

Date: 2024.04.28

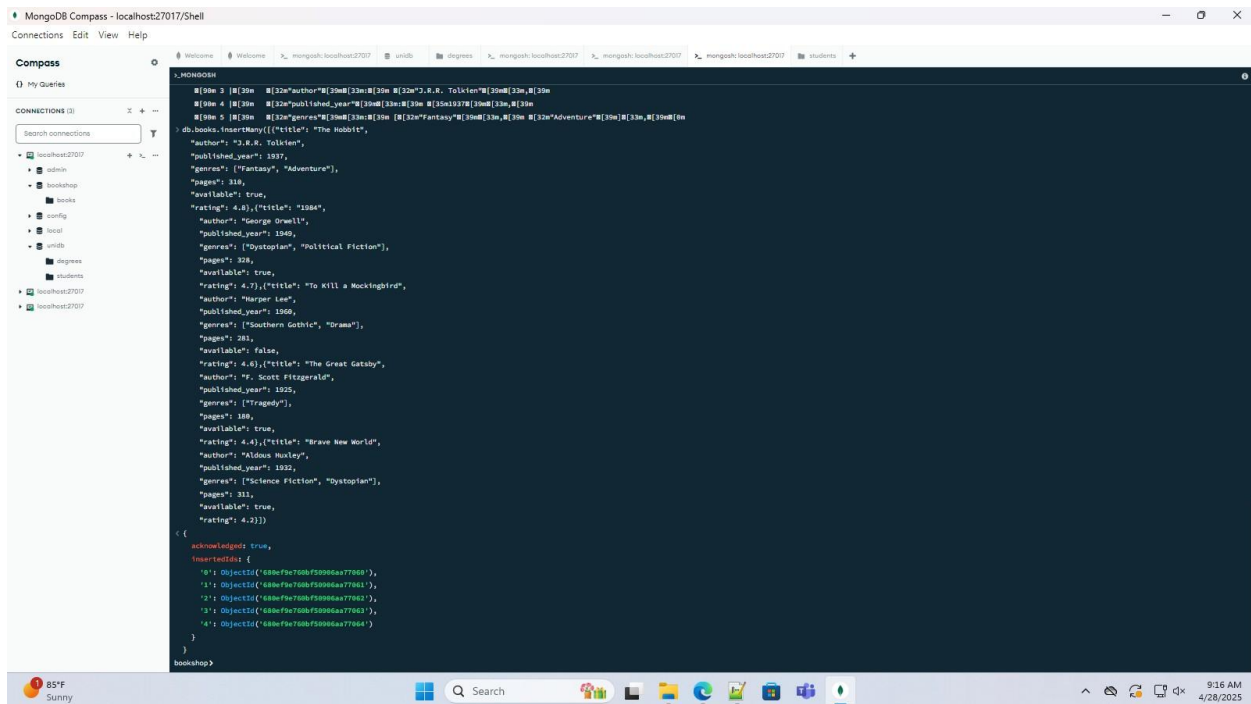
1. Create a database bookshop.
2. Create a collection books.
3. Insert the following data.

```
{  
  "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,
```

