Problem 4: Movie Ratings and Reviews
Context:
A movie platform stores user reviews and wants to perform analysis on the data.
Collection: movies
Sample Document:
{
"movie_id": 1,
"title": "Interstellar",
"genre": "Sci-Fi",
"release_year": 2014,
"ratings": [
{ "user": "user1", "score": 5 },
{ "user": "user2", "score": 4 }
]
}
Tasks:
1. Insert at least 5 movie documents with ratings.
2. Find all movies released after 2010 in the "Sci-Fi" genre.
3. Update the title of a movie from "Inception" to "Inception (2010)".
4. Delete all movies with an average rating below 3.
5. Use aggregation to calculate the average score of each movie.

-- Step 1: Create / Use the Database
use movie_platform

--Step 2: Create the movies Collection (Automatically created on insert)
db.createCollection("movies")

-- Step 3: Insert at Least 5 Movie Documents with Ratings
```
db.movies.insertMany([
  {
    movie_id: 1,
    title: "Interstellar",
    genre: "Sci-Fi",
    release_year: 2014,
    ratings: [
      { user: "user1", score: 5 },
      { user: "user2", score: 4 }
    ]
  },
  {
    movie_id: 2,
    title: "Inception",
    genre: "Sci-Fi",
```

```
    release_year: 2010,
    ratings: [
      { user: "user1", score: 5 },
      { user: "user2", score: 3 }
    ]
  },
  {
    movie_id: 3,
    title: "The Dark Knight",
    genre: "Action",
    release_year: 2008,
    ratings: [
      { user: "user1", score: 5 },
      { user: "user3", score: 4 }
    ]
  },
  {
    movie_id: 4,
    title: "The Matrix",
    genre: "Sci-Fi",
    release_year: 1999,
    ratings: [
      { user: "user2", score: 4 },
      { user: "user3", score: 4 }
    ]
  },
  {
    movie_id: 5,
    title: "Avatar",
    genre: "Sci-Fi",
    release_year: 2009,
    ratings: [
      { user: "user1", score: 3 },
      { user: "user2", score: 2 }
    ]
  }
])


--  Step 4: Find All Movies Released After 2010 in the "Sci-Fi" Genre
db.movies.find({
  release_year: { $gt: 2010 },
  genre: "Sci-Fi"
})


-- Step 5: Update the Title of a Movie from "Inception" to "Inception (2010)"
db.movies.updateOne(
  { title: "Inception" },
  { $set: { title: "Inception (2010)" } }
```

```
)


-- Step 6: Delete All Movies with an Average Rating Below 3
db.movies.deleteMany({
  $expr: {
    $lt: [
      { $avg: "$ratings.score" },
      3
    ]
  }
})



-- Step 7: Use Aggregation to Calculate the Average Score of Each Movie
db.movies.aggregate([
  {
    $project: {
      movie_id: 1,
      title: 1,
      average_rating: { $avg: "$ratings.score" }
    }
  }
])
```