: { $all: ["communication", "presentation"] } });
```

Section 4: Array Methods

Task 9: Retrieve employees who have "MongoDB" listed as one of their skills:

```
db.employees.find({ skills: "MongoDB" });
```

Task 10: Find employees with at least 3 skills:

```
db.employees.find({ skills: { $size: 3 } });
```

Task 11: Add a new skill "leadership" to Ishaan Gupta:

```
db.employees.updateOne({ name: "Ishaan Gupta" }, { $push: { skills: "Leadership" } });
```

Task 12: Remove "MongoDB" from Ishaan Gupta's skills:

```
db.employees.updateOne({ name: "Ishaan Gupta" }, { $pull: { skills: "MongoDB" } });
```