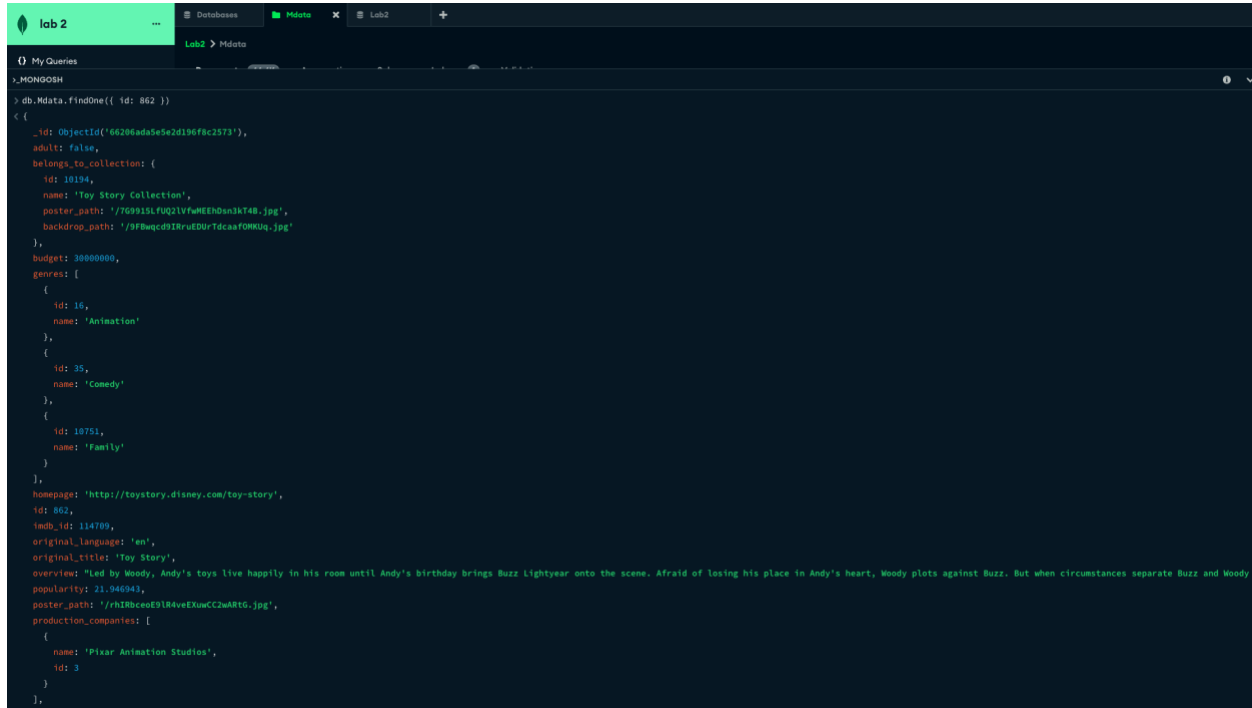


NoSQL Queries:

Query: `db.Mdata.findOne({ id: 862 })`

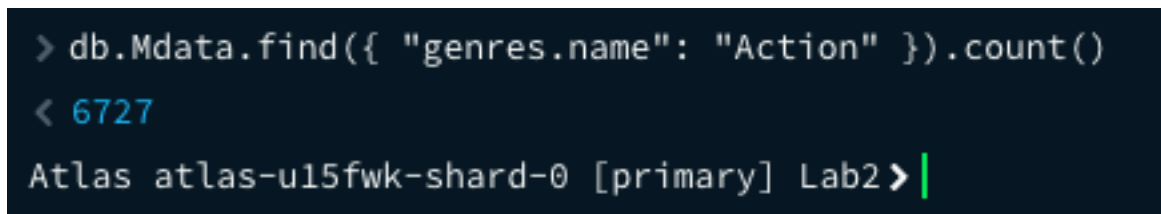


The screenshot shows a MongoDB shell window with the following content:

```
lab 2
Databases Mdata Lab2
My Queries
> db.Mdata.findOne({ id: 862 })
< {
  _id: ObjectId('66206ada5e5e2d196f8c2573'),
  adult: false,
  belongs_to_collection: {
    id: 10194,
    name: 'Toy Story Collection',
    poster_path: '/769915LlUQ2lVfwHEH0sn3kT4B.jpg',
    backdrop_path: '/9Fhwqcd9IRruEDUrTdcaasFORUuq.jpg'
  },
  budget: 380000000,
  genres: [
    {
      id: 16,
      name: 'Animation'
    },
    {
      id: 35,
      name: 'Comedy'
    },
    {
      id: 10751,
      name: 'Family'
    }
  ],
  homepage: 'http://toystory.disney.com/toy-story',
  id: 862,
  imdb_id: 114709,
  original_language: 'en',
  original_title: 'Toy Story',
  overview: 'Led by Woody, Andy's toys live happily in his room until Andy's birthday brings Buzz Lightyear onto the scene. Afraid of losing his place in Andy's heart, Woody plots against Buzz. But when circumstances separate Buzz and Woody',
  popularity: 21.946943,
  poster_path: '/rhlBnceeE9l8AveEXuwcC2wART6.jpg',
  production_companies: [
    {
      name: 'Pixar Animation Studios',
      id: 3
    }
  ],
}
```

