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.

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| **SOLUTION:**  **//create a database named library**  Use library  //create a collection named”books”  **library>** db.books.insertOne({title:"The power of subconscious mind",Author:"Joseph Murphy",published\_year:1963})   * db.books.insertOne({title:"The girl with no dreams",Author:"Deepak Gupta",published\_year:2019}) * db.books.insertOne({title:”Harry potter”,Author:”J.K.Rowling”,published\_year:2007}) * db.books.insertOne({title:"The catcher in the Rye",Author:"J.D.Shalinger",published\_year:1984}) |

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.

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| **SOLUTION:**  //retrieve all document from books  **library>** db.books.find()  //find and display  **library>** db.books.find({Author:"J.K.Rowling"})  //fetch and display earliest published year  **library>** 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.

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| **SOLUTION:**  //updatethe published year of the book with the title "The Catcher in the Rye" to the current year.  **library>**db.books.update({ title: "The Catcher in the Rye" }, { $set: { published\_year: 2024 } })  //add a new field “genre” with the value “Mystery” to all document in the “books” collection.  **library>** 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.

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| **SOLUTION:**  **//remove title 1984**  **library>** db.books.remove({ title: "1984" })  //delete all document from books collection where the published\_year is before 2000  **library>** db.books.remove ({ 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".

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| **SOLUTION:**  **//find and display the top 3 recently published books from the books collection**  **library>** db.books.find().sort({published\_year:1}).limit(3)  //retrieve documents from the books collection where the title contains the word “Mongodb” or “NoSQL”.  **library>** db.books.find({$or:[{title:{$regex:"MongoDB",$options:"i"}},{title:{$regex:"NoSQL",$options:"i"}}]}) |