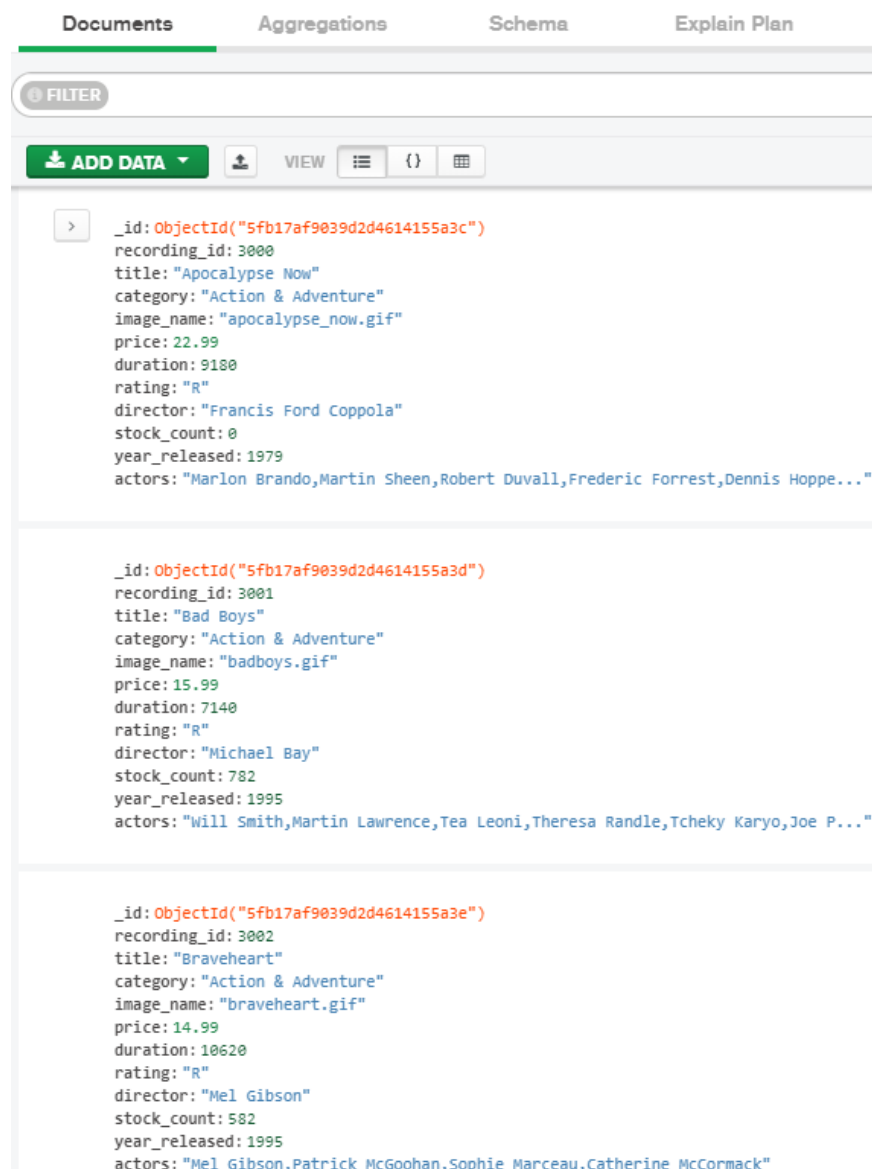


## Final Project

- Data Model
  - I only used one collection based on the original Video\_Recordings collection. Each document has the info of all 3 original collections combined per recording, including a list of every actor that was in each recording. I did this so that the queries can be simplified to only go through a single collection instead of cross-checking other collections.
- Screenshot of MongoDB collection objects

app.Video\_DB



- Lab 3 Query Results

- Query 3

- I used `collection.aggregate()` to *group* by category and find the sum of entries for each group

```
Query 3:  
Drama: 10  
Comedy: 10  
Action & Adventure: 10  
Science Fiction: 9  
Suspense: 8  
Horror: 8
```

- Query 4

- I used `collection.aggregate()` to first *match* every document where the `stock_count` is greater than 0 and then *group* by category and find the sum of entries for each group

```
Query 4:  
Horror: 6  
Science Fiction: 8  
Suspense: 6  
Action & Adventure: 8  
Drama: 9  
Comedy: 8
```

