

week 10

CRUD Operations in MongoDB

MongoDB, a NoSQL database, supports the standard CRUD (Create, Read, Update, Delete) operations to manage data within its collections. Let's explore each operation with an example:

1. Create (Insert)

- **Purpose:** To add a new document to a collection.
- **MongoDB Command:** `db.collection.insertOne()` or `db.collection.insertMany()`
- **Example:**

JavaScript

```
// Insert a single document
db.users.insertOne({
  name: "Alice",
  age: 30,
  city: "New York"
});
```

```
// Insert multiple documents
db.products.insertMany([
  { name: "Laptop", price: 800 },
  { name: "Phone", price: 500 }
]);
```

2. Read (Find)

- **Purpose:** To retrieve documents from a collection based on specific criteria.
- **MongoDB Command:** `db.collection.find()`
- **Example:**

JavaScript

```
// Find all users
db.users.find();
```

```
// Find users older than 25
db.users.find({ age: { $gt: 25 } });
```

```
// Find a specific user
db.users.findOne({ name: "Alice" });
```

3. Update

- **Purpose:** To modify existing documents in a collection.
- **MongoDB Command:** `db.collection.updateOne()` or `db.collection.updateMany()`
- **Example:**

JavaScript

```
// Update a specific user's age
db.users.updateOne({ name: "Alice" }, { $set: { age: 31 } });

// Update multiple users' city
db.users.updateMany({ age: { $gt: 25 } }, { $set: { city: "Los Angeles" } });
```

4. Delete

- **Purpose:** To remove documents from a collection.
- **MongoDB Command:** `db.collection.deleteOne()` or `db.collection.deleteMany()`
- **Example:**

JavaScript

```
// Delete a specific user
db.users.deleteOne({ name: "Alice" });

// Delete all users older than 30
db.users.deleteMany({ age: { $gt: 30 } });
```