Queries in MongoDB

- **Select Operations in MongoDB**

Where clause in Mongodb

```
db.film.find({film_id:1}).pretty()
```

Find films with id = 1 or 2

```
db.film.find({film_id:{$in:[1,2]}}).pretty()
```

Specifiy AND condition

Select films with release_year =2006 and rental_duration = 3

```
db.film.find({
        release_year:2006 ,
        rental_duration : 3
})
```

Count the number of films whose rental_rate is more than $4

```
db.film.find({
        rental_rate: {$gt: 4}
        }).count();
```

Count the number of films whose rental_rate is between $2 than $4

```
db.film.find({
        rental_rate: {$lt: 4 , $gt: 2}
        }).count();
```

Limit the results to the first 5 films

Count the number of films whose rental_rate is between $2 than $4

```
db.film.find({
        rental_rate: {$lt: 4 , $gt: 2}
        }).limit(5).pretty();
```

Select Distinct operation
db.film.distinct("rating")

Projection Operation :
Select title , rating , replacement_cost from film

```
 db.film.find(
          {replacement_cost : {$lt: 20}}   ,
          { _id: 0 , title:1 , rating: 1, replacement_cost : 1}
).pretty()
```

Sort the previous result by ascending order of replacement_cost

```
db.film.find(
          {replacement_cost : {$lt: 20}}   ,
          { _id: 0 , title:1 , rating: 1, replacement_cost : 1}
).sort(
       {
          replacement_cost: 1
       }
).pretty()
```

Logical OR operation example :

```
db.film.find( {$or: [{rating:"G"},{rating:"PG"}]} ).count()
```

- **Aggregate**

General Syntax

db.<collection>.aggregate([{ <stage1> }, { <stage2> } ...])

Select count(*) from film group by rating db.film.aggregate([{$group : {_id:"$rating",NumFilms:{$sum:1}} }])
Select min(replacement_cost) from film group by rating db.film.aggregate([{$group : {_id:"$rating",MinReplacementCost:{$min: "$replacement_cost"}} }])

- **InClass Assignment**

List the distinct rental durations across all documents in the collection

```
db.film.distinct("rental_duration")
[ 7, 5, 6, 3, 4 ]
```

Sort the documents in the descending order of the rental duration

```
db.film.find().sort({rental_duration:-1})
```

List the average rental rate by the rental duration

```
db.film.aggregate([{$group:{_id:"$rental_duration", AverageCost:{$avg:"$rental_rate"}}}])
{ "_id" : 3, "AverageCost" : 2.8323645320197044 }
{ "_id" : 6, "AverageCost" : 2.8956603773584906 }
{ "_id" : 4, "AverageCost" : 2.9702955665024633 }
{ "_id" : 5, "AverageCost" : 3.1994240837696335 }
{ "_id" : 7, "AverageCost" : 3.0214136125654454 }
```

Select film_id and title the films whose rental_duration is >= 3 and <= 5 days

```
db.film.find({rental_duration:{$lte:5, $gte:3}},{film_id:1 ,title:1}).pretty()
```

List the count of the films whose rental_duration is >= 3 and <= 5 days

```
db.film.find({rental_duration:{$lte:5, $gte:3}}).count();
597
```