

GROUP ORION - MONGODB QUERIES

1. Write a query to display a list of books.

```
Atlas atlas-dy3k5g-shard-0 [primary] whatabook> db.books.find();
[
  {
    _id: ObjectId('67be00c7d5457e8f02cb0dc5'),
    ISBN: '9780439708180',
    title: 'Harry Potter and the Sorcerer's',
    cover: 'https://whatabook.com/images/sorcerers-stone.jpg',
    genres: [ 'Fantasy', 'Young Adult' ],
    author: 'J.K. Rowling',
    bookId: 'book-001',
    ratings: [
      {
        ratingId: 'rating-001',
        userId: 'user-001',
        rating: 4,
        timestamp: ISODate('2025-02-25T17:41:26.999Z')
      },
      {
        ratingId: 'rating-002',
        userId: 'user-003',
        rating: 2,
        timestamp: ISODate('2025-02-25T17:41:26.999Z')
      },
      {
        ratingId: 'rating-003',
        userId: 'user-005',
        rating: 5,
        timestamp: ISODate('2025-02-25T17:41:26.999Z')
      }
    ],
    reviews: [
      {
        reviewId: 'review-001',
        userId: 'user-003',
        review: 'better than the movie?',
        timestamp: ISODate('2025-02-25T17:41:26.999Z')
      },
      {
        reviewId: 'review-002',
        userId: 'user-007',
        review: 'magic magic magic!',
        timestamp: ISODate('2025-02-25T17:41:26.999Z')
      }
    ]
  }
]
```

```
{
  reviewId: 'review-003',
  userId: 'user-005',
  review: 'love this book',
  timestamp: ISODate('2025-02-25T17:41:26.999Z')
},
publisher: 'Bloomsbury Publishing',
readHistory: [
  {
    historyId: 'history-001',
    userId: 'user-004',
    currentPage: 16,
    startDate: ISODate('2025-02-25T17:41:26.999Z'),
    completeDate: null
  },
  {
    historyId: 'history-002',
    userId: 'user-006',
    currentPage: 220,
    startDate: ISODate('2025-02-25T17:41:26.999Z'),
    completeDate: null
  },
  {
    historyId: 'history-003',
    userId: 'user-004',
    currentPage: 8,
    startDate: ISODate('2025-02-25T17:41:26.999Z'),
    completeDate: null
  }
],
pageCount: 223,
totalCopies: 12,
availableCopies: 10
},
```

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```
{
  _id: ObjectId('67be00c7d5457e8f02cb0dc6'),
  ISBN: '9780618968627',
  title: 'To Kill a Mockingbird',
  cover: 'https://whatabook.com/images/kill-a-mockingbird.jpg',
  genres: [ 'Fiction', 'Classic' ],
  author: 'Harper Lee',
  bookId: 'book-002',
  ratings: [],
  reviews: [],
  publisher: 'J.B. Lippincott & Co.',
  readHistory: [],
  pageCount: 281,
  totalCopies: 15,
  availableCopies: 15
},
{
  _id: ObjectId('67be00c7d5457e8f02cb0dc7'),
  ISBN: '9780141439518',
  title: 'The Great Gatsby',
  cover: 'https://whatabook.com/images/the-great-gatsby.jpg',
  genres: [ 'Fiction', 'Classic' ],
  author: 'F. Scott Fitzgerald',
  bookId: 'book-003',
  ratings: [],
  reviews: [],
  publisher: 'Penguin Books',
  readHistory: [],
  pageCount: 208,
  totalCopies: 5,
  availableCopies: 1
},
{
  _id: ObjectId('67be00c7d5457e8f02cb0dc8'),
  ISBN: '9780061120084',
  title: 'The Catcher in the Rye',
  cover: 'https://whatabook.com/images/rye-catcher.jpg',
  genres: [ 'Fiction', 'Young Adult' ],
  author: 'J.D. Salinger',
  bookId: 'book-004',
  ratings: [],
  reviews: [],
  publisher: 'Little, Brown and Company',
  readHistory: [],
  pageCount: 277,
  totalCopies: 10,
  availableCopies: 8
},
}
```

```
{
  _id: ObjectId('67be00c7d5457e8f02cb0dc9'),
  ISBN: '9780345391803',
  title: 'The Hobbit',
  cover: 'https://whatabook.com/images/th-hobbit.jpg',
  genres: [ 'Fantasy', 'Adventure' ],
  author: 'J.R.R. Tolkien',
  bookId: 'book-005',
  ratings: [],
  reviews: [],
  publisher: 'Houghton Mifflin Harcourt',
  readHistory: [],
  pageCount: 310,
  totalCopies: 14,
  availableCopies: 3
}
]
Atlas atlas-dy3k5g-shard-0 [primary] whatabook> █
```

GROUP ORION - MONGODB QUERIES

2. Write a query to display a list of books by genre.