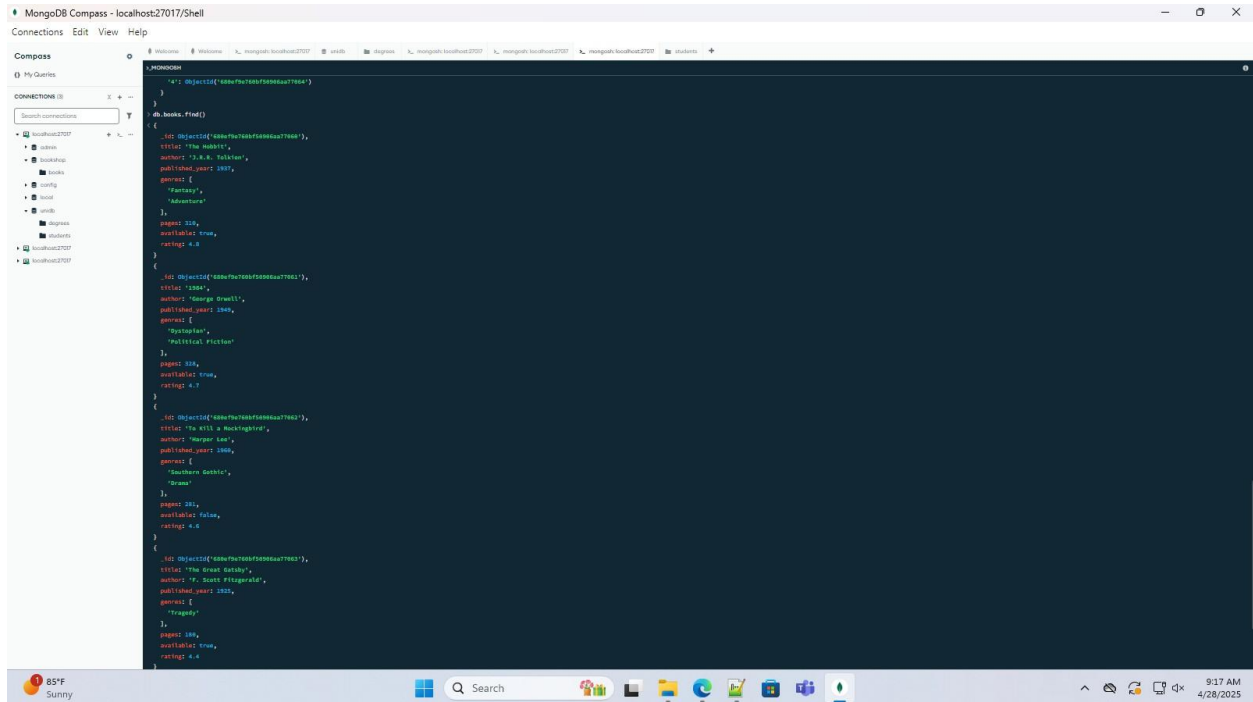
```

"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
}

```



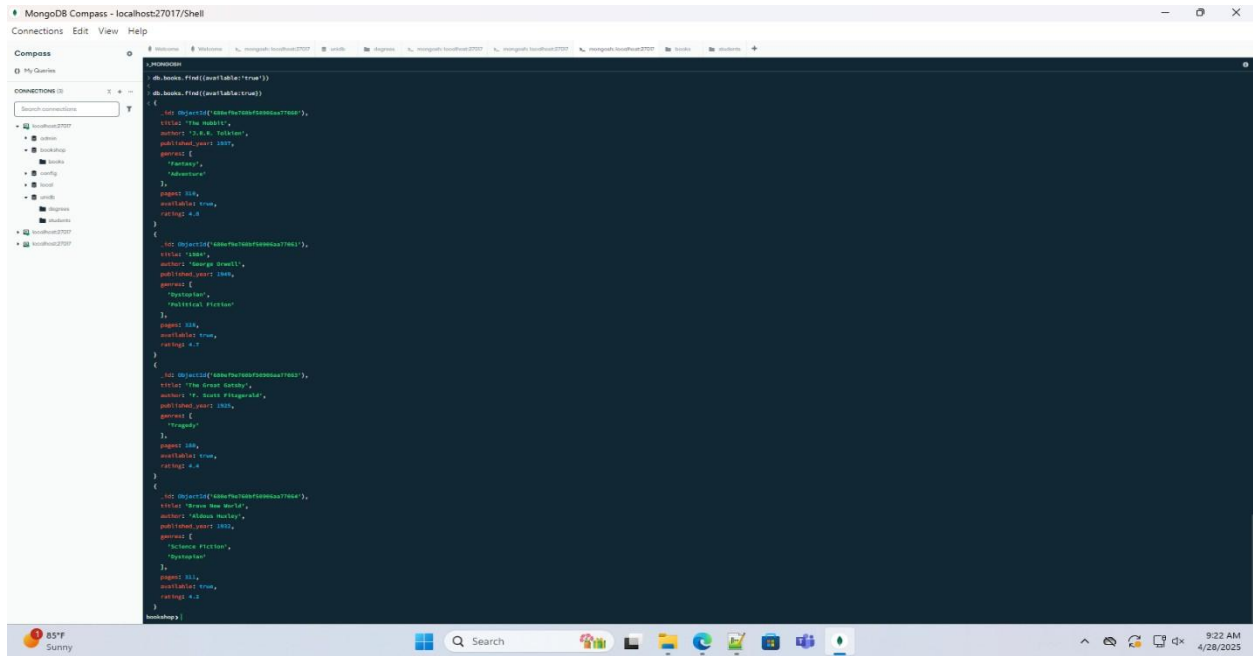
4. Write the query to find all books.