Fig – 1: NoSQL Query

Query: `db.Mdata.find({ "genres.name": "Action" }).count()`



The screenshot shows a MongoDB shell window with the following content:

```
> db.Mdata.find({ "genres.name": "Action" }).count()
< 6727
Atlas atlas-u15fwk-shard-0 [primary] Lab2> |
```

Fig – 2: NoSQL Query

Query: db.Mdata.distinct("id")

```
> db.Mdata.distinct("id")
< [
    2,  3,  5,  6, 11, 12, 13, 14, 15, 16, 17, 18,
  19, 20, 21, 22, 24, 25, 26, 27, 28, 30, 33, 35,
  38, 55, 58, 59, 62, 63, 64, 65, 66, 67, 68, 69,
  70, 71, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82,
  83, 85, 86, 87, 88, 89, 90, 91, 92, 93, 95, 96,
  97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108,
  109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 120, 121,
  122, 123, 124, 127, 128, 129, 132, 133, 134, 135, 136, 137,
  138, 139, 140, 141,
  ... 45329 more items
]
Atlas atlas-u15fwk-shard-0 [primary] Lab2>
```

Fig – 3: NoSQL Query

Query: db.Mdata.aggregate([
 { \$group: { _id: "\$id", count: { \$sum: 1 } } }])

```
>_MONGOSH
> db.Mdata.aggregate([
  { $group: { _id: "$id", count: { $sum: 1 } } }
])
< {
  _id: 1278,
  count: 1
}
{
  _id: 21362,
  count: 1
}
{
  _id: 11133,
  count: 1
}
{
  _id: 5503,
  count: 1
}
{
  _id: 338767,
  count: 1
}
}
```

Fig – 4: NoSQL Query

Query: `db.Mdata.find({ runtime: {$gte:110}})`

```

  },
  rating: 3.4,
  crew: [{"credit_id": "52fe4245c3a36847f80111c3", "department": "Production", "gender": 2, "id": 6189, "job": "Executive Producer", "name": "Stuart Reynolds ", "profile_path": None}, {"credit_id": "52fe4245c3a36847f80111b1", "department":
}
{
  _id: ObjectId('66286ada5e2d196f8c258c'),
  adult: false,
  genres: [
    {
      id: 18,
      name: 'Drama'
    }
  ],
  id: 16428,
  imdb_id: 114057,
  original_language: 'en',
  original_title: 'Othello',
  overview: 'The evil Iago pretends to be friend of Othello in order to manipulate him to serve his own end in the film version of this Shakespeare classic.',
  popularity: 1.845899,
  poster_path: '/qM8XKEQjwAzkdZ0TYw6twpHX.jpg',
  production_companies: [
    {
      name: 'Columbia Pictures',
      id: 5
    },
    {
      name: 'Castle Rock Entertainment',
      id: 97
    }
  ],
  production_countries: [
    {
      iso_3166_1: 'IT',
      name: 'Italy'
    }
  ],
  release_date: '12/15/95',
  runtime: 123,

```

Fig – 5: NoSQL Query

Query: `db.Mdata.find({ "genres.name": "Romance" }).limit(3)`

```

> MONGODB
> db.Mdata.find({ "genres.name": "Romance" }).limit(3)
< [
  {
    _id: ObjectId('66286ada5e2d196f8c2575'),
    adult: false,
    belongs_to_collection: {
      id: 119958,
      name: 'Grumpy Old Men Collection',
      poster_path: '/nLVdGgPg3F85WMCi19gVFUket.jpg',
      backdrop_path: '/hyPTnLot228wpFS7qwsQHM1uV8u.jpg'
    },
    genres: [
      {
        id: 10749,
        name: 'Romance'
      },
      {
        id: 35,
        name: 'Comedy'
      }
    ],
    id: 15602,
    imdb_id: 113228,
    original_language: 'en',
    original_title: 'Grumpier Old Men',
    overview: 'A family wedding reignites the ancient feud between next-door neighbors and fishing buddies John and Max. Meanwhile, a sultry Italian divorcee opens a restaurant at the local bait shop, alarming the locals who worry she'll scare',
    popularity: 11.7129,
    poster_path: '/6kxmisjKMFbD07UY216G1ju9SRL.jpg',
    production_companies: [
      {
        name: 'Warner Bros.',
        id: 6194
      },
      {
        name: 'Lancaster Gate',
        id: 19464
      }
    ],
    production_countries: [
      {

