Assignment for Week 12 - Mongo DB Exercise - @Mathankumar.N

Question 1 :

Create Operation:

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

2. Create a collections named "books" with fields: title, author, and published_year.

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

Answer :

```
test> use library
switched to db library
library> db.createCollection("books")
{ ok: 1 }
library> db.books.insertMany([{title:"Rich Dad Poor Dad",author:"T. Kiyosaki",published_year:1997},{title:"The Psychology of Money",author:"Morgan Housel",p
ublished_year:2020},{title:"Think and Grow Rich",author:"Napoleon Hill",published_year:1937},{title:"I Will Teach You to Be Rich",author:"Ramit Sethi",publi
shed_year:2009}])
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('675acd2a0611f2f9be893bf8'),
    '1': ObjectId('675acd2a0611f2f9be893bf9'),
    '2': ObjectId('675acd2a0611f2f9be893bfa'),
    '3': ObjectId('675acd2a0611f2f9be893bfb')
  }
}
library> |
```

Question 2 :

Read Operation:

1. Retrieve all documents from the "books" collection.

2. Find and display only the documents where the author is "Morgon Housel".

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

Answer :

```
library> db.books.find()
[
  {
    _id: ObjectId('675acd2a0611f2f9be893bf8'),
    title: 'Rich Dad Poor Dad',
    author: 'T. Kiyosaki',
    published_year: 1997
  },
  {
    _id: ObjectId('675acd2a0611f2f9be893bf9'),
    title: 'The Psychology of Money',
    author: 'Morgan Housel',
    published_year: 2020
  },
  {
    _id: ObjectId('675acd2a0611f2f9be893bfa'),
    title: 'Think and Grow Rich',
    author: 'Napoleon Hill',
    published_year: 1937
  },
  {
    _id: ObjectId('675acd2a0611f2f9be893bfb'),
    title: 'I Will Teach You to Be Rich',
    author: 'Ramit Sethi',
    published_year: 2009
  }
]
library> db.books.find({author:"Morgan Housel"})
[
  {
    _id: ObjectId('675acd2a0611f2f9be893bf9'),
    title: 'The Psychology of Money',
    author: 'Morgan Housel',
    published_year: 2020
  }
]
library> db.books.find().sort({published_year:1}).limit(1)
[
  {
    _id: ObjectId('675acd2a0611f2f9be893bfa'),
    title: 'Think and Grow Rich',
    author: 'Napoleon Hill',
    published_year: 1937
  }
]
library> |
```

Question 3 :

Update Operation:

1. Update the published year of the book with the title "The Intelligent Investor" , author "Benjamin graham" to the current year.
2. Add a new field "genre" with the value "Money" to all documents in the "books" collection.

Answer :

```
library>  db.books.updateOne({title:"The Intelligent Investor",author:"Benjamin Graham"},{$set:{published_year:2024}})
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
library>  db.books.updateMany({},{$set:{genre:"Money"}},{multi:true})
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 4,
  modifiedCount: 3,
  upsertedCount: 0
}
library> db.books.find()
[
  {
    _id: ObjectId('675acd2a0611f2f9be893bf8'),
    title: 'Rich Dad Poor Dad',
    author: 'T. Kiyosaki',
    published_year: 1997,
    genre: 'Money'
  },
  {
    _id: ObjectId('675acd2a0611f2f9be893bf9'),
    title: 'The Psychology of Money',
    author: 'Morgan Housel',
    published_year: 2020,
    genre: 'Money'
  },
  {
    _id: ObjectId('675acd2a0611f2f9be893bfa'),
    title: 'Think and Grow Rich',
    author: 'Napoleon Hill',
    published_year: 1937,
    genre: 'Money'
  },
  {
    _id: ObjectId('675acd2a0611f2f9be893bfb'),
    title: 'I Will Teach You to Be Rich',
    author: 'Ramit Sethi',
    published_year: 2009,
    genre: 'Money'
  }
]
```

Question 4 :

Delete Operation:

1. <mark>Remove</mark> the document with the title "<mark>Think and grow rich</mark>" from the "books" collection.

2. <mark>Delete</mark> all documents from the "<mark>books</mark>" collection where <mark>the published year is before 2000</mark>.

Answer :

```
library> db.books.deleteOne({title:"Think and Grow Rich"})
{ acknowledged: true, deletedCount: 1 }
library> db.books.deleteMany({published_year:{$lt:2000}})
{ acknowledged: true, deletedCount: 1 }
library> db.books.find()
[
  {
    _id: ObjectId('675acd2a0611f2f9be893bf9'),
    title: 'The Psychology of Money',
    author: 'Morgan Housel',
    published_year: 2020,
    genre: 'Money'
  },
  {
    _id: ObjectId('675acd2a0611f2f9be893bfb'),
    title: 'I Will Teach You to Be Rich',
    author: 'Ramit Sethi',
    published_year: 2009,
    genre: 'Money'
  }
]
library>
```

Question 5 :

Advanced Query:

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

2. Retrieve documents from the "books" collection where the title contains the word "Genre" or "published_year:Lessthan 2000".

```
]
library> db.books.find().sort({published_year:-1}).limit(3)
[
  {
    _id: ObjectId('675acd2a0611f2f9be893bf9'),
    title: 'The Psychology of Money',
    author: 'Morgan Housel',
    published_year: 2020,
    genre: 'Money'
  },
  {
    _id: ObjectId('675ad78c0611f2f9be893bfc'),
    title: 'The Barefoot Investor',
    author: 'Scott Pape',
    published_year: 2016,
    genre: 'Money'
  },
  {
    _id: ObjectId('675acd2a0611f2f9be893bfb'),
    title: 'I Will Teach You to Be Rich',
    author: 'Ramit Sethi',
    published_year: 2009,
    genre: 'Money'
  }
]
library> db.books.find({$or:[{genre:"Money"},{published_year:{$lt:2000}}]})
[
  {
    _id: ObjectId('675acd2a0611f2f9be893bf9'),
    title: 'The Psychology of Money',
    author: 'Morgan Housel',
    published_year: 2020,
    genre: 'Money'
  },
  {
    _id: ObjectId('675acd2a0611f2f9be893bfb'),
    title: 'I Will Teach You to Be Rich',
    author: 'Ramit Sethi',
    published_year: 2009,
    genre: 'Money'
  },
  {
    _id: ObjectId('675ad78c0611f2f9be893bfc'),
    title: 'The Barefoot Investor',
    author: 'Scott Pape',
    published_year: 2016,
    genre: 'Money'
  },
  {
    _id: ObjectId('675ad78c0611f2f9be893bfd'),
    title: 'The Total Money Makeover',
    author: 'Dave Ramsey',
    published_year: 2003,
    genre: 'Money'
  }
]
```