- Query 5

- For the rest of the queries, I created a Map

```
Query 5:  
Ed O`Ross: [Action & Adventure]  
Vaughn Taylor: [Horror]  
Harvey Fierstein: [Action & Adventure, Comedy]  
David Morse: [Action & Adventure]  
Fred Gwyne: [Horror]  
Kate Winslet: [Drama]  
Tcheky Karyo: [Action & Adventure]  
Bokeem Woodbine: [Action & Adventure]  
Angela Bassett: [Science Fiction]  
Jimmy Lynch: [Action & Adventure]  
Whip Hubley: [Action & Adventure]  
Mindy Sterling: [Comedy]  
Alfre Woodard: [Comedy]  
Roger Guenveur Smith: [Drama]  
Ray Charles: [Comedy]  
Thomas Mitchell: [Drama]  
Vincent D`Onofrio: [Action & Adventure]  
Melanie Mayron: [Comedy]  
Carol Cleveland: [Comedy]  
Linda Hunt: [Science Fiction]  
Timothy Hutton: [Drama]  
Mykelti Williamson: [Drama]
```

- Query 6
  - I used the Map to find every actor whose list of categories has a size that is more than 1

```
Query 6:
Harvey Fierstein: [Action & Adventure, Comedy]
Alec Baldwin: [Action & Adventure, Suspense]
Harrison Ford: [Action & Adventure, Science Fiction]
Jodie Foster: [Science Fiction, Suspense]
Scott Glenn: [Action & Adventure, Suspense]
James Rebhorn: [Action & Adventure, Suspense]
Carrie Fisher: [Comedy, Science Fiction]
Bill Pullman: [Action & Adventure, Suspense]
Tom Skerritt: [Action & Adventure, Science Fiction]
Tim Robbins: [Action & Adventure, Drama]
Sally Field: [Comedy, Drama]
Sean Penn: [Drama, Suspense]
Ed Harris: [Action & Adventure, Suspense]
Demi Moore: [Drama, Suspense]
Jeff Goldblum: [Action & Adventure, Science Fiction]
Sam Neill: [Action & Adventure, Science Fiction]
Morgan Freeman: [Action & Adventure, Drama, Suspense]
Lady Reed: [Action & Adventure, Comedy]
Tom Cruise: [Action & Adventure, Suspense]
David Warner: [Drama, Science Fiction]
Robin Williams: [Comedy, Drama]
Vanessa Williams: [Drama, Horror]
Rudy Ray Moore: [Action & Adventure, Comedy]
Kathy Bates: [Drama, Horror, Suspense]
Jerry Jones: [Action & Adventure, Comedy]
```

- Query 7
  - I used the Map to find every actor whose list of categories contains “Comedy”

```
Query 7:
Ed O`Ross: [Action & Adventure]
Vaughn Taylor: [Horror]
David Morse: [Action & Adventure]
Fred Gwyne: [Horror]
Kate Winslet: [Drama]
Tcheky Karyo: [Action & Adventure]
Bokeem Woodbine: [Action & Adventure]
Angela Bassett: [Science Fiction]
Jimmy Lynch: [Action & Adventure]
Whip Hubley: [Action & Adventure]
Roger Guenveur Smith: [Drama]
Thomas Mitchell: [Drama]
Vincent D`Onofrio: [Action & Adventure]
Linda Hunt: [Science Fiction]
Timothy Hutton: [Drama]
Mykelti Williamson: [Drama]
Alec Guinness: [Science Fiction]
Kenneth McMillan: [Science Fiction]
Mel Gibson: [Action & Adventure]
William Sadler: [Drama]
Yaphet Kotto: [Science Fiction]
Stellan Skarsgard: [Drama]
Mark Hamill: [Science Fiction]
William Fichtner: [Science Fiction]
Danny Nucci: [Drama]
James Cromwell: [Science Fiction]
Drew Barrymore: [Horror]
Oliver Robbins: [Horror]
Val Kilmer: [Action & Adventure]
Jeff Bridges: [Science Fiction]
Alec Baldwin: [Action & Adventure, Suspense]
Harrison Ford: [Action & Adventure, Science Fiction]
Vivien Leigh: [Drama]
Cole Hauser: [Drama]
Kevin Spacey: [Suspense]
Neve Campbell: [Horror]
Betty Buckley: [Horror]
James Whitmore: [Drama]
John Gavin: [Horror]
```

- Query 8
  - I used the Map to find every actor whose list of categories contains both “Comedy” and “Action & Adventure”

```
Query 8:  
Harvey Fierstein: [Action & Adventure, Comedy]  
Lady Reed: [Action & Adventure, Comedy]  
Rudy Ray Moore: [Action & Adventure, Comedy]  
Jerry Jones: [Action & Adventure, Comedy]
```

- Benefits/Drawbacks of using a NoSQL database
  - Pros
    - Dynamic Schema: The database can be changed at any point without needing to modify any existing data
    - Speed: For relatively simple queries, the speed of NoSQL databases is superior
  - Cons
    - Relational databases are better suited to handle more complex queries
- Source Code
  - Attached in submission