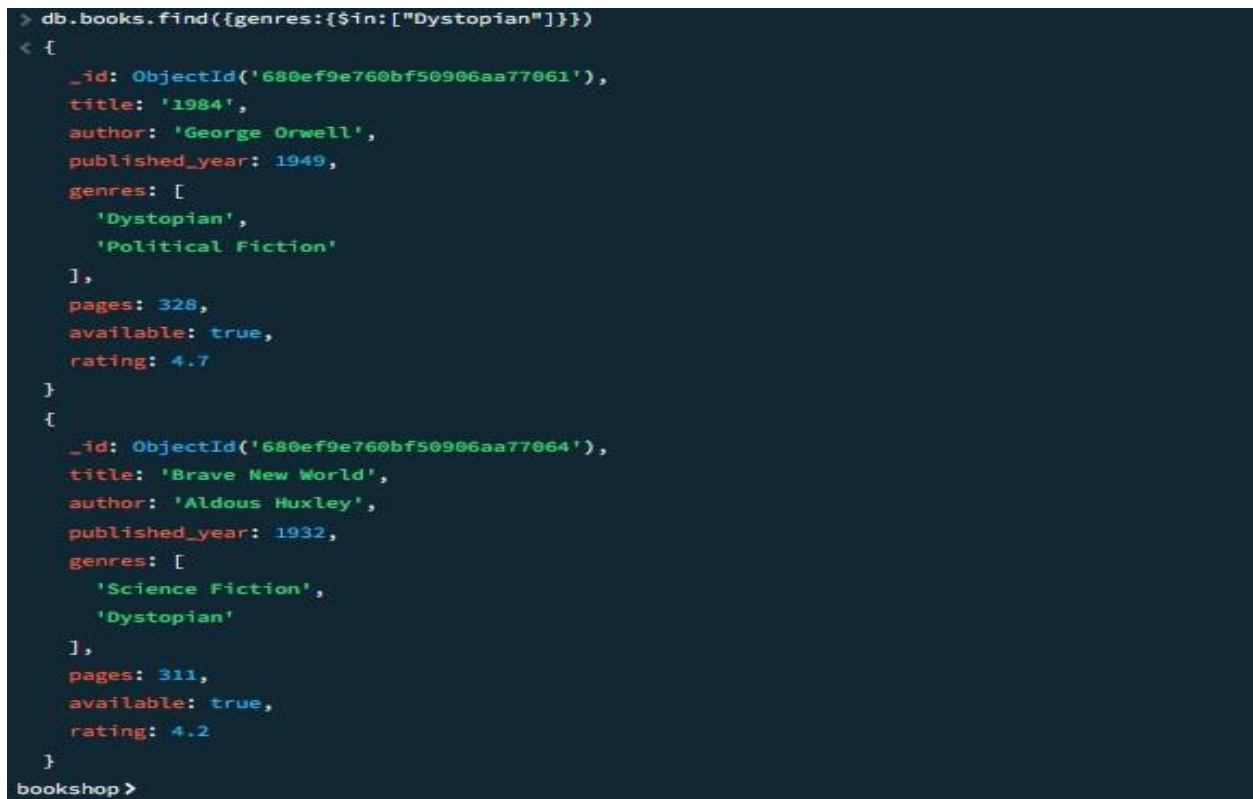
5. Write the query to find all books published after 1950.