```
Atlas atlas-dy3k5g-shard-0 [primary] whatabook> db.books.find({ genres: "Fiction" }).pretty();
[
  {
    _id: ObjectId('67be00c7d5457e8f02cb0dc6'),
    ISBN: '9780618968627',
    title: 'To Kill a Mockingbird',
    cover: 'https://whatabook.com/images/kill-a-mockingbird.jpg',
    genres: [ 'Fiction', 'Classic' ],
    author: 'Harper Lee',
    bookId: 'book-002',
    ratings: [],
    reviews: [],
    publisher: 'J.B. Lippincott & Co.',
    readHistory: [],
    pageCount: 281,
    totalCopies: 15,
    availableCopies: 15
  },
  {
    _id: ObjectId('67be00c7d5457e8f02cb0dc7'),
    ISBN: '9780141439518',
    title: 'The Great Gatsby',
    cover: 'https://whatabook.com/images/the-great-gatsby.jpg',
    genres: [ 'Fiction', 'Classic' ],
    author: 'F. Scott Fitzgerald',
    bookId: 'book-003',
    ratings: [],
    reviews: [],
    publisher: 'Penguin Books',
    readHistory: [],
    pageCount: 208,
    totalCopies: 5,
    availableCopies: 1
  },
  {
    _id: ObjectId('67be00c7d5457e8f02cb0dc8'),
    ISBN: '9780061120084',
    title: 'The Catcher in the Rye',
    cover: 'https://whatabook.com/images/rye-catcher.jpg',
    genres: [ 'Fiction', 'Young Adult' ],
    author: 'J.D. Salinger',
    bookId: 'book-004',
    ratings: [],
    reviews: [],
    publisher: 'Little, Brown and Company',
    readHistory: [],
    pageCount: 277,
    totalCopies: 10,
    availableCopies: 8
  }
]
Atlas atlas-dy3k5g-shard-0 [primary] whatabook> []
```

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3. Write a query to display a list of books by author.

```
Atlas atlas-dy3k5g-shard-0 [primary] whatabook> db.books.find({ author: "Harper Lee" }).pretty();
[
  {
    _id: ObjectId('67be00c7d5457e8f02cb0dc6'),
    ISBN: '9780618968627',
    title: 'To Kill a Mockingbird',
    cover: 'https://whatabook.com/images/kill-a-mockingbird.jpg',
    genres: [ 'Fiction', 'Classic' ],
    author: 'Harper Lee',
    bookId: 'book-002',
    ratings: [],
    reviews: [],
    publisher: 'J.B. Lippincott & Co.',
    readHistory: [],
    pageCount: 281,
    totalCopies: 15,
    availableCopies: 15
  }
]
Atlas atlas-dy3k5g-shard-0 [primary] whatabook> 
```

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4. Write a query to display a book by bookId.

```
Atlas atlas-dy3k5g-shard-0 [primary] whatabook> db.books.findOne({ bookId: 'book-002' });
{
  _id: ObjectId('67be00c7d5457e8f02cb0dc6'),
  ISBN: '9780618968627',
  title: 'To Kill a Mockingbird',
  cover: 'https://whatabook.com/images/kill-a-mockingbird.jpg',
  genres: [ 'Fiction', 'Classic' ],
  author: 'Harper Lee',
  bookId: 'book-002',
  ratings: [],
  reviews: [],
  publisher: 'J.B. Lippincott & Co.',
  readHistory: [],
  pageCount: 281,
  totalCopies: 15,
  availableCopies: 15
}
Atlas atlas-dy3k5g-shard-0 [primary] whatabook> 
```

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5. Display a Wishlist by customerId.

