

Design and Develop MongoDB Queries using aggregation and indexing with suitable example using MongoDB

```
movie> db.movie.find();
```

```
[
  {
    _id:
      ObjectId("65279e825ad3e0191c39e246"),
    MName: 'Iron Man',
    Production:
      'Marvel',Area:
      'Hollywood',
    Budget: 900
  },
  {
    _id:
      ObjectId("65279eb05ad3e0191c39e248"),
    MName: 'Tom and Jerry',
    Production:
      'WB', Area:
      'Hollywood',
    Budget: 400
  },
  {
    _id:
      ObjectId("65279eef5ad3e0191c39e249"),
    MName: 'Jailer',
    Production: 'Sun
    Pictures',Area:
      'Tollywood', Budget:
      600
  },
  {
    _id:
      ObjectId("65279f6a5ad3e0191c39e24a"),
    MName: 'Bahubali',
    Production: 'Dharma
    Prod.',Area: 'Bollywood',
    Budget: 500
  },
  {
    _id:
      ObjectId("65279fab5ad3e0191c39e24b"),
    MName: 'Jawan',
    Production: 'Red
    Chillies',Area:
      'Bollywood', Budget:
```

```
300
}
]
movie> db.movie.aggregate([{$group: {_id: "", Budget: { $max:"$Budget"}}}]);
[ {_id: "", Budget: 900} ]
movie> db.movie.aggregate([{$group: {_id: "", Budget: { $min:"$Budget"}}}]);
[ {_id: "", Budget: 300 } ]
movie> db.movie.aggregate([{$group: {_id: "", Budget: { $first:"$Budget"}}}]);
[ {_id: "", Budget: 900 } ]
movie> db.movie.aggregate([{$group: {_id: "", Budget: { $last:"$Budget"}}}]);
[ {_id: "", Budget: 300 } ]
movie> db.movie.aggregate([{$group: {_id: "", Budget: { $sum:"$Budget"}}}]);
[ {_id: "", Budget: 2700 } ]
```

```

movie> db.movie.aggregate([{$group: {_id: "", Budget: { $avg: "$Budget" }}}]);
[ { _id: "", Budget: 540 } ]
movie> db.movie.aggregate({$group: {_id: "$MName", Budget: { $push:
{MName: "$MName", Budget: "$Budget" }}}});
[ { _id: 'Jailer', Budget: [ { MName: 'Jailer', Budget: 600 } ] },
  { _id: 'Tom and Jerry', Budget: [ { MName: 'Tom and Jerry', Budget: 400 } ] },
  { _id: 'Iron Man', Budget: [ { MName: 'Iron Man', Budget: 900 } ] },
  { _id: 'Bahubali', Budget: [ { MName: 'Bahubali', Budget: 500 } ] },
  { _id: 'Jawan', Budget: [ { MName: 'Jawan', Budget: 300 } ] }
]
movie> db.movie.aggregate([{$group : {_id : "", Budget : {$addToSet : "$Budget" }}}]);
[
  { _id: "", Budget: [ 600, 500, 300, 400, 900 ] }
]

```

//INDEXING

```

movie> db.movie.createIndex({'MName':1});
MName_1
movie> db.movie.getIndexes();
[
  { v: 2, key: { _id: 1 }, name: '_id_' },
  { v: 2, key: { MName: 1 }, name: 'MName_1' }
]
movie> db.movie.createIndex({'MName':1, Budget:-1});
MName_1_Budget_-1
movie> db.movie.getIndexes();
[
  { v: 2, key: { _id: 1 }, name: '_id_' },
  { v: 2, key: { MName: 1 }, name: 'MName_1' },
  { v: 2, key: { MName: 1, Budget: -1 }, name: 'MName_1_Budget_-1' }
]
movie> db.movie.dropIndex({'MName' : 1});
{ nIndexesWas: 3, ok: 1 }
movie> db.movie.getIndexes();
[
  { v: 2, key: { _id: 1 }, name: '_id_' },
  { v: 2, key: { MName: 1, Budget: -1 }, name: 'MName_1_Budget_-1' }
]

```