6. Write the query to find the available books.



7. Write the query to find all books that belong to the "Dystopian" genre.



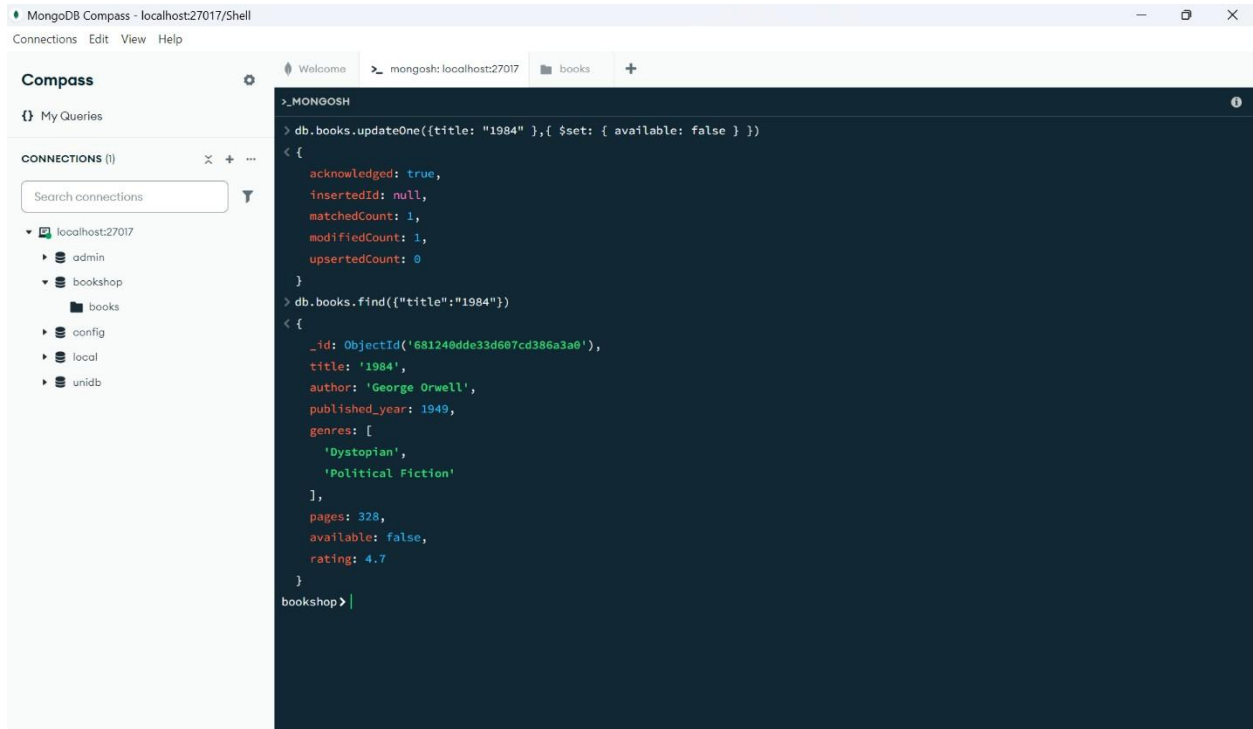
8. Write the query to find the books which published after 1960 and had rating more than 4.0.

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

9. Write the query to project only title and author fields.

```
> db.books.find().projection(['title','author'])
< {
  _id: ObjectId('680ef9e760bf50906aa77060'),
  title: 'The Hobbit',
  author: 'J.R.R. Tolkien'
}
{
  _id: ObjectId('680ef9e760bf50906aa77061'),
  title: '1984',
  author: 'George Orwell'
}
{
  _id: ObjectId('680ef9e760bf50906aa77062'),
  title: 'To Kill a Mockingbird',
  author: 'Harper Lee'
}
{
  _id: ObjectId('680ef9e760bf50906aa77063'),
  title: 'The Great Gatsby',
  author: 'F. Scott Fitzgerald'
}
{
  _id: ObjectId('680ef9e760bf50906aa77064'),
  title: 'Brave New World',
  author: 'Aldous Huxley'
}
bookshop >
```

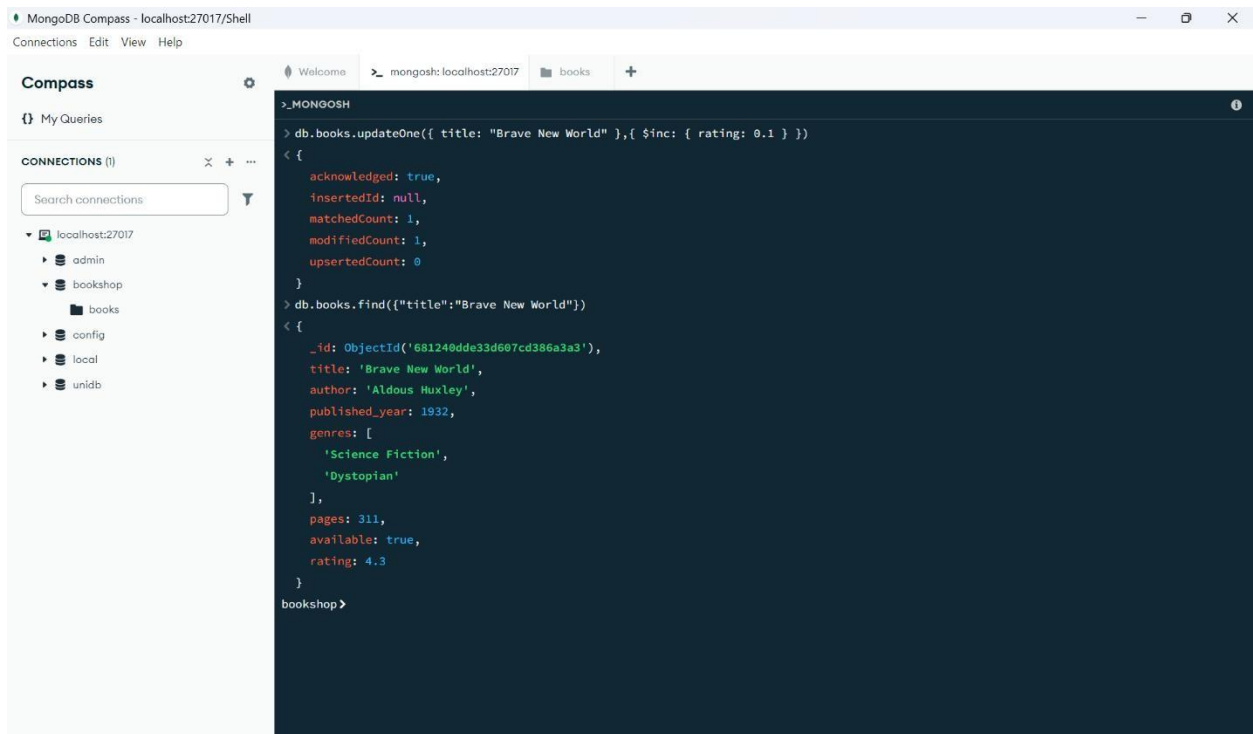
10. Write the query to update the book "1984" to set available: false.