```

Fig – 6: NoSQL Query

Query: db.Mdata.find().skip(5)

```
> MONGODB
>
{
  _id: 15162,
  name: 'dog'
},
{
  _id: 15163,
  name: 'goose'
},
{
  _id: 158175,
  name: 'bear attack'
},
{
  _id: 158370,
  name: 'dog sled'
},
{
  _id: 158371,
  name: 'frozen lake'
}
},
crew: [{"credit_id": "593f24b9c3a3680369002373", "department": "Production", "gender": 2, "id": 488, "job": "Producer", "name": "Steven Spielberg", "profile_path": "/pOK150Naw758xj78Q0iulehPPh.jpg"}, {"credit_id": "593f24cfc3a36803f60025"}]
}
{
  _id: ObjectId('66206ada5e2d196f8c2580'),
  adult: false,
  budget: 44000000,
  genres: [
    {
      _id: 36,
      name: 'History'
    },
    {
      _id: 18,
      name: 'Drama'
    }
  ],
  id: 10858,
  imdb_id: 113987,
```

Fig – 7: NoSQL Query

Query: db.Mdata.find({ \$or: [{ id: 862 }, { imdb_id: 114709 }] })

```
> MONGODB
Type "it" for more
> db.Mdata.find({ $or: [{ id: 862 }, { imdb_id: 114709 }] })
{
  _id: ObjectId('66206ada5e2d196f8c2573'),
  adult: false,
  belongs_to_collection: {
    id: 10194,
    name: 'Toy Story Collection',
    poster_path: '/769915LlUQ2lVfwMEHdn3kT4B.jpg',
    backdrop_path: '/9fBwqcd9IRruEDUrTdcasf0MKUq.jpg'
  },
  budget: 30000000,
  genres: [
    {
      _id: 16,
      name: 'Animation'
    },
    {
      _id: 35,
      name: 'Comedy'
    }
  ],
  id: 10751,
  name: 'Family'
},
homepage: 'http://toystory.disney.com/toy-story',
id: 862,
imdb_id: 114709,
original_language: 'en',
original_title: 'Toy Story',
overview: 'Led by Woody, Andy's toys live happily in his room until Andy's birthday brings Buzz Lightyear onto the scene. Afraid of losing his place in Andy's heart, Woody plots against Buzz. But when circumstances separate Buzz and Woody',
popularity: 21.945943,
poster_path: '/rIRbceoeE9lR4veEXuwcQ2wART6.jpg',
production_companies: [
  {
    name: 'Pixar Animation Studios',
    id: 3
  }
],
```

Fig – 8: NoSQL Query

Query: db.Mdata.find({ id: { \$exists: true } })

```
> MONGODB
>
{
  id: 11517,
  imdb_id: 113845,
  original_language: 'en',
  original_title: 'Money Train',
  overview: 'A vengeful New York transit cop decides to steal a trainload of subway fares; his foster brother, a fellow cop, tries to protect him.',
  popularity: 7.337906,
  poster_path: '/j5ozzzv0R2kFgTUw0n0G0yRf1.jpg',
  production_companies: [
    {
      name: 'Columbia Pictures',
      id: 5
    }
  ],
  production_countries: [
    {
      iso_3166_1: 'US',
      name: 'United States of America'
    }
  ],
  release_date: '11/21/95',
  revenue: 35431113,
  runtime: 103,
  spoken_languages: [
    {
      iso_639_1: 'en',
      name: 'English'
    }
  ],
  status: 'Released',
  tagline: 'Get on, or GET OUT THE WAY!',
  title: 'Money Train',
  video: false,
  vote_average: 5.4,
  vote_count: 224,
  cast: [
    {
      cast_id: 1,
      character: 'John',

