**Mongo DB Assignment**

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.

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.

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.

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.

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".

[Remember to use the appropriate MongoDB shell commands (e.g., `use`, `db.collection.insert`, `db.collection.find`, `db.collection.update`, `db.collection.remove`, etc.) to perform these operations. This will help you become more familiar with MongoDB's CRUD capabilities]

**Solution:**

**1. Create Operation**

// Create a new database library

use library

//Switch to the database

Switched to db library

// Create a collection named "books"

db.createCollection("books")

// Insert a document into the "books" collection

db.books.insertOne({

title: "The Great Gatsby",

author: "F. Scott Fitzgerald",

published\_year: 1925

})

**2. Read Operation:**

// Retrieve all documents from the "books" collection

db.books.find()

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

db.books.find({ author: "J.K. Rowling" })

// Fetch and display the document with the earliest published year

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"

db.books.update({ title: "The Catcher in the Rye" }, { $set: { published\_year: 2024 } })

// Add a new field "genre" with the value "Mystery" to all documents

db.books.update({}, { $set: { genre: "Mystery" } }, { multi: true })

**4. Delete Operation:**

// Remove the document with the title "1984"

db.books.remove({ title: "1984" })

// Delete all documents where the published year is before 2000

db.books.remove({ published\_year: { $lt: 2000 } })

**5.Advanced Query:**

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

db.books.find().sort({ published\_year: -1 }).limit(3)

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

db.books.find({$or: [

{ title: /MongoDB/i },

{ title: /NoSQL/i }

]

})