The screenshot shows the MongoDB Compass interface. The left sidebar displays the 'Connections' list with 'localhost:27017' selected, and the 'Collections' list with 'books' selected. The main panel shows the MongoDB Shell with the following commands and results:

```
>_MONGOSH
> db.books.updateOne({title: "1984"},{ $set: { available: false } })
< {
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
> db.books.find({"title":"1984"})
< {
  _id: ObjectId('681248dde33d607cd386a3a0'),
  title: '1984',
  author: 'George Orwell',
  published_year: 1949,
  genres: [
    'Dystopian',
    'Political Fiction'
  ],
  pages: 328,
  available: false,
  rating: 4.7
}
bookshop>
```

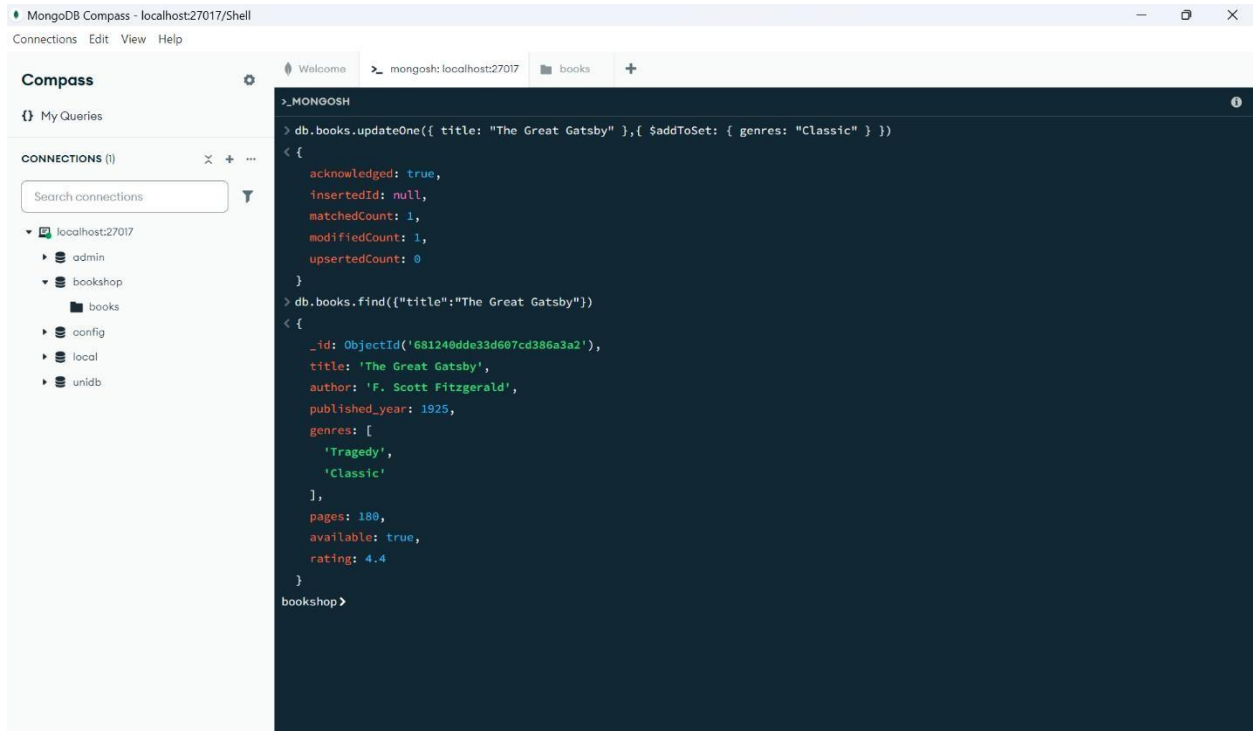
11. Write the query to increase the rating of "Brave New World" by +0.1.



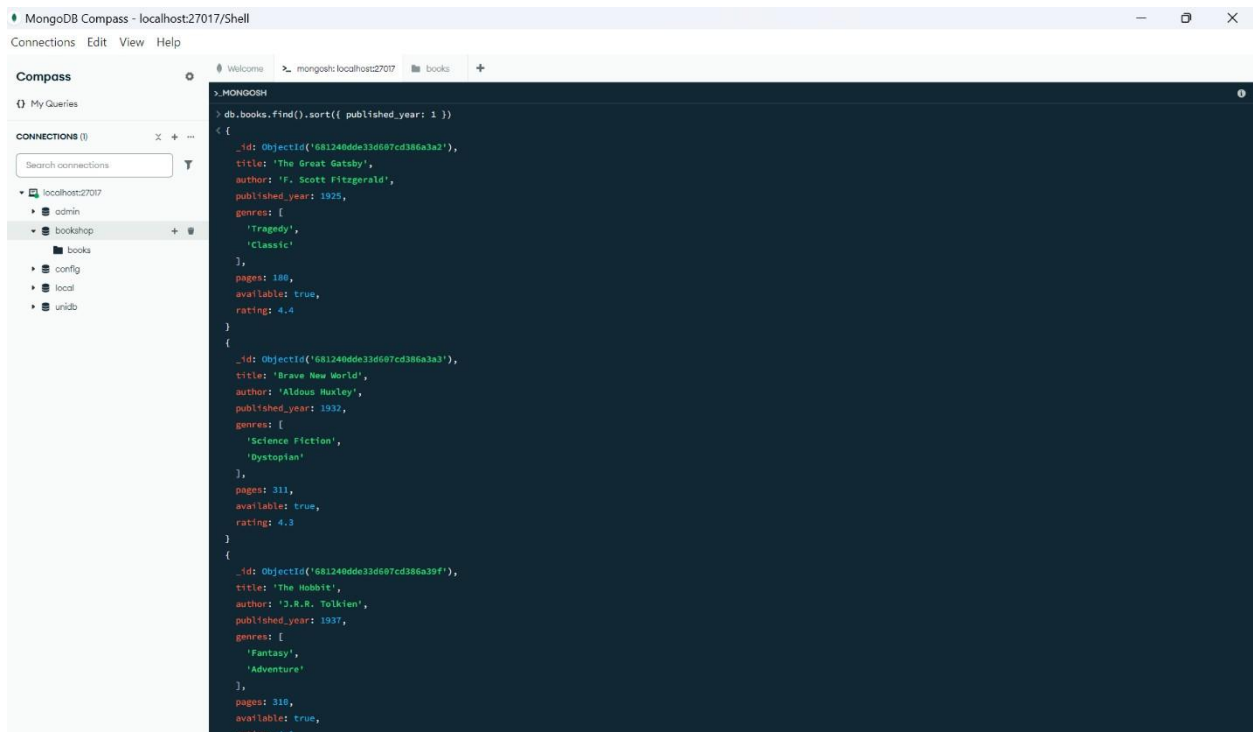
The screenshot shows the MongoDB Compass interface. The left sidebar displays the 'Connections' list with 'localhost:27017' selected, and the 'Collections' list with 'books' selected. The main panel shows the MongoDB Shell with the following commands and results:

```
>_MONGOSH
> db.books.updateOne({ title: "Brave New World" },{ $inc: { rating: 0.1 } })
< {
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
> db.books.find({"title":"Brave New World"})
< {
  _id: ObjectId('681248dde33d607cd386a3a3'),
  title: 'Brave New World',
  author: 'Aldous Huxley',
  published_year: 1932,
  genres: [
    'Science Fiction',
    'Dystopian'
  ],
  pages: 311,
  available: true,
  rating: 4.3
}
bookshop>
```

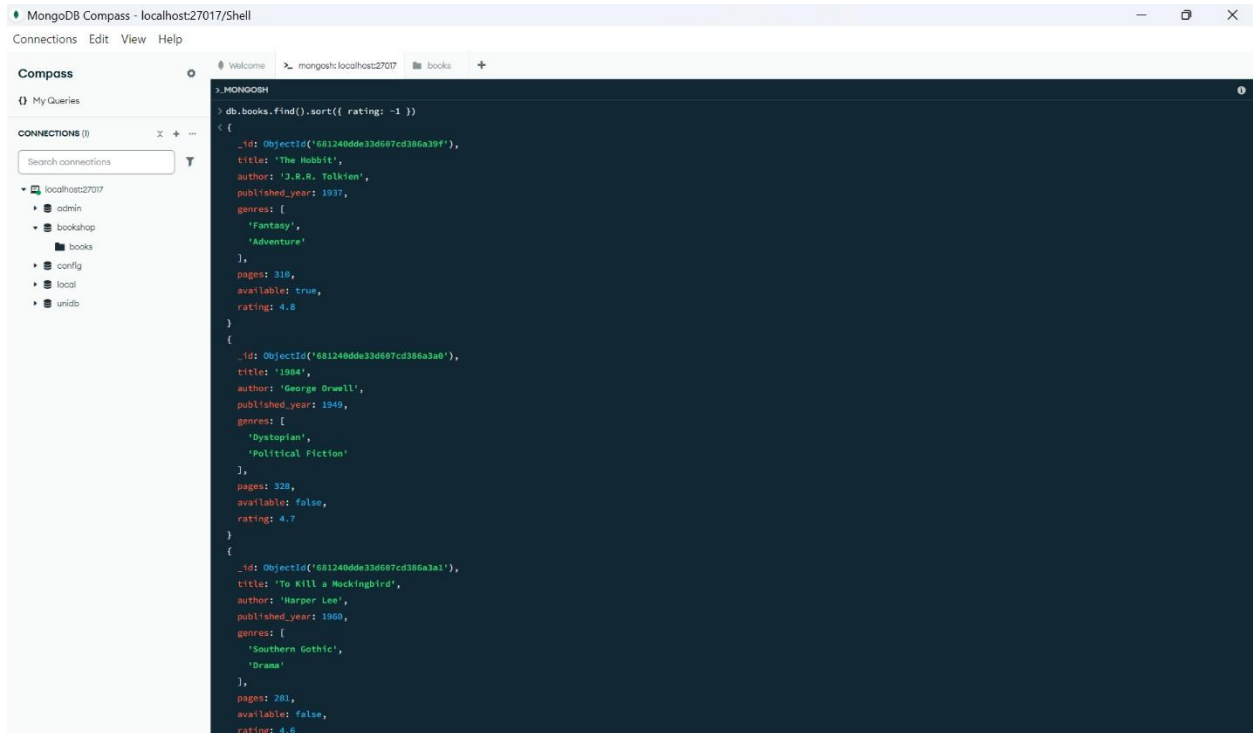
12. Write the query to add a new genre "Classic" to "The Great Gatsby".



13. Write the query to sort books by published year in ascending order.



14. Write the query to sort books by rating in descending order.



MongoDB Compass - localhost:27017/Shell

Connections Edit View Help

Compass

{ } My Queries

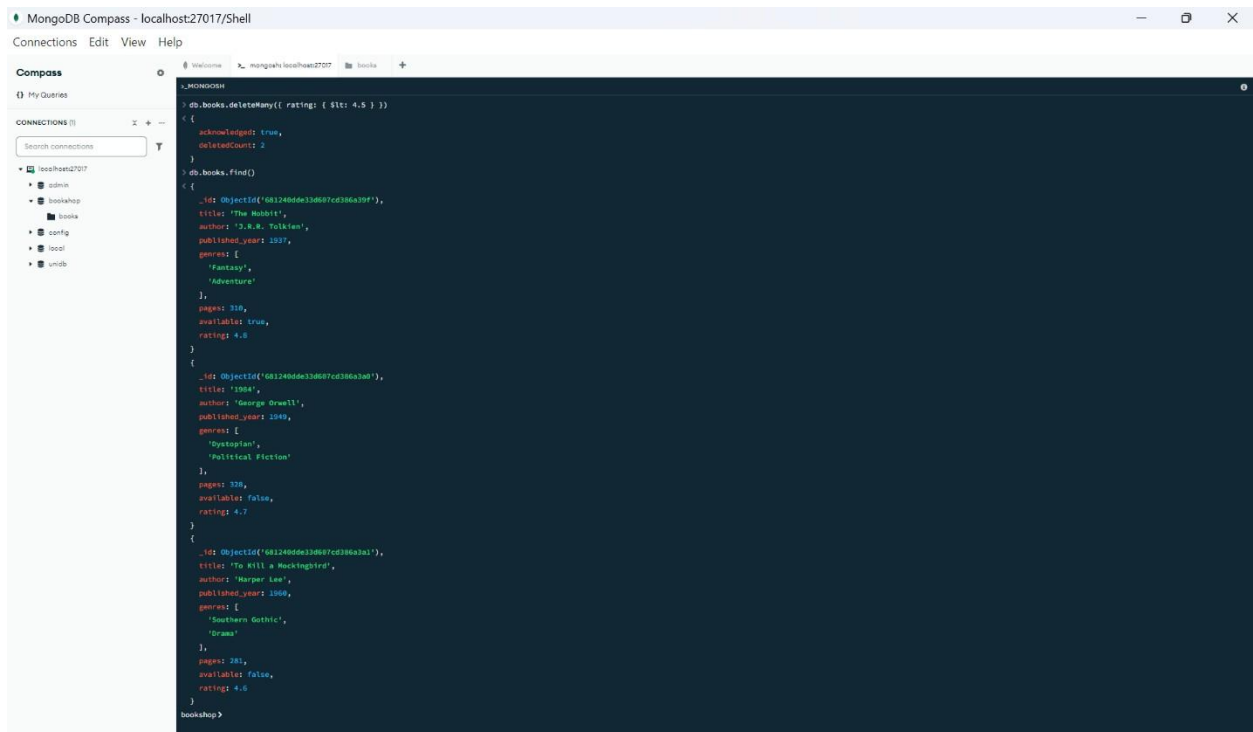
CONNECTIONS (1)

Search connections

- localhost:27017
 - admin
 - bookshop
 - books
 - config
 - local
 - unibdb

```
> db.books.find().sort({ rating: -1 })
{
  "_id": ObjectId("681240dde33d687cd386a39f"),
  "title": "The Hobbit",
  "author": "J.R.R. Tolkien",
  "published_year": 1937,
  "genres": [
    "Fantasy",
    "Adventure"
  ],
  "pages": 310,
  "available": true,
  "rating": 4.8
}
{
  "_id": ObjectId("681240dde33d687cd386a3a0"),
  "title": "1984",
  "author": "George Orwell",
  "published_year": 1949,
  "genres": [
    "Dystopian",
    "Political Fiction"
  ],
  "pages": 328,
  "available": false,
  "rating": 4.7
}
{
  "_id": ObjectId("681240dde33d687cd386a3a1"),
  "title": "To Kill a Mockingbird",
  "author": "Harper Lee",
  "published_year": 1960,
  "genres": [
    "Southern Gothic",
    "Drama"
  ],
  "pages": 281,
  "available": false,
  "rating": 4.6
}
```

15. Write the query to delete all books with a rating lower than 4.5.



MongoDB Compass - localhost:27017/Shell

Connections Edit View Help

Compass

{ } My Queries

CONNECTIONS (1)

Search connections

- localhost:27017
 - admin
 - bookshop
 - books
 - config
 - local
 - unibdb

```
db.books.deleteMany({ rating: { $lt: 4.5 } })
{
  acknowledged: true,
  deletedCount: 2
}
db.books.find()
{
  "_id": ObjectId("681240dde33d687cd386a39f"),
  "title": "The Hobbit",
  "author": "J.R.R. Tolkien",
  "published_year": 1937,
  "genres": [
    "Fantasy",
    "Adventure"
  ],
  "pages": 310,
  "available": true,
  "rating": 4.8
}
{
  "_id": ObjectId("681240dde33d687cd386a3a0"),
  "title": "1984",
  "author": "George Orwell",
  "published_year": 1949,
  "genres": [
    "Dystopian",
    "Political Fiction"
  ],
  "pages": 328,
  "available": false,
  "rating": 4.7
}
{
  "_id": ObjectId("681240dde33d687cd386a3a1"),
  "title": "To Kill a Mockingbird",
  "author": "Harper Lee",
  "published_year": 1960,
  "genres": [
    "Southern Gothic",
    "Drama"
  ],
  "pages": 281,
  "available": false,
  "rating": 4.6
}
```