```
db.wishlists.aggregate([ { $match: { userId: "user-001" } }, { $lookup: { from: "books", localField: "bookId", foreignField: "bookId", as: "wishlistBooks" } } ]).pretty();
```

```
[
  {
    _id: ObjectId('67be00c7d5457e8f02cb0dd2'),
    userId: 'user-001',
    bookId: 'book-003',
    timestamp: ISODate('2025-02-25T17:41:26.999Z'),
    wishlistId: 'wishlist-001',
    wishlistBooks: [
      {
        _id: ObjectId('67be00c7d5457e8f02cb0dc7'),
        ISBN: '9780141439518',
        title: 'The Great Gatsby',
        cover: 'https://whatabook.com/images/the-great-gatsby.jpg',
        genres: [ 'Fiction', 'Classic' ],
        author: 'F. Scott Fitzgerald',
        bookId: 'book-003',
        ratings: [],
        reviews: [],
        publisher: 'Penguin Books',
        readHistory: [],
        pageCount: 208,
        totalCopies: 5,
        availableCopies: 1
      }
    ]
  }
]
```

```
Atlas atlas-dy3k5g-shard-0 [primary] whatabook> [
```

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6. Add books to a customer's wishlist.

```
db.wishlists.updateOne( { userId: "user-001", bookId: "book-005" }, { $setOnInsert: { wishlistId: "wishlist-007", timestamp: new Date() } }, { upsert: true } );  
{  
  acknowledged: true,  
  insertedId: null,  
  matchedCount: 1,  
  modifiedCount: 1,  
  upsertedCount: 0  
}  
Atlas atlas-dy3k5g-shard-0 [primary] whatabook> █
```

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Proof wishlist item added to user 1:

```
db.users.findOne({userId: 'user-001'});
{
  _id: ObjectId('67be00c7d5457e8f02cb0dca'),
  role: 'librarian',
  email: 'mthompson@whatabook.com',
  userId: 'user-001',
  password: 'TheSwiftFox$323',
  lastName: 'Thompson',
  firstName: 'Mark',
  ratings: [
    { bookId: 'book-001', ratingId: 'rating-001' },
    { bookId: 'book-002', ratingId: 'rating-001' }
  ],
  reviews: [
    { bookId: 'book-001', reviewId: 'review-001' },
    { bookId: 'book-002', reviewId: 'review-002' }
  ],
  wishlist: [ 'wishlist-001', 'wishlist-007' ],
  readHistory: [
    { bookId: 'book-001', historyId: 'history-001' },
    { bookId: 'book-002', historyId: 'history-001' }
  ],
  borrowedBooks: [ 'borrowedId-005' ]
}
Atlas atlas-dy3k5g-shard-0 [primary] whatabook>
```

```
db.wishlists.findOne({wishlistId: 'wishlist-007'});
{
  _id: ObjectId('67be0b0f0b125d825ab2f450'),
  bookId: 'book-005',
  userId: 'user-001',
  timestamp: ISODate('2025-02-25T18:25:19.845Z'),
  wishlistId: 'wishlist-007'
}
Atlas atlas-dy3k5g-shard-0 [primary] whatabook>
```


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7. Remove book from a customer's wishlist.

```
· db.wishlists.deleteOne({ userId: "user-001", wishlistId: "wishlist-007" }); db.users.updateOne({ userId: "user-001" }, { $pull: { wishlist: "wishlist-007" } })  
{  
  acknowledged: true,  
  insertedId: null,  
  matchedCount: 1,  
  modifiedCount: 1,  
  upsertedCount: 0  
}  
Atlas atlas-dy3k5g-shard-0 [primary] whatabook> █
```

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Proof wishlist item has been removed from user and wishlist collection

```
db.users.findOne({userId: 'user-001'});  
{  
  _id: ObjectId('67be00c7d5457e8f02cb0dca'),  
  role: 'librarian',  
  email: 'mthompson@whatabook.com',  
  userId: 'user-001',  
  password: 'TheSwiftFox$323',  
  lastName: 'Thompson',  
  firstName: 'Mark',  
  ratings: [  
    { bookId: 'book-001', ratingId: 'rating-001' },  
    { bookId: 'book-002', ratingId: 'rating-001' }  
  ],  
  reviews: [  
    { bookId: 'book-001', reviewId: 'review-001' },  
    { bookId: 'book-002', reviewId: 'review-002' }  
  ],  
  wishlist: [ 'wishlist-001' ],  
  readHistory: [  
    { bookId: 'book-001', historyId: 'history-001' },  
    { bookId: 'book-002', historyId: 'history-001' }  
  ],  
  borrowedBooks: [ 'borrowedId-005' ]  
}  
Atlas atlas-dy3k5g-shard-0 [primary] whatabook>
```

```
db.wishlists.findOne({wishlistId: 'wishlist-007'});  
null  
Atlas atlas-dy3k5g-shard-0 [primary] whatabook>
```