

Query 1:

Query1.js:

```
db.movies.insert([{"movie_id": 696, "movie_genre": "nostrud", "movie_name":  
"Exospeed", "director_name": "Finch Lyons", "producers": [{"name": "Shari  
Osborne"}, {"name": "Lou Merritt"}, {"name": "Rowe Brooks"}], "studio_name":  
"Baluba", "release_period": {"day": 7, "month": 11, "year": 1970}, "duration":  
438, "similar_movies": ["nulla", "aliquip", "duis", "adipisicing", "ullamco"],  
"average_rating": "1.3", "plot_description": "Nisi magna proident aute qui elit  
quis sint ea id laboris ipsum deserunt ut cillum. Nisi reprehenderit aliqua id ad  
sit magna nostrud amet id laboris cillum culpa consequat ut. Nisi excepteur non  
reprehenderit ad magna ut sint cupidatat aliquip. Ullamco ea officia esse veniam  
laborum proident et nulla ut tempor exercitation sint ex. Magna quis adipisicing  
consectetur commodo laboris commodo ullamco est. Nostrud aute aute dui nisi  
dolor aute esse excepteur nulla. Eiusmod id veniam eu occaecat Lorem do eu  
deserunt labore proident enim in proident.", "budget": 936, "gross": 1235,  
"review": [{"critic_id": 86241, "movie_id": 32, "posted_on_date": {"day": 22,  
"month": 4, "year": 2010, "time": "17:3:26"}, "review_summary": "Laborum  
cupidatat qui magna exercitation non mollit qui do. Nisi aliqua dui ipsum dolor  
est dolor culpa voluptate irure culpa. Do laboris proident excepteur non dolor et  
eu nisi esse eu nisi. Et reprehenderit irure minim sunt tempor est culpa sunt  
excepteur exercitation consectetur excepteur esse.", "rating": "4.9"},  
{"critic_id": 82114, "movie_id": 32, "posted_on_date": {"day": 23, "month": 12,  
"year": 1941, "time": "14:57:8"}, "review_summary": "Do laboris qui fugiat  
voluptate in amet nostrud magna. Pariatur in nisi proident dolore nostrud sunt  
veniam sint consectetur est excepteur dui labore mollit. Dolore qui ut proident  
ea proident deserunt veniam qui. Proident aute magna dui reprehenderit ea elit  
minim non proident eu aliquip sunt commodo eu.", "rating": "8.7"}, {"critic_id":  
88480, "movie_id": 32, "posted_on_date": {"day": 6, "month": 12, "year": 1928,  
"time": "21:19:11"}, "review_summary": "Veniam esse et qui est esse elit cillum  
cillum eiusmod elit est esse. Minim et sint pariatur veniam dolor qui eiusmod do  
ipsum ipsum esse in consectetur proident. Cillum proident eiusmod nulla pariatur  
consequat sit mollit. Qui aute adipisicing laboris nulla fugiat. Labore mollit  
sit esse pariatur in. Aliquip consectetur magna ut reprehenderit occaecat aliquip  
quis aliquip nulla veniam laboris amet reprehenderit.", "rating": "0.1"}]]]);  
db.movies.find();
```

Output:

```
$ mongo --host gpel8.cs.ou.edu:27109 mydb < query1.js
MongoDB shell version: 2.6.10
connecting to: gpel8.cs.ou.edu:27109/mydb
BulkWriteResult({
  "writeErrors" : [ ],
  "writeConcernErrors" : [ ],
  "nInserted" : 1,
  "nUpserted" : 0,
  "nMatched" : 0,
  "nModified" : 0,
  "nRemoved" : 0,
  "upserted" : [ ]
})
{ "_id" : ObjectId("5ad2a8cbc53b88b63e3cd1fd"), "movie_id" : 696, "movie_genre" : "nostrud", "movie_name" : "Exos
peed", "director_name" : "Finch Lyons", "producers" : [ { "name" : "Sharī Osborne" }, { "name" : "Lou Merritt" },
{ "name" : "Rowe Brooks" } ], "studio_name" : "Baluba", "release_period" : { "day" : 7, "month" : 11, "year" : 1
970 }, "duration" : 438, "similar_movies" : [ "nulla", "aliquip", "duis", "adipisicing", "ullamco" ], "average_ra
ting" : "1.3", "plot_description" : "Nisi magna proident aute qui elit quis sint ea id laboris ipsum deserunt ut
cillum. Nisi reprehenderit aliqua id ad sit magna nostrud amet id laboris cillum culpa consequat ut. Nisi excepte
ur non reprehenderit ad magna ut sint cupidatat aliquip. Ullamco ea officia esse veniam laborum proident et nulla
ut tempor exercitation sint ex. Magna quis adipisicing consectetur commodo laboris commodo ullamco est. Nostrud
aute aute duis nisi dolor aute esse excepteur nulla. Eiusmod id veniam eu occaecat Lorem do eu deserunt labore pr
oident enim in proident.", "budget" : 936, "gross" : 1235, "review" : [ { "critic_id" : 86241, "movie_id" : 32, "
posted_on_date" : { "day" : 22, "month" : 4, "year" : 2010, "time" : "17:3:26" }, "review_summary" : "Laborum cup
idatat qui magna exercitation non mollit qui do. Nisi aliqua duis ipsum dolor est dolor culpa voluptate irure cul
pa. Do laboris proident excepteur non dolor et eu nisi esse eu nisi. Et reprehenderit irure minim sunt tempor est
culpa sunt excepteur exercitation consectetur excepteur esse.", "rating" : "4.9" }, { "critic_id" : 82114, "movi
e_id" : 32, "posted_on_date" : { "day" : 23, "month" : 12, "year" : 1941, "time" : "14:57:8" }, "review_summary"
: "Do laboris qui fugiat voluptate in amet nostrud magna. Pariatur in nisi proident dolore nostrud sunt veniam si
nt consectetur est excepteur duis labore mollit. Dolore qui ut proident ea proident deserunt veniam qui. Proident
aute magna duis reprehenderit ea elit minim non proident eu aliquip sunt commodo eu.", "rating" : "8.7" }, { "cr
itic_id" : 88480, "movie_id" : 32, "posted_on_date" : { "day" : 6, "month" : 12, "year" : 1928, "time" : "21:19:1
1" }, "review_summary" : "Veniam esse et qui est esse elit cillum cillum eiusmod elit est esse. Minim et sint par
iatur veniam dolor qui eiusmod do ipsum ipsum esse in consectetur proident. Cillum proident eiusmod nulla pariatu
r consequat sit mollit. Qui aute adipisicing laboris nulla fugiat. Labore mollit sit esse pariatu in. Aliquip co
nsectetur magna ut reprehenderit occaecat aliquip quis aliquip nulla veniam laboris amet reprehenderit.", "rating
" : "0.1" } ] }
```

Query 2:

Query2.js:

```
db.movies.find({ "release_period.year": 1995 }).sort({"gross":-1}).limit(1);
```