```

Fig – 9: NoSQL Query

Query: db.Mdata.find({\$and: [{ release_date: { \$exists: "1995-22-12" } }],{ revenue: { \$gt: 1500000 } }]},{cast:0, crew:0,_id:0, ratings:0,timestamp:0}).limit(1)

```
> db.Mdata.find({$and: [{ release_date: { $exists: "1995-22-12" } } ],{ revenue: { $gt: 1500000 } } ]},{cast:0, crew:0,_id:0, ratings:0,timestamp:0}).limit(1)
< {
  adult: false,
  belongs_to_collection: {
    id: 10194,
    name: 'Toy Story Collection',
    poster_path: '/769b15LfuQ2lVfwMEENDn3kT4B.jpg',
    backdrop_path: '/9F0wq031RruEDUrTdcaaF0RMUq.jpg'
  },
  budget: 30000000,
  genres: [
    {
      id: 16,
      name: 'Animation'
    },
    {
      id: 35,
      name: 'Comedy'
    },
    {
      id: 10751,
      name: 'Family'
    }
  ],
  homepage: 'http://toystory.disney.com/toy-story',
  id: 862,
  imdb_id: 114709,
  original_language: 'en',
  original_title: 'Toy Story',
  overview: 'Led by Woody, Andy's toys live happily in his room until Andy's birthday brings Buzz Lightyear onto the scene. Afraid of losing his place in Andy's heart, Woody plots against Buzz. But when circumstances separate Buzz and Woody',
  popularity: 21.946943,
  poster_path: '/rhIRbceD9lR4veEXuWC2wART6.jpg',
  production_companies: [
    {
      name: 'Pixar Animation Studios',
      id: 3
    }
  ],
  production_countries: [

```

Fig – 10: NoSQL Query

Aggregations:

Query: db.Mdata.aggregate([
 { \$group: { _id: null, avgField: { \$avg: "\$runtime" } } }
])

```
> db.Mdata.aggregate([  
  { $group: { _id: null, avgField: { $avg: "$runtime" } } }  
  ])  
< {  
  _id: null,  
  avgField: 94.08688524590164  
}
```

Fig – 11: Aggregations

```
Query: db.Mdata.aggregate([
  { $group: { _id: "$runtime", count: { $sum: 1 } } }
])
```

```
> db.Mdata.aggregate([
  { $group: { _id: "$runtime", count: { $sum: 1 } } }
])
< {
  _id: 135,
  count: 146
}
{
  _id: 299,
  count: 1
}
{
  _id: 190,
  count: 7
}
{
  _id: 260,
  count: 4
}
{
  _id: 202,
  count: 2
}
```

Fig – 12: Aggregations

Query: db.collection.aggregate([
 { \$group: { _id: null, maxField: { \$max: "\$runtime" } } }
])

```
> db.Mdata.aggregate([  
  { $group: { _id: null, maxField: { $max: "$runtime" } } }  
])  
< {  
  _id: null,  
  maxField: 1256  
}
```

Fig – 13: Aggregations

```
Query: db.Mdata.aggregate([
  { $limit: 10 }
])
```



The image shows a MongoDB Shell session. The prompt is `>_MONGOSH`. The user enters the query `> db.Mdata.aggregate([{ $limit: 10 }])`. The shell returns the first 10 documents from the `Mdata` collection. The output is a JSON array starting with an object that has the following fields: `_id` (ObjectId), `adult` (false), `belongs_to_collection` (an object with `id` 10194, `name` 'Toy Story Collection', `poster_path`, and `backdrop_path`), `budget` (300000000), and `genres` (an array of objects for 'Animation' and 'Comedy').

```
>_MONGOSH
<
> db.Mdata.aggregate([
  { $limit: 10 }
])
< {
  _id: ObjectId('66206ada5e5e2d196f8c2573'),
  adult: false,
  belongs_to_collection: {
    id: 10194,
    name: 'Toy Story Collection',
    poster_path: '/7G9915LfUQ2lVfwMEEhDsn3kT4B.jpg',
    backdrop_path: '/9FBwqcd9IRruEDUrTdcaaf0MKUq.jpg'
  },
  budget: 300000000,
  genres: [
    {
      id: 16,
      name: 'Animation'
    },
    {
      id: 35,
      name: 'Comedy'
    },
    {
      id: 10751,
      name: 'Family'
    }
  ]
}
```

Fig – 14: Aggregations

```
Query: db.Mdata.aggregate([
  { $skip: 5 }
])
```

```
>_MONGOSH
original_language: 'en',
original_title: 'Powder',
overview: 'Harassed by classmates who won't accept his shocking appearance, a shy young man known as "Powder" struggles to fi
popularity: 12.133094,
poster_path: '/1uRKsx0Ctgz0xVqs9l4hYtp4dFm.jpg',
production_companies: [
  {
    name: 'Caravan Pictures',
    id: 175
  },
  {
    name: 'Hollywood Pictures',
    id: 915
  }
],
production_countries: [
  {
    iso_3166_1: 'US',
    name: 'United States of America'
  }
],
release_date: '10/27/95',
runtime: 111,
spoken_languages: [
  {
    iso_639_1: 'en',
    name: 'English'
  }
],
status: 'Released',
tagline: 'An extraordinary encounter with another human being.',
title: 'Powder',
video: false,
```

Fig – 15: Aggregations