1. \*\*Create Operation:\*\*

- Create a new database named "library" and switch to it.

- Create a collection named "books" with fields: title, author, and published\_year.

- Insert a document into the "books" collection with the details of your favorite book.

**Solution:**

* use Library
* db.books.insert({title:"A Little Life",author:"Hanya Yanagihara",published\_year:2015})

2. \*\*Read Operation:\*\*

- Retrieve all documents from the "books" collection.

- Find and display only the documents where the author is "J.K. Rowling".

- Fetch and display the document with the earliest published year.

**Solution:**

* db.books.find()
* db.books.find({author:"J.K. Rowling"})
* db.books.find().sort({ published\_year: 1 }).limit(1)

3. \*\*Update Operation:\*\*

- Update the published year of the book with the title "The Catcher in the Rye" to the current year.

- Add a new field "genre" with the value "Mystery" to all documents in the "books" collection.

**Solution:**

* db.books.update({title:”The Catcher in the Rye”},{$set:{published\_year:2024}})
* db.books.update({}, { $set: { genre: "Mystery" } }, { multi: true })

4. \*\*Delete Operation:\*\*

- Remove the document with the title "1984" from the "books" collection.

- Delete all documents from the "books" collection where the published year is before 2000.

**Solution:**

* db.books.remove({title:”1984”})
* db.books.deleteMany({published \_year:{$lt:2000}})

5. \*\*Advanced Query:\*\*

- Find and display the top 3 recently published books from the "books" collection.

- Retrieve documents from the "books" collection where the title contains the word "MongoDB" or "NoSQL".

**Solution:**

* db.books.find().sort({ published\_year: -1 }).limit(3)
* db.books.find({ $or: [ { title: { $regex: /MongoDB/i } }, { title: { $regex: /NoSQL/i } } ]})