Output:

```
$ mongo --host gpel8.cs.ou.edu:27109 mydb < query2.js
MongoDB shell version: 2.6.10
connecting to: gpel8.cs.ou.edu:27109/mydb
{ "_id" : ObjectId("5acd1bc2dafa1a972ac0cc9"), "gross" : 923, "movie_name" : "Namebox", "movie_genre" : "deserunt", "review" : [ { "posted_on_date" : { "time" : "15:1:0", "year" : 1945, "day" : 8, "month" : 2 }, "rating" : "2.9", "review_summary" : "Aliqua non eu reprehenderit velit Lorem nulla sit aliquip. Ad mollit reprehenderit incididunt enim laborum aliquip. Magna quis mollit est esse sit aliqua eiusmod ad ipsum dolore eu pariatur consequat. Adipisicing dolor elit est incididunt id id commodo cillum cupidatat pariatur. Ex excepteur esse sunt qui ea mollit ad duis in. Nostrud laboris voluptate laborum quis magna pariatur aliquip ipsum fugiat occaecat. Ipsum quis incididunt adipisicing adipisicing occaecat ea proident minim.", "movie_id" : 846, "critic_id" : 50157 }, { "posted_on_date" : { "time" : "4:45:38", "year" : 1950, "day" : 12, "month" : 3 }, "rating" : "7.5", "review_summary" : "Consectetur pariatur velit mollit velit ullamco elit tempor adipisicing irure laboris. In aliquip amet commodo eu laboris minim enim aliqua. Laborum ipsum aliqua proident occaecat cillum culpa mollit eu cillum. Voluptate excepteur quis qui non tempor nulla sit ex pariatur sunt velit ea. Labore cupidatat occaecat reprehenderit ea deserunt. Sit quis pariatur quis ex reprehenderit consectetur.", "movie_id" : 846, "critic_id" : 24033 }, { "posted_on_date" : { "time" : "16:33:37", "year" : 1927, "day" : 3, "month" : 9 }, "rating" : "7.4", "review_summary" : "Enim nulla excepteur deserunt commodo enim eiusmod sit elit velit sit minim elit dolor labore. Labore esse irure ad laboris tempor cillum cillum duis et enim consectetur et. Sit irure labore id qui qui. Enim velit ullamco fugiat Lorem laboris officia ea ipsum qui. Nulla sint ullamco nisi et in velit qui veniam ipsum sit sint consectetur sit id. Ipsum reprehenderit cupidatat commodo aliqua ad culpa.", "movie_id" : 846, "critic_id" : 87927 } ], "studio_name" : "Zinca", "budget" : 618, "plot_description" : "Excepteur reprehenderit anim nisi velit ut Lorem culpa ut ex elit cupidatat fugiat id. Consectetur veniam eu dolore culpa officia fugiat esse aute ad. Sint sint labore consequat occaecat sunt dolore aute. Commodo commodo culpa laboris tempor nulla consequat ex. Officia ea elit laboris minim do. Duis anim ea magna velit aute culpa ad laboris ad laboris proident.", "director_name" : "Bradley Wyatt", "producers" : [ { "name" : "Sandy Dudley" }, { "name" : "Brenda Moore" }, { "name" : "Sherry Gardner" } ], "average_rating" : "7.1", "similar_movies" : [ "ea", "adipisicing", "qui", "voluptate", "mollit" ], "duration" : 465, "movie_id" : 846, "release_period" : { "year" : 1995, "day" : 30, "month" : 11 } }
```

Query 3:

Query3.js:

```
db.movies.aggregate({ $group: { _id: "$director_name", "total_movies": { $sum: 1 } } });
```

Output:

```
$ mongo --host gpel8.cs.ou.edu:27109 mydb < query3.js
MongoDB shell version: 2.6.10
connecting to: gpel8.cs.ou.edu:27109/mydb
{ "_id" : "Jaclyn Blankenship", "total_movies" : 1 }
{ "_id" : "Muriel Burch", "total_movies" : 1 }
{ "_id" : "Leanna Hamilton", "total_movies" : 1 }
{ "_id" : "Keisha Meadows", "total_movies" : 1 }
{ "_id" : "Holcomb Bruce", "total_movies" : 1 }
{ "_id" : "Nunez Olson", "total_movies" : 1 }
{ "_id" : "Norton Albert", "total_movies" : 1 }
{ "_id" : "McCormick Glover", "total_movies" : 1 }
{ "_id" : "Belinda Moreno", "total_movies" : 1 }
{ "_id" : "Trina Bradshaw", "total_movies" : 1 }
{ "_id" : "Vang Woods", "total_movies" : 1 }
{ "_id" : "Terrell Sears", "total_movies" : 1 }
{ "_id" : "Haley Daniels", "total_movies" : 1 }
{ "_id" : "Imogene Rojas", "total_movies" : 1 }
{ "_id" : "Barbra Stephens", "total_movies" : 1 }
{ "_id" : "King Nolan", "total_movies" : 1 }
{ "_id" : "Heather Harding", "total_movies" : 1 }
{ "_id" : "Olson Stevenson", "total_movies" : 1 }
{ "_id" : "Lilian Kirk", "total_movies" : 1 }
{ "_id" : "Hess Reeves", "total_movies" : 1 }
Type "it" for more
```

Query 4:

Query4.js:

```
db.movies.update({ movie_id : 520 }, { $push: {"review": {"critic_id": 44230,
"movie_id": 520, "posted_on_date": {"day": 12, "month": 5, "year": 2011, "time":
"16:4:25"}, "review_summary": "This is such a great movie!", "rating": "1.9"}}});
db.movies.find({ movie_id : 520 });
```

Output:

```
$ mongo --host gpel8.cs.ou.edu:27109 mydb < query4.js
MongoDB shell version: 2.6.10
connecting to: gpel8.cs.ou.edu:27109/mydb
2018-04-14T20:30:48.482-0500 SyntaxError: Unexpected token .
{ "_id" : ObjectId("5acd1bc2dafa972ac0cbd"), "gross" : 549, "movie_name" : "Krag", "movie_genre" : "eu", "review": [ { "posted_on_date" : { "time" : "20:17:18", "year" : 2015, "day" : 3, "month" : 11 }, "rating" : "7.3", "review_summary" : "Dolor consequat sit do deserunt nulla. Esse fugiat proident commodo non non ut irure fugiat mollit. Reprehenderit nostrud aliquip aute ut mollit duis dolore occaecat quis.", "movie_id" : 520, "critic_id" : 93140 }, { "posted_on_date" : { "time" : "10:56:43", "year" : 1909, "day" : 26, "month" : 6 }, "rating" : "3.7", "review_summary" : "Commodo culpa id duis nostrud esse exercitation irure labore. Occaecat culpa est cillum consectetur dolor in. Et ea occaecat sunt voluptate excepteur magna consectetur veniam est qui nisi mollit. Adipiscing et eiusmod amet reprehenderit elit do enim. Irure nostrud est est quis duis exercitation sint veniam nostrud irure. Fugiat minim pariatur adipiscing occaecat voluptate ut exercitation. Aute dolore eiusmod in duis occaecat nostrud ipsum in commodo ad culpa fugiat culpa.", "movie_id" : 520, "critic_id" : 45894 }, { "posted_on_date" : { "time" : "20:5:41", "year" : 1933, "day" : 25, "month" : 5 }, "rating" : "7.4", "review_summary" : "Sint nisi id sunt veniam. Velit eu et sunt minim occaecat. Dolor id sit quis velit reprehenderit et ea anim sint tempor non non.", "movie_id" : 520, "critic_id" : 87193 } ], "studio_name" : "Myopium", "budget" : 670, "plot_description" : "Aliqua sit in anim est. Aute aute est ullamco irure. Ipsum laboris non laborum enim. Veniam magna deserunt incididunt est tempor consectetur. Veniam ullamco veniam labore qui ut fugiat labore qui sint occaecat eiusmod occaecat elit ipsum. Lorem nostrud commodo labore aute do nisi adipiscing sit nisi nulla nulla.", "director_name" : "Kerr i Barry", "producers" : [ { "name" : "Claire Joyner" }, { "name" : "Katherine Houston" }, { "name" : "Chavez Rowland" } ], "average_rating" : "7.4", "similar_movies" : [ "non", "anim", "minim", "cillum", "et" ], "duration" : 349, "movie_id" : 520, "release_period" : { "year" : 1949, "day" : 25, "month" : 7 } }
bye
```

Query 5:

Query5.js:

```
db.movies.update(
  {$and: [{ $where: "this.movie_genre = movie_genre"}, {$or: [{"average_rating"
: {$gte: {$subtract: ["$average_rating", 1]}}}, {"average_rating" : {$lte: {$add:
["$average_rating", 1]}}}]}}],
  {$push: {"similar_movies": "$movie_name" }},
  {multi: true}
);
db.movies.find();
```

Output:

```
$ mongo --host gpel8.cs.ou.edu:27109 mydb < query5.js
MongoDB shell version: 2.6.10
connecting to: gpel8.cs.ou.edu:27109/mydb
WriteResult({ "nMatched" : 0, "nUpserted" : 0, "nModified" : 0 })
{ "_id" : ObjectId("5acd1bc1dafa972ac0cbc"), "gross" : 1235, "movie_name" : "Exospeed", "movie_genre" : "nostr
ud", "review" : [ { "posted_on_date" : { "time" : "17:3:26", "year" : 2010, "day" : 22, "month" : 4 }, "rating" :
"4.9", "review_summary" : "Laborum cupidatat qui magna exercitation non mollit qui do. Nisi aliqua duis ipsum do
lor est dolor culpa voluptate irure culpa. Do laboris proident excepteur non dolor et eu nisi esse eu nisi. Et re
prehenderit irure minim sunt tempor est culpa sunt excepteur exercitation consectetur excepteur esse.", "movie_id"
```

(Because my data was truly randomly generated, out of the 50 entries, none matched both criteria to have them added to similar movies)

Query E:

QueryE.js:

```
db.movies.update(
  {"director_name" : "Jaclyn Blankenship"},
  {$set : {"screenwriter" : "Billy Joe"}},
  {multi: true}
);
db.movies.find({"director_name" : "Jaclyn Blankenship"});
```

Output:

```
$ mongo --host gpel8.cs.ou.edu:27109 mydb < queryE.js
MongoDB shell version: 2.6.10
connecting to: gpel8.cs.ou.edu:27109/mydb
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
{ "_id" : ObjectId("5acd1bc2dafa1a972ac0cea"), "gross" : 253, "movie_name" : "N
ipaz", "movie_genre" : "aliquip", "review" : [ { "posted_on_date" : { "time" : "
24:49:24", "year" : 1900, "day" : 3, "month" : 9 }, "rating" : "3.9", "review_su
mmmary" : "Cillum id ut elit fugiat non quis dolore labore ad exercitation. Nulla
aute id proident do sit do dolor anim qui ipsum pariatur irure sit aliqua. Occa
ecat dolore fugiat aliquip laboris exercitation qui amet quis.", "movie_id" : 14
6, "critic_id" : 43389 }, { "posted_on_date" : { "time" : "4:8:33", "year" : 198
4, "day" : 17, "month" : 6 }, "rating" : "6.7", "review_summary" : "Amet ea veli
t mollit quis duis velit quis ad id Lorem fugiat aliqua sint. Reprehenderit elit
esse amet eiusmod fugiat excepteur irure dolore do commodo dolore ipsum culpa c
illum. Irure aliquip consectetur incididunt laborum proident aute do minim nulla
ea et magna eu.", "movie_id" : 146, "critic_id" : 79247 }, { "posted_on_date" :
{ "time" : "10:48:49", "year" : 1992, "day" : 6, "month" : 5 }, "rating" : "7.4
", "review_summary" : "Eiusmod reprehenderit labore culpa pariatur tempor minim
officia id dolor magna commodo amet. Voluptate cillum eiusmod do incididunt. Inc
ididunt ullamco amet cupidatat pariatur. Labore commodo laborum Lorem pariatur c
onsequat irure anim enim esse minim laborum.", "movie_id" : 146, "critic_id" : 9
7581 } ], "studio_name" : "Uneeq", "budget" : 693, "plot_description" : "In labo
rum do elit ad duis laboris ipsum ex est duis dolor reprehenderit. Magna fugiat
tempor cillum nisi cillum. Eiusmod magna mollit nulla Lorem elit tempor. Ipsum e
nim est aliquip ullamco id irure ullamco aute. Ullamco deserunt excepteur offici
a labore eiusmod dolore deserunt fugiat aliquip sint cupidatat quis pariatur. Ma
gna sunt amet dolore fugiat Lorem cillum consectetur mollit id. Pariatur cillum
duis culpa do esse velit enim aliqua ullamco enim minim in nisi nisi.", "directo
r_name" : "Jaclyn Blankenship", "producers" : [ { "name" : "Sheree Craft" }, { "
name" : "Gilbert Cortez" }, { "name" : "Estrada Daniel" } ], "average_rating" :
"4.6", "similar_movies" : [ "enim", "culpa", "ea", "sint", "proident" ], "durati
on" : 360, "movie_id" : 146, "release_period" : { "year" : 1958, "day" : 30, "mo
nth" : 11 }, "screenwriter" : "Billy Joe" }
```

Testing it a second time with director_name = Muriel Burch, and screenwriter = Billy Joe Jr.:

```
$ mongo --host gpel8.cs.ou.edu:27109 mydb < queryE.js
MongoDB shell version: 2.6.10
connecting to: gpel8.cs.ou.edu:27109/mydb
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
{ "_id" : ObjectId("5acd1bc2dafa1a972ac0ce9"), "gross" : 1245, "movie_name" : "Fossil", "movie_genre" : "ullamco
", "review" : [ { "posted_on_date" : { "time" : "24:50:54", "year" : 1961, "day" : 22, "month" : 7 }, "rating" : "
1.3", "review_summary" : "Labore amet quis et quis pariatur tempor esse ad et exercitation dolore eiusmod. Qui lab
ore nostrud laborum voluptate reprehenderit aute tempor excepteur ut enim. Irure reprehenderit nulla irure non exc
epteur anim nisi et qui. Elit esse enim consequat nulla ex. Qui dolor adipisicing in excepteur laboris.", "movie_i
d" : 260, "critic_id" : 41623 }, { "posted_on_date" : { "time" : "19:18:24", "year" : 2011, "day" : 9, "month" : 1
0 }, "rating" : "9.7", "review_summary" : "Et excepteur adipisicing sunt labore voluptate nisi mollit. Pariatur no
strud incididunt do ut voluptate reprehenderit velit ut et esse cupidatat pariatur. Sunt ex cupidatat do aliqua Lo
rem cillum mollit consectetur consectetur culpa voluptate excepteur. Non tempor velit aute duis fugiat duis eiusmod
d sit nostrud cillum.", "movie_id" : 260, "critic_id" : 85575 }, { "posted_on_date" : { "time" : "13:9:12", "year"
: 1966, "day" : 27, "month" : 10 }, "rating" : "4.7", "review_summary" : "Ex sint laborum officia culpa do sit ma
gna do aliqua pariatur nulla Lorem aliquip. Officia fugiat culpa pariatur adipisicing cupidatat voluptate. Nulla d
olore ea eu quis. Magna magna ad irure non ex velit consectetur anim ipsum ad tempor eiusmod culpa tempor. Fugiat
esse non excepteur eu elit minim. Ullamco aliqua amet nostrud aliqua id.", "movie_id" : 260, "critic_id" : 84198 }
], "studio_name" : "Digigene", "budget" : 1441, "plot_description" : "Irure cupidatat elit cillum do esse culpa s
it. Proident incididunt velit ullamco adipisicing consectetur sunt. Laboris Lorem nisi magna ex voluptate id proid
ent occaecat deserunt in nostrud laborum sit. Cillum labore sit consectetur quis ad eu aute cillum incididunt est.
Cillum qui ut eu id labore non nisi id amet ex officia sit Lorem. Exercitation nostrud ut Lorem nulla. Nostrud pr
oident et voluptate dolore esse enim eiusmod ex anim Lorem eu exercitation duis et.", "director_name" : "Muriel Bu
rch", "producers" : [ { "name" : "Bird Lott" }, { "name" : "Stevenson Gallagher" }, { "name" : "Bethany Callahan"
} ], "average_rating" : "0.4", "similar_movies" : [ "aliqua", "exercitation", "non", "velit", "ipsum" ], "duration
" : 353, "movie_id" : 260, "release_period" : { "year" : 1976, "day" : 14, "month" : 11 }, "screenwriter" : "Billy
Joe Jr." }
```


Query F:

QueryF.js:

```
db.movies.insert([{"movie_id": 998, "movie_genre": "magna", "movie_name": "The Beauty", "director_name": "Nunez Olson", "producers": [{"name": "Mcgee Webb"}, {"name": "Rachelle Floyd"}, {"name": "Ashley Holden"}], "studio_name": "Ronelon", "release_period": {"day": 18, "month": 3, "year": 1941}, "duration": 370, "similar_movies": ["fugiat", "ex", "nostrud", "voluptate", "ea"], "average_rating": "4.5", "plot_description": "Culpa cillum eu esse exercitation excepteur. Reprehenderit voluptate aute cillum veniam laborum consequat. Anim dolore ullamco in aliquip sint fugiat minim labore anim id cillum laborum. Duis aliquip dolore exercitation eu ut elit ut velit ut dolor reprehenderit laborum et. Laborum ipsum exercitation Lorem do reprehenderit qui non et velit dolore dolore exercitation ullamco ex.", "budget": 399, "gross": 553, "review": [{"critic_id": 79192, "movie_id": 457, "posted_on_date": {"day": 11, "month": 7, "year": 1988, "time": "0:30:24"}, "review_summary": "Sit culpa consectetur voluptate fugiat incididunt enim dolore ipsum qui. Ut aliqua esse qui ullamco ea consequat voluptate et mollit laboris. Esse est quis qui irure veniam. Aliqua culpa ad nostrud irure incididunt labore non ad incididunt dui occaecat. Tempor mollit aliqua in cillum ipsum reprehenderit adipisicing Lorem esse.", "rating": "9.3"}, {"critic_id": 11383, "movie_id": 457, "posted_on_date": {"day": 2, "month": 2, "year": 1987, "time": "11:4:6"}, "review_summary": "Lorem consequat consequat nostrud laborum laboris et est elit adipisicing ex ullamco cillum dolor voluptate. Adipisicing officia adipisicing dolore cupidatat deserunt voluptate esse incididunt. Duis culpa veniam nulla eu ad Lorem veniam id voluptate. Mollit cupidatat Lorem sint consectetur.", "rating": "8.6"}, {"critic_id": 94764, "movie_id": 457, "posted_on_date": {"day": 3, "month": 7, "year": 1914, "time": "21:31:3"}, "review_summary": "Non officia aliqua qui labore ipsum aute consectetur mollit ad culpa ex. Excepteur Lorem eiusmod aliquip proident eiusmod dui tempor elit ad tempor velit tempor. In ad nulla eiusmod Lorem anim labore incididunt amet tempor do voluptate. Do proident qui ut dolore ipsum.", "rating": "4.3"}], "actors": [{"name": "Eva Faulkner"}, {"name": "Farmer Winters"}]}]);
db.movies.find({"movie_id": 998});
db.movies.insert([{"movie_id": 999, "movie_genre": "magna", "movie_name": "The Beast", "director_name": "Angelita Cole", "producers": [{"name": "Eva Faulkner"}, {"name": "Farmer Winters"}, {"name": "Booth Newman"}], "studio_name": "Apexia", "release_period": {"day": 16, "month": 6, "year": 1987}, "duration": 182, "similar_movies": ["ullamco", "velit", "nulla", "cupidatat", "duis"], "average_rating": "1.6", "plot_description": "Nisi laboris quis ullamco labore quis nulla. Pariatur id ex nisi eiusmod ullamco. Enim ullamco ullamco cillum elit quis consequat consectetur anim officia elit magna aliquip laboris.", "budget": 211, "gross": 195, "review": [{"critic_id": 13399, "movie_id": 414, "posted_on_date": {"day": 4, "month": 12, "year": 2010, "time": "8:25:52"}, "review_summary": "Deserunt fugiat Lorem ad ullamco excepteur. Labore quis dui aliquip ut sunt nisi. Mollit est occaecat mollit minim fugiat nisi incididunt ea.
```

```
Est sint esse enim consectetur sunt est deserunt aliquip esse ad in voluptate
enim. Commoda magna non dolor deserunt. Amet ad ad consectetur mollit magna
ullamco incididunt sunt nisi ad.", "rating": "5.1"}, {"critic_id": 11904,
"movie_id": 414, "posted_on_date": {"day": 19, "month": 3, "year": 1921, "time":
"2:46:6"}, "review_summary": "Minim reprehenderit non voluptate proident
consectetur exercitation ipsum. Nulla id sit adipisicing sunt sit esse qui irure
anim culpa Lorem veniam officia deserunt. Et elit veniam non quis culpa aliquip
nostrud aute eiusmod elit. Culpa ex nulla id esse dolore dui do cillum deserunt
voluptate dui aliqua ea. Laboris consectetur incididunt ut ex. Veniam do ea
labore laborum nisi eu incididunt occaecat enim occaecat.", "rating": "7.8"},
{"critic_id": 76749, "movie_id": 414, "posted_on_date": {"day": 14, "month": 6,
"year": 1907, "time": "9:32:21"}, "review_summary": "Anim incididunt dui
consectetur ipsum aliquip eu voluptate. Elit mollit sint minim ex dolore ullamco
nulla tempor deserunt ad nisi irure. Eiusmod non et non aute ut mollit. Cupidatat
ea veniam laboris voluptate aliquip aliquip. Dolor anim voluptate pariatur in
irure amet voluptate voluptate Lorem magna amet cupidatat ea eu. Laboris
excepteur aute sit ipsum elit laboris in consectetur pariatur.", "rating":
"7.7"}], "actors": [{"name": "Eva Faulkner"}, {"name": "Farmer Winters"}]]);
db.movies.find({"movie_id": 999});
```

Output:

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```
$ mongo --host gpel8.cs.ou.edu:27109 mydb < queryF.js
MongoDB shell version: 2.6.10
connecting to: gpel8.cs.ou.edu:27109/mydb
BulkWriteResult({
  "writeErrors" : [ ],
  "writeConcernErrors" : [ ],
  "nInserted" : 1,
  "nUpserted" : 0,
  "nMatched" : 0,
  "nModified" : 0,
  "nRemoved" : 0,
  "upserted" : [ ]
})
{ "_id" : ObjectId("5ad2dcb6045e6ae378ab95e5"), "movie_id" : 998, "movie_genre" : "magna", "movie_name" : "The Bea
uty", "director_name" : "Nunez Olson", "producers" : [ { "name" : "Mcgee Webb" }, { "name" : "Rachelle Floyd" }, {
  "name" : "Ashley Holden" } ], "studio_name" : "Ronelon", "release_period" : { "day" : 18, "month" : 3, "year" : 1
941 }, "duration" : 370, "similar_movies" : [ "fugiat", "ex", "nostrud", "voluptate", "ea" ], "average_rating" : "
4.5", "plot_description" : "Culpa cillum eu esse exercitation excepteur. Reprehenderit voluptate aute cillum venia
m laborum consequat. Anim dolore ullamco in aliquip sint fugiat minim labore anim id cillum laborum. Duis aliquip
dolore exercitation eu ut elit ut velit ut dolor reprehenderit laborum et. Laborum ipsum exercitation Lorem do rep
rehenderit qui non et velit dolore dolore exercitation ullamco ex.", "budget" : 399, "gross" : 553, "review" : [ {
  "critic_id" : 79192, "movie_id" : 457, "posted_on_date" : { "day" : 11, "month" : 7, "year" : 1988, "time" : "0:3
0:24" }, "review_summary" : "Sit culpa consectetur voluptate fugiat incididunt enim dolore ipsum qui. Ut aliqua es
se qui ullamco ea consequat voluptate et mollit laboris. Esse est quis qui irure veniam. Aliqua culpa ad nostrud i
rure incididunt labore non ad incididunt duis occaecat. Tempor mollit aliqua in cillum ipsum reprehenderit adipisi
cing Lorem esse.", "rating" : "9.3" }, { "critic_id" : 11383, "movie_id" : 457, "posted_on_date" : { "day" : 2, "m
onth" : 2, "year" : 1987, "time" : "11:4:6" }, "review_summary" : "Lorem consequat consequat nostrud laborum labor
is et est elit adipisicing ex ullamco cillum dolor voluptate. Adipisicing officia adipisicing dolore cupidatat des
erunt voluptate esse incididunt. Duis culpa veniam nulla eu ad Lorem veniam id voluptate. Mollit cupidatat Lorem s
int consectetur.", "rating" : "8.6" }, { "critic_id" : 94764, "movie_id" : 457, "posted_on_date" : { "day" : 3, "m
onth" : 7, "year" : 1914, "time" : "21:31:3" }, "review_summary" : "Non officia aliqua qui labore ipsum aute conse
ctetur mollit ad culpa ex. Excepteur Lorem eiusmod aliquip proident eiusmod duis tempor elit ad tempor velit tempo
r. In ad nulla eiusmod Lorem anim labore incididunt amet tempor do voluptate. Do proident qui ut dolore ipsum.", "
rating" : "4.3" } ], "actors" : [ { "name" : "Eva Faulkner" }, { "name" : "Farmer Winters" } ] }
BulkWriteResult({
  "writeErrors" : [ ],
  "writeConcernErrors" : [ ],
  "nInserted" : 1,
  "nUpserted" : 0,
  "nMatched" : 0,
  "nModified" : 0,
  "nRemoved" : 0,
  "upserted" : [ ]
})
{ "_id" : ObjectId("5ad2dcb6045e6ae378ab95e6"), "movie_id" : 999, "movie_genre" : "magna", "movie_name" : "The Bea
st", "director_name" : "Angelita Cole", "producers" : [ { "name" : "Eva Faulkner" }, { "name" : "Farmer Winters" }
], { "name" : "Booth Newman" } ], "studio_name" : "Apexia", "release_period" : { "day" : 16, "month" : 6, "year" :
1987 }, "duration" : 182, "similar_movies" : [ "ullamco", "velit", "nulla", "cupidatat", "duis" ], "average_rating
" : "1.6", "plot_description" : "Nisi laboris quis ullamco labore quis nulla. Pariatur id ex nisi eiusmod ullamco.
Enim ullamco ullamco cillum elit quis consequat consectetur anim officia elit magna aliquip laboris.", "budget" :
211, "gross" : 195, "review" : [ { "critic_id" : 13399, "movie_id" : 414, "posted_on_date" : { "day" : 4, "month"
: 12, "year" : 2010, "time" : "8:25:52" }, "review_summary" : "Deserunt fugiat Lorem ad ullamco excepteur. Labore
quis duis aliquip ut sunt nisi. Mollit est occaecat mollit minim fugiat nisi incididunt ea. Est sint esse enim co
nsectetur sunt est deserunt aliquip esse ad in voluptate enim. Commodum magna non dolor deserunt. Amet ad ad consec
tetur mollit magna ullamco incididunt sunt nisi ad.", "rating" : "5.1" }, { "critic_id" : 11904, "movie_id" : 414,
"posted_on_date" : { "day" : 19, "month" : 3, "year" : 1921, "time" : "2:46:6" }, "review_summary" : "Minim repre
henderit non voluptate proident consectetur exercitation ipsum. Nulla id sit adipisicing sunt sit esse qui irure a
nim culpa Lorem veniam officia deserunt. Et elit veniam non quis culpa aliquip nostrud aute eiusmod elit. Culpa ex
nulla id esse dolore duis do cillum deserunt voluptate duis aliqua ea. Laboris consectetur incididunt ut ex. Veni
am do ea labore laborum nisi eu incididunt occaecat enim occaecat.", "rating" : "7.8" }, { "critic_id" : 76749, "m
ovie_id" : 414, "posted_on_date" : { "day" : 14, "month" : 6, "year" : 1907, "time" : "9:32:21" }, "review_summary
" : "Anim incididunt duis consectetur ipsum aliquip eu voluptate. Elit mollit sint minim ex dolore ullamco nulla t
empor deserunt ad nisi irure. Eiusmod non et non aute ut mollit. Cupidatat ea veniam laboris voluptate aliquip ali
quip. Dolor anim voluptate pariatur in irure amet voluptate voluptate Lorem magna amet cupidatat ea eu. Laboris ex
cepteur aute sit ipsum elit laboris in consectetur pariatur.", "rating" : "7.7" } ], "actors" : [ { "name" : "Eva
Faulkner" }, { "name" : "Farmer Winters" } ] }
```

Data Replication Code:

REPLICATION FOR EACH MACHINE:

```
mkdir -p /home/blac5795/data/gpel8
mongod --replSet "myreplicadb" --dbpath /home/blac5795/data/gpel8 --port 27109

mkdir -p /home/blac5795/data/gpel9
mongod --replSet "myreplicadb" --dbpath /home/blac5795/data/gpel9 --port 27109

mkdir -p /home/blac5795/data/gpel10
mongod --replSet "myreplicadb" --dbpath /home/blac5795/data/gpel10 --port 27109
```

HOST:

```
mongo --port 27109
rs.initiate()
rs.add("gpel9.cs.ou.edu:27109")
rs.add("gpel10.cs.ou.edu:27109")
use admin
rs.status()
```

rs.status():

```
myreplicadb:PRIMARY> use admin
switched to db admin
myreplicadb:PRIMARY> rs.status()
{
  "set" : "myreplicadb",
  "date" : ISODate("2018-04-16T20:02:08Z"),
  "myState" : 1,
  "members" : [
    {
      "_id" : 0,
      "name" : "gpel8:27109",
      "health" : 1,
      "state" : 1,
      "stateStr" : "PRIMARY",
      "uptime" : 388,
      "optime" : Timestamp(1523908365, 1),
      "optimeDate" : ISODate("2018-04-16T19:52:45Z"),
      "electionTime" : Timestamp(1523908859, 1),
      "electionDate" : ISODate("2018-04-16T20:00:59Z"),
      "self" : true
    },
    {
      "_id" : 1,
      "name" : "gpel9.cs.ou.edu:27109",
      "health" : 1,
      "state" : 2,
      "stateStr" : "SECONDARY",
      "uptime" : 75,
      "optime" : Timestamp(1523908365, 1),
      "optimeDate" : ISODate("2018-04-16T19:52:45Z"),
      "lastHeartbeat" : ISODate("2018-04-16T20:02:07Z"),
      "lastHeartbeatRecv" : ISODate("2018-04-16T20:02:07Z"),
      "pingMs" : 0,
      "lastHeartbeatMessage" : "syncing to: gpel8:27109",
      "syncingTo" : "gpel8:27109"
    },
    {
      "_id" : 2,
      "name" : "gpel10.cs.ou.edu:27109",
      "health" : 1,
      "state" : 2,
      "stateStr" : "SECONDARY",
      "uptime" : 24,
      "optime" : Timestamp(1523908365, 1),
      "optimeDate" : ISODate("2018-04-16T19:52:45Z"),
      "lastHeartbeat" : ISODate("2018-04-16T20:02:06Z"),
      "lastHeartbeatRecv" : ISODate("2018-04-16T20:02:07Z"),
      "pingMs" : 20,
      "lastHeartbeatMessage" : "syncing to: gpel8:27109",
      "syncingTo" : "gpel8:27109"
    }
  ],
  "ok" : 1
}
myreplicadb:PRIMARY>
```

Replication Design Explanation:

This design and description of my replication design is very simple. Essentially, I've created a bundle of mongod processes that share the same data set. This is incredibly useful, because if one node goes down, say gpel8, the primary node, the replica set will detect that and then elect a new primary. This increases availability by an incredible amount.

Task H – Failure Output:

```

myreplicadb:SECONDARY> use admin
switched to db admin
myreplicadb:PRIMARY> rs.status()
{
  "set" : "myreplicadb",
  "date" : ISODate("2018-04-16T19:05:16Z"),
  "myState" : 1,
  "members" : [
    {
      "_id" : 0,
      "name" : "gpel18:27109",
      "health" : 0,
      "state" : 8,
      "stateStr" : "(not reachable/healthy)",
      "uptime" : 0,
      "optime" : Timestamp(0, 0),
      "optimeDate" : ISODate("1970-01-01T00:00:00Z"),
      "lastHeartbeat" : ISODate("2018-04-16T19:05:15Z"),
      "lastHeartbeatRecv" : ISODate("1970-01-01T00:00:00Z"),
      "pingMs" : 0
    },
    {
      "_id" : 1,
      "name" : "gpel19.cs.ou.edu:27109",
      "health" : 1,
      "state" : 1,
      "stateStr" : "PRIMARY",
      "uptime" : 23,
      "optime" : Timestamp(1523870088, 1),
      "optimeDate" : ISODate("2018-04-16T09:14:48Z"),
      "electionTime" : Timestamp(1523905509, 1),
      "electionDate" : ISODate("2018-04-16T19:05:09Z"),
      "self" : true
    },
    {
      "_id" : 2,
      "name" : "gpel10.cs.ou.edu:27109",
      "health" : 1,
      "state" : 2,
      "stateStr" : "SECONDARY",
      "uptime" : 14,
      "optime" : Timestamp(1523870088, 1),
      "optimeDate" : ISODate("2018-04-16T09:14:48Z"),
      "lastHeartbeat" : ISODate("2018-04-16T19:05:15Z"),
      "lastHeartbeatRecv" : ISODate("2018-04-16T19:05:15Z"),
      "pingMs" : 136
    }
  ],
  "ok" : 1
}
myreplicadb:PRIMARY> 

```

Homework 3 – Emily Black – 04/16/18

Query Results:

Query 1:

```
myreplicadb:PRIMARY> db.movies.insert([{"movie_id": 696, "movie_genre": "nostrud", "movie_name": "Exospeed", "director_name": "Finch Lyons", "producers": [{"name": "Shari Osborne"}, {"name": "Lou Merritt"}], {"name": "Rowe Brooks"}], {"studio_name": "Baluba", "release_period": {"day": 7, "month": 11, "year": 1970}, "duration": 438, "similar_movies": [{"nulla", "aliquip", "duis", "adipiscing", "ullamco"}], "average_rating": "1.3", "plot_description": "Nisi magna proident aute qui elit quis sint ea id laboris ipsum deserunt ut cillum. Nisi reprehenderit aliqua id ad sit magna nostrud amet id laboris cillum culpa consequat ut. Nisi excepteur non reprehenderit ad magna ut sint cupidatat aliquip. Ullamco ea officia esse veniam laborum proident et nulla ut tempor exercitation sint ex. Magna quis adipiscing consectetur commodolaboris commodoullamco est. Nostrud aute aute duis nisi dolor aute esse excepteur nulla. Eiusmod id veniam eu occaecat Lorem do eu deserunt labore proident enim in proident.", "budget": 936, "gross": 1235, "review": [{"critic_id": 86241, "movie_id": 32, "posted_on_date": {"day": 22, "month": 4, "year": 2010, "time": "17:3:26"}, "review_summary": "Laborum cupidatat qui magna exercitati on non mollit qui do. Nisi aliqua duis ipsum dolor est dolor culpa voluptate irure culpa. Do laboris proident excepteur non dolor et eu nisi esse eu nisi. Et reprehenderit irure minim sunt tempor est culpa sunt excepteur exercitation consectetur excepteur esse.", "rating": "4.9"}, {"critic_id": 82114, "movie_id": 32, "posted_on_date": {"day": 23, "month": 12, "year": 1941, "time": "14:57:8"}, "review_summary": "Do laboris qui fugiat voluptate in amet nostrud magna. Pariatur in nisi proident dolore nostrud sunt veniam sint consectetur est excepteur duis labore mollit. Dolore qui ut proident ea proident deserunt veniam qui. Proident aute magna duis reprehenderit ea elit minim non proident eu aliquip sunt commodoeu.", "rating": "8.7"}, {"critic_id": 88480, "movie_id": 32, "posted_on_date": {"day": 6, "month": 12, "year": 1928, "time": "21:19:11"}, "review_summary": "Veniam esse et qui est esse elit cillum cillum eiusmod elit est esse. Minim et sint pariatur veniam dolor qui eiusmod do ipsum ipsum esse in consectetur proident. Cillum proident eiusmod nulla pariatur consequat sit mollit. Qui aute adipiscing laboris nulla fugiat. Labore mollit sit esse pariatur in. Aliquip consectetur magna ut reprehenderit occaecat aliquip quis aliquip nulla veniam laboris amet reprehenderit.", "rating": "0.1"}]); BulkWriteResult({
  "writeErrors": [],
  "writeConcernErrors": [],
  "nInserted": 1,
  "nUpserted": 0,
  "nMatched": 0,
  "nModified": 0,
  "nRemoved": 0,
  "upserted": []
})
myreplicadb:PRIMARY> db.movies.find({"movie_id": 696});
{ "_id" : ObjectId("5ad4fb3c1d5b60bd2aaf1f1"), "movie_id" : 696, "movie_genre" : "nostrud", "movie_name" : "Exospeed", "director_name" : "Finch Lyons", "producers" : [ { "name" : "Shari Osborne" }, { "name" : "Lou Merritt" } ], {"name": "Rowe Brooks"} ], {"studio_name" : "Baluba", "release_period" : { "day" : 7, "month" : 11, "year" : 1970 }, "duration" : 438, "similar_movies" : [ "nulla", "aliquip", "duis", "adipiscing", "ullamco" ] }, {"average_rating" : "1.3", "plot_description" : "Nisi magna proident aute qui elit quis sint ea id laboris ipsum deserunt ut cillum. Nisi reprehenderit aliqua id ad sit magna nostrud amet id laboris cillum culpa consequat ut. Nisi excepteur non reprehenderit ad magna ut sint cupidatat aliquip. Ullamco ea officia esse veniam laborum proident et nulla ut tempor exercitation sint ex. Magna quis adipiscing consectetur commodolaboris commodoullamco est. Nostrud aute aute duis nisi dolor aute esse excepteur nulla. Eiusmod id veniam eu occaecat Lorem do eu deserunt labore proident enim in proident.", "budget" : 936, "gross" : 1235, "review" : [ { "critic_id" : 86241, "movie_id" : 32, "posted_on_date" : { "day" : 22, "month" : 4, "year" : 2010, "time" : "17:3:26" }, "review_summary" : "Laborum cupidatat qui magna exercitation non mollit qui do. Nisi aliqua duis ipsum dolor est dolor culpa voluptate irure culpa. Do laboris proident excepteur non dolor et eu nisi esse eu nisi. Et reprehenderit irure minim sunt tempor est culpa sunt excepteur exercitation consectetur excepteur esse.", "rating" : "4.9" }, { "critic_id" : 82114, "movie_id" : 32, "posted_on_date" : { "day" : 23, "month" : 12, "year" : 1941, "time" : "14:57:8" }, "review_summary" : "Do laboris qui fugiat voluptate in amet nostrud magna. Pariatur in nisi proident dolore nostrud sunt veniam sint consectetur est excepteur duis labore mollit. Dolore qui ut proident ea proident deserunt veniam qui. Proident aute magna duis reprehenderit ea elit minim non proident eu aliquip sunt commodoeu.", "rating" : "8.7" }, { "critic_id" : 88480, "movie_id" : 32, "posted_on_date" : { "day" : 6, "month" : 12, "year" : 1928, "time" : "21:19:11" }, "review_summary" : "Veniam esse et qui est esse elit cillum cillum eiusmod elit est esse. Minim et sint pariatur veniam dolor qui eiusmod do ipsum ipsum esse in consectetur proident. Cillum proident eiusmod nulla pariatur consequat sit mollit. Qui aute adipiscing laboris nulla fugiat. Labore mollit sit esse pariatur in. Aliquip consectetur magna ut reprehenderit occaecat aliquip quis aliquip nulla veniam laboris amet reprehenderit.", "rating" : "0.1" } ] }
myreplicadb:PRIMARY>
```

Query 2:

```
myreplicadb:PRIMARY> db.movies.find({"release_period.year": 1995 }).sort({"gross":-1}).limit(1);
{ "_id" : ObjectId("5ad4fd9660b5f5eb9b5329594"), "gross" : 923, "movie_name" : "Namebox", "movie_genre" : "deserunt", "review" : [ { "posted_on_date" : { "time" : "15:1:0", "year" : 1945, "day" : 8, "month" : 2 }, "rating" : "2.9", "review_summary" : "Aliqua non eu reprehenderit velit Lorem nulla sit aliquip. Ad mollit reprehenderit incididunt enim laborum aliquip. Magna quis mollit est esse sit aliqua eiusmod ad ipsum dolore eu pariatur consequat. Adipiscing dolor elit est incididunt id id commodocillum cupidatat pariatur. Ex excepteur esse sunt qui ea mollit ad duis in. Nostrud laboris voluptate laborum quis magna pariatur aliquip ipsum fugiat occaecat. Ipsum quis incididunt adipisicng adipiscing occaecat ea proident minim.", "movie_id" : 846, "critic_id" : 50157 }, { "posted_on_date" : { "time" : "4:45:38", "year" : 1950, "day" : 12, "month" : 3 }, "rating" : "7.5", "review_summary" : "Consectetur pariatur velit mollit velit ullamco elit tempor adipiscing irure laboris. In aliquip amet commodoeu laboris minim enim aliqua. Laborum ipsum aliqua proident occaecat cillum culpa mollit eu cillum. Voluptate excepteur quis qui non tempor nulla sit ex pariatur sunt velit ea. Labore cupidatat occaecat reprehenderit ea deserunt. Sit quis pariatur quis ex reprehenderit consectetur.", "movie_id" : 846, "critic_id" : 24033 }, { "posted_on_date" : { "time" : "16:33:37", "year" : 1927, "day" : 9, "month" : 9 }, "rating" : "7.4", "review_summary" : "Enim nulla excepteur deserunt commodoenim eiusmod sit elit velit sit minim elit dolor labore. Labore esse irure ad laboris tempor cillum cillum duis et enim consectetur et. Sit irure labore id qui qui. Enim velit ullamco fugiat Lorem laboris officia ea ipsum qui. Nulla sint ullamco nisi et in velit qui veniam ipsum sit sint consectetur sit id. Ipsum reprehenderit cupidatat commodoa aliqua ad culpa.", "movie_id" : 846, "critic_id" : 87927 }, {"studio_name" : "Zinco", "budget" : 618, "plot_description" : "Excepteur reprehenderit anim nisi velit ut Lorem culpa ut ex elit cupidatat fugiat id. Consectetur veniam eu dolore culpa officia fugiat esse aute ad. Sint sint labore consequat occaecat sunt dolore aute. Commodo commodoculpa laboris tempor nulla consequat ex. Officia ea elit laboris minim do. Duis anim ea magna velit aute culpa ad laboris ad laboris proident.", "director_name" : "Bradley Wyatt", "producers" : [ { "name" : "Sandy Dudley" }, { "name" : "Brenda Moore" } ], {"name": "Sherry Gardner"} ], "average_rating" : "7.1", "similar_movies" : [ "ea", "adipiscing", "qui", "voluptate", "mollit" ], "duration" : 465, "movie_id" : 846, "release_period" : { "year" : 1995, "day" : 30, "month" : 11 } }
myreplicadb:PRIMARY>
```

Query 3:

```
myreplicadb:PRIMARY> db.movies.aggregate({ $group: { _id: "$director_name", "total_movies": { $sum: 1 }}});
{ "_id" : "Jaclyn Blankenship", "total_movies" : 2 }
{ "_id" : "Muriel Burch", "total_movies" : 2 }
{ "_id" : "Leanna Hamilton", "total_movies" : 2 }
{ "_id" : "Keisha Meadows", "total_movies" : 2 }
{ "_id" : "Holcomb Bruce", "total_movies" : 2 }
{ "_id" : "Nunez Olson", "total_movies" : 2 }
{ "_id" : "Norton Albert", "total_movies" : 2 }
{ "_id" : "McCormick Glover", "total_movies" : 2 }
{ "_id" : "Belinda Moreno", "total_movies" : 2 }
{ "_id" : "Trina Bradshaw", "total_movies" : 2 }
{ "_id" : "Vang Woods", "total_movies" : 2 }
{ "_id" : "Terrell Sears", "total_movies" : 2 }
{ "_id" : "Haley Daniels", "total_movies" : 2 }
{ "_id" : "Imogene Rojas", "total_movies" : 2 }
{ "_id" : "Barbra Stephens", "total_movies" : 2 }
{ "_id" : "King Nolan", "total_movies" : 2 }
{ "_id" : "Heather Harding", "total_movies" : 2 }
{ "_id" : "Olson Stevenson", "total_movies" : 2 }
{ "_id" : "Lillian Kirk", "total_movies" : 2 }
{ "_id" : "Hess Reeves", "total_movies" : 2 }
Type "it" for more
myreplicadb:PRIMARY>
```


Homework 3 – Emily Black – 04/16/18

Query 4:

```
myreplicadb:PRIMARY> db.movies.update({movie_id: 520 }, { $push: { "review": { "critic_id": 44230, "movie_id": 520, "posted_on_date": { "day": 12, "month": 5, "year": 2011, "time": "16:41:25" }, "review_summary": "This is such a great movie!", "rating": "1.9" }}});
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
myreplicadb:PRIMARY> db.movies.find({movie_id: 520 }):
{ "_id" : ObjectId("5ad4fd9660b5f5eb9b5325898"), "gross" : 549, "movie_name" : "Krag", "movie_genre" : "eu", "review" : [ { "posted_on_date" : { "time" : "20:17:18", "year" : 2015, "day" : 3, "month" : 11 }, "rating" : "7.3", "review_summary" : "Dolor consequat sit do deserunt nulla. Esse fugiat proident commodo non non ut irure fugiat mollit. Reprehenderit nostrud aliquip aute ut mollit duis dolore occaecat quis.", "movie_id" : 520, "critic_id" : 93140 }, { "posted_on_date" : { "time" : "10:56:43", "year" : 1909, "day" : 26, "month" : 6 }, "rating" : "3.7", "review_summary" : "Commodo culpa id duis nostrud esse exercitation irure labore. Occaecat culpa est cillum consectetur dolor in. Et ea occaecat sunt voluptate excepteur magna consectetur veniam est qui nisi mollit. Adipiscing et eiusmod amet reprehenderit elit do enim. Irure nostrud est est quis duis exercitation sint veniam nostrud irure. Fugiat minim pariatur adipisicing occaecat voluptate ut exercitation. Aute dolore eiusmod in duis occaecat nostrud ipsum in commodo ad culpa fugiat culpa.", "movie_id" : 520, "critic_id" : 45894 }, { "posted_on_date" : { "time" : "20:5:41", "year" : 1933, "day" : 25, "month" : 5 }, "rating" : "7.4", "review_summary" : "Sint nisi id sunt veniam. Velit eu et sunt minim occaecat. Dolor id sit quis velit reprehenderit et ea anim sint tempor non non.", "movie_id" : 520, "critic_id" : 87193 }, { "critic_id" : 44230, "movie_id" : 520, "posted_on_date" : { "day" : 12, "month" : 5, "year" : 2011, "time" : "16:41:25" }, "review_summary" : "This is such a great movie!", "rating" : "1.9" } ], "studio_name" : "Myopium", "budget" : 670, "plot_description" : "Aliqua sit in anim est. Amet aute est ullamco irure. Ipsum laboris non laborum enim. Veniam magna deserunt incididunt est tempor consectetur. Veniam ullamco veniam labore qui ut fugiat labore qui sint occaecat eiusmod occaecat elit ipsum. Lorem nostrud commodo labore aute do nisi adipisicing sit nisi nulla nulla.", "director_name" : "Kerri Barry", "producers" : [ { "name" : "Claire Joyner" }, { "name" : "Katherine Houston" }, { "name" : "Chavez Rowland" } ], "average_rating" : "7.4", "similar_movies" : [ "non", "anim", "minim", "cillum", "et" ], "duration" : 349, "movie_id" : 520, "release_period" : { "year" : 1949, "day" : 25, "month" : 7 } }
{ "_id" : ObjectId("5ad4fe571142e783abfcf9bd"), "gross" : 549, "movie_name" : "Krag", "movie_genre" : "eu", "review" : [ { "posted_on_date" : { "time" : "20:17:18", "year" : 2015, "day" : 3, "month" : 11 }, "rating" : "7.3", "review_summary" : "Dolor consequat sit do deserunt nulla. Esse fugiat proident commodo non non ut irure fugiat mollit. Reprehenderit nostrud aliquip aute ut mollit duis dolore occaecat quis.", "movie_id" : 520, "critic_id" : 93140 }, { "posted_on_date" : { "time" : "10:56:43", "year" : 1909, "day" : 26, "month" : 6 }, "rating" : "3.7", "review_summary" : "Commodo culpa id duis nostrud esse exercitation irure labore. Occaecat culpa est cillum consectetur dolor in. Et ea occaecat sunt voluptate excepteur magna consectetur veniam est qui nisi mollit. Adipiscing et eiusmod amet reprehenderit elit do enim. Irure nostrud est est quis duis exercitation sint veniam nostrud irure. Fugiat minim pariatur adipisicing occaecat voluptate ut exercitation. Aute dolore eiusmod in duis occaecat nostrud ipsum in commodo ad culpa fugiat culpa.", "movie_id" : 520, "critic_id" : 45894 }, { "posted_on_date" : { "time" : "20:5:41", "year" : 1933, "day" : 25, "month" : 5 }, "rating" : "7.4", "review_summary" : "Sint nisi id sunt veniam. Velit eu et sunt minim occaecat. Dolor id sit quis velit reprehenderit et ea anim sint tempor non non.", "movie_id" : 520, "critic_id" : 87193 } ], "studio_name" : "Myopium", "budget" : 670, "plot_description" : "Aliqua sit in anim est. Amet aute est ullamco irure. Ipsum laboris non laborum enim. Veniam magna deserunt incididunt est tempor consectetur. Veniam ullamco veniam labore qui ut fugiat labore qui sint occaecat eiusmod occaecat elit ipsum. Lorem nostrud commodo labore aute do nisi adipisicing sit nisi nulla nulla.", "director_name" : "Kerri Barry", "producers" : [ { "name" : "Claire Joyner" }, { "name" : "Katherine Houston" }, { "name" : "Chavez Rowland" } ], "average_rating" : "7.4", "similar_movies" : [ "non", "anim", "minim", "cillum", "et" ], "duration" : 349, "movie_id" : 520, "release_period" : { "year" : 1949, "day" : 25, "month" : 7 } }
myreplicadb:PRIMARY>
```

Query 5:

```
myreplicadb:PRIMARY> db.movies.update({$and: [{ $where: "this.movie_genre == movie_genre" }, { $or: [{ "average_rating" : { $gte: { $subtract: [ "$average_rating", 1 ] } } }, { "average_rating" : { $lte: { $add: [ "$average_rating", 1 ] } } } ] } }, { $push: { "similar_movies": "$movie_name" }, "multi": true });
WriteResult({ "nMatched" : 0, "nUpserted" : 0, "nModified" : 0 })
myreplicadb:PRIMARY> db.movies.find():
{ "_id" : ObjectId("5ad4fd9660b5f5eb9b5325897"), "gross" : 1235, "movie_name" : "Exospeed", "movie_genre" : "nostrud", "review" : [ { "posted_on_date" : { "time" : "17:9:26", "year" : 2010, "day" : 22, "month" : 4 }, "rating" : "4.9", "review_summary" : "Laborum cupidatat qui magna exercitation non mollit qui do. Nisi aliqua duis ipsum dolor est dolor culpa voluptate irure culpa. Do laboris proident excepteur non dolor et eu nisi esse eu nisi. Et reprehenderit irure minim sunt tempor est culpa sunt excepteur exercitation consectetur excepteur esse.", "movie_id" : 32, "critic_id" : 86241 }, { "posted_on_date" : { "time" : "14:57:8", "year" : 1941, "day" : 23, "month" : 12 }, "rating" : "8.7", "review_summary" : "Do laboris qui fugiat voluptate in amet nostrud magna. Pariatur in nisi proident dolore nostrud sunt veniam sint consectetur est excepteur duis labore mollit. Dolore qui ut proident ea proident deserunt veniam qui. Proident aute magna duis reprehenderit ea elit minim non proident eu aliquip sunt commodo eu.", "movie_id" : 32, "critic_id" : 92114 }, { "posted_on_date" : { "time" : "21:19:11", "year" : 1928, "day" : 6, "month" : 12 }, "rating" : "0.1", "review_summary" : "Veniam esse et qui est esse elit cillum cillum eiusmod elit est esse. Minim et sint pariatur veniam dolor qui eiusmod do ipsum ipsum esse in consectetur proident. Cillum proident eiusmod nulla pariatur consequat sit mollit. Qui aute adipisicing laboris nulla fugiat. Labore mollit sit esse pariatur in. Aliquip consectetur magna ut reprehenderit occaecat aliquip quis aliquip" } ], "studio_name" : "Myopium", "budget" : 670, "plot_description" : "Aliqua sit in anim est. Amet aute est ullamco irure. Ipsum laboris non laborum enim. Veniam magna deserunt incididunt est tempor consectetur. Veniam ullamco veniam labore qui ut fugiat labore qui sint occaecat eiusmod occaecat elit ipsum. Lorem nostrud commodo labore aute do nisi adipisicing sit nisi nulla nulla.", "director_name" : "Kerri Barry", "producers" : [ { "name" : "Claire Joyner" }, { "name" : "Katherine Houston" }, { "name" : "Chavez Rowland" } ], "average_rating" : "7.4", "similar_movies" : [ "non", "anim", "minim", "cillum", "et" ], "duration" : 349, "movie_id" : 520, "release_period" : { "year" : 1949, "day" : 25, "month" : 7 } }
```