**Queries and Answers:**

1. **What genre is the movie CopyCat in?**

**Query**  
db.movies.find({"Title":/Copycat/},{Genres : 1,\_id : 0})

**Result**{ "Genres" : [ "Crime", "Drama", "Horror", "Mystery", "Thriller" ] }

1. **What genre has the most movies?**

**Query** db.movies.aggregate([{$unwind:"$Genres"},{$group:{\_id:"$Genres","count":{$sum:1}}},{$sort:{count:-1}},{$limit:1}])

**Result**  
 { "\_id" : "Drama", "count" : 5339 }

1. **What tags did user 146 use to describe the movie "2001: A Space Odyssey”?**

**Query**  
db.tags.find({"UserID":146,"Title":/2001: A Space Odyssey/},{Tag:1,\_id:0})

**Result**

{ "Tag" : "Arthur C. Clarke" }

{ "Tag" : "artificial intelligence" }

{ "Tag" : "based on a book" }

1. **What are the top 5 movies with the highest avg rating?**

**Query**  
 db.ratings.aggregate([{$group:{ \_id : "$MovieID",Title :{$first:"$Title"}, AvgMovieRating : { $avg: "$Rating" }}},{$sort : { AvgMovieRating : -1 }},{$limit:5},{$project:{\_id:0,Title:1,AvgMovieRating:1}}])

**Result**

{ "Title" : "Satan's Tango (SÃ¡tÃ¡ntangÃ³) (1994)", "AvgMovieRating" : 5 }

{ "Title" : "Shadows of Forgotten Ancestors (1964)", "AvgMovieRating" : 5 }

{ "Title" : "Sun Alley (Sonnenallee) (1999)", "AvgMovieRating" : 5 }

{ "Title" : "Fighting Elegy (Kenka erejii) (1966)", "AvgMovieRating" : 5 }

{ "Title" : "Blue Light, The (Das Blaue Licht) (1932)", "AvgMovieRating" : 5 }

1. **What is the highest avg rating possible?**

**Query**

db.ratings.aggregate([{$group:{ \_id : "$MovieID",Title :{$first:"$Title"}, AvgMovieRating : { $avg: "$Rating" }}},{$sort : { AvgMovieRating : -1 }},{$limit:1},{$project:{\_id:0,Title:0,AvgMovieRating:1}}])  
  
**Result**

{ "AvgMovieRating" : 5 }

**Write 3 different queries of your choice to demonstrate that your data storage is working:**

1. **Which is the most rated Genre?**

**Query**

db.ratings.aggregate([{$unwind:"$Genres"},{$group:{\_id:"$Genres","count":{$sum:1}}},{$sort:{count:-1}},{$limit:1}])

**Result**

{ "\_id" : "Drama", "count" : 4344198 }

1. **Which is the most frequently occurring Tag for any movie?**

**Query**db.tags.aggregate([{$group:{\_id:"$Tag","count":{$sum:1}}},{$sort:{count:-1}},{$limit:1}])

**Result**

"\_id" : "Tumey's DVDs", "count" : 641 }

1. **Find the average rating for each Genre?**

**Query** db.ratings.aggregate([{$unwind:"$Genres"},{$group:{\_id:"$Genres","AvgRating":{$avg:"$Rating"}}}])

**Result**

"\_id" : "Drama", "AvgRating" : 3.6732628208935227 }

"\_id" : "Comedy", "AvgRating" : 3.436946311044954 }

"\_id" : "Children", "AvgRating" : 3.4184739602194236 }

"\_id" : "Romance", "AvgRating" : 3.553776441558182 }

"\_id" : "Action", "AvgRating" : 3.4213307400955033 }

"\_id" : "Crime", "AvgRating" : 3.6656546597629625 }

"\_id" : "Sci-Fi", "AvgRating" : 3.396193464024223 }

"\_id" : "Thriller", "AvgRating" : 3.5071860967677653 }

"\_id" : "Adventure", "AvgRating" : 3.4936211560747057 }

"\_id" : "Fantasy", "AvgRating" : 3.502019481138221 }

"\_id" : "War", "AvgRating" : 3.7801731498090883 }

"\_id" : "Animation", "AvgRating" : 3.5999880565273004 }

"\_id" : "Musical", "AvgRating" : 3.56247843815335 }

"\_id" : "Western", "AvgRating" : 3.555656921300586 }

"\_id" : "Mystery", "AvgRating" : 3.6776306613582186 }

"\_id" : "Horror", "AvgRating" : 3.269243385726838 }

"\_id" : "Film-Noir", "AvgRating" : 4.012151194601495 }

"\_id" : "Documentary", "AvgRating" : 3.7834593152512226 }

"\_id" : "IMAX", "AvgRating" : 3.7645374449339206 }

"\_id" : "(no genres listed)", "AvgRating" : 3.642857142857143 }