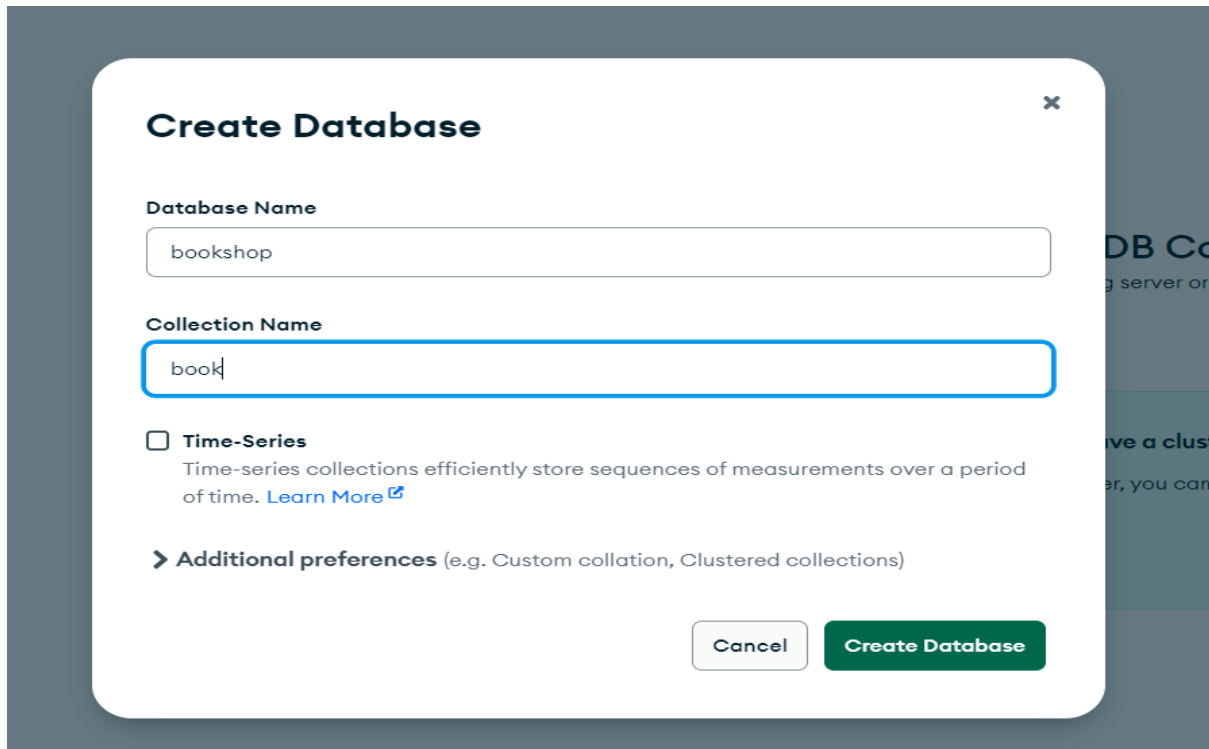


Exercise

1. Create a database and collection



Create Database ×

Database Name

bookshop

Collection Name

book

☐ **Time-Series**
Time-series collections efficiently store sequences of measurements over a period of time. [Learn More](#)

> Additional preferences (e.g. Custom collation, Clustered collections)

Cancel Create Database

2. Insert the multiple data

- `db.books.insertMany([`
 `{`
 `"title": "The Hobbit",`
 `"author": "J.R.R.Tolkien",`
 `"published_year": 1937,`
 `"genres": ["Fantasy", "Adventure"],`
 `"pages": 310,`
 `"available": true,`
 `"rating": 4.8`
 `},`
 `{`
 `"title": "1984",`
 `"author": "George Orwell",`
 `"published_year": 1949,`
 `"genres": ["Dystopian", "Political Fiction"],`
 `"pages": 328,`
 `"available": true,`
 `"rating": 4.7`
 `}]`

```

    },
    {
      "title": "To Kill a Mockingbird",
      "author": "Harper Lee",
      "published_year": 1960,
      "genres": ["Southern Gothic", "Drama"],
      "pages": 281,
      "available": false,
      "rating": 4.6
    },
    {
      "title": "The Great Gatsby",
      "author": "F. Scott Fitzgerald",
      "published_year": 1925,
      "genres": ["Tragedy"],
      "pages": 180,
      "available": true,
      "rating": 4.4
    },
    {
      "title": "Brave New World",
      "author": "Aldous Huxley",
      "published_year": 1932,
      "genres": ["Science Fiction", "Dystopian"],
      "pages": 311,
      "available": true,
      "rating": 4.2
    }
  });

```

```

    acknowledged: true,
    insertedIds: {
      '0': ObjectId('681b3dd958873d29afdd2fee'),
      '1': ObjectId('681b3dd958873d29afdd2fef'),
      '2': ObjectId('681b3dd958873d29afdd2ff0'),
      '3': ObjectId('681b3dd958873d29afdd2ff1'),
      '4': ObjectId('681b3dd958873d29afdd2ff2')
    }
  }
}

```

Documents 5 Aggregations Schema Indexes 1 Validation

Type a query: { field: 'value' } or [Generate query](#) [Explain](#) [Reset](#)

[+ ADD DATA](#) [EXPORT DATA](#) [UPDATE](#) [DELETE](#) 25 1 - 5 of 5

```

_id: ObjectId('681b3dd958873d29afdd2fee')
title: "The Hobbit"
author: "J.R.R.Tolkien"
published_year: 1937
genres: Array (2)
pages: 310
available: true
rating: 4.8

```

```

_id: ObjectId('681b3dd958873d29afdd2fef')
title: "1984"
author: "George Orwell"
published_year: 1949
genres: Array (2)
pages: 328
available: true
rating: 4.7

```

```

_id: ObjectId('681b3dd958873d29afdd2ff0')
title: "To Kill a Mockingbird"
author: "Harper Lee"
published_year: 1960
genres: Array (2)
pages: 281
available: false
rating: 4.6

```

Questions

1. Find all books

- `Db.books.find();`

```

> db.books.find();
< {
  _id: ObjectId('681b3dd958873d29afdd2fee'),
  title: 'The Hobbit',
  author: 'J.R.R.Tolkien',
  published_year: 1937,
  genres: [
    'Fantasy',
    'Adventure'
  ],
  pages: 310,
  available: true,
  rating: 4.8
}
{
  _id: ObjectId('681b3dd958873d29afdd2fef'),
  title: '1984',
  author: 'George Orwell',
  published_year: 1949,
  genres: [
    'Dystopian',
    'Plitical Fiction'
  ],
  pages: 328,
  available: true,
  rating: 4.7
}

```

```

    _id: ObjectId('681b3dd958873d29afdd2ff0'),
    title: 'To Kill a Mockingbird',
    author: 'Harper Lee',
    published_year: 1960,
    genres: [
      'Southern Gothic',
      'Drama'
    ],
    pages: 281,
    available: false,
    rating: 4.6
  }
  {
    _id: ObjectId('681b3dd958873d29afdd2ff1'),
    title: 'The Great Gatsby',
    author: 'F. Scott Fitzgerald',
    published_year: 1925,
    genres: [
      'Tragedy'
    ],
    pages: 180,
    available: true,
    rating: 4.4
  }
  {
    _id: ObjectId('681b3dd958873d29afdd2ff2'),
    title: 'Brave New World',

```

2. Find all books published after 1950

- `db.books.find({ "published_year": { $gt: 1950 } });`

```

> db.books.find({ "published_year": { $gt: 1950 } });
< {
  _id: ObjectId('681b3dd958873d29afdd2ff0'),
  title: 'To Kill a Mockingbird',
  author: 'Harper Lee',
  published_year: 1960,
  genres: [
    'Southern Gothic',
    'Drama'
  ],
  pages: 281,
  available: false,
  rating: 4.6
}

```

3. Find the available books

- `db.books.find({"available":true});`

```
{
  _id: ObjectId('681b3dd958873d29afdd2ff1'),
  title: 'The Great Gatsby',
  author: 'F. Scott Fitzgerald',
  published_year: 1925,
  genres: [
    'Tragedy'
  ],
  pages: 180,
  available: true,
  rating: 4.4
}
{
  _id: ObjectId('681b3dd958873d29afdd2ff2'),
  title: 'Brave New World',
  author: 'Aldous Huxley',
  published_year: 1932,
  genres: [
    'Science Fiction',
    'Dystopian'
  ],
  pages: 311,
  available: true,
  rating: 4.2
}
```

4. Find all books that belong to the “Dystopian” genres

- `db.books.find({"genres":"Dystopian"});`

```

> db.books.find({"genres":"Dystopian"});
< {
  _id: ObjectId('681b3dd958873d29afdd2fef'),
  title: '1984',
  author: 'George Orwell',
  published_year: 1949,
  genres: [
    'Dystopian',
    'Plitical Fiction'
  ],
  pages: 328,
  available: true,
  rating: 4.7
}
{
  _id: ObjectId('681b3dd958873d29afdd2ff2'),
  title: 'Brave New World',
  author: 'Aldous Huxley',
  published_year: 1932,
  genres: [
    'Science Fiction',
    'Dystopian'
  ],
  pages: 311,
  available: true,
  rating: 4.2
}

```

5. Find the books which published after 1960

And had rating more than 4.0

- `db.books.find({"published_year":{$gt:1960},"rating":{$gt:4.0}});`

```

> db.books.find({"published_year":{$gt:1960},"rating":{$gt:4.0}});
<
bookshop > |

```

6. Project only title and author fields

- `db.books.find({}, {"title":1,"author":1,"_id":0});`

```
> db.books.find({}, {"title":1,"author":1,"_id":0});
< {
  title: 'The Hobbit',
  author: 'J.R.R.Tolkien'
}
{
  title: '1984',
  author: 'George Orwell'
}
{
  title: 'To Kill a Mockingbird',
  author: 'Harper Lee'
}
{
  title: 'The Great Gatsby',
  author: 'F. Scott Fitzgerald'
}
{
  title: 'Brave New World',
  author: 'Aldous Huxley'
}
```

7. Update the book "1984" to set available: false

- `db.books.updateOne(
 {"title":"1984"},
 {$set:{"available":false}});`

```
> db.books.updateOne(
  {"title":"1984"},
  {$set:{"available":false}});
< {
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
```

8. Increase the rating of “Brave New World” by +0.1

- `db.books.updateOne(
 {"title": "Brave New World"},
 {$set: {"rating": 0.1}});`

```
> db.books.updateOne(  
  {"title": "Brave New World"},  
  {$set: {"rating": 0.1}});  
< {  
  acknowledged: true,  
  insertedId: null,  
  matchedCount: 1,  
  modifiedCount: 1,  
  upsertedCount: 0  
}
```

9. Add a new genre “Classic” to “The Great Gatsby”

- `db.books.updateOne(
 {"title": "The Great Gatsby"},
 {$push: {"genres": "Classic"}});`

```
> db.books.updateOne(  
  {"title": "The Great Gatsby"},  
  {$push: {"genres": "Classic"}});  
< {  
  acknowledged: true,  
  insertedId: null,  
  matchedCount: 1,  
  modifiedCount: 1,  
  upsertedCount: 0  
}
```

10. Sort books by published_year ascending

- `db.books.find().sort({"published_year": 1});`


```
{
  _id: ObjectId('681b3dd958873d29afdd2fef'),
  title: '1984',
  author: 'George Orwell',
  published_year: 1949,
  genres: [
    'Dystopian',
    'Plitical Fiction'
  ],
  pages: 328,
  available: false,
  rating: 4.7
}
{
  _id: ObjectId('681b3dd958873d29afdd2ff0'),
  title: 'To Kill a Mockingbird',
  author: 'Harper Lee',
  published_year: 1960,
  genres: [
    'Southern Gothic',
    'Drama'
  ],
  pages: 281,
  available: false,
  rating: 4.6
}
```

11.Sort books by rating descending

- `db.books.find().sort({"rating":-1});`

```
_id: ObjectId('681b3dd958873d29afdd2ff1'),
title: 'The Great Gatsby',
author: 'F. Scott Fitzgerald',
published_year: 1925,
genres: [
  'Tragedy',
  'Classic'
],
pages: 180,
available: true,
rating: 4.4
```

```
_id: ObjectId('681b3dd958873d29afdd2ff2'),
title: 'Brave New World',
author: 'Aldous Huxley',
published_year: 1932,
genres: [
  'Science Fiction',
  'Dystopian'
],
pages: 311,
available: true,
rating: 0.1
```

12.Delete all books with rating lower than 4.5

- db.books.deleteMany({"rating":{\$lt:4.5}});

```
> db.books.deleteMany({"rating":{$lt:4.5}});
< {
  acknowledged: true,
  deletedCount: